



ICE PEAK MACHINE

Operator's Manual



Release Date: July 24, 2003

Publication Number: M620202001OPR

Revision Date: April 01, 2014

Revision: D

Visit the Cornelius web site at www.cornelius.com for all your Literature needs.

The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. It is assumed that appropriate safety precautions are taken and that all local safety and construction requirements are being met, in addition to the information contained in this manual.

This Product is warranted only as provided in Cornelius' Commercial Warrant applicable to this Product and is subject to all of the restrictions and limitations contained in the Commercial Warranty.

Cornelius will not be responsible for any repair, replacement or other service required by or loss or damage resulting from any of the following occurrences, including but not limited to, (1) other than normal and proper use and normal service conditions with respect to the Product, (2) improper voltage, (3) inadequate wiring, (4) abuse, (5) accident, (6) alteration, (7) misuse, (8) neglect, (9) unauthorized repair or the failure to utilize suitably qualified and trained persons to perform service and/or repair of the Product, (10) improper cleaning, (11) failure to follow installation, operating, cleaning or maintenance instructions, (12) use of "non-authorized" parts (i.e., parts that are not 100% compatible with the Product) which use voids the entire warranty, (13) Product parts in contact with water or the product dispensed which are adversely impacted by changes in liquid scale or chemical composition.

Contact Information:

To inquire about current revisions of this and other documentation or for assistance with any Cornelius product contact:

www.cornelius.com

800-238-3600

Trademarks and Copyrights:

This document contains proprietary information and it may not be reproduced in any way without permission from Cornelius.

This document contains the original instructions for the unit described.

CORNELIUS INC
101 Regency Drive
Glendale Heights, IL
Tel: + 1 800-238-3600

Printed in U.S.A.

TABLE OF CONTENTS

Safety	1
Safety Instructions	1
Read and Follow all Safety Instructions	1
Safety Tips	1
Qualified Service Personnel	1
Shipping And Storage	1
Installation	3
Connection To Main Power Supply	5
Operation	7
Preparing Product	7
Programming Electronic Touch Pad	8
Enter Time Programming on Initial Installation or in the Event of a Time Change	8
Setting Defrost Timer (Night Setting)	9
Operate in Automatic Mode (with Defrost Timer Activated)	9
Operate in Manual Mode (without Defrost Timer Activated)	9
Setting the 12 or 24 Hour Display	9
Setting the oF or oC Temperature Display	10
Viewing the Bowl Temperature	10
“FILTER CLEANING” Alarm	10
“SYSTEM OVER TEMPERATURE” Alarm	10
Traditional Rocker Switch Model	11
Dispensing Product	12
Consistency Adjustment	12
Cleaning and Sanitizing Procedures	13
Daily Cleaning	13
Maintenance	17
Removing and cleaning the filter (Weekly)	17
Cleaning the Condenser (Monthly)	17
Replacing the Light Bulbs (As Needed)	18
Lid Lights	18
Rear Merchandiser Lights	18
Seal Maintenance	19
Bell Shaped Seal	19
Spindle Bushing Seal	19
To Replace Spindle Bushing	19
Bowl Gasket (located at rear of bowl)	20
O-Ring Maintenance	20
Preventive Maintenance Checklist	21
Preventive Maintenance (Every 3 to 6 Months)	21
Optional Accessories	22
Security Kit Installation	22
Installing Locking Clip	22
Auto Fill Installation and Operation	22
Troubleshooting Guide	25

SAFETY

SAFETY INSTRUCTIONS

Read and Follow all Safety Instructions

Read and follow all safety instructions in this manual and on the machine (decals and labels).

Read and understand all applicable OSHA (Occupation Safety and Health Administration) safety regulations before operating the machine.

SAFETY TIPS

- Carefully read all safety messages in this manual and safety signs on the machine.
- Keep safety signs in good condition and replace missing or damaged safety signs.
- Learn how to operate the machine and how to use the controls properly.
- Do not let anyone operate the machine without proper training.
- Keep your machine in proper working condition and do not allow unauthorized modifications to the machine.

QUALIFIED SERVICE PERSONNEL

CAUTION — Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES.

SHIPPING AND STORAGE

CAUTION - Refrigeration equipment must remain upright to avoid damage to the compressor. Always ship, carry, store, and handle the machine in an upright position to prevent the oil contained in the compressor from flowing into the cooling circuit.

INSTALLATION

1. Cut the straps from the box and lift it up off the machine (see Figure 1).

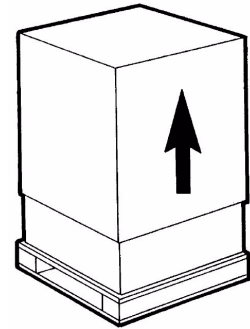


FIGURE 1

2. Positioning the machine:
 - The machine must be well ventilated. Leave an 8" (20 cm) clearance on the sides and back of the machine to allow proper ventilation (see Figure 2).
 - Avoid installing the machine near a heat source. Heat sources to avoid are: Ovens, coffee machines, cold or frozen beverage dispensers, or ice machines (equipment with compressors that expel hot air through its vents).
 - This machines should not be located near dust producing units such as a Powdered Cappuccino or Cocoa dispenser.
 - A room temperature between 59°F (15°C) and 77°F (25°C) is recommended.
 - The reversible (front to back) lit merchandising covers allow the operator to face the machine in either direction (Figure 2).

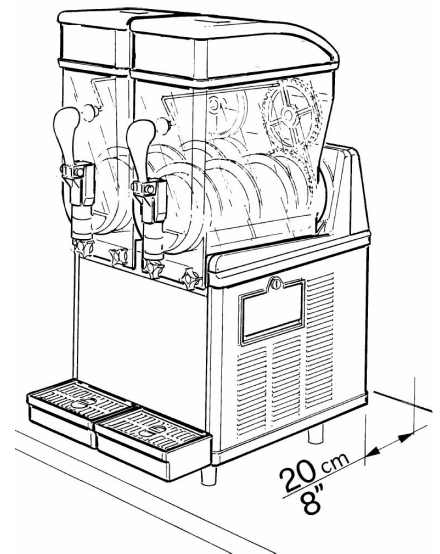


FIGURE 2

ATTENTION: Remove the shipping pin, attached to tag located behind each bowl, before starting machines.

3. Remove Shipping Pin:
 - A. Lift up and remove rear back-lit merchandiser panel (see Figure 3).

NOTE: Some units may have dual rear back-lit merchandiser panels, these function in the same manner as the single panel rear merchandisers.

- B. Pull out each pin attached to each tag (see Figure 3).
 - C. Replace rear back-lit merchandiser panel.

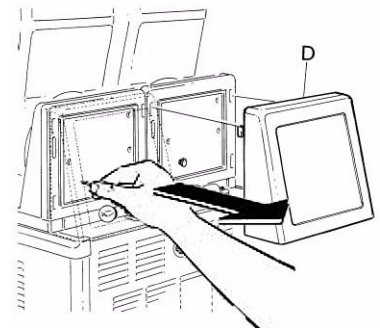


FIGURE 3

4. Installing the Top Lid Merchandiser (requires Phillips head screwdriver):
 - A. Unplug the cord to the lid and remove the lid from the machine.
 - B. Remove the 4 hole plugs over the front (2) screws middle (near rocker switch) and back screws then remove these 4 screws with a Phillips head screwdriver. Remove the black top part of the cover from the clear plastic base (see Figure 4.)
 - C. Slide the merchandiser header around the outside edge of the lid's clear plastic base. Position bottom edge of header in grooved area (see Figure 5).
 - D. Reassemble the black top cover onto the clear plastic base. The top edge of header should slide into black top cover grooved area (see Figure 5). Replace the screws. Replace the hole plugs (the angled plug goes in the rear hole, and the two large plugs go in the two front holes and the small plug goes in the center hole by the rocker switches).
 - E. Replace assembled lid on machine and reattach cord.
5. Installing the Rear Back-lit Merchandiser:
 - A. Bend or pinch any existing artwork in the middle of the back-lit merchandiser and pull it from the rear merchandising display casing (see Figure 6).
 - B. Slide the left corner edges of the new art into the left top and bottom casing edges.
 - C. Bend the art slightly and insert the right side of art into the right top and bottom casing edges.
 - D. Smooth out art until all edges are properly inserted into the casing.

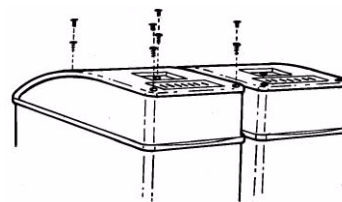


FIGURE 4

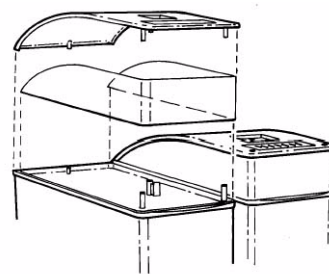


FIGURE 5

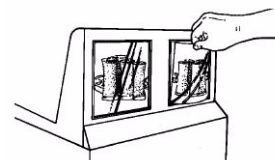


FIGURE 6

CONNECTION TO MAIN POWER SUPPLY

ATTENTION: Before inserting the plug into the electrical outlet, carefully read the following the precautions.

- The electrical safety of this machine can only be achieved if the machine is properly connected to a grounded, electrical receptacle that is in compliance with current national safety standards. The manufacturer cannot be held responsible for damage and/or injury caused by failure to connect the unit to an appropriate source of power.

Electrical Information for the 1 Bowl Unit

115V/60Hz	920 watts	8 amps	15 amp circuit breaker
220V/60Hz	874 watts	3.8 amps	15 amp circuit breaker
230V/50Hz	530 watts	2.3 amps	10 amp circuit breaker

Electrical Information for the 2 Bowl Unit

115V/60Hz	1320 watts	13.8 amps	20 amp circuit breaker
220V/60Hz	1840 watts	8 amps	15 amp circuit breaker
230V/50Hz	940 watts	7.3 amps	10 amp circuit breaker

Electrical Information for the 3 Bowl Unit

115V/60Hz	1817 watts	15.8 amps	20 amp circuit breaker
220V/60Hz	2415 watts	10.5 amps	15 amp circuit breaker
230V/50Hz	1420 watts	10.5 amps	15 amp circuit breaker

NOTE: For a safe and correct installation, connect the unit to a dedicated outlet/circuit breaker. U.S.A. cord plug supplies with unit:

- 1 Bowl 115V 15 Amp Plug
- 2 Bowl 115V 20 Amp Plug
- 3 Bowl 115V 20 Amp Plug

ATTENTION: Altering the cord or plug will void the warranty.

- Do not alter the cord or plug in any way.
- The entire length of the power supply cord must not, in any way, be compressed (bent or bunched together) nor may extension cords be used.
- Do not obstruct the ventilation and heat dispersion grill vents on the side and rear panels of the unit. An insufficient ventilation process may reduce the efficiency of the machine, causing it to function inadequately, and cause serious damage to the machine. A minimum of eight inches (20cm) of clearance is necessary on all sides (left, right, top, and rear).

OPERATION

PREPARING PRODUCT

ATTENTION: Make sure that the mixture has a 13% minimum Brix (sugar content). A lower concentrate could seriously damage the mixing parts, as well as the gear motors. **NEVER USE ONLY WATER.**

1. Dilute and mix the product, according to the directions given by the manufacturer, in a separate container if using product concentrate (instead of ready-to-use product) (see Figure 7). Never pour dry powder, crystals, or concentrate into a dry bowl.



FIGURE 7

2. Slide the merchandising lid either forward or toward the back of the bowl until the “stops” reach the edge of the bowl. (It is not necessary to remove the merchandising cover.) When sliding lid back make sure that no droplets of water come off lid. Pour the prepared product into the bowl (see Figure 8). Do not spill any material on lid or on bowl. There is a minimum and maximum fill line on the bowl. Do not overfill or run the unit without enough product. Running unit with product below the minimum full line may cause damage to the unit.
3. Insert the plug into a dedicated electrical outlet.

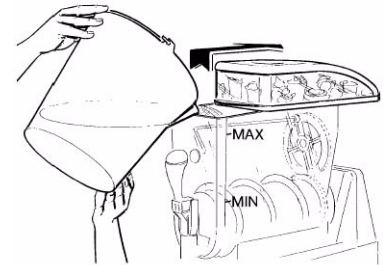


FIGURE 8

PROGRAMMING ELECTRONIC TOUCH PAD

Lower the cover, use a coin or other object to turn the keyless lock to the horizontal position, in order to access the operating panel.

Main Power Switch

Turns unit ON.

Selects 12/24 time or F°/C° temperature display when turned ON while simultaneously depressing the auger button.

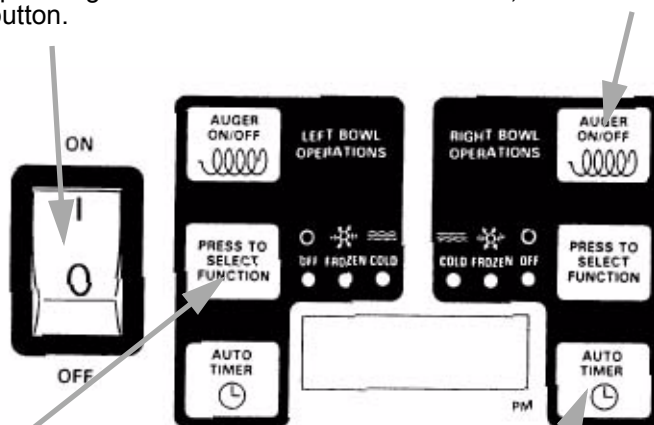
Sets current time when turned ON while simultaneously depressing the "Press To Select Function" button.

Auger ON/OFF Button

Turns auger ON and OFF when main power switch is ON.

Must be ON to permit defrost time to be reset.

Must be ON to activate the "Press To Select Function" button to select manual "OFF", "FREEZE", or "COOLING" functions.



Press To Select Function Button

Used to manually select "OFF", FREEZE", or "COOLING" functions when auger is turned ON.

Accesses defrost timer reset mode when depressed for an extended period when auger is turned ON.

Locks in hours, minutes and final time settings after they are reset using the "Auto Timer" button.

Does not function when light on "Auto Timer" button is illuminated.

"Auto Timer" Button

Turns auto defrost mode ON or OFF (light on switch indicates when auto defrost mode is activated).

Used to adjust the hours and minutes settings when readjusting current time or auto defrost timer.

Enter Time Programming on Initial Installation or in the Event of a Time Change

1. Turn the power switch OFF.
2. Press and hold the left "Press To Select Function" button and turn ON the power switch. Release the "Press to Select Function" button when the hour digits start blinking.
3. Set the hour by pressing the "Auto Timer" clock button until the appropriate hour is shown.

NOTE: When using a 12 hour clock the time is P.M. when the dot at the bottom right corner of the LED display is lit; A.M. when dot is not lit.

4. Press the left "Press To Select Function" button to set the minutes, then press the "Auto Timer" clock button until the appropriate minutes are set.
5. Press the "Press To Select Function" button one more time to save your settings.

Setting Defrost Timer (Night Setting)

1. Turn the power switch ON. Make sure the "Auto Time" is OFF (light on button is not lit).
2. Press the "Auger ON/OFF" button ON for the side you are setting.
3. Press and hold the "Press To Select Function" button until you hear a long beep and the LED, "Cold" and the "Auto Timer" clock light begins to blink.
4. Press the "Auto Timer" clock button to set the hour you want it to turn to refrigeration mode, (defrost mode) and then press the "Press To Select Function" button to save the hour setting.
5. Press the "Auto Timer" clock button to set the minutes to complete time setting that you want it to turn to refrigeration mode (defrost mode). Then press the "Press To Select Function" button to save the minute setting. The "Cold" light will turn off and the "Freeze" light and "Auto Time" light will begin blinking.
6. Set the time you want the machine to turn to freezing mode by following steps 1 - 5 above. Then press the "Press To Select Function" button to save the time settings for freeze mode. The freeze light should be blinking.

NOTE: Once the settings have been saved, the unit will keep the settings, even when the power switch is turned OFF.

NOTE: When the light on the "Auto Timer" clock button is "ON", the defrost timer is activated. To turn OFF the defrost timer, press the "Auto Timer" clock button(s) until the light(s) on the clock button(s) turns off.

Operate in Automatic Mode (with Defrost Timer Activated)

1. Turn power switch ON and wait for LED display to light up.
2. Press auger button ON for the side you are setting.
3. To operate in defrost mode press the "Auto Timer" button until it is illuminated.
4. When setting automatic times, please keep in mind it will take time for the frozen product to become liquid or vice versa.

Operate in Manual Mode (without Defrost Timer Activated)

1. Turn the power switch ON and wait for LED display to light up.
2. Make sure the clock button is OFF (LED light on clock button should not be lit up).
3. First turn auger on by pressing the "Auger ON/OFF" button until it beeps.

NOTE: The auger must be on before the unit will allow the cooling or freezing mode to be activated).

4. Then select refrigeration or freezing mode by pressing the "Press To Select Function" button until the light under the selection you desire is lit up.

NOTE: In the cooling mode, the LED will read the actual temperature of the product (the temperature setting is preset to NSF standards and is not adjustable.) In the "Freeze" or "Off" mode the LED will read the current time.

Setting the 12 or 24 Hour Display

1. Turn the power switch OFF.
2. Press and hold the left "Auger On/Off" button and turn the power switch ON. Release the "Auger On/Off" button when either "12" or "24" are shown (indicates the current hour view).
3. Press the "Auto Timer" button until the desired hour display type is shown (12 to 24).
4. Press the "Press to Select Function" button until the desired temperature display type is shown (°F or °C).
5. Press the "Press to Select Function" button until the current time is displayed to store the changes. The unit is now ready for use.

Setting the °F or °C Temperature Display

1. Turn the power switch OFF.
2. Press and hold the left “Auger On/Off” button and turn ON the power switch. Release the “Auger On/Off” button when either “12” or “24” are shown (indicates the current hour view).
3. Press the “Press to Select Function” button until either °F or °C is shown on the display.
4. Press the “Auto Timer” button until the desired temperature display type is shown (°F or °C).
5. Store the change by pressing the “Press to Select Function” button until the current time is displayed. The unit is now ready for use.

Viewing the Bowl Temperature

1. Turn On the auger on the side that you want to display the bowl temperature (press the “Auger On/Off” button).
2. Press the “Press to Select Function” button until the “Cold” LED is lit. The display will now show the current bowl temperature in either °F or °C depending on which was selected in the *Setting the °F or °C Temperature Display* section.

“FILTER CLEANING” Alarm

A filter cleaning alarm will activate when the unit is running hot due to insufficient internal air circulation. When this occurs a “Filtr” message will appear on the touch pad LED display readout and an intermittent audible tone will also sound to alert the operator of this condition.

The “Filtr” message will appear when the alarm activates (a beeping sound every 4-5 seconds). To determine the condition that caused the alarm and correct problem, see list of conditions below:




- Condition: The filter is dirty and needs to be cleaned.
Corrective Action: Clean and replace filter following instructions (Removing and Cleaning Filter).
- Condition: The unit is positioned too close to a wall or other object restricting air flow and causing the machine to run at a higher temperature.
Corrective Action: Reposition unit to maximize ventilation space (Installation Instructions).
- Condition: The filter is not properly installed.
Corrective Action: Properly install filter (Removing and cleaning filter).
- Condition: The unit has been installed near a heat source, such as a coffee machine, ice maker or cold beverage machine which expels hot air from its vents, causing the machine to run at a high temperature (installation near a heat source should be avoided)
Corrective Action: Reposition unit to maximize ventilation space.

“SYSTEM OVER TEMPERATURE” Alarm

A system over temperature alarm will activate as a safety precaution when the unit has overheated to protect the compressor.

- The system automatically goes to “OFF” status where the compressor’s operations is stopped, while augers will keep working to avoid forming ice blocks.
- When this occurs an “Err” message will appear on the touch pad LED readout accompanied by a continuous buzzer sound to alert the operator of this condition.
- When this alarm activates, turn off all switches. Then determine the condition. (See “Filter Cleaning” Alarm Section for Conditions and Corrective Actions)

TRADITIONAL ROCKER SWITCH MODEL

1. Turn ON the main power switch (D) (see Figure 9)
2. Each bowl is controlled by three switches which have the following functions:
 -  (E) activates the mixing parts/spiral auger;
 -  (F) activates the freezing of the product;
 -  (G) activates the refrigeration of the product (night/defrost setting).

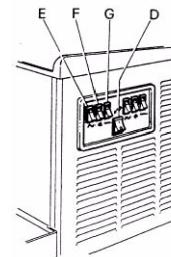


FIGURE 9

To obtain a slush

Select the (E) switch to activate the mixing parts/spiral auger and select the (F) switch to activate the freeze mode.

NOTE: There is a 4 minute delay before the compressor will start.

To obtain cold (night/defrost) drinks

Select the (E) switch to activate the mixing parts/spiral auger and select the (G) switch to activate the refrigeration mode.

Stand-by mode setting

Select the (E) switch to activate the mixing parts/spiral auger and the (G) switch to activate refrigeration mode to keep the product(s) in bowl(s) overnight.

Defrost Timer Operating Instructions

1. SETTING CURRENT TIME - Rotate the program disc, in the direction of the arrows, to align the correct time of day with the time of day mark. Figure 10 shows the timesetting of 7:00.
2. SETTING DEFROST MODE - Set the defrost period by pushing the switch actuator toward the outer edge of the program disc. Freeze time is set by pushing the switch actuators toward the center of the time switch. Figure 10 shows a defrost time from 11:00 to 6:15. The light and dark shaded areas of the program disc indicate day and night respectively. Each actuator is equivalent to 15 minutes.
3. All switches (power, auger, refrigeration, and freeze) must be ON for defrost timer to properly function.

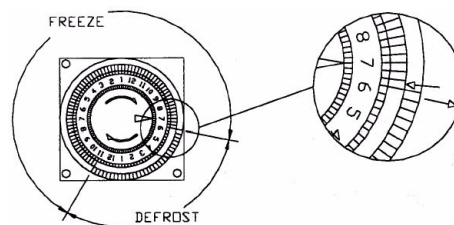


FIGURE 10

NOTE: The timer has a battery back-up. The battery back-up feature will work for 2 weeks without power, this feature will fail if power is not restored. The battery is nickel cadmium that will last from 6 to 8 years if properly charged, it is not replaceable.

Dispensing Product

1. Position the cup under the dispensing valve (C).
2. Lower the dispensing lever (B) (see Figure 11).

ATTENTION: If the machine is turned off at night, with full or partially full bowls, a layer of solid ice may form on the surface due to the natural separation of the unmixed (non-moving) product. Remove superficial ice to prevent damage to the mixing auger before turning the machine ON.

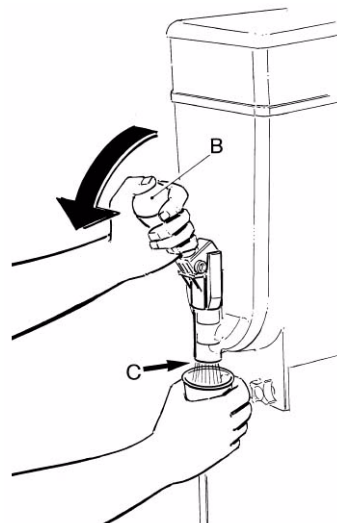


FIGURE 11

Consistency Adjustment

ATTENTION: To prevent the product from becoming too thick:

- **Electronic Models** - Push the left and right “Press To Select Function” keys to the Cold Drink position.
- **Rocker Switch Models** - Turn OFF both of the Freeze Switches.
- **Refill the bowl** when the product level inside the bowl is below the minimum fill line.

1. Unplug the machine.
2. Check that the product level is in the proper range (is must be above the minimum and below the maximum fill level).
3. Remove the merchandiser.
4. Change the thickness of the product by turning the screw (D) on the back of the bowl, as shown on Figure 12. Turn the screw clockwise for thinner product or counterclockwise for thicker product. The indicator gauge (D1), located on the back of the bowl, shows the degree of adjustment (+/-). (+) = thicker, (-) = thinner.

NOTE: This (D1) is an indicator gauge only. To adjust consistency, turn screw on top (D).

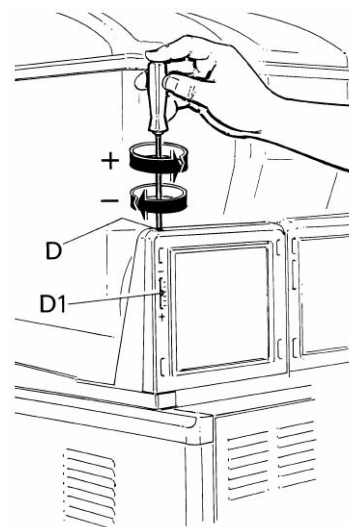


FIGURE 12

CLEANING AND SANITIZING PROCEDURES

CAUTION: Disconnect the unit from its power supply prior to cleaning or sanitizing the unit. Failure to do so may result in electric shock.

DAILY CLEANING

For the machine to function properly, it is important that the cleaning procedures be carried out daily, according to the following instructions.

1. Turn off the main power switch and empty the bowl of any remaining product. Fill the bowl with hot water (not boiling) to help melt off any sugar deposits and drain the water prior to proceeding to step (2).
2. Unplug the unit.
3. Pull the mixing rod (E) out by pushing it slightly backwards to remove it from its position (see Figure 13).

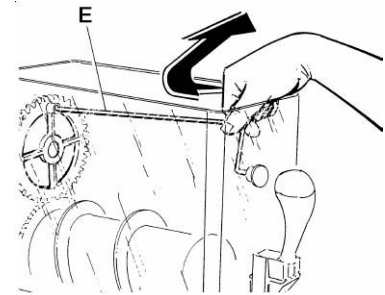


FIGURE 13

4. Unscrew and remove the two knobs (F) then lower the bowl to drain out any remaining product through the dispensing valve (see Figure 14).

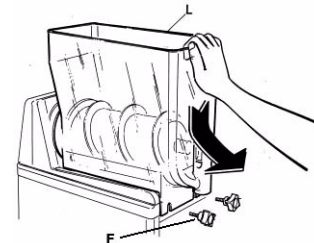


FIGURE 14

5. Remove the dispensing valve:
 - Simultaneously apply pressure to the two securing tabs (H) and lift the dispensing valve (C) to pull it out of its position (see Figure 15).

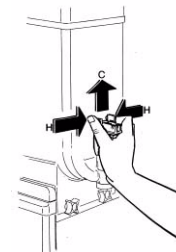


FIGURE 15

6. Remove the bowl (L) by pulling it downwards (see Figure 14).

7. Unscrew the securing bolt (M) clockwise. Pull off the auger (N) and remove the shaft seal (O) and the bowl seal (P) (see Figure 16).

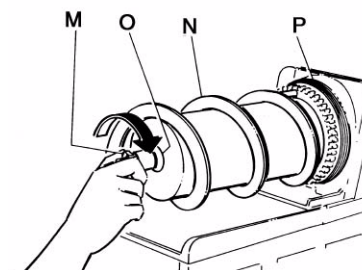


FIGURE 16

8. Remove the drain tray by lifting up on the front edge, while lowering the rear edge, and then lift it off the unit (see Figure 17).

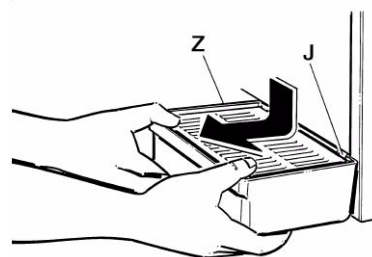


FIGURE 17

CAUTION: Avoid the use of abrasive cleaners which can damage the finish. Do not put the parts in a dishwasher. Dishwasher may damage some parts such as the clear plastic bowl(s), auger gears, and top mixing bar.

9. Thoroughly wash each part that has been removed in steps 1-8 and the condensation tray (Q), as well as the freezing cylinder (R) with warm water and mild dish washing detergent. Rinse well with clear water and allow to air dry (see Figure 18). Reassemble with clean hands.

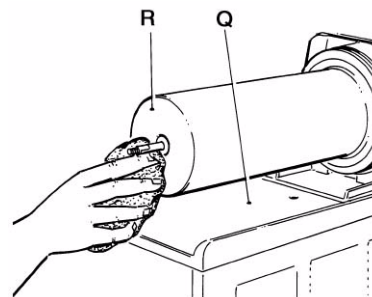


FIGURE 18

10. Reassemble the mixing unit, according to the following procedures (see Figure 16):
 - Moisten the bowl seal (P) with water and slip it into place at the back of cylinder with ribs angled toward back of freezer.
 - Apply food grade lubricant to the inside of the shaft seal (O) and put the shaft seal (O) back on with the flared end of seal toward back of freezer.
 - Put the auger assembly (N) back on the evaporator.
 - Secure all the parts in place by screwing on the bolt (M) counterclockwise.

11. Reassemble the bowl (L), positioning it into place. Make sure that the bowl fits tightly to the bowl seal (see Figure 19). We also suggest that the rear part of the bowl be moistened with water or lightly lubricated at the point where it fits together with the seal to make it easier to install the bowl.
 - The lower right and left bowl flanges should fit on the outside of each black triangle edge. **The lid cover will not fit properly if this is not correctly positioned.**

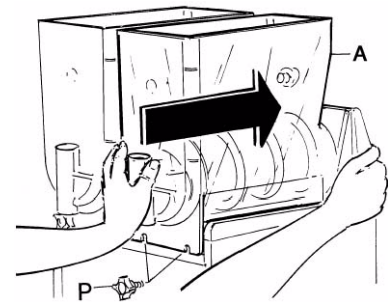


FIGURE 19

12. Secure the bowl (A) by keeping it lifted until the bolt (S) is aligned with its hole (K), then tightly screw on the knobs (P) without exerting excessive pressure to avoid cracking the bowl (see Figure 20).

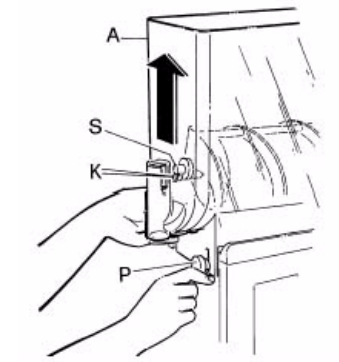


FIGURE 20

13. Reassemble the mixing rod (O) so that its gears are aligned with the lower gear ring. This will allow the front pin to fit perfectly in its position on the bowl (Figure 21).
14. Reinstall the drain tray (see Figure 17). Make sure that the condensation drainage tube (J) is reinserted into its correct fixed position, allowing it to drain into the tray.
15. Plug the unit back into appropriate power supply.
16. After the cleaning and reassembly of the mixing parts and bowl as per above instructions, fill the bowl with a mix of water and an approved sanitizing solution (example Stera Sheen), according to the measures specified.

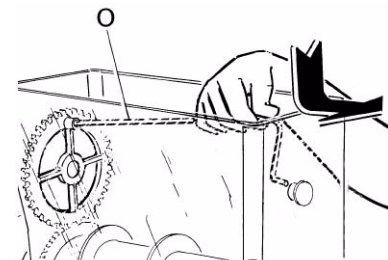


FIGURE 21

NOTE: Add 4 ounces of Stera Sheen to 4 gallons (15 liters) of 120° F (50° C) water to achieve a concentrate of 100 parts per million.

17. Start the mixing part of the machine for about 10 minutes to sanitize all parts. Follow the cleaning solution specifications.
18. Drain the cleaning solution as follows:
 - Unscrew the two knobs (F) (see Figure 14);
 - Then lower the bowl to drain out any remaining product through the dispensing valve (C).
19. Screw the knobs in (F) to fix the bowls.

ATTENTION: Lamp cover must be unplugged. Electric shock could occur if cover or power cord come in contact with solution. Do not submerge lamp cover in water/liquid.

20. With a clean cloth wash the underside of the lamp cover with warm water and a mild detergent. Allow this part to air dry and then wipe it with a clean cloth which has been dipped in the sanitizing mixture. Prepare a minimum of 4 gallons (15 liters) of sanitizing solution (Stera Sheen Label or equivalent) following the manufacturer's instructions.

MAINTENANCE

WARNING: Disconnect the unit from its power supply before performing any maintenance procedures. Failure to do so could result in electric shock, injury from hazardous moving parts, or serious burns from hot surfaces.

REMOVING AND CLEANING THE FILTER (WEEKLY)

This should be done weekly or more often if necessary. In order to guarantee an efficient refrigerating system, it is essential that the filter be properly cleaned, according to the following procedures.

1. Unplug the machine.
2. Unscrew the knob (K) in order to remove back panel (see Figure 22).

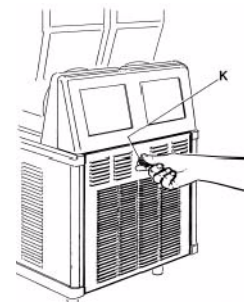


FIGURE 22

3. Remove the filter (W) held inside the back panel (X) and clean it properly using water or vacuum (see Figure 23).
4. Replace the clean filter inside the back panel and reinstall the back panel on the machine (see Figure 22).

ATTENTION: Failure to maintain a clean filter and condenser will cause damage to the unit and consequently void the warranty.

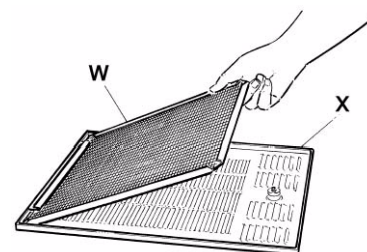


FIGURE 23

CLEANING THE CONDENSER (MONTHLY)

This cleaning should be done monthly or more often if necessary. In order to guarantee an efficient refrigerating system, it is essential that the condenser be properly cleaned at regular intervals, according to the following procedures.

1. Unplug the machine.
2. Remove the back panel and filter. Remove the dust that has accumulated between the fins of the condenser using a dry brush or vacuum (see Figure 24).

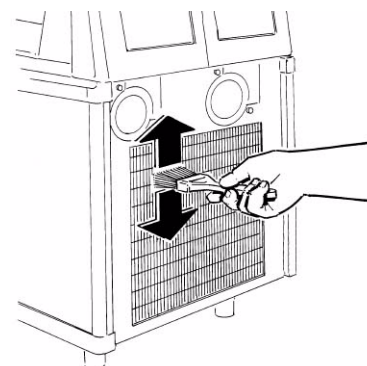


FIGURE 24

REPLACING THE LIGHT BULBS (AS NEEDED)

NOTE: Unplug the machine for all light bulb replacement.

Lid Lights

1. Unplug the cord to the lid and remove the lid from the machine.
2. Insert a quarter in the slot on the small panel on the top of the cover (DA) and rotate the quarter to pop the panel open to access the light bulb in the merchandising cover (see Figure 25).

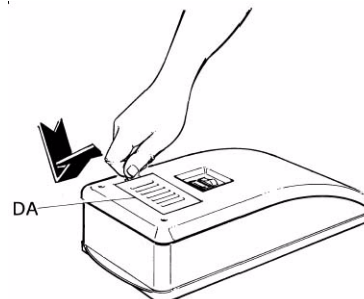


FIGURE 25

3. Carefully remove the light bulb while holding the merchandising cover with the top open, (see Figure 26).
4. Insert the new bulb and replace the light cover.
5. Place lid on machine and plug lid cord back into lid.

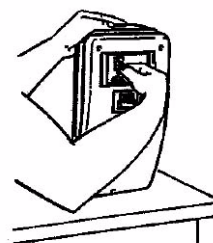


FIGURE 26

Rear Merchandiser Lights

1. Remove the rear merchandiser by sliding it upwards to access the light bulb from the rear back-lit merchandiser (see Figure 27).



FIGURE 27

2. Then remove the light bulb(s) (BA) (see Figure 28).
3. Insert the new bulb(s) (BA).
4. Reassemble the rear back-lit merchandiser (AA) making sure that its slots are inserted properly in the relevant brackets (CA) (see Figure 28).
5. Plug machine into the power supply.

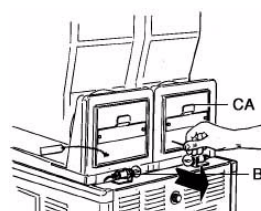


FIGURE 28

SEAL MAINTENANCE

Bell Shaped Seal

Replace every 1 to 6 months depending on conditions of use and level of maintenance and lubrication. This part should be lubricated during reassembly after every cleaning.

Spindle Bushing Seal

Replace every 6 to 12 months depending on conditions of use and level of maintenance. Replacement of spindle bushing should **ONLY** be done by a qualified service technician.

To Replace Spindle Bushing

Items required:

- Flat Head Screwdriver
- Rubber Mallet
- PM Kit 1030380

PM Kit Contents:

- (2) Bell Shaped Seals P/N 1030326
- (2) Evaporator Spindle Bushings P/N 1030327
- (4) Dispense Valve O-Rings P/N 1030398
- (1) Kit of 2 Special Tools P/N 1030381

1. Remove the Rulon bushing using a flathead screwdriver as shown.

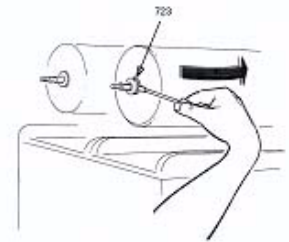


FIGURE 29

2. Insert the brass guide tool on the drive shaft (see Figure 30). Slip the bushing over the guide tool and firmly press into place.

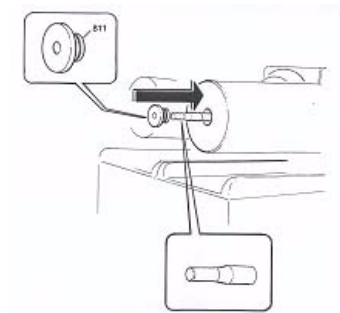
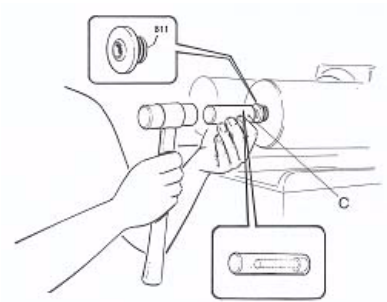
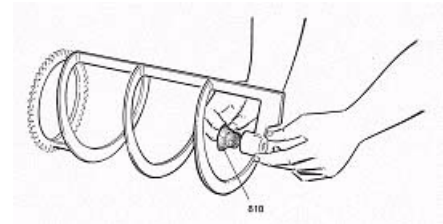


FIGURE 30

3. Using the special tool "C" (see Figure 31) and a rubber mallet, gently seat the bushing into place as shown.

**FIGURE 31**

4. Lubricate the bell shaped seal and reassemble onto the evaporator/auger shaft.

**FIGURE 32**

Bowl Gasket (located at rear of bowl)

Replace as necessary depending on the conditions of use and level of maintenance. This part should be lubricated during re-assembly after every cleaning.

O-Ring Maintenance

The dispense valve O-rings should be replaced every 6 to 12 months or as necessary when wear is apparent. Lubricate the O-rings each time they are replaced or the dispense handle is removed for cleaning.

PREVENTIVE MAINTENANCE CHECKLIST

A preventive maintenance visit should be performed every 3 to 6 months depending on the usage and environment where the unit is placed. The following procedures should be performed during a preventive maintenance visit. Use PM kit # 1030380.

Model # _____

Serial # _____

Date _____

PM Completed by _____

PREVENTIVE MAINTENANCE (EVERY 3 TO 6 MONTHS)

- o Document model and serial number of equipment
- o Check product temperature and consistency for proper setting - adjust if necessary
- o Insure product is being mixed properly and is within specification (check and document brix - most products should be around 13% - refer product manufacturer's recommendations for exact recommended brix)
- o Check for leaks at gaskets, o-rings, front shaft seal etc.
- o Empty product from bowls
- o Disassemble unit completely
- o Clean and sanitize all disassembled parts
- o Clean and sanitize top condensation tray and freezing barrel
- o Clean out condensation tube with sanitizer and long brush
- o Check condition of all panels, bowls, lids - replace if necessary
- o Check mixing rods and augers for wear, check mixing rod bearing for wear - replace if necessary
- o Check for bowl knobs (two per bowl to lock down bowl in front) - replace if necessary
- o Check operation of lights in lid - replace light bulbs if necessary
- o Clean re-usable condenser filter (if so equipped)
- o Check condition of filter and replace if necessary
- o Clean condenser
- o Check condition of bowl gasket and replace if necessary
- o Replace o-rings on dispense valves (lubricate)
- o Check drive shaft. Surface should be smooth and drive shaft secure (no excessive movement in or out)
- o Replace Rulon bushing seal in front of evaporator using extraction tool
- o Replace bell shaped rubber shaft seal on front of freezing barrel (lubricate inside seal)
- o Lubricate parts where appropriate (dispense valve o-rings, inside of shaft seal, inner rim of bowl where it meets with the bowl seal)
- o Re-assemble unit and refill with product
- o Verify and document defrost timer setting, operation, and time of day setting. Adjust if necessary
- o Check thermostat setting on non-electronic controlled models. Thermostat setting should be between 1 1/2 and 2
- o Verify compressor operation and freezer controller operation
- o Verify ventilation is adequate (8" on sides and back)
- o Check electrical connections and wiring
- o Check fan operation (1 condensor fan and 2 gear motor fans) and clean fan or blades if necessary
- o Review proper periodic care and cleaning instructions (disassembly, cleaning, sanitizing, lubrication and re-assembly) with store personnel. Review proper product mixing and handling instructions with store personnel. Demonstrate and train store personnel to follow proper procedures (stress importance of store level maintenance ie lubrication, filter cleaning etc.)
- o Make sure store personnel have appropriate supplies (lubricant and sanitizer) to care for machine.

The above preventive maintenance procedures are expected to take approximately one hour.

OPTIONAL ACCESSORIES

SECURITY KIT INSTALLATION

Installing Locking Clip

1. Close the tap.
2. Attach a padlock in hole provided on the locking clip (see Figure 33).

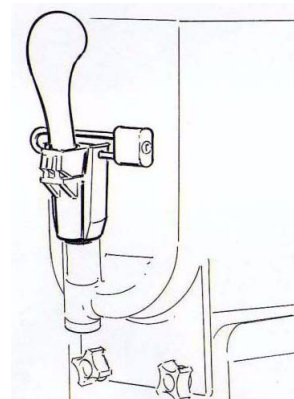


FIGURE 33

AUTO FILL
BOWL COVER WIRING

AUTO FILL INSTALLATION AND OPERATION

The Cornelius Auto Fill Kit is intended for use with 5:1 BIB (Bag-In-Box) syrup concentrates. Other ratios are available by request. To install and operate the Auto Fill Kit, follow the instructions below.

1. Place the Auto Fill black box in close proximity to the Granita Auto Fill dispenser.
2. Attach a 1/2" I.D. (1.3cm) beverage grade water supply line to the male water inlet fitting on the side of the Auto Fill box using the supplied fitting and worm gear clamp.
3. Attach 3/8" I.D. (0.95cm) syrup supply lines to the syrup inlet fittings on each Shurflo® Brix Pump. Secure the syrup lines using the supplied Oetiker clamps.
4. Insert 3/8" O.D. (0.95cm) beverage grade tubing into the John Guest® fittings located at the top of the Auto Fill box. There are individual outputs for syrup and water.

NOTE: The 3/8" O.D. (0.95cm) tubing is not supplied with the Auto Fill Kit and is sold separately. Cornelius part number is 620708970.

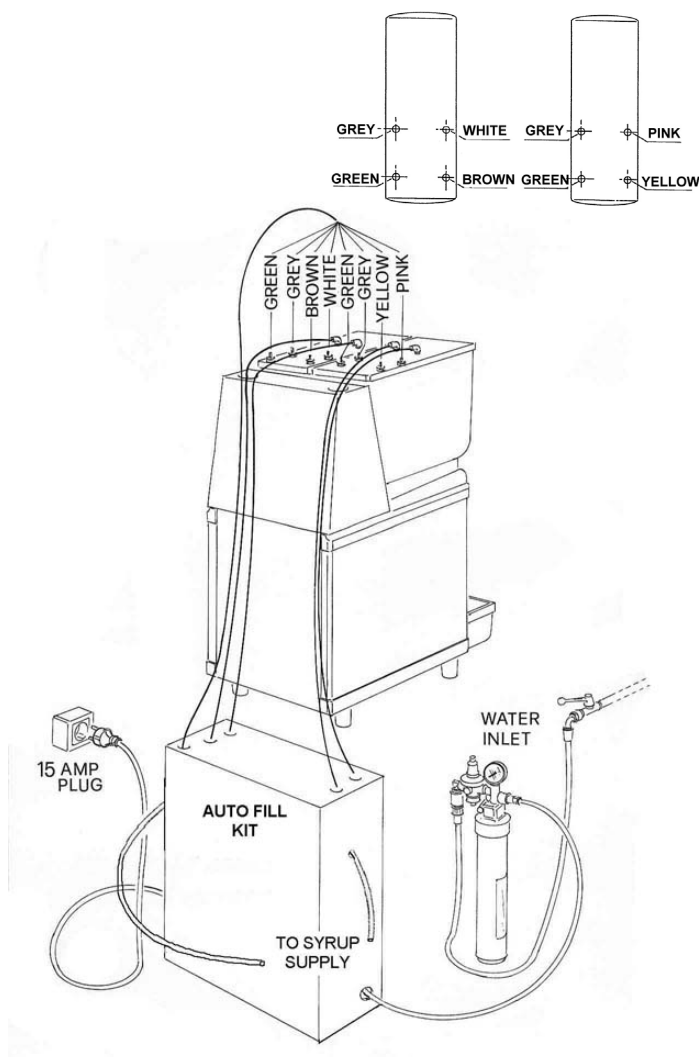


FIGURE 34

5. Remove the lower rear panel from the Granita Auto Fill dispenser. Route the 3/8" syrup and water lines from the Auto Fill box up through the back of the Granita Auto Fill dispenser. Attach a syrup and water line to each respective bowl as shown.
6. Attach the gray wire harness, coiled inside the Auto Fill box, to the liquid level sensing probes on each product bowl lid. Route the gray harness up through the backside of the dispenser and attached the wires as shown.
7. Turn on the water supply and plug the Auto Fill box into the proper power outlet.
8. The water regulator inside the Auto Fill box is factory preset to approximately 43 PSIG (3 bar) which is the preferred setting required to operate the ShurFlo® Brix Pumps.

If adjustment is necessary, loosen nut "B". Turn Nut "A" clockwise to increase the pressure and counter-clockwise to decrease the pressure.

IMPORTANT: DO NOT SET THE WATER PRESSURE HIGHER THAN 50 PSIG (3.4 BAR). REFER TO THE SHURFLO® INSTRUCTIONS PACKAGED WITH THE AUTO FILL BOX FOR INSTRUCTIONS ON PERIODIC CLEANING AND MAINTENANCE OF THE BRIX PUMPS.

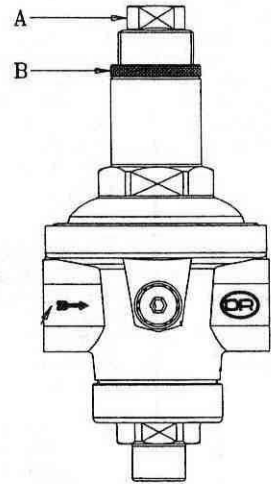


FIGURE35



TROUBLESHOOTING GUIDE

NOTE: The following procedures must be performed by a qualified service technician.

Problem	Possible Cause	Solution
The machine does not cool, or cools only partially, but the compressors are running	<ul style="list-style-type: none"> The space around the machine is inadequate for ventilation Freezer is in defrost The condenser fins are clogged with airborne particles Fan motor is not running Refrigerant is leaking 	<ul style="list-style-type: none"> Allow at least 8" (20cm) between the machine and anything next to it; keep away from heat sources Return to freeze mode Remove the side panels. Using a brush or compressed air clean the condenser Check the fan motor's electrical connections and, if disconnected, reconnect. If still not operating, replace the motor Locate the leak, eliminate it and recharge the system
The machine does not cool or cools only partially, but one or more of the compressors are not running	<ul style="list-style-type: none"> Electrical components of the compressor(s) are not functioning Some electrical connections are not complete One or more of the compressors are malfunctioning No current is coming to the "compressor delay" PC board 	<ul style="list-style-type: none"> Replace the malfunctioning components Check the contacts and correct those that are incomplete Replace the compressor(s) Check the electrical connections to the PC board as well as the transformer feeding the PC board and correct
The machine over-freezes, making the auger movement slow or stopped	<ul style="list-style-type: none"> The product brix is too low The screw setting for the product consistency control system is set too far toward the "+" position The limit switch arm is bent away from the gearmotor and prevents contact The level of the product in the bowl is too low, exposing the auger The compressor PC board contacts don't open 	<ul style="list-style-type: none"> Check the product brix and correct Reset the screw toward the "-" position to produce a thinner consistency product Using pliers, straighten the limit switch arm Add more product or turn the refrigeration "Off" Replace the PC board
The machine is noisy	<ul style="list-style-type: none"> The fan motor blades are hitting internal components 	<ul style="list-style-type: none"> Check and correct
The main power switch is "On". The unit is not running.	<ul style="list-style-type: none"> The fuse(s) are blown The pressure cutout switch has activated Some electrical connections are not complete The main power is not functioning 	<ul style="list-style-type: none"> Replace the fuse(s) Clean the condenser or add ventilation space around the machine (the cutout switch reset is automatic when the conditions are corrected) Check the contacts and correct those that are incomplete Replace the switch
Product is leaking out of the bowl	<ul style="list-style-type: none"> One of the bowl seals is not in place 	<ul style="list-style-type: none"> Replace or reposition the seals

Product is leaking from the dispensing valve	<ul style="list-style-type: none"> • The dispensing valve has been incompletely or incorrectly replaced in its position • The free movement of the dispensing valve is impeded • Dispensing valve o-rings are damaged 	<ul style="list-style-type: none"> • Reassemble and replace • Clean and lubricate the valve and valve cylinder with the lubricant provided with the machine • Replace the o-rings
Product is flowing into drain tray through drainage tube	<ul style="list-style-type: none"> • The bell shaped "shaft" seal between the front of the cylinder and the auger hub has not been reinstalled properly • The bell shaped "shaft" seal or the spindle bushing seal is damaged or worn 	<ul style="list-style-type: none"> • Find the seal and put it back in place • Replace the damaged/worn seal and check the condition of the driveshaft.
The auger and/or the upper mixing unit is not turning	<ul style="list-style-type: none"> • Auger not turned on • Some electrical connections are not complete • The gear motor(s) are malfunctioning 	<ul style="list-style-type: none"> • Turn auger on • Check the contacts and correct the ones that are incomplete • Replace the gear motor(s)
The auger and/or the upper mixing units are creating noises as they rotate	<ul style="list-style-type: none"> • The large red bowl seal is not in position, causing the gear teeth not to mesh • The product brix is incorrect • The bell shaped "shaft" seal has been replaced without lubrication or is damaged • The auger has been incompletely or incorrectly reassembled (ie the auger's gear pins are not properly seated) 	<ul style="list-style-type: none"> • Check and correct • Check the product brix and correct • Replace or Clean and lubricate with the lubricant provided with the machine • Check and correct
There is no light in the merchandising lid or rear merchandising panel	<ul style="list-style-type: none"> • The light bulb is burnt out • The 5 Amp fuse between the transformer and the lamp is blown • The transformer is blown 	<ul style="list-style-type: none"> • Replace (See "Changing the light bulb" section in this manual) • Replace • Replace
The cover does not fit properly on the bowl	<ul style="list-style-type: none"> • The bowl is incorrectly positioned (the lower, outside corner is not over the lower, outside base piece) 	<ul style="list-style-type: none"> • Remove bowl and position properly
"Filtr" or "Err" message appears on the touchpad LED readout	<ul style="list-style-type: none"> • The filter is dirty and needs to be cleaned • The unit is positioned too close to a wall or other object restricting air flow and causing the machine to run at a higher temperature • The filter is not properly installed • The unit has been installed near a heat source, such as a coffee machine, ice maker or cold beverage machine which expels hot air from its vents, causing the machine to run at a high temperature. (Installation near a heat source should be avoided) 	<ul style="list-style-type: none"> • Clean and replace filter following instructions (Removing and Cleaning Filter) • Reposition unit to maximize ventilation space (see installation figures) • Properly install filter see "Removing and cleaning filter" • Reposition unit to maximize ventilation space (see installation figures)

Cornelius Inc.
www.cornelius.com