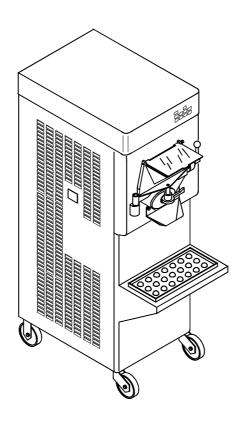
# cattabriga



F 45 G F 90 (G) F 120 (G)

## OPERATION MANUAL

#### CATTABRIGA

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## **Callabriga** Operation Manual FORWARD

Thank you for selecting CATTABRIGA as your choice in equipment. CATTABRIGA machines are able to meet today's fast growing demands. Your CATTABRIGA machine has been manufactured at one of the most modern manufacturing plants and utilizes the most advanced equipment and technology available in the industry.

We at CATTABRIGA, take great pride and care in the manufacture of each and every machine, using only the finest components available, to provide you with years of trouble-free operation.

Over twenty-five years of experience in the manufacturing of dispensing equipment has guided us in the preparation of this Operation Manual. PLEASE READ IT CAREFULLY. Keep it handy for future reference and follow the instructions from the very first time your machine is put into service.

On the following pages you will find important information and procedures that describe the proper installation, sanitizing, operation, and maintenance of your CATTABRIGA machine. We feel certain that your full compliance with these instructions will assure you of excellent performance, trouble-free operation, and profitable business for years to come.

USING THIS MANUAL

As you go through this manual, you will occasionally see special notes accompanied by this symbol:



Pay special attention to these notes - they contain special hints and precautions that are necessary for the proper operation of your CATTABRIGA machine.

All technical data, pictures and drawings contained in this manual are not binding on the manufacturenor can the manufacturer be held liable for any modification of the machine in part or whole. © Copyright 1998, CATABRIGA. All rights reserved.

#### **IMPORTANT!**

Failure to follow operational and maintenance procedures may result in damage to the unit and/or void your warranty. CATTABRIGA Corporation will not be held responsible for any machine that is not properly operated or maintained.

In the event this unit should malfunction, please contact your CATTABRIGA distributor or an authorized service agency.

#### PART 1 **INSTALLATION**

Before starting this procedure, carefully inspect the shipping case to ensure the unit has not been dropped, tampered with, or abused in such a way as to indicate the

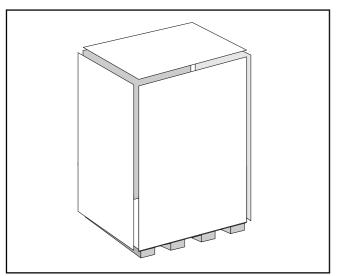
unit may have been damaged in transit.

If you notice any damage to the outside of the shipping case that may indicate possible hidden damage, make a notation of the damage on the bill of lading before signing. Contact the carrier immediately and request an inspection of damage. If this procedure is

not adhered to you may forfeit your right to file a damage claim and be responsible for subsequent repair costs.

#### UNCRATING

• The case is secured to the skid with strapping. Use caution when cutting the strapping as it may spring out injuring you or damaging the machine.



Uncrating

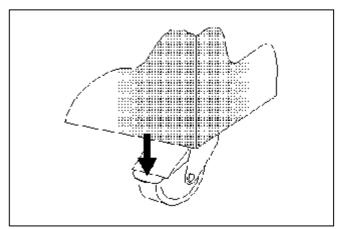
- Remove the case by lifting it straight up and away from the machine.
- The machine is also secured to the skid with strapping. Use caution when cutting the strapping as it may spring out injuring you or damaging the machine.
- Free the machine from the skid.
- Remove the single screw at the bottom of each side • panel.
- Remove the panels by sliding downward slightly, then pull outward at the bottom and allow the panel to slide down.
- You may remove the protective plastic coating that has been laminated to the panels by peeling it off.

#### **POSITIONING THE MACHINE**

- The machine is equipped with 2 pivoting front wheels to allow easy location. Move the machine to the desired location
- The machine must stand level. Check the level condition by placing a level on the top of the machine at each corner.
- · Lock the front wheels to prevent the machine from moving.



Accurate leveling is necessary to allow for correct drainage of the freezer barrel and to ensure correct overrun.



Positioning the machine with pivoting front wheels

## MACHINE EQUIPPED WITH AIR COOLED CONDENSER

• Machines with air-cooled condenser must be installed at least 2 feet (24 inches) away from any wall or object to allow the free circulation of air around the condenser (ref. Fig. 1).



Insufficient air circulation effects the operation and output capacity of the machine. If these clearances are not maintained, the production capacity will be reduced, cycling will increase, and the machine may stop completely.

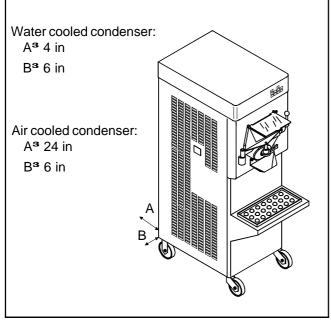
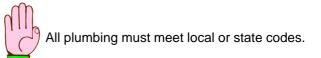


Figure 1

- It is necessary to clean the condenser each month to eliminate dust, paper, etc., which may obstruct it. Failure to do so may result in potential damage to the machine and improper functioning.
- The machine should be within six feet of the power supply (a plug and receptacle or unfused disconnected).
- Position the machine to allow easy access for cleaning, servicing and maintenance.
- Position the machine away from direct sunlight. For every 2EF over 68EF, the machine's performance will decrease by approximately 1%.
- Once the machine is set in position, it should be leveled as accurately as possible.

## MACHINE EQUIPPED WITH WATER-COOLED CONDENSER

- If the unit is water-cooled, it should be located close to the water supply and within six feet of a drain.
- Connect the fitting marked "WATER IN" to the cold water supply. Connect the fitting marked "WATER OUT" to a drain (ref. Fig.2).



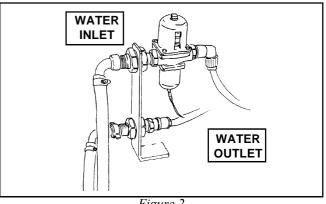


Figure 2

#### WATER VALVE ADJUSTMENT

The water valve is preset at the factory. Proceed as follows if an adjustment is required:

- To maintain a head pressure of 235-255 psi while the compressor is running, attach a refrigeration high pressure gauge to the compressor's high side discharge port.
- Open the water valve clockwise to increase the pressure or counter clockwise to decrease the pressure (ref. Fig. 3).

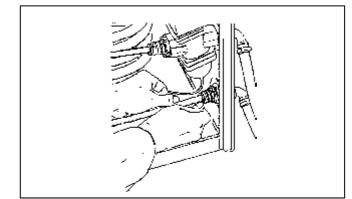


Figure 3



Never expose water-cooled machines to temperatures at or below 32°F. without first draining the water from the condenser. Serious damage to the machine can occur if it is not properly drained.

#### **ELECTRICAL REQUIREMENTS**

- The wiring used to operate this machine must be in accordance with the National Electrical Code and/or local electrical codes, rules and regulations.
- The machine must be properly grounded. We recommend that a licensed electrician install the power supply.

#### **POWER SUPPLY**

The power supply must be adequate enough to meet requirements at all times. Voltage fluctuations with the machine in operation should not exceed plus or minus 5% of the normal or rated voltage.

#### WIRING

- Adequate wiring must be provided with respect to wire size or gauge. Unless otherwise required by the local Electrical Codes, the same gauge wire at the machine junction box should be used for the direct power line. A separate circuit breaker with adequate fuse protection should be employed.
- An unfused disconnected switch or a properly sized plug and receptacle within 6 feet of the machine, is recommended.

CATTABRIGA machines are equipped with protection for the beater motor. Should the line voltage drop, or in the unlikely event a short circuit occurs, the overload protector will automatically disconnect the starter and the machine will stop immediately so that no permanent damage can be caused to the motor.

The compressor is also internally protected. If the Klixon protector trips due to an overload, the protector must first cool down for several minutes before the compressor can be restarted.

#### **ELECTRICAL CONNECTIONS**

- After you remove the panel on the left side of the machine, the wiring connection box can be found on the bottom of the frame and is labeled "Connect Power Line Here" (ref. Fig. 4).
- Feed the power line through the access hole located at the bottom deck directly below the wiring connection box.
- Connect the power line to the machine's power lines and wiring connection box.
- After connecting, the power line should be fastened to the wiring connection box with appropriate electrical hardware.
- In all installations, the machine must be properly grounded. Because all high voltage components (the controls are 24 volts) are connected with flexible conduit or cord, adequate ground continuity is assured by running and fastening a ground line to the machine junction box ground lug (ref. Fig. 4).

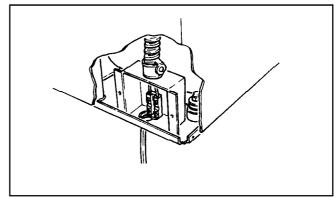


Figure 4

#### **BEATER ROTATION**

After the electrical connections have been completed check the rotation of the beater which should be counterclockwise when facing the front of the machine.

#### **COMPLETING THE INSTALLATION**

The following pages contain important information and procedures that describe the proper sanitizing, operation, and maintenance of your CATTABRIGA machine. We feel certain that your full compliance with these instructions will ensure the excellent performance and trouble-free operation of the machine and a profitable business for years to come.



Failure to closely follow set-up and maintenance procedures can void your warranty. CATTABRIGA Corporation will not be responsible for any machine not properly maintained.

In the event this unit should malfunction, please contact your CATTABRIGA Distributor or an authorized service agency.



EXTREME CARE MUST BE TAKEN WHEN RE-MOVING SIDE, REAR, OR CONTROL BOX PAN-ELS. ALWAYS TURN THE MACHINE TO THE OFF POSITION. ALSO TURN OFF THE DISCON-NECT SWITCH ON THE ELECTRICAL SUPPLY LINE BEFORE EXPOSING ANY ELECTRICAL CONNECTIONS AND/OR MOVING PARTS, SUCH AS BELTS, PULLEYS, FAN BLADES AND BEATER.

#### **MACHINE SAFETY SYSTEM - THERMAL RELAY**

The Thermal Relay monitors amperage draw of the beater motor. When maximum values are reached, the machine will stop and the monitor will blink "RT" which is the code that indicates the THERMAL CUT-OUT has been tripped. Upon automatic resetting of the thermal relay, the display will stop blinking. Before restarting operation, it is important to investigate the reason the Thermal Cut-out tripped. To restart the machine, press the desired button.

#### **PRESSURE SWITCH**

The Pressure Switch protects the cooling system compressor. This switch will stop the compressor in the event of water flow interruption (water-cooled system) or air flow obstruction (air-cooled system); resetting is automatic.

If the compressor runs too long, or the machine continually stops and restarts it may indicate cooling is insufficient. Call your authorized service technician.

#### PROTECTION FOR THE OPERATOR

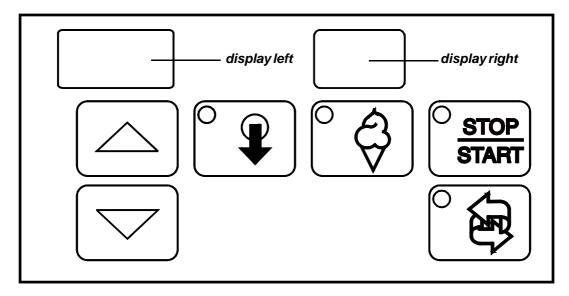
A microswitch has been placed on the door of the barrel with the beater assembly. The switch will immediately stop the machine when the door is opened. When the machine stops, the monitor will display "PT." The display will blink if the machine was running when it was stopped. The display will be steady (not blinking) if the machine was already stopped when the door was opened. After closing the door, the machine remains stopped and the display resets.



Make sure the machine is stopped before opening the front door.

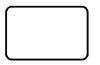
#### PART 2 EXPLANATION OF CONTROLS

The machine is provided with an electronic panel on operator front side; all push-buttons are provided with symbols explaning relevant functions.



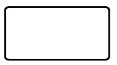
#### MONITORING CONSISTENCY

The ice cream consistency monitor consists of 4 parts:

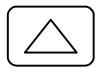


DISPLAY RIGHT

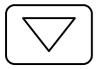
Indicates the actual ice cream consistecy



**DISPLAY LEFT** Indicates the consistency to be reached



**"UP" (INCREASE) KEY** Pressing this key while PRODUCTION is active will increase consistency of ice cream insde the cylinder (maximum value is 12).



**"DOWN" (DECREASE) KEY** Pressing this key while PRODUCTION is active will decrease consistency of ice cream inside the cylinder.

#### **PUSH BUTTON PANEL**

Each button has a symbol representing the corresponding function:



**"STOP" BUTTON** When pushing **STOP** button, the machine will stop.



#### "PRODUCTION" BUTTON

By pushing **PRODUCTION** button, the machine starts its cooling process.

Right display will show a number indicating the consistency of product inside the cylinder and left display shows the consistency value to be reached.

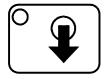
When cooling process is complete, set consistency being reached, an audible alarm will indicate the compressor is off.

If one does not take the product out immediately, compressor starts running cyclically, in order to keep an ideal product consistency.



#### "CLEANOUT" BUTTON

This function is activated by pushing relevant button and lasts 3 minutes, as a maximum, if not stopped through **STOP** function before time is over.



#### "PRODUCT DISPENSE" KEY ("G" VERSION ONLY)

This function is activated by pushing relevant key and it is timed for 3 minutes, as a maximum time. During dispensing process, the beater runs fast.

**DISPENSE** can be entered from **PRODUCTION** and **CLEANOUT**, whilst from extrusion you can enter **CLEANOUT** and **STOP**.

If, during the function of **DISPENSE**, one pushes **PRODUCTION** key, the compressor runs for 20 seconds and you get a chilled "**POST-COOLING**" extrusion.

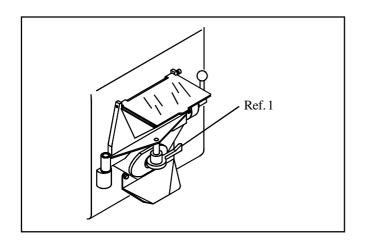
#### ICE CREAM DISPENSING DOOR

#### LOCKING

• To lock the ice cream door, turn the handle (ref. 1) to the right until it stops.

#### OPENING

- Turn the handle (ref. 1) 90E to the left.
- Lift the handle and the ice cream door then lock the ice cream door in the top position by turning the handle right until it stops.



#### CLOSING

• Reverse the procedures described above.

#### PART 3

#### INITIAL CLEANING PROCEDURE

This is a new machine and it must be completely disassembled, washed and sanitized before starting. Proceed as follows:

PRELIMINARY CLEAN-OUT

- With the machine in STOP and the beater front door closed, fill the machine with water (into the barrel).
- Press the "Clean Out" button and allow the beater to run for the proper length of time.
- The machine will run for about 3 minutes and then will automatically stop. The timer helps prevent unnecessary wear on the sliding blades and barrel.
- Drain all water from barrel and open the door.

#### **BEATER DISASSEMBLY**

· Remove beater with care.

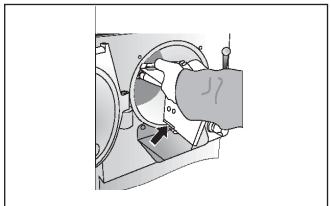


Figure 11

Perform this operation with extreme care. The beater may be damaged if it falls to the ground or is impacted against another object.

- · Remove the beater seal from the beater shaft
- Disassemble the scraping blades and O-Ring completely.

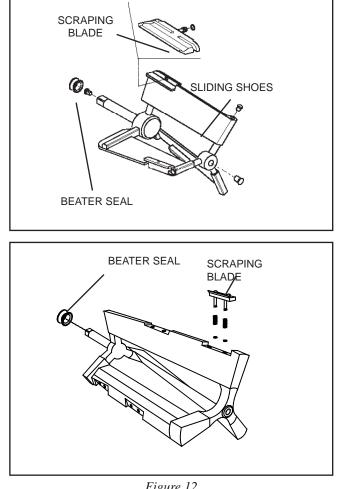


Figure 12

#### FRONT DOOR DISASSEMBLY

- Lift the door locking lever and shift it to the right (ref. Fig. 13).
- Open the door by rotating it on its hinge (ref. Fig. 13).

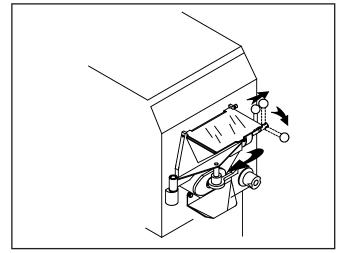
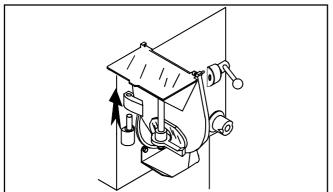


Figure 13

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- Lift the door and remove it (ref. Fig. 14).
- To perform cleaning operations, remove all movable parts and seal with barrel.



#### ICE CREAM DOOR DISASSEMBLY

- Lift the ice cream door and remove OR (Ref. 1126 Fig. 15) from the ice cream door and withdraw it which will also release the lever.
- To perform cleaning, also remove the ice cream gate OR (Ref. 2 Fig. 15).

#### FILL CHUTE COVER DISASSEMBLY

- Remove the horizontal hinge pin (Ref. 3 Fig. 15) then remove the cover.
- The cover is provided with a small bulkhead (Ref.4 Fig.15), which prevents ice cream from going up into the fill chute which must disassembled to be cleaned.

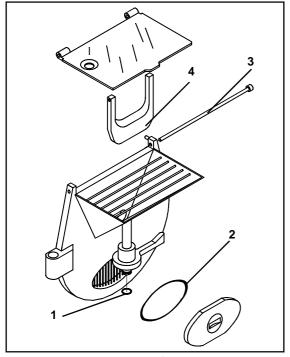


Figure 15

#### **CLEANING OPERATIONS**

• Wash all parts in lukewarm water (80-90 F) using a mild non-foaming detergent. Scrub each of the parts with the cleaning brushes provided in the Start-Up Kit.



Do not use hot water on plastic parts as damage to the parts can result.

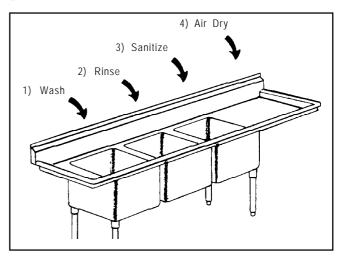


Figure 16

Using your three-tank sink, wash, rinse and sanitize all of the disassembled machine parts. Mix the sanitizing solution to a 200ppm concetration with warm water. Allow the parts to soak in the sanitizing solution for 3-5 minutes before removing. Allow the parts to air-dry on the clean, sanitized counter at the end of the sink.

Do not towel of sponge dry these parts.

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#### PART 4 ASSEMBLING THE MACHINE

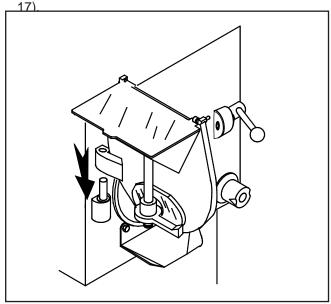
Once the parts have been washed, rinsed and sanitized, the machine is ready to be re-assembled. Prior to beginning the re-assembly procedure, sanitize your hands by submerging them in the sanitizing solution.

FRONT DOOR RE-ASSEMBLY

- Lubricate all rubber parts with the lubricant included in the Start-Up Kit.
- Reassemble the components in reverse order to the disassembly procedure previously stated. That is:

FILL CHUTE COVER ICE CREAM DOOR

Insert the assembled front door on the hinge (ref. Fig.





**BEATER RE-ASSEMBLY** 

- Lubricate the beater lip seal with the lubricant included in the Start-Up Kit and mount it (ref Fig. 20).
- Reassemble the scraping blades and O-Ring completely.
- Position the beater into the freezing barrel.
- Push the beater toward the bottom of the barrel.



In order not to damage the freezing barrel, do not strike the beater against the barrel rim.

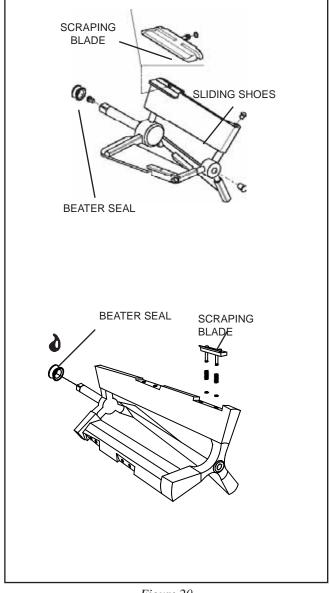


Figure 20

• Push the beater deeply and, at the same time, turn it in order to lock the end of beater shaft into its seat.

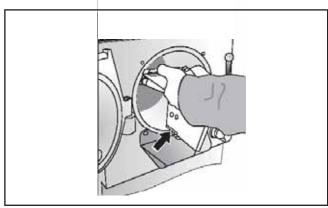


Figure 21

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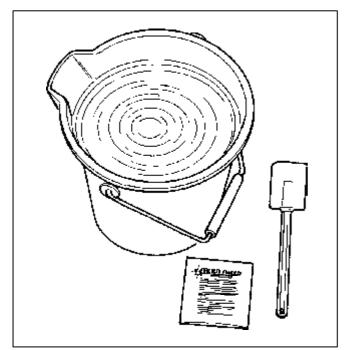
#### PART 5 SANITIZING THE MACHINE

Before filling the machine with your liquid product, it must be sanitized. The cleaning and sanitizing frequency cycles must comply with all health codes in your area. Contact your Board of Health for additional information.

Proper sanitizing of the machine is important. Sanitizing retards the growth of bacteria and ensures excellent test results when your machine is inspected by your local health department and/or agriculture department.

To begin, you will need:

- A clean bucket.
- Sanitizer (sample packets were included in your Start-Up Kit).
- A spatula (also included in the Start-Up Kit).
- A brush with plastic bristles.



Sanitizing Kit

#### SANITIZING PROCEDURES

 Mix the sanitizer into the clean pail with at least two gallons of warm water. Mix the sanitizer and water to make a 200-PPM concentration of sanitizer solution. Using the spatula, stir the solution until the sanitizer is completely dissolved.

Do not exceed the formula recommended by the sanitizer manufacturer – higher concentrations will not increase the effectiveness. Do not use straight chlorine bleach since it does not clean properly and will damage plastic omponents. Do not leave the sanitizing solution in the machine longer than on hour as it can correde some parts.

- Pour the mix into the mixing tanks.
- With the machine off and the beater assembly door closed, pour a non-corrosive sanitizing solution into the freezing barrel.
- Push the "Cleanout" button.
- Run the machine for the correct time recommended for this procedure about 20-30 seconds.

Running the machine in the "Cleanout" mode for excessive periods of time with the barrel empty or with water and cleansing solutions will wear out the beater shoes very quickly. Run the machine ONLY for the time necessary to complete these operations. To avoid unnecessary wear of the sliding shoes and barrel, the machine will automatically stop after three minutes of uninterrupted running.

• Drain all sanitizer solution.



Do not touch the sanitized parts with hands, napkins, or anything else.



The machine is now sanitized and ready to be filled with mix. Do not wipe aout any residual sanitizing solution from the tank as this will contaminate the machine with bacteria.

#### PART 6 STARTING THE MACHINE

#### ICE CREAM PRODUCTION (BATCHING PROCESS)

After washing, sanitizing and thoroughly rinsing the machine right before its use, as previously described, take the mix from the storing vat, pour the quantity you wish into the cylinder through the hopper, while also respecting minimum and maximum quantities shown in the table.

- Before pouring the mix, make sure that front lid and ice cream door are perfectly closed.
- Pour the desired quantity into the tank.
- By pushing "Production" button, the machine starts the batching process: mix stirring and cooling.
- After a time that can vary in relation to the temperarature and the type of entering mix, an audible alarm warns the operator that ice cream has reached its optimum consistency.
- Now, if you do not take ice cream out, the refrigerating plant starts working cyclically.
- Place an adequately capable tank beneath the ice cream door, turn the knob anticlockwise and then shift it upwards and block the ice cream door in that position by turning the knob clockwise.
- Close the ice cream door again.



#### CAUTION

Never put any objects into the metal grid of ice cream door while the beater is running; door and beater might be damaged.

#### CHANGING ICE CREAM CONSISTENCY

CATTABRIGA delivers the machines according to optimum consistency set, in relation to the working mix. In order to change final ice consistency, push buttons "UP" and "DOWN" on the electronic control panel, when the machine is in production (batching process).

- To get a harder ice cream, press "UP" so as to increase setting number shown on **DISPLAY LEFT**.
- To get a softer ice cream, press "DOWN" so as to decrease setting number i shown on **DISPLAY LEFT**.

#### NOTE

Typical setting value is 10. The new value set by the operator is stored till a new change is carried out.

#### EXAMPLE

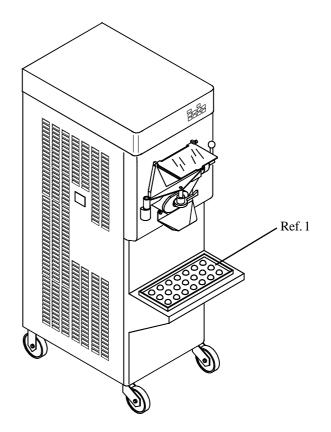
Change consistency from its typical value 10 into 7 (end product with a lower consistency value):

- Press "Production" button.
- Press "DOWN" more times until the number decreased is 7; the new consistency value is immediately stored.
- When the production cycle is completed, the buzzer will sound and LED bar will blink, ice cream conistency will be 7 instead of 10.

#### **ICE CREAM DISPENSE**

When the production cycle is completed, being indicated by an audible alarm, ice cream shall be taken out from the freezing cylinder, as follows:

- Place a tank on the shelf (Ref.1), beneath ice cream outlet shoot
- Push the **DISPENSE** button.
- Dispense ice cream.
- When this oepration is over, press STOP.



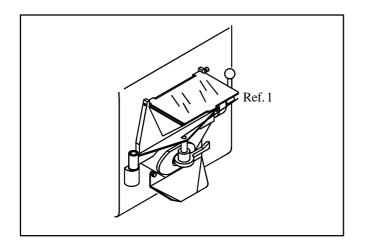
#### ICE CREAM DISPENSING HANDLE

#### LOCKING

• Lock the ice cream gate turning the handle (ref. 1) to the right until it stops.

#### OPENING

- Turn the handle (ref. 1) 90° to the left.
- Lift the handle (ref. 1) and the ice cream gate.
- Lock the ice cream gate on top by turning the handle to the right until it stops.



#### CLOSING

• Repeat the procedures (above) in reverse order.

#### PART 7 CLEANING PROCEDURE

Cleaning and sanitizing schedules for your machine are determined by your local Health Department and/or Department of Agriculture and must be followed accordingly. Check with your local organization prior to determining your cleaning schedule.

After determining your schedule, remove any ice cream

remaining in the barrel. Proceed as follows:

#### PRELIMINARY CLEAN-OUT

- With the machine off and the beater front door closed, use the hose and shutoff valve on the front of the machine to put water in the barrel.
- Turn the machine on then press the Cleanout button and let the beater run for the specified time. The machine will run for about three minutes then automatically stop. This helps prevent unnecessary wear on the sliding shoes and barrel.
- Drain all water from the barrel then open the door to remove the beater.

#### BEATER DISASSEMBLY

• Remove beater with care.

Perform this operation with extreme care.

The beater may be damaged if it falls to the ground or is impacted against another object.

- Remove the beater lip seal from its seat on the beater shaft (ref. Fig. 29).
- Disassemble the scraping blades and O-Ring completely (ref. Fig. 29).

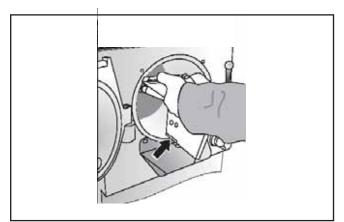


Figure 28

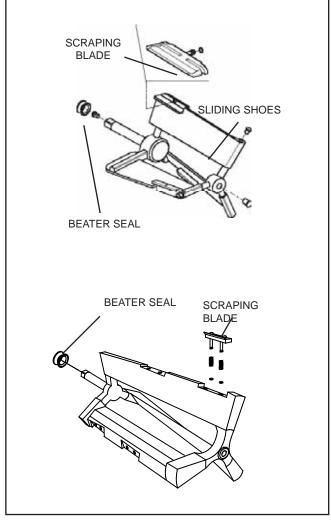


Figure 29

#### FRONT DOOR DISASSEMBLY

• Lift the door locking lever and shift it to the right (ref. Fig. 30).

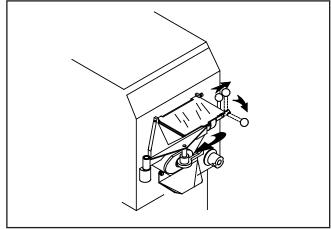
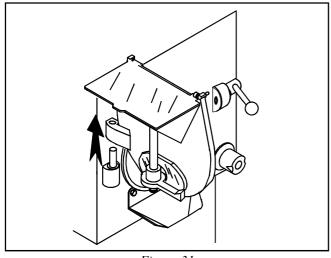


Figure 30

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- Open the door by rotating it on its hinge (ref. Fig. 30).
- Lift the door and remove it (ref. Fig. 31).
- To perform cleaning operations, remove all movable parts and seal with barrel.



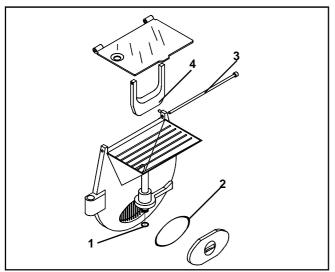


#### ICE CREAM GATE DISASSEMBLY

- Lift the ice cream gate and remove OR (Ref. 1 Fig. 32) from sliding rod of ice cream gate and withdraw it which will also release the lever.
- To perform cleaning, also remove the ice cream gate OR (Ref. 2 Fig. 32).

#### FILL CHUTE COVER DISASSEMBLY

- Remove the horizontal hinge pin (Ref. 3 Fig. 32) then remove the cover.
- The cover is provided with a small bulkhead (Ref.4 Fig.32), which prevents ice cream from going up into the fill chute which must disassembled to be cleaned.



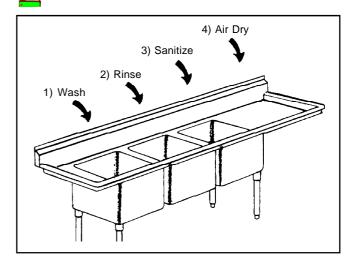


#### **CLEANING OPERATIONS**

• Wash all parts in lukewarm water (80-90 F) using a mild non-foaming detergent. Scrub each of the parts with the cleaning brushes provided in the Start-Up Kit.



Do not use hot water on plastic parts as damage to the parts can result.



Using your three-tank sink, wash, rinse and sanitize all of the disassembled machine parts. Mix the sanitizing solution to a 200ppm concetration with warm water. Allow the parts to soak in the sanitizing solution for 3-5 minutes before removing. Allow the parts to air-dry on the clean, sanitized counter at the end of the sink.



Do not towel of sponge dry these parts.

FRONT DOOR RE-ASSEMBLY (see Part IV)

BEATER RE-ASSEMBLY (see Part IV)

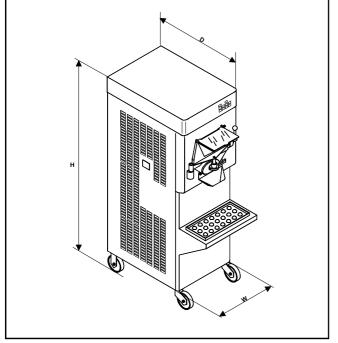
SANITIZING THE MACHINE (see Part V)

#### PART 8 TECHNICAL INFORMATION

Model	Weight Ibs	Power input	Hourly production	Tank capacity
F 45 G	520	4 kW	140 lb**	1,8 gal.
F 90 (G)	635	5,5 kW	198 lb**	4,2 gal.
F 120 (G)	990	9,5 kW	264 lb**	10,3 gal.

\* Output based on 4 batches per Hour at 40% overrun

\*\* Output based on 4 batches per hour at 60% overrun



Measuring Dimensions

#### **TECHNICAL INFORMATION**

MODEL	н	D	W
F 45 G	55"	32"	20"
F 90 (G)	55"	41"	24"
F 120 (G)	57"	45,5"	25,5"

#### PART 9 MANTEINANCE

Any servicing operation requiring the opening of machine panels must be carried out with machine set to stop and disconnected from main switch!

Cleaning and lubricating moving parts is forbidden!



## Repairs of electrical and freezing plants must be carried out by skilled engineers!

Operations necessary to proper machine running are such that most of servicing is completed during production cycle.

Servicing operations, such as cleaning of parts in contact with the product, replacing of beater seal, disassembling of beater assembly are to be carried out at the end of a working day, so as to speed up serving operations required.

Here below you can find a list of routine servicing operations:

#### • Cleanout and replacement of beater seal

Cleaning should be carried out at the end of a working day. While replacement of beater seal is necessary only after checking or in the event that product drips inside drip tray.

Cleanout of beater assembly

At the end of a working day

Cleanout of sliding shoes

At the end of a working day

• Cleanout of panels

To be carried out daily with neutral soap , seeing to it that cleansing solution never reaches beater assembly at its inside.

• Cleanout and sanitization At the end of each working day, according to procedures described in section Part VII.



Never use abrasive sponges to clean machine and its parts, as it might scratch their surfaces.

Your CATTABRIGA machine has been designed, engineered and manufactured to achieve high performance and long durability.

The life expectancy of a machine, any machine, does not depend only on the quality of its components and design, but also on the beneficial effects of basic maintenance procedures.

It is important to you, therefore, to become familiar with a few of these basic procedures:

- Remove O-rings only with the O-ring extractor supplied with the machine.
- Clean the machine according to the instructions.
- Lubricate all O-rings and seals, as instructed.
- The wearing or the improper cleaning of the beater shaft seals, will result in leakage from the rear. Check the drip chute pans frequently and replace seals, when so necessary.
- Replace any O-ring that has a nick in it.

If not replaced, it will leak and interfere with the proper performance of the machine.

- When all the spare parts supplied with the machine are used, re-order immediately. Do not wait until the part is required again.
- NEVER use the AUTO position for washing, sanitizing and initially filling the freezing cylinder.



During the washing and sanitizing period, run the machine only for the time strictly necessary for this operation.Prolonged use of the beater in the Cleaning position may cause severe damage to the machine.

• Always wash metal, plastic or rubber parts in lukewarm water. NEVER, NEVER USE HOT WATER!



If your Model is an air cooled machine, its efficiency depends on the air cooled condenser. The fins of the condenser must be cleaned every two or three months to assure efficiency.

#### PART 10 TROUBLESHOOT GUIDE

IRREGULARITY	CAUSE	PROCEDURE
Machine does not start	Main switch is off	Switch it on
	Machine unplugged	Check and plug in
	Machine is not set at PRODUCTION	Check push button for PRODUCTION is lit
	Front lid is not closed well	Check front lid closure
Compressor starts and then stops after a few seconds without ice cream	Watercooled machine: water does not circulate	Open water tap
being thick		Check that hose is neither squashed nor doubled up
	Aircooled machine:	Check that rear of machine air does not circulate is at least 50 cm from wall. Clean condenser from obstructions
After 15 minutes processing mix has not frozen and the	No gas	Check leakage and weld
machine returns to Stop	Pressure switch has broken down	Check connection and replace, if need be
Machine runs but no ice cream comes from ice cream door	No sugar in the mix	Allow to thaw, then modify or replace the mix
Machine works but ice cream is too soft	Too much sugar in the mix	Modify or replace the mix
Mix in drip drawer	Beater seal missing or ruined	Install if missing Replace if ruined
Ice cream comes out from behind front lid	Gasket missing or not properly installed	Check and fix or replace
Bacteria tests show too high bacteria charge	Too high bacteria charge in the mix	Improve preparation procedure by sanitizing all containers, spoons, etc., and have mix analyzed before pouring it into the machine
	Machine not clean enough	Empty and thoroughly wash the machine. Carry out sanitizatio.