



Model F144I
OPERATORS MANUAL

Manual No. 513608

Rev.2

This manual provides basic information about the machine. Instructions and suggestions are given covering its operation and care.

The illustrations and specifications are not binding in detail. We reserve the right to make changes to the machine without notice, and without incurring any obligation to modify or provide new parts for machines built prior to date of change.

DO NOT ATTEMPT to operate the machine until instructions and safety precautions in this manual are read completely and are thoroughly understood. If problems develop or questions arise in connection with installation, operation, or servicing of the machine, contact Stoelting.



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A Few Words About Safety

Safety Information

Read and understand the entire manual before operating or maintaining Stoelting equipment.

This manual provides the operator with information for the safe operation and maintenance of Stoelting equipment. As with any machine, there are hazards associated with their operation. For this reason safety is emphasized throughout the manual. To highlight specific safety information, the following safety definitions are provided to assist the reader.

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

If you need to replace a part, use genuine Stoelting parts with the correct part number or an equivalent part. We strongly recommend that you do not use replacement parts of inferior quality.



Safety Alert Symbol:

This symbol Indicates danger, warning or caution. Attention is required in order to avoid serious personal injury. The message that follows the symbol contains important information about safety.

Signal Word:

Signal words are distinctive words used throughout this manual that alert the reader to the existence and relative degree of a hazard.



The signal word "WARNING" indicates a potentially hazardous situation, which, if not avoided, may result in death or serious injury and equipment/property damage.



The signal word "CAUTION" indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury and equipment/property damage.

CAUTION

The signal word "CAUTION" not preceded by the safety alert symbol indicates a potentially hazardous situation, which, if not avoided, may result in equipment/property damage.

NOTE (or NOTICE)

The signal word "NOTICE" indicates information or procedures that relate directly or indirectly to the safety of personnel or equipment/property.

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SECTION 1 SPECIFICATIONS

1.1 DESCRIPTION

The Stoelting Futura F144I and SF144I (with blender) countertop combination shake/softserve freezers are gravity fed. The freezers are equipped with fully automatic controls to provide uniform product. The freezer is designed to operate with almost any type of commercial soft serve and shake mixes available, including ice milk, ice cream, yogurt, and frozen dietary desserts.

The F144 series freezers allow the operator to dispense outstanding soft serve from the left pigot, and thick creamy shakes or smoothies from the right spigot, with the convenience and cost of one unit. The freezer is designed to be used with both barrels in operation. If you desire to use one barrel only, the freezer must be cleaned, sanitized and filled with fresh mix daily. The SF144 freezer includes a blender for mixing fruit and berries into the dairy product for making smoothies. For more information call your authorized Stoelting Serviceperson.

This manual is designed to assist qualified service personnel and operators in the installation, operation and maintenance of the Stoelting Model Futura 144 gravity freezer.



**Figure 1. Model F144I/SF144I Freezer
(SF144I shown)**

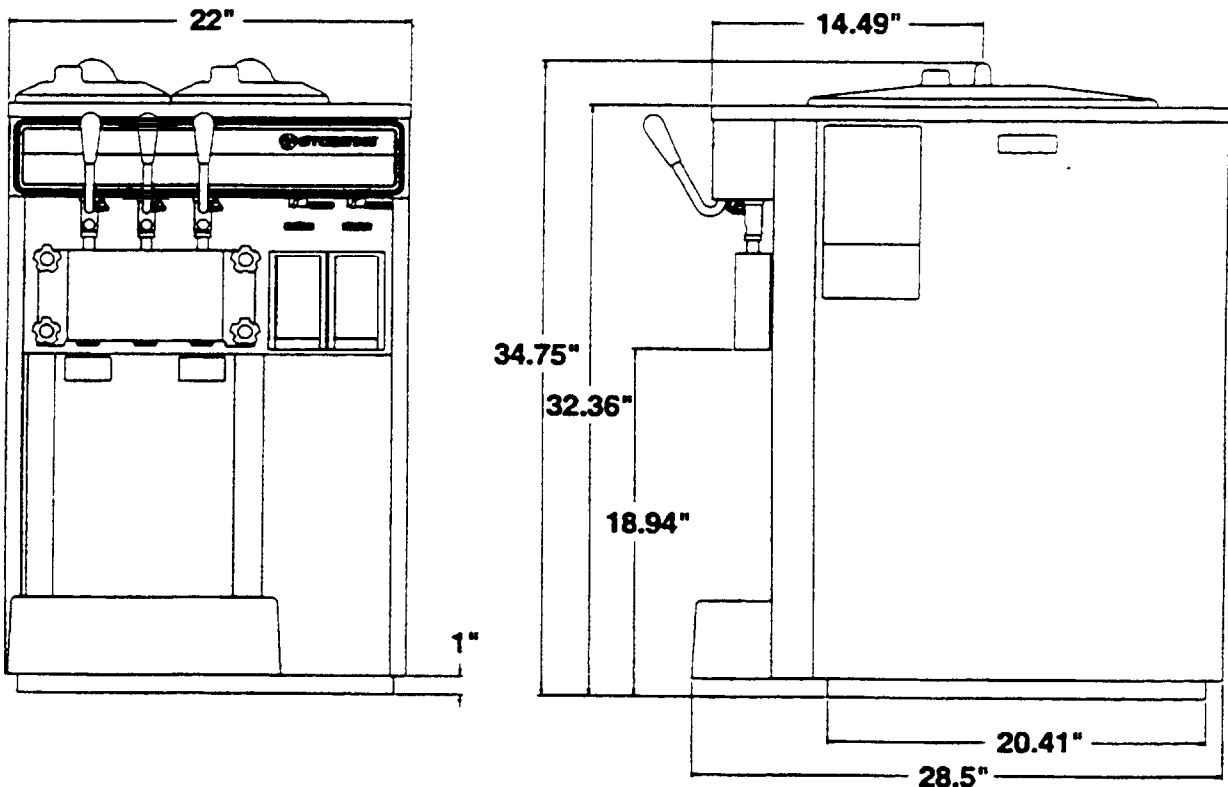


Figure 2. Specifications

1.2 SPECIFICATIONS
MODEL FUTURA 144
COUNTERTOP COMBINATION SHAKE/SOFTSERVE
GRAVITY FREEZER

Dimensions:

Freezer: 22" (56 cm) wide x 28" (72 cm) deep x 34.75" (88 cm) high

Crated: 28" (71 cm) wide x 35 1/2" (89.4 cm) deep x 40.3" (102.4 cm) high

Weight:

Freezer: 385 lbs. (174.6 kg) Crated: 470 lbs. (213.2 kg)

Electrical:

Approximately 11 total running Amps, 20 Amp. maximum fuse or circuit breakers. NEMA 6-20P power cord provided.

Automatic safeguard circuit built into electronic control - protects major freezer components under normal operating conditions.

Refrigerant:

R404a

Compressor:

12,000 B.T.U.H./hr.

Drive Motor:

(2) 3/4 H.P.

Cooling

Air cooled requires minimum 3" air clearance on right and left hand side and rear. Minimum 10" top clearance

Freezing Cylinder Volume

Two cylinders, .85 gallon, 3.4 Quarts (3,22 liters)

Hopper

2 each, 3 Gallons (11.35 liters) each refrigerated and insulated.

SECTION 2 INSTALLATION INSTRUCTIONS

2.1 SAFETY PRECAUTIONS

Do not attempt to operate the freezer until the safety precautions and operating instructions in this manual are read completely and are thoroughly understood.

Take notice of all warning labels on the freezer (Fig. 3). The labels have been put there to help maintain a safe working environment. The labels have been designed to withstand washing and cleaning. All labels must remain legible for the life of the freezer.

Labels should be checked periodically to be sure they can be recognized as warning labels.

If danger, warning or caution labels are needed, indicate the part number, type of label, location of label, and quantity required along with your address and mail to:

STOELTING, INC.
ATTENTION: Customer Service
502 HWY 67
Kiel, Wisconsin 53042-1600

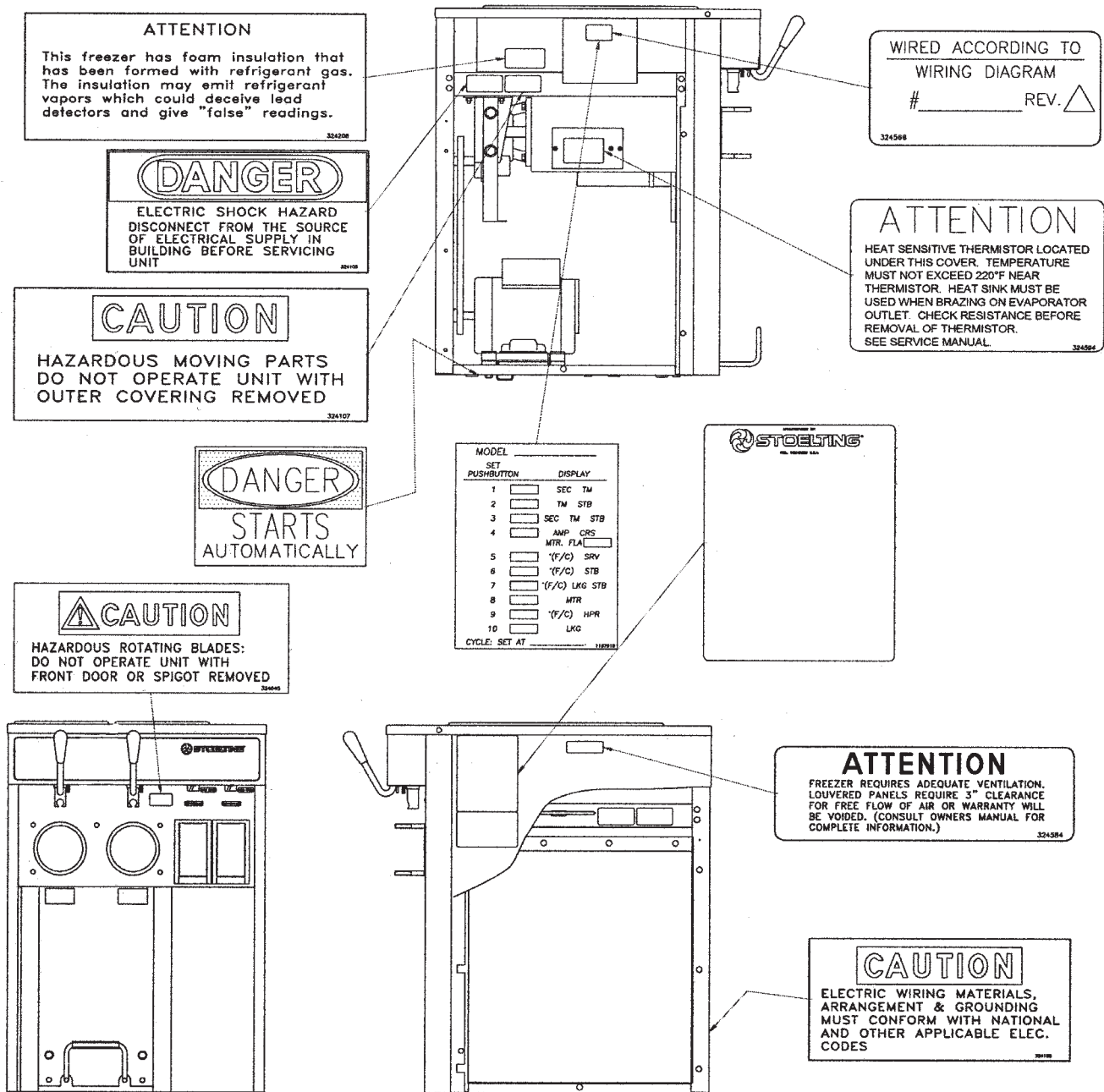


Fig. 3. Warning Label Locations

2.2 SHIPMENT AND TRANSIT

The freezer has been assembled, operated and inspected at the factory. Upon arrival at the final destination, the complete freezer must be checked for any damage which may have occurred during transit.

With the method of packaging used, the freezer should arrive in excellent condition. **THE CARRIER IS RESPONSIBLE FOR ALL DAMAGE IN TRANSIT, WHETHER VISIBLE OR CONCEALED.** Do not pay the freight bill until the freezer has been checked for damage. Have the carrier note any visible damage on the freight bill.

If concealed damaged and/or shortage is found later, advise the carrier within 10 days and request inspection. The customer must place claim for damages and/or shortages in shipment with the carrier. **Stoelting, Inc. cannot make any claims against the carrier.**

2.3 FREEZER INSTALLATION

Installation of the freezer involves moving the freezer close to its permanent location, removing all crating, setting in place, assembling parts, and cleaning.

- A. Uncrate the freezer.
- B. Accurate leveling is necessary for correct drainage of freezer barrel and to insure correct overrun. Place a spirit level on top of the freezer at each corner to check for level condition. If adjustment is necessary, level the freezer by turning the bottom part of each leg in or out. Then separate freezer base gasket and install with the seam to the back and the flat to the bottom.
- C. Air cooled freezers require correct ventilation. The right side of the freezer is the air intake and **must** have a 3" (7.5cm) clearance. Air discharges out of the left side of the unit and must have 3" (7.5cm) clearance. **Do not** obstruct the intake or discharge (Fig. 4).



Fig. 4. Space and Ventilation Requirements

CAUTION

Failure to provide adequate ventilation will void Warranty.

- D. Place both FREEZING CYLINDER OFF-ON switches in the OFF position. (Fig. 9)
- E. Install the drip trays, drain trays, covers and other miscellaneous parts on the freezer. (Fig. 5)



Figure 5. Installing Trays and Inserts (SF144 shown)

- F. Connect the power cord. The plug is designed for 208 or 230 volt/20 amp duty. Check the nameplate on your freezer for proper supply. The unit must be connected to a properly grounded receptacle. The electrical cord furnished as part of the freezer has a three prong grounding type plug (Fig. 6). The use of an extension cord is not recommended. If one must be used, use one with a wire size 12 gauge or heavier with a ground wire. Do not use an adaptor to get around grounding requirement.



WARNING

Do not alter or deform electrical plug in any way. Altering the plug to fit into an outlet of different configuration may cause fire, risk of electrical shock, product damage and will void the warranty.



Figure 6. Power Cord

2.4 FLOOR STAND INSTALLATION

To install the F144 on the floor stand, follow the steps outlined below.

1. Uncrate the floor stand and place in an upright position.

NOTE

Detailed instructions are included with each floor stand.

2. Place a spirit level across the top of the stand to check for level condition, side to side and front to back. If adjustment is necessary, level the stand by turning the bottom part of each caster in or out, then tighten the lock nut, and lock caster.
3. Remove the four legs from the freezer and replace with the four leg adapters provided. Adapters must be fully tightened to the freezer.
4. Place the F144 freezer on the floor stand with the front of the freezer to the door end of the stand. Secure the freezer to the stand with the nuts and lock washers provided. Then separate freezer base gasket and install the seam to the back and the flat to the bottom (Fig. 7).



Fig. 7. F144 with Floor Stand

2.5 INSTALLING PERMANENT WIRING



WARNING

High voltage will shock, burn or cause death. Turn off and lock out main power disconnect before proceeding with installation. Do not operate machine with cabinet panels removed.

Electrical materials, arrangement and grounding must conform with national and local electrical codes. If permanent wiring is required by local codes, the following procedure must be performed:

- A. Remove the back panel.
- B. Disconnect the wires from the terminal block. Disconnect the green ground wire from the grounding stud.

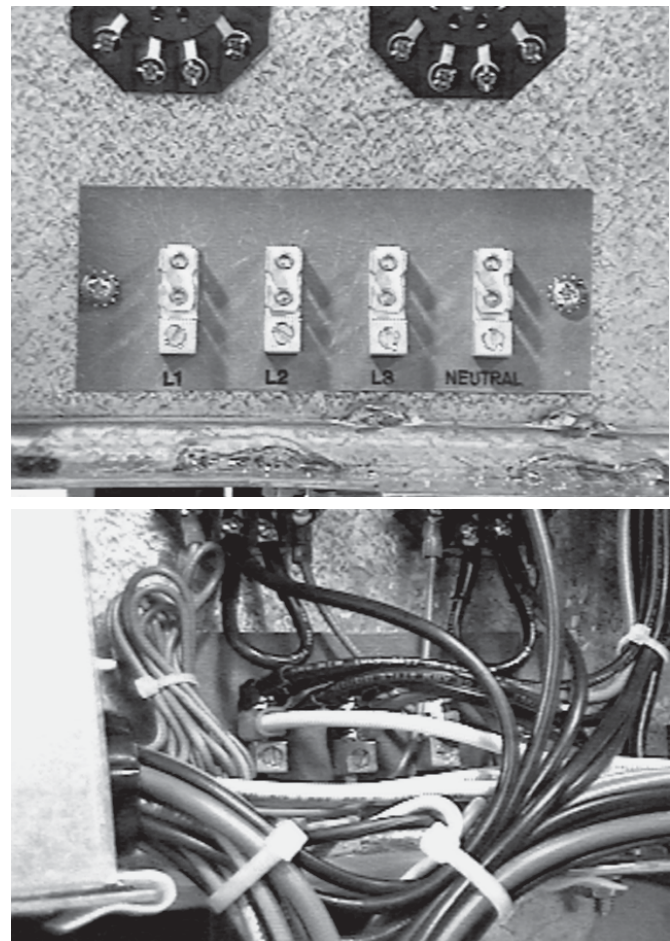


Figure 8. Power Cord Connection

- C. Remove the power cord.
- D. Install permanent wiring according to local code.
- E. Replace the back panel.

SECTION 3 INITIAL SET-UP AND OPERATION

3.1 OPERATOR'S SAFETY PRECAUTIONS

SAFE OPERATION IS NOT AN ACCIDENT; Observe these rules:

- A. **Know the freezer.** Read and understand the Operating Instructions.
- B. **Notice all warning labels on the freezer.**
- C. **Wear proper clothing.** Avoid loose fitting garments, and remove watches, rings or jewelry which could cause a serious accident.
- D. **Maintain a clean work area.** Avoid accidents by cleaning up the area and keeping it clean.
- E. **Stay alert at all times.** Know which switch, push button or control you are about to use and what effect it is going to have.
- F. **Disconnect electrical cord for maintenance.** Never attempt to repair or perform maintenance on the freezer until the main electrical power has been disconnected.
- G. **Do not operate under unsafe operating conditions.** Never operate the freezer if unusual or excessive noise or vibration occurs.

3.2 OPERATION CONTROLS AND INDICATORS

Before operating the freezer, it is required that the operator know the function of each operating control. Refer to Figure 9 and 10 for the location of the operating controls on the freezer. Additional information on the IntelliTec control, including consistency adjustment can be found in Section 4.



WARNING

High voltage will shock, burn or cause death. The OFF-ON switch must be placed in the OFF position prior to disassembling for cleaning or servicing. Do not operate machine with cabinet panels removed.

A. SPIGOT SWITCH

The SPIGOT switch will automatically actuate the auger drive and refrigeration systems when the spigot is opened to dispense product. When the spigot is closed, the drive motor and compressor will remain "on" until the product in the barrel reaches the proper consistency.



Figure 9. Controls

B. Freezing Cylinder Off-On switch

The Freezing Cylinder Off-On switches are two position toggle switches used to supply power to the left or right freezing cylinder control circuit. When the switch is in the OFF position, the refrigeration system and auger will not operate. When the switch is in the ON position, the freezer can be run in the freezing mode or cleaning mode. The freezer will be in the sleep mode until a switch is activated.

NOTE

The control on the left side of the freezer also controls the refrigeration of both mix hoppers. The left Freezing Cylinder Off-On switch must be in the ON position any time there is mix in the freezer, even if the left cylinder is not being used.

C. Push To Freeze Switch

The PUSH TO FREEZE switch is a membrane or "snap" switch used to start the freezing cycle. During initial freeze down, the The Main Freezer Power switch and Freezing Cylinder Off-On switch are placed in the ON position. Next, the PUSH TO FREEZE switch is pressed and held until the drive motor and compressor turn on.

NOTE

After the auger drive motor starts, there is a 3 second delay before the compressor starts.

G. Amber Light

During the normal operation, the amber light next to the PUSH TO FREEZE switch will illuminate after the freezer has been idle for the preset cycles. Before drawing product, press the PUSH TO FREEZE switch. A horizontal status bar on the LCD display will begin to fill the screen as product freezes down. Wait until at least six bars are displayed or the green light is illuminated before dispensing.

NOTE

If the freezer shuts off and alternating green and amber lights flash on the control panel, the freezer is running in the "cab only" mode (both freezing cylinders are turned off) or the freezer is in an error condition. Note the display on the LCD screen. If the screen displays an error, turn the Freezing Cylinder Off/On switch to the OFF position, correct the problem and place the Freezing Cylinder Off/On switch to the ON position. (Refer to Troubleshooting in Section 4).

H. Green Light

The green light is used to indicate that the product has reached the proper consistency and is ready to be dispensed. The light begins to flash at 98% of consistency.

I. Clean Switch

The CLEAN switch is a membrane, or "snap" switch. When the switch is pushed, the freezing cylinder's refrigeration system will be OFF and the auger will rotate for cleaning. The CLEAN message will display on the LCD screen. When the switch is pushed again, the auger will stop and the amber light will flash indicating the freezer is in the CLEAN mode. To exit the CLEAN mode turn the Freezing Cylinder Off/On switch to the OFF position. If the freezer is left in CLEAN for more than 30 minutes, it will go into an error mode. See Section 4 regarding errors.

J. Drive Motor Overload

The internal drive motor overload will trip if the drive motor is overloaded. It will reset after approximately 10-12 minutes. If the drive motor continues to trip, refer to Troubleshooting in Section 4.

K. Mix Low Light Indicator

A MIX LOW message will appear on the LCD display to alert the operator of a low mix condition. The message will display when there is approximately one gallon of mix left in the hopper. When the MIX LOW message is displayed, refill the hopper immediately.

L. Dispense Rate Adjusters

The dispense rate adjuster limits the opening of the spigot. To adjust product dispense rate, turn the adjusting knob clockwise for slower flow and counter-clockwise for faster flow. It takes at least five complete turns of the adjusting knob to make a noticeable difference in the dispense rate.

M. High Head Pressure Cut Out (water cooled models only)

If the head pressure exceeds 445 PSIG (28 bar), the high head pressure cutout will trip. The reset button can be accessed from the top left corner on the right side panel of the freezer.

N. Front Door Safety Switch

The front door safety switch prevents the auger from turning when the front door is removed. The switch is open when the door is removed and closed when the door is properly installed.

O. Menu Navigation Buttons

The Menu Navigation Buttons allow the user to display information regarding the freezer's status of operation as well as adjust product consistency.

Selection Button (SEL) The SEL button is not functional in the normal operation mode. This button is only used by service technicians for freezer calibration.

Set Button (SET) Pressing this button will save a change made to the product consistency setting. Refer to Section 4 for consistency adjustment procedures.

Left Arrow Button (←) Pressing any button on the control panel will automatically illuminate the display. The backlight will turn off several seconds after use. To keep the display constantly light, press and hold the left (←) button for five seconds. The backlight function can be reset to normal operation in the same manner.

Up Arrow Button (↑) Pressing this button will change the value of the product consistency. Refer to Section 4 for consistency adjustment procedures.

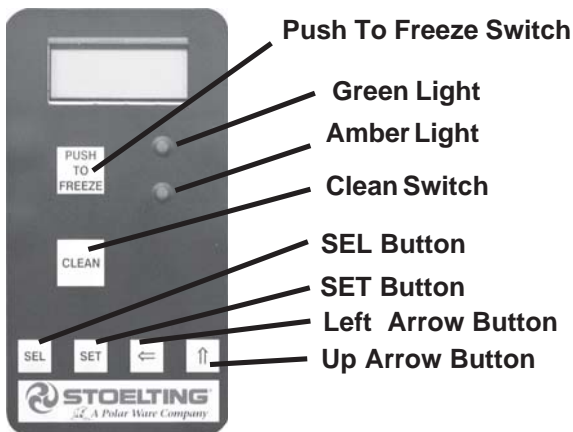


Figure 10. IntelliTec Controller

L. BLENDER POWER SWITCH (SF144 Models Only)

The blender power switch is a two position toggle switch used to supply power to the blender. When the switch is in the OFF position, the agitator will not turn. When the switch is in the ON position, the agitator will be activated every time the blender activation switch is pressed.

M. BLENDER ACTIVATION SWITCH (SF144 Models Only)

The blender activation switch is a two speed, momentary contact switch that will actuate the agitator to blend product when pressed in and held in either the HIGH or LOW speed position. The HIGH speed position is used to blend fruit into dairy mix when making smoothies. The LOW speed position is used during cleaning procedures.

3.3 SANITIZING

Sanitizing must be done after the freezer is clean and just before the hopper is filled with mix. **Sanitizing the night before is not effective.** However, you should always clean the freezer and parts after using it.

THE UNITED STATES DEPARTMENT OF AGRICULTURE AND THE FOOD AND DRUG ADMINISTRATION REQUIRE THAT ALL CLEANING AND SANITIZING SOLUTIONS USED WITH FOOD PROCESSING EQUIPMENT BE CERTIFIED FOR THIS USE.

When sanitizing the freezer, refer to local sanitary regulations for applicable codes and recommended sanitizing products and procedures. **The frequency of sanitizing must comply with local health regulations.** Mix sanitizer according to manufacturer's instructions to provide a 100 parts per million strength solution. Mix sanitizer in quantities of no less than 2 gallons (7.5 liters) of 120°F of water. Allow sanitizer to contact the surfaces to be sanitized for 5 minutes. Any sanitizer must be used only in accordance with the manufacturer's instructions.

CAUTION

Do not allow sanitizer to remain in contact with stainless steel freezer parts for prolonged periods. Prolonged contact of sanitizer with freezer may cause corrosion of stainless steel parts.

In general, sanitizing may be conducted as follows:

- Push the mix inlet regulator into hopper with air inlet (long) tube toward the front of the freezer. (Fig. 11).



Figure 11. Mix Inlet Regulator

- B. Prepare 2 gallons (7.5 liters) of sanitizing solution following manufacturer's instructions. Pour into hopper with mix inlet regulator in place.
- C. Place the FREEZING CYLINDER OFF-ON toggle switch in the ON position and press the CLEAN switch. Check for leaks.
- D. Clean sides of hopper, mix inlet regulator and under-side of hopper cover using a sanitized soft bristle brush dipped in the sanitizing solution (Fig. 12).



Figure 12. Sanitizing Hopper

- E. After five minutes, place a bucket under the spigot and open spigot to drain sanitizing solution. When solution has drained, press the CLEAN snap switch to stop the auger. Allow the freezer barrel to drain completely (Fig. 13).



Figure 13. Spigot Opened and Solution Draining

- F. To sanitize SF144 models with the blender, fill a tall cup with sanitizing solution. Completely immerse the blender's agitator shaft in the sanitizer solution. Do not wipe dry (Fig. 14).

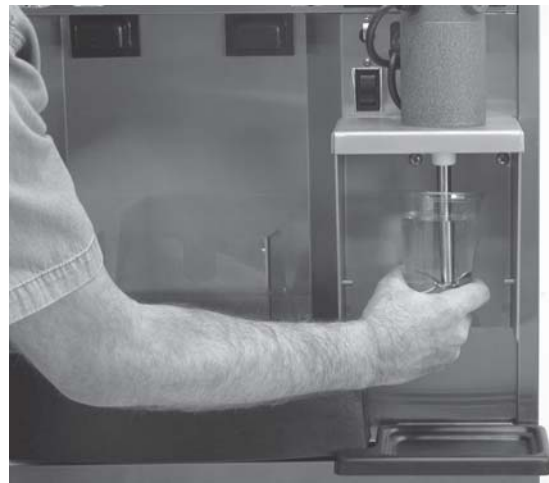


Figure 14. Sanitizing Agitator Shaft (SF144 Model Only)

3.4 FREEZE DOWN AND OPERATION

This section covers the recommended operating procedures to be followed for the safe operation of the freezer.

- A. Sanitize just prior to use.
- B. Place the FREEZING CYLINDER OFF-ON switch in the OFF position.
- C. With spigots open, pour approximately 1 gallon (3.8 liters) of mix into the hopper. Allow the mix to flush out about 8 ounces (0.23 liters) of sanitizing solution and liquid mix. Close the spigot.
- D. Fill hopper with approximately 3 gallons (11.4 liters) of prechilled (40°F or 4°C) mix.

NOTE

Do not overfill the hopper. Mix level must not be higher than 2 inches (5 cm) from the top of the air inlet tube on the mix inlet regulator.

- E. The freezer barrel will automatically fill until it is about 1/2 full. If freezer barrel does not fill, check for obstruction in the mix inlet regulator. If freezer barrel fills over 1/2 full, indicated by low overrun, check for leaks at the mix inlet regulator O-ring or check if the mix inlet regulator was installed correctly or that the freezer is level.
- F. Place the FREEZING CYLINDER OFF-ON switch in the ON position, then press the PUSH TO FREEZE switch until the freezer starts.

NOTE

After the auger drive motor starts, there is a 3 second delay before the compressor starts.

- G. After about 6 to 10 minutes the freezer will shut off and the "SERVE" message will display on the LCD panel. The product will be ready to serve. Freeze down time may be longer for some frozen diet dessert mixes. High ambient temperatures may extend freeze down time.
- H. For normal dispensing, move the spigot handle fully open (Fig. 15).



Figure 15. Dispensing Product

- I. The freezer is designed to dispense the product at a reasonable draw rate. If the freezer is overdrawn, the result is a soft product or a product that will not dispense at all. If this should occur, allow the freezer to run for approximately 30 seconds before dispensing additional product. After a while the operator will sense or feel when the freezer is beginning to fall behind, and will slow down on the rate of draw so as not to exceed the capacity. Spigot Rate Adjusters are located under the Header Panel, to the immediate right of each Spigot Handle. Turning the Spigot Rate Adjuster counterclockwise will decrease the dispense rate.
- J. **Do not** operate the freezer when the MIX LOW message is displayed or with less than 1-3/4" (4.4 cm) of mix in the hopper. Refill the hopper immediately.

NOTE

The freezer has a standby and sleep mode. When the freezer is not used, after a preset number of freezing cycles, it will enter the standby mode (followed by sleep mode) and remain there until someone draws a product or pushes the push-to-freeze switch. In the sleep mode, the freezer will keep the product below 45°F (7.2°C). Sleep modes are not to be used in place of cleaning and sanitizing. Frequency of cleaning and sanitizing is determined by Federal, State, and local regulatory agencies.

3.5 MIX INFORMATION

Mix can vary considerably from one manufacturer to another. Differences in the amount of butterfat content and quantity and quality of other ingredients have a direct bearing on the finished frozen product. A change in freezer performance that cannot be explained by a technical problem may be related to the mix.

When changing from one type of mix to another such as yogurt to Vitari, you may have to change the mix inlet regulator and/or control settings. Please call your distributor for further information.

Proper product serving temperature varies from one manufacturer's mix to another. Mixes should provide a satisfactory product in the 18° to 20°F (-7° to -6°C) range.

When checking the temperature, stir the thermometer in the frozen product to read the true temperature.

Mix **does not** improve with age. Old mix, or mix that has been stored at too high a temperature, can result in a finished product that is less than satisfactory in taste and appearance. To retard bacteria growth in dairy based mixes, the best storage temperature range is between 36° to 40°F (2.2° to 4.4°C).

Some products tend to foam more than others. If excess foam should occur, skim the foam off with a sanitized utensil and discard. Periodically, stir the mix in the hopper with a sanitized utensil.

3.6 REMOVING MIX FROM THE FREEZER

To remove the mix from the freezer, refer to the following steps:

- A. Remove the mix inlet regulator from the hopper by pulling straight up (Fig.16).



Figure 16. Removing Mix Inlet Regulator

- B. Place the FREEZING CYLINDER OFF-ON switch in the ON position and push the CLEAN switch to rotate the auger. Allow the mix to agitate in the freezer barrel until the mix has become a liquid, about 5 minutes.
- C. Drain the liquid mix by opening the spigot. A bucket or container should be placed under the spigot to catch the liquid mix (Fig. 17).
- D. Place the Freezing Cylinder OFF-ON switch in the OFF position.



Figure 17. Draining Mix

3.7 CLEANING THE FREEZER

NOTE

The frequency of cleaning the freezer and freezer parts must comply with state and local health regulations.

After the mix has been removed from the freezer, the freezer must be cleaned. To clean the freezer, refer to the following steps:

- A. Close the spigot and fill the hopper with 2 gallons (7.5 liters) of cold tap water.
- B. Place the FREEZING CYLINDER OFF-ON switch in the ON position while pushing the CLEAN switch to rotate the auger.
- C. Allow the water to agitate for approximately five minutes.

NOTE

If freezer is left in CLEAN for more than 30 minutes, it will go into error. Turn the FREEZING CYLINDER OFF-ON switch OFF for 10 seconds to clear the error.

- D. Open the spigot to drain the water. Remember to place a bucket or container under the spigot to catch the water. When the water has drained, turn the FREEZING CYLINDER OFF-ON switch to the OFF position. Allow the freezer barrel to drain completely.



CAUTION

Hazardous Moving Parts

Revolving blender agitator shaft can grab and cause injury. Remove watches and jewelry prior to operating blender. Keep hands and clothing away from revolving agitator. The Power switch must be placed in the OFF position for cleaning and when not in use.

- E. Fill a tall cup with clean 110°F (43°C) water. Press the low speed on the blender activation switch and allow agitator to run for 10 to 15 seconds (See Figure 18).



Figure 18. Cleaning Agitator Shaft

- F. Repeat steps A through E using a mild detergent solution.

3.8 DISASSEMBLY OF FREEZER PARTS



CAUTION

Hazardous Moving Parts

Revolving auger shaft can grab and cause injury. Place the **FREEZING CYLINDER OFF-ON switch** in the OFF position before disassembling for cleaning or servicing.

Inspection for worn or broken parts should be made at every disassembly of the freezer for cleaning or other purposes. All worn or broken parts should be replaced to ensure safety to both the operator and the customer and to maintain good freezer performance and a quality product. Two normal wear areas are the auger flights and front auger support bushing (Fig. 19). Frequency of cleaning must comply with the state and local health regulations.

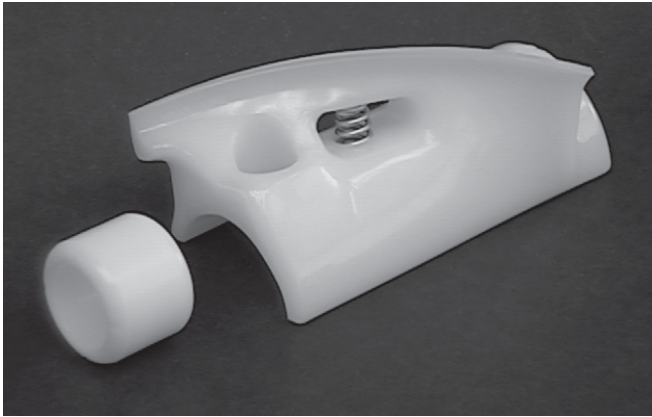


Figure 19. Auger Flight Wear and Front Auger Support Bushing Wear

- D. Place the FREEZING CYLINDER OFF-ON switch in the OFF position.

To disassemble the freezer, refer to the following steps:

- A. Remove the mix inlet regulator from the hopper by pulling straight up.
- B. Remove the front door by turning off the circular knobs and then pulling the front door off the studs (Fig. 20).



Figure 20. Removing Front Door

- C. Remove the rosette caps from the front door. Push the spigot body through the bottom of the front door and remove. (Fig. 21).

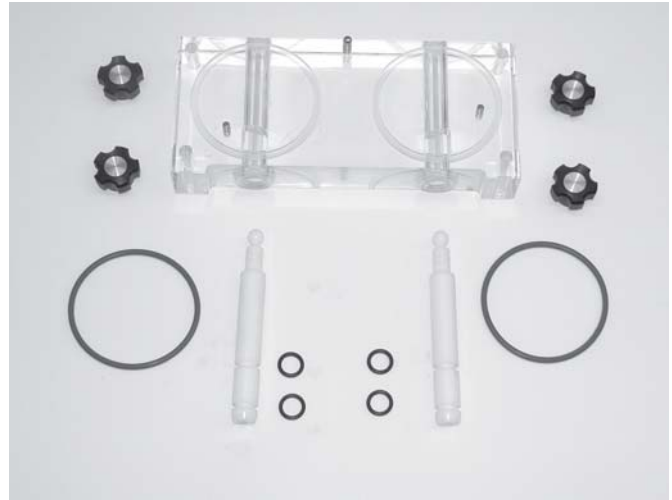


Figure 21. Front Door Disassembly

- D. Remove the clear acrylic splash guard from the blender.
- E. Remove the blender's agitator from the agitator shaft. Grasp the agitator shaft in one hand, and turn the agitator in a clockwise direction with the other hand (Fig. 22).

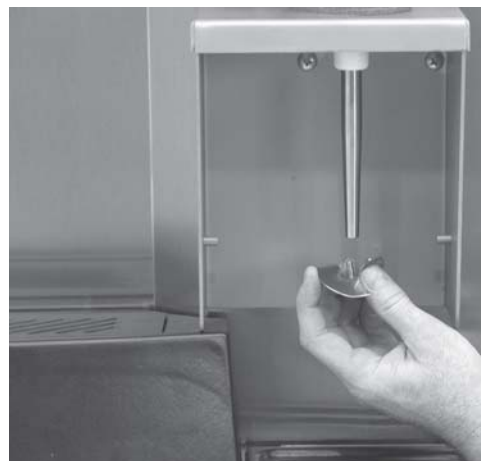


Figure 22. Removing Agitator From Shaft

- D. Remove the front auger supports and bushings (Fig. 23).



Figure 23. Removing Auger Supports

- G. Remove the auger assemblies from the freezer. Pull the augers out of the freezer barrel slowly. As the augers are being pulled out, carefully remove each of the plastic flights with springs.
- H. Keep the rear of the auger shafts tipped up once they are clear of the freezer barrels to avoid dropping rear seals.
- I. Wipe socket lubricant from the drive end (rear) of the auger with a cloth or paper towel.
- J. Remove the rear seals.
- K. Remove all O-rings from parts by first wiping off the lubricant using a clean paper towel. Then squeeze the O-ring upward with a dry cloth (Fig. 24). When a loop is formed, roll out of the O-ring groove.



Figure 24. Removing O-ring

CAUTION

Do not use any type of sharp object to remove O-rings. Using tools to remove O-rings may damage spigot and O-rings.

3.9 CLEANING THE FREEZER PARTS

Place all loose parts in a pan or container and take to the wash sink for cleaning. To clean freezer parts refer to the following steps:

- A. Place all parts in warm mild detergent water and clean with brushes provided. Rinse all parts with clean hot water.
- B. Wash the hopper and freezer barrel with warm detergent water and brushes provided.
- C. Clean the rear seal surfaces from the inside of the freezer barrel with warm detergent water.

NOTE

Clean the auger drive socket located inside the barrel at the rear seal area. Use clean cloth or paper towel for this purpose.

- D. Clean the drip trays and insert with a soap solution. Rinse with clean hot water.

3.10 SANITIZE FREEZER AND FREEZER PARTS

- A. Use a sanitizer mixed according to manufacturer's instructions to provide a 100 parts per million strength solution. Mix sanitizer in quantities of no less than 2 gallons (7.5 liters) of 120°F water. Allow the sanitizer to contact the surfaces to be sanitized for 5 minutes. Any sanitizer must be used only in accordance with the manufacturer's instructions.
- B. Place all parts in the sanitizing solution, then remove and let air dry.
- C. Using this sanitizing solution and the large barrel brush provided, sanitize the rear of the barrel and drive area by dipping the brush in the sanitizing solution and brushing the rear of the barrel.

3.11 ASSEMBLY OF FREEZER

To assemble the freezer parts, refer to the following steps:

NOTE

Petrol-Gel sanitary lubricant or equivalent must be used when lubrication of parts is specified.

NOTE

The United States Department of Agriculture and Food and Drug Administration require that lubricants used on food processing equipment be certified for this use. Use lubricants only in accordance with the manufacturer's instructions.

- A. Assemble all o-rings onto parts dry, **without lubrication**. Then apply a thin film of sanitary lubrication to exposed surfaces of the O-rings. Apply a thin film of sanitary lubricant to metal part of rear seal. Also apply a thin film of sanitary lubricant inside the hole of the front of the auger.
- B. Assemble the rear seals onto the augers with the large end to the rear. Be sure the O-ring is in place before installing the rear seal.
- C. Lubricate the inside of the auger drive sockets (rear) with a small amount of white socket lubricant. A small container of socket lubricant is shipped with the freezer.

- D. Screw the springs onto the studs in plastic flights.
Springs must be screwed into the flights completely to provide compression (Fig. 25).

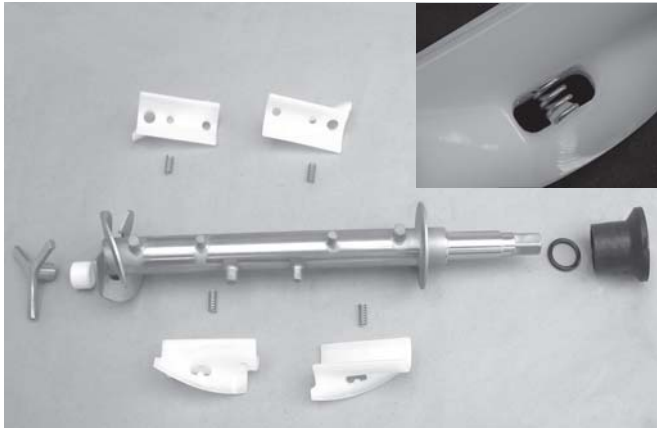


Figure 25. Exploded View of Auger

CAUTION

Do not place the mix inlet regulator into the hopper before installing the auger. Attempting to install the auger with mix inlet regulator in place will damage the mix inlet regulator.

- E. Install the two plastic flights onto rear of the auger and insert part way into freezer barrel.
- F. Install the third plastic flight, push the auger into the freezer barrel and rotate slowly until the auger engages the drive socket.
- G. Install the auger support and bearing into the front of the augers with one leg of the support at 9 o'clock.

NOTE

Apply a small amount of Petro-Gel to the surface of the cam on the spigot handle prior to assembly of handle to the spigot body.

- H. Install the spigot bodies with O-rings into the front door from the bottom (Fig.26). Push straight up until the spigots are in place. Install rosette caps.



Figure 26. Exploded View of Front Door

- I. Install the front door on the freezer.
- J. Install the circular knobs on the freezer studs.

CAUTION

Overtightening or uneven tensioning of circular knobs may cause damage to front door and cause leaking. Hand tighten circular knobs evenly.

Look for the proper seal between the freezer barrel, O-ring, and front door.

- K. Install the mix air regulator into the freezer with the air tube to the front of the freezer. (Fig. 27).



Figure 27. Install Mix Inlet Regulators

- L. Thread agitator onto blender agitator shaft. (Fig. 22).

NOTE

Refer to Section 3.3, for sanitizing the assembled freezer before filling with mix.

3.12 ROUTINE CLEANING

To remove spilled or dried mix from the freezer exterior, simply wash in the direction of the finish with warm soapy water and wipe dry. **Do not** use highly abrasive materials as they will mar the finish.

3.13 PREVENTIVE MAINTENANCE

It is recommended that a maintenance schedule be followed to keep the freezer clean and operating properly.

A. Cleaning and Sanitizing Information

Soft serve freezers require special consideration when it comes to food safety and proper cleaning and sanitizing.

The following information has been compiled by Purdy Products Company, makers of Stera-Sheen Green Label Cleaner/Sanitizer and specifically covers issues for cleaning and sanitizing frozen dessert machines. This information is meant to *supplement* a comprehensive food safety program.

Soil Materials Associated with Frozen Dessert Machines

MILKFAT/BUTTERFAT – As components of ice-cream/frozen custard mix, these soils will accumulate on the interior surfaces of the machine and its parts. Fats are difficult to remove and help attribute to milkstone build-up.

MILKSTONE – Is a white/gray film that forms on equipment and utensils that come in contact with dairy products. These films will accumulate slowly on surfaces because of ineffective cleaning, use of hard water, or both. **Milkstone is usually a porous deposit, which will harbor microbial contaminants and eventually defy sanitizing efforts.**

Once milkstone has formed, it is very difficult to remove. Without using the correct product and procedure, it is nearly impossible to remove a thick layer of milkstone.
(NOTE: general-purpose cleaners DO NOT remove milkstone.) **This can lead to high bacteria counts and a food safety dilemma.**

IT IS BEST TO CONTROL MILKSTONE ON A DAILY BASIS BEFORE IT CAN BECOME A SIGNIFICANT FOOD SAFETY PROBLEM.

In addition to food safety, milkstone can cause premature wear to machine parts which can add to costs for replacement parts or possibly more expensive repairs if worn machine parts are not replaced once they have become excessively worn.

Important Differences Between *Cleaning* and *Sanitizing*

CLEANING vs. SANITIZING

It is important to distinguish between cleaning and sanitizing. Although these terms may sound synonymous, they are not. BOTH are required for adequate food safety and proper machine maintenance.

CLEANING

- Is the removal of soil materials from a surface.
- Is a prerequisite for effective sanitizing.

NOTE

An UNCLEAN surface will harbor bacteria that can defy sanitizing efforts.

Bacteria can develop and resist sanitizing efforts within a layer of soil material (milkstone). ***Thorough cleaning procedures that involve milkstone removal are critical for operators of frozen dessert machines.***

SANITIZING

- Kills bacteria.
- Can be effective on clean surfaces only.
- **DOES NOT** clean or remove milkstone.

NOTE

Using a SANTITIZER on an unclean surface will not guarantee a clean and safe frozen dessert machine.

Proper Daily Maintenance: The Only Way to Assure Food Safety and Product Quality

Proper daily maintenance can involve a wide variety of products and procedures. Overall, the products and procedures fall into three separate categories. *(Please note that this is a brief overview intended for informational purposes only.)*

1. **CLEANING** – This involves draining mix from the freezer barrel and rinsing the machine with water. Next, a cleaner is run through the machine. Then, the machine is disassembled and removable parts are taken to the sink for cleaning.
2. **MILKSTONE REMOVAL** – Since almost all cleaners do not have the ability to remove milkstone, the use of a delimer becomes necessary. Although this procedure may not be needed on a daily basis, it will usually follow the cleaning procedure. It requires letting a delimer solution soak in the machine for an extended period of time. Individual parts are also soaked in a deliming solution for an extended period of time (more about delimers in *Additional Information*).

3. **SANITIZING** – After the machine has been cleaned and contains no milkstone, the machine is reassembled. Then a FDA approved sanitizing solution is run through the machine to kill bacteria. The machine is then ready for food preparation.

As a recommended cleaner and sanitizer for your frozen dessert machine, STERA-SHEEN has proven to be one of the best daily maintenance products for:

- **CLEANING** – Thorough removal of all solids including butterfat and milk fat.
- **MILKSTONE REMOVAL** – Complete removal of milkstone.
- **SANITIZING** – FDA-approved no rinse sanitizer for food contact surfaces.

Additional Information

THE USE OF DELIMERS

A delimer is a strong acid that has the ability to dissolve milkstone. This type of chemical may become necessary once high levels of milkstone have developed. While these products are very effective for removing HIGH levels of milkstone, they are not ideal for two reasons:

1. **PRODUCT SAFETY** – Strong acids are dangerous chemicals and handling them requires safety
2. **MACHINE DAMAGE** – Strong acids will attack metal and rubber causing premature wear of parts. The use of a delimer needs to be closely monitored to avoid damage to machine surfaces and parts.

With proper daily use of STERA-SHEEN or it's equivalent, there is no need for the use of a *DELIMER*.

DO NOT USE BLEACH

- BLEACH HAS ABSOLUTELY **NO** CLEANING PROPERTIES.
- BLEACH IS CORROSIVE. It can and will damage components of the machine causing premature wear and metal corrosion.

GENERAL PURPOSE CLEANERS

General purpose cleaners **do not** have the ability to remove milkstone. Milkstone will become a problem *if not remedied* with additional products and procedures.

THE USE OF CHLORINE TEST STRIPS

“Test strips” are used to determine concentrations of active chlorine in sanitizing solutions. To use the strips, tear off a small portion and submerge it into the sanitizing solution. Then, compare the color change to the color key on the side of the test strip dispenser to determine the approximate chlorine concentration.

The ideal concentration of chlorine needs to be 100 ppm (as stated by the FDA).

NOTE

Follow the directions on the container for proper concentration.

There are two main factors that contribute to falling chlorine concentrations in a sanitizing solution.

1. **PRODUCT USE** – As the chlorine in the solution is being used, chlorine concentrations fall.
2. **TIME** – As time passes, small amounts of chlorine “evaporate” from the solution. (That is why you can smell it.)

Sanitizing solutions *should not* be allowed to fall below 100 ppm chlorine. New solutions should be mixed once old solutions become ineffective

B. DAILY

1. The exterior should be kept clean at all times to preserve the lustre of the stainless steel. A mild alkaline cleaner is recommended. Use a soft cloth or sponge to apply the cleaner.

CAUTION

Do not use acidic cleansers, strong caustic compounds or abrasive materials to clean any part of the freezer exterior or plastic parts. Use of these types of cleaners will cause equipment damage.

C. WEEKLY

1. Check O-rings and rear seal for excessive wear and replace if necessary.
2. Remove the drip tray by gently lifting up to disengage from the support and pulling out. Clean behind the drip tray and front of the freezer with a soap solution.

D. QUARTERLY



WARNING

High voltage will shock, burn or cause death. Turn off and lock out main power disconnect before servicing. Do not operate machine with cabinet panels removed.

The air-cooled condenser is a copper tube and aluminum fin type. Condensing is totally dependent upon airflow. A plugged condenser filter, condenser, or restrictions in the louvered panel will restrict airflow. This will lower the capacity of the system and damage the compressor.

The condenser must be kept clean of dirt and grease. The freezer must have a minimum of 3" (7.5 cm) of ventilation on the right and left sides of the unit for free flow of air (Figure 29). Make sure the freezer is not pulling over 100° F (37° C) air from other equipment in the area.

The water-cooled condenser is a tube and shell type. The condenser needs a cool, clean supply of water to properly cool the freezer, inlet and discharge lines must be 3/8" I.D. minimum.

The condenser and condenser filter require periodic cleaning. To clean, refer to the following procedures.

1. Remove the Phillips head screw from the bottom of the right side panel, and then slide the panels down and out.
2. To remove the condenser filter, grasp the top and pull off. Visually inspect for dirt. If the filter is dirty, shake or brush excess dirt off the filter and wash in warm, soapy water. Once the filter is clean rinse thoroughly in warm, clear water and shake dry, taking care not to damage the filter in any way (Figure 28).
3. Visually inspect the condenser for dirt by shining a light through the coil from the back (inside) of the condenser.
4. If the condenser is dirty, place a wet towel over the front (outside) of the condenser.

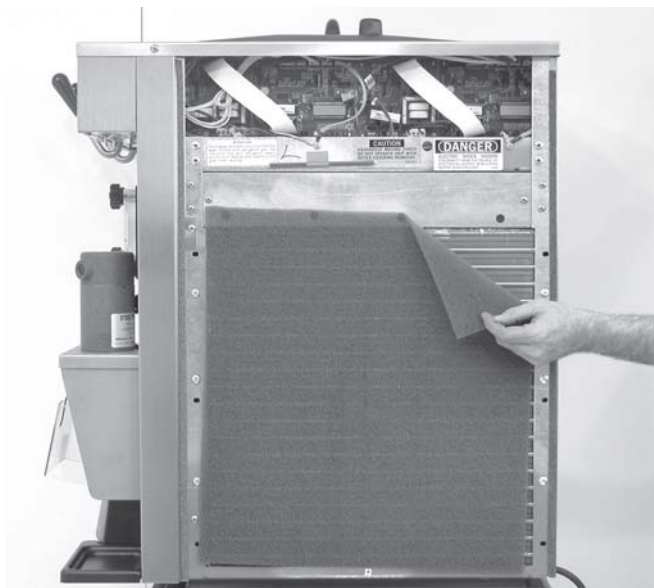


Figure 28. Condenser and Filter

5. Using a vacuum, carefully clean the condenser coil from the inside and outside of the freezer. A stiff bristled brush may help in releasing debris from between the condenser coils (Figure 29).



Figure 29. Cleaning Condenser

NOTE

If the condenser is not kept clean, loss of refrigeration efficiency will result; causing extended run time or soft product consistency.

Water-cooled condensers need an unrestricted supply of cold, clean water.

3.14 EXTENDED STORAGE

Refer to the following steps for storage of the freezer over any long period of shutdown time:

- A. Turn both FREEZING CYLINDER OFF-ON switches to the OFF position.
- B. Disconnect (unplug) from the electrical supply source.
- C. Clean thoroughly with a warm water detergent all parts that come in contact with the mix. Rinse in clear water and dry all parts. **Do not** sanitize.

NOTE

Do not let the cleaning solution stand in the hopper or in the freezer barrel during the shutdown period.

- D. Remove, disassemble and clean the front door, mix inlet regulator and auger parts. Place the auger flights in a plastic bag with a moist paper towel to prevent them from becoming brittle.
- E. On water cooled freezers, shut off and disconnect water supply at rear of freezer; run compressor for 2-3 minutes to open water valve, and blow out all water first through inlet then outlet line, using air or carbon dioxide.

3.15 PRODUCT CONSISTENCY ADJUSTMENT

The freezer's control system monitors the consistency (firmness) of the product (mix) in each freezing cylinder. The program module senses the consistency of the product and shuts off the drive motor and refrigeration system when the pre-programmed consistency is reached. The control panels on the front of the freezer allow the operator to adjust each freezing cylinder to create the desired product consistency.

- A. Place the FREEZING CYLINDER OFF/ON switch in the ON position.
- B. Press the SET button on the Control Panel once. Fine Adj will appear on the LCD screen (Fig. 30).
- C. Press the up arrow button (↑) until the desired consistency setting is displayed. The higher the number, the greater the product consistency. The control may be set from 1 to 9. Each time the up arrow (↑) button is pressed, the value will increase by 1 until the value reaches 9, then restart at 0. The 0 setting cannot be set.
- D. Press the SET button once to save the setting change and return to the current mode display.



Figure 30. Product Consistency Control

3.16 LOCKING OUT CONTROL PANEL

The IntelliTec control has a tamper proof mode to prevent unauthorized use. When set, all buttons on the control panel are disabled. To lock out the control panel:

- A. Press and hold the PUSH TO FREEZE button for 5 seconds.
- B. While still holding the PUSH TO FREEZE button, press the CLEAN button once.
- C. Release both buttons. An astrisk (*) will appear after the word MODE on the display, indicating that the control is in the lock out mode.
- D. To unlock the control panel, repeat steps A, B and C.

SECTION 4

TROUBLESHOOTING

4.1 ERROR CODES

The following error condition codes will display on the control panel when the freezer is experiencing a problem. The error condition code directs you to the system location of the malfunction.

ERROR CODE	MALFUNCTION
01	Program Board
02	High Torque Error
03	Extended Run Time Error
04	Clean Error
05	Freezing Cylinder Sensor
07	Drive Motor Current
09	High Pressure Cutout
12	Left Hopper Sensor Error
13	Right Hopper Sensor Error

Any error causing condition must be corrected, then the power turned off, and back on before the freezer will return to normal operation.

4.2 UNDERSTANDING ERROR CODES

ERROR CONDITION CODE 01

If the control panel displays a program board error (Error Code 01), place the Freezing Cylinder Off-On Switch in the Off position, wait 10 seconds, and return the switch to the On position. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

ERROR CONDITION CODE 02

If the control panel displays a high torque error (Error Code 02), the controller has sensed that the product in the freezing cylinder has reached 125% of set consistency for 10 or more seconds. This condition may be caused if the product consistency adjustment has been set too high. To remedy this condition, place the Freezing Cylinder Off-On Switch in the Off position, wait until the product in the freezing cylinder has had adequate time to thaw to a reasonably soft consistency, and return the switch to the On position. Follow the Product Consistency Adjustment procedures at the beginning of this section and reduce the Fine Adjustment value by a few points. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

ERROR CONDITION CODE 03

Extended run time errors (Error Code 03) are often times caused by the mix running too low in the freezer's hopper, or if a restriction is preventing the mix from entering the freezing cylinder. Check the mix level on the affected freezing cylinder. If the level mix is low, add mix. Look for ice crystals in the liquid mix in the hopper. Ice crystals can clog the mix inlet regulator, and prevent mix from entering the freezing cylinder. If you find ice crystals in the mix, check the temperature of the walk-in cooler where the mix is stored.

Excessive compressor run time may also occur if the condenser filter is dirty, or if the condenser is obstructed. Check around the sides of the freezer, to be sure nothing has been placed near the condenser vents. A minimum of 3" clearance is required.

After the cause of the problem is found and remedied, place the Freezing Cylinder Off-On Switch in the Off position, wait 10 seconds, and return the switch to the On position. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

ERROR CONDITION CODE 04

If the freezer is left in the Clean Mode for more than 20 minutes, the control panel will display a Clean Error (Error 04). This condition does not reflect a problem with the freezer itself. The Clean Error has been programmed into the controller as a safeguard to protect the freezer from potential damage caused by the freezer being accidentally left in the clean mode. To remedy the Clean Error, place the Freezing Cylinder Off-On Switch in the Off position, wait 10 seconds, and return the switch to the On position. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

ERROR CONDITION CODE 05

If the control panel displays a Freezing Cylinder Sensor error (Error Code 05), place the Freezing Cylinder Off-On Switch in the Off position, wait 10 seconds, and return the switch to the On position. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

NOTE

When the freezer encounters a Freezing Cylinder Sensor Error, the freezer will automatically be switched to run on pre-configured timing cycles. This mode will allow you to continue serving product until the freezer can be serviced.

ERROR CONDITION CODE 07

If the control panel displays a Drive Motor Current error (Error Code 07), place the Freezing Cylinder Off-On Switch in the Off position, wait 10 seconds, and return the switch to the On position. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

ERROR CONDITION CODE 09 (water cooled models only)

Error 09 conditions are usually caused by insufficient cooling at the freezer's condenser. If the control panel displays a High Pressure Cutout error (Error Code 09), turn the freezer power off. Press the High Pressure Cutout Reset Switch located on the upper, left hand corner of the left side panel. There is a round, black boot covering the reset switch. Pressing in the center of the boot will reset the switch.

Check for proper waterflow through the condenser coil. After the cause of the error is determined and corrected, place the Freezing Cylinder switch to the On position. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

ERROR CONDITION CODE 12

If the control panel displays a left hopper sensor error (Error Code 12), place the Freezing Cylinder Off-On Switch in the Off position, wait 10 seconds, and return the switch to the On position. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

ERROR CONDITION CODE 13

If the control panel displays a right hopper sensor error (Error Code 13), place the Freezing Cylinder Off-On Switch in the Off position, wait 10 seconds, and return the switch to the On position. If the Control Panel still displays the error condition code, call your Authorized Stoelting Distributor for further assistance.

ALTERNATING FLASHING CONTROL PANEL LIGHTS

When the right Freezing Cylinder OFF/ON switch is placed in the ON position and the left Freezing Cylinder OFF/ON switch is left in the OFF position, the green and amber control panel lights will flash in alternating sequence and the message "Frz Cyl Hprs Of" will display on the LCD panel. This indicates that the right freezing cylinder is receiving power, but the hoppers are not being refrigerated. Placing the left Freezing Cylinder OFF/ON switch in the ON position will return the left freezing cylinder to the SLEEP mode, and keep the hoppers refrigerated.

SECTION 4 TROUBLESHOOTING CHARTS

The Troubleshooting Tables on the following two pages list the common problems that can occur to the freezer.

PROBLEM	POSSIBLE CAUSE	REMEDY
Freezer does not run.	<ol style="list-style-type: none"> 1. Power to freezer is off. 2. Fuse or circuit if blown or tripped. 3. Freeze-up (auger will not turn). 4. High pressure cut-out tripped. 5. Front door not in place. 	<ol style="list-style-type: none"> 1. Supply power to freezer. 2. Replace or reset. 3. Turn OFF-ON switch to OFF for 15 minutes, then restart. 4. Reset high pressure cut-out. 5. Assemble front door in place.
Freezer will not shut off.	<ol style="list-style-type: none"> 1. Not enough mix in hopper. 2. Drive belt failure. 3. Consistency temperature setting is too firm. 4. Consistency temperature control failure. 5. Refrigeration problem. 	<ol style="list-style-type: none"> 1. Fill hopper with mix. 2. Replace drive belt. 3. Readjust. (Call distributor for service.) 4. Replace. (Call distributor for service.) 5. Check system. (Call distributor for service.)
Product is too soft.	<ol style="list-style-type: none"> 1. Product is being dispensed before "SERVE" is displayed on LCD panel. 2. No vent space for free flow of cooling air. 3. Air temperature entering condenser is above 100°F. 4. Condenser is dirty. 5. Consistency setting too soft. 6. Stabilizers in mix are broken down. 7. Auger is assembled wrong. 8. Refrigeration problem. 	<ol style="list-style-type: none"> 1. Press the PUSH TO FREEZE push button. Wait until "SERVE" is displayed on LCD panel before dispensing. 2. A minimum of 3 inches of vent space required. (See Section 2) 3. Change location or direct hot air away from freezer. 4. Clean. (See Section 3) 5. Readjust. (Call distributor for service.) 6. Remove mix, clean, sanitize and freeze down with fresh mix. 7. Remove mix, clean, reassemble, sanitize and freeze down. 8. Check system. (Call distributor for service.)
Product is too firm.	<ol style="list-style-type: none"> 1. No mix in hopper. 2. Small portions are being dispensed in a short time. 3. Consistency temperature setting is too firm. 4. Consistency temperature control failure. 5. Line voltage fluctuating. 	<ol style="list-style-type: none"> 1. Fill hopper with mix. 2. Allow freezer to sit idle for 5 minutes before dispensing. 3. Readjust. (Call distributor for service.) 4. Replace. (Call distributor for service.) 5. Check. (Call distributor for service.)

PROBLEM	POSSIBLE CAUSE	REMEDY
Product does not dispense.	<ol style="list-style-type: none"> 1. No mix in hopper. 2. Mix inlet regulator tube is plugged. 3. Special mix inlet regulator needed for mix being used. 4. Capacity of freezer is being exceeded. 5. Drive motor overload tripped. 6. Drive belt failure. 7. Freeze-up. (Auger will not turn.) 	<ol style="list-style-type: none"> 1. Fill hopper with mix. 2. Unplug, using small sanitized brush. 3. Order special mix inlet regulator. 4. Slow up on the draw rate. 5. Reset. (If condition continues, call distributor for service.) 6. Replace drive belt. 7. Turn OFF-ON switch to OFF for 15 min., then restart.
Drive belt slipping or squealing.	<ol style="list-style-type: none"> 1. Worn drive belt. 2. Freeze-up (Auger will not turn). 	<ol style="list-style-type: none"> 1. Replace drive belt. 2. Turn OFF-ON switch to OFF for 15 min., then restart.
Low overrun.	<ol style="list-style-type: none"> 1. Auger is assembled wrong. 2. Mix inlet regulator missing. 3. Mix inlet regulator O-ring missing. 4. Mix inlet regulator air tube blocked. 5. Product breakdown. 	<ol style="list-style-type: none"> 1. Remove mix, clean, sanitize, and freeze down with fresh mix. 2. Replace mix inlet regulator. 3. Replace mix inlet regulator O-ring. 4. Clean with sanitized brush. 5. Fill freezer with fresh product.
Rear auger seal leaks.	<ol style="list-style-type: none"> 1. Outside surface of rear auger seal is lubricated. 2. Rear seal missing or damaged. 3. Seal O-ring missing, damaged or installed incorrectly. 4. Worn or scratched shaft. 	<ol style="list-style-type: none"> 1. Clean lubricant from outside of rear seal, lubricate inside of seal and reinstall. 2. Check. 3. Check. 4. Replace shaft.
Front door leaks.	<ol style="list-style-type: none"> 1. Front door knobs are loose. 2. Spigot parts are not lubricated. 3. Chipped or worn spigot O-rings. 4. O-rings or spigot installed wrong. 5. Inner spigot hole in front door nicked or scratched. 	<ol style="list-style-type: none"> 1. Tighten knobs. 2. See Section 3. 3. Replace O-rings. 4. Remove spigot and check O-ring. 5. Replace front door.
Hopper will not maintain mix temperature below 45°F (7°C).	<ol style="list-style-type: none"> 1. Hopper temperature set too warm. 2. Hopper sensor failure. 3. EPR valve needs adjustment. 4. Refrigeration problem. 	<ol style="list-style-type: none"> 1. (Call distributor for service.) 2. Replace. (Call distributor for service.) 3. Adjust EPR valve. 4. Check system. (Call distributor for service.)

SECTION 5 REPLACEMENT PARTS

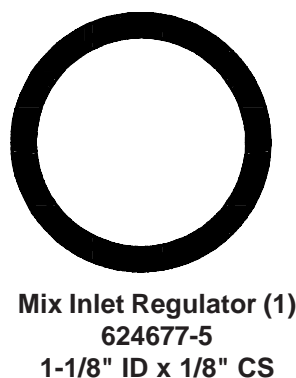
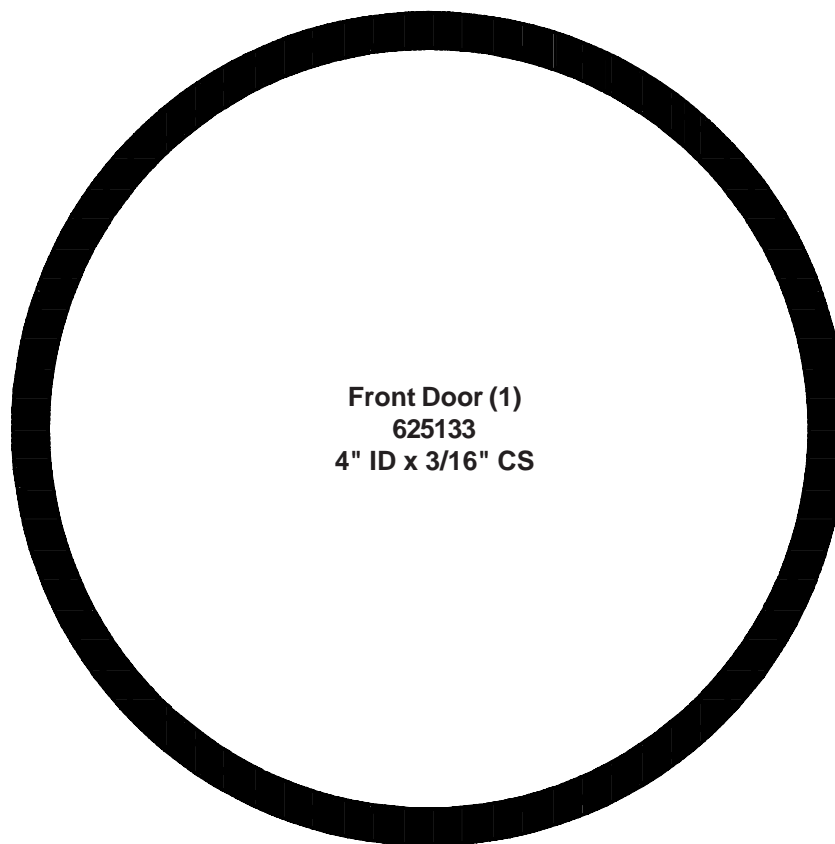
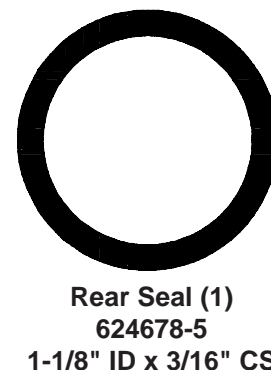
5.1 HOW TO ORDER PARTS

To assure receipt of the proper replacement parts, supply your dealer or distributor with the following information:

- A. Model number of equipment.
- B. Serial number of model, stamped on nameplate.
- C. Part number, part name and quantity needed. Common part names and numbers are listed in this manual.

Part Number	Description	Part Number	Description
208135	Brush, Nylon: 16" x 4", Wooden Handle	324686	Danger Automatic Start
208380	Brush, Nylon: 14" x 1/4", Wire Handle	324105	Danger - Electrical Shock Hazard
208401	Brush, Nylon: 10" x 1", Wire Handle	324106	Caution - Electrical Wiring Materials
208467	Brush, Nylon: 5-1/4" x 3/8", Wire Handle	324141	Caution - Hazardous Rotating Blades
3177946-04	Model ID Plate	324584	Adequate Ventilation
324594	Heat Sensitive	324566	Wire According to
324107	Caution - Hazardous Moving Parts	324509	Decal, Cleaning

O-RING IDENTIFICATION SHEET MODEL FUTURA 144



**O-rings are drawn to
Approximate Size**

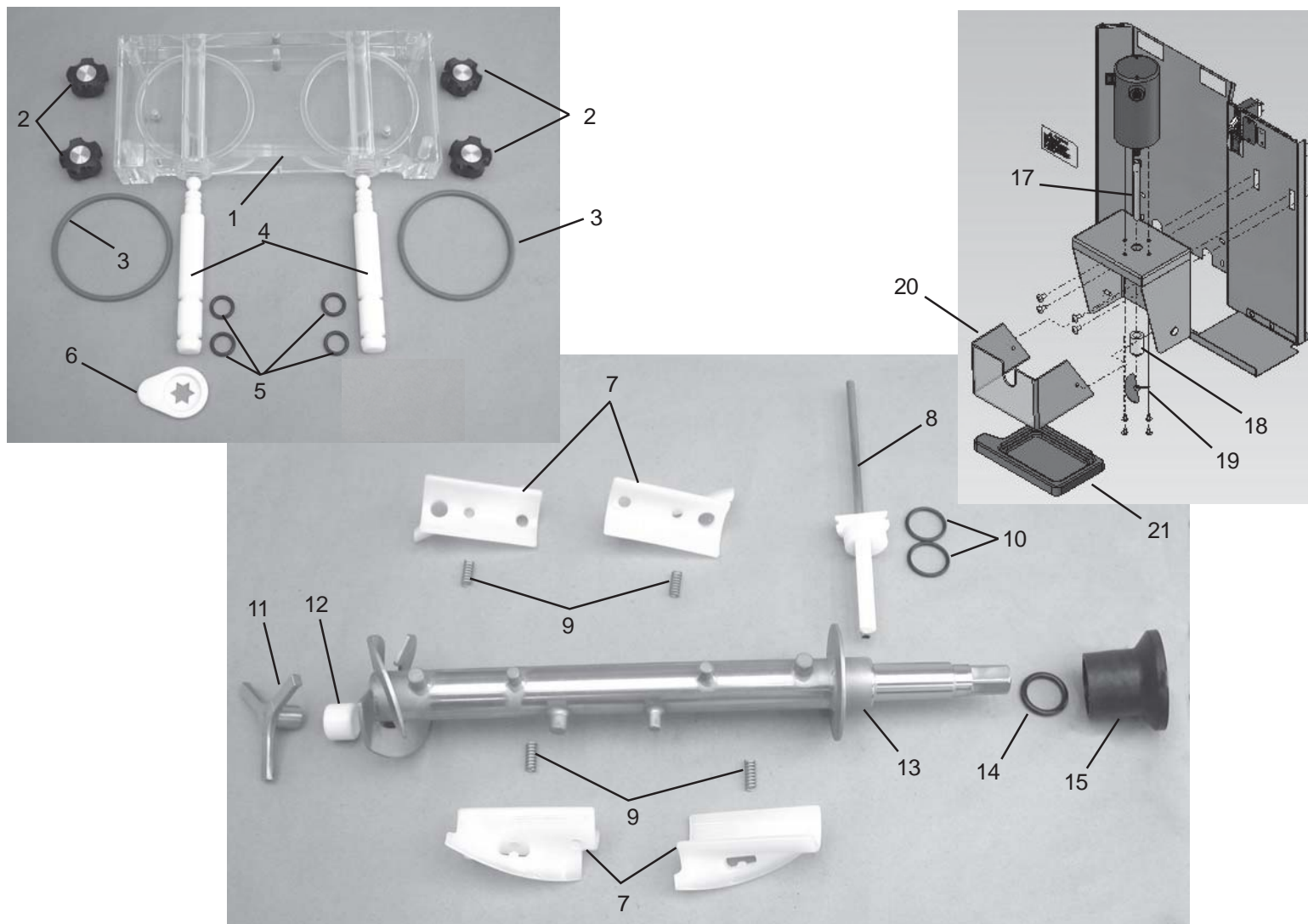


Figure 31. Spigot, Front Door and Auger Assembly

Item No.	Part No.	Description	Qty.
1	2183047	Front Door Only	1
	2177072	1.5" Spigot Extension	
	2177073	2.5" Spigot Extension	
	2177074	3" Spigot Extension	
2	482019	Circular Door Knob	4
3	625133	O-ring Front Door	2
4	3159696	Spigot	2
5	624598-5	O-ring Spigot (5 Pack)	4
6	232734	Rosette Cap	2
7	381804	Auger Flight	8
8	2149243-01	Mix Inlet Regulator	2
9	694255	Auger Spring	8
10	624677-5	O-ring Mix Inlet Regulator and Spigot Extension (5 Pack)	6
11	3170644	Front Auger Support	2
12	149003	Auger Bushing	2
13	4157968	Auger Shaft	2
14	624678	O-ring Auger Shaft Seal (5 Pack)	2
15	666786	Auger Shaft Seal	2
16	522839	Blender Motor	1
17	274031	Blender Agitator Collar	1
18	674147	Blender Agitator Shaft	1
19	521026	Blender Agitator	1
20	681514	Clear Swing Splash Shield	1
21	744299	Blender Drip Tray	1

1. Scope:

Stoelting, A Vollrath Company ("Stoelting") warrants to the first user (the "Buyer") that the Stoelting-branded freezer equipment (the "Equipment") will be free from defects in materials and workmanship under normal use and proper maintenance for the period listed below in the Warranty Period section. All warranty periods begin on the date of original install or one (1) year from the shipping date, whichever occurs first. This warranty is subject to all conditions, exceptions, and limitations contained herein.

2. Disclaimer of Other Warranties:

THIS WARRANTY IS EXCLUSIVE; AND STOELTING HEREBY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

3. Remedies:

Stoelting's sole obligations, and Buyer's sole remedies, for any breach of this warranty shall be, at Stoelting's option, one of the following: repair or replacement of the affected component at Stoelting's plant in Kiel, Wisconsin, or refund of the purchase price of the affected Equipment. Stoelting, through an Authorized Stoelting Provider, will deinstall/reinstall the affected component from/into the equipment ("Labor") for the period listed below in the Warranty Period section. These obligations/remedies are subject to the conditions that Buyer (a) signs and returns to Stoelting, upon installation, the Start-Up and Training Checklist for the affected equipment, (b) gives Stoelting prompt written notice of any claimed breach of warranty within the applicable warranty period, and (c) delivers the affected equipment to Stoelting or its designated service location, in its original packaging/crating, also within that period. Buyer shall bear the cost and risk of shipping to and from Stoelting's plant or designated service location.

4. Warranty Period:

Equipment	Part	Part Warranty Period	Labor Warranty Period
Soft Serve & Shake	Freezing Cylinders	Five (5) Years	Twelve (12) Months
	Hoppers		
	Compressors		
	Drive Motors		
	Speed Reducers		
	Augers		
Frozen Uncarbonated Beverage	Evaporator	Five (5) Years	Twelve (12) Months
	Compressors		
	Drive Motors		
	Speed Reducers		
Custard & Batch	Freezing Cylinders	Two (2) Years	Twelve (12) Months
	Hoppers		
	Compressors		
	Drive Motors		
	Speed Reducers		
	Beaters		
	Auger Shafts		
Dipping Cabinets & Display Cabinets	All components	Twelve (12) Months	Twelve (12) Months
Frozen Beverage / Granita Dispenser	Compressors	Five (5) Years	Twelve (12) Months
	Electronic Board	Three (3) Years	
	All other components	Two (2) Years	
AutoVend	All components	Twelve (12) Months	Twelve (12) Months
Crème Whippers	Compressors	Two (2) Years	Twelve (12) Months
	Motors		
	Condensers		
All equipment	All other components not specified above	Twelve (12) Months	Twelve (12) Months

5. Conditions:

- a) If the date of the original installation cannot be verified, these warranty periods begin one (1) year from the shipping date. It is the responsibility of the seller to disclose this information to the Buyer at the time of sale.
- b) Stoelting shall not be responsible to provide any remedy under this warranty with respect to any component that fails by reason of negligence, abnormal use, misuse or abuse, faulty repair made by others, use with parts or equipment not manufactured or supplied by Stoelting, any modification or alteration of any parts or equipment, or damage in transit.
- c) This warranty is valid only if the Equipment is installed and serviced by an Authorized Stoelting Provider and only if new, genuine Stoelting parts are used.
- d) The Equipment installation location must have suitable conditions as explained in the Stoelting operators manual, specification sheet, and/or technical manual including but not limited to, ambient temperature, water supply parameters, and space requirements.
- e) The Authorized Stoelting Provider must return defective parts, at Stoelting's discretion, for credit.
- f) Any refrigerant other than that specified on the Equipment model identification nameplate voids this warranty.

6. Exceptions:

This warranty does **NOT** cover any of the following

- a) Costs associated with installation labor, disposal of equipment being replaced, and shipping costs of replacement parts or Equipment.
- b) Cleaning, maintenance or lubrication of the Equipment as outlined in the Stoelting operators manual.
- c) This warranty does not extend to parts, sometimes called "wear parts", which are generally expected to deteriorate and to require replacement as equipment is used, including but limited to o-rings, auger flights, auger seals, auger support bushings, and drive belts. All such parts are sold **AS IS**.
- d) External components including but not limited to hoses, piping, or electrical equipment.
- e) Labor and travel charges due to return trips or waiting if the Authorized Stoelting Provider is prevented from promptly starting service work upon arrival. This exception includes labor charges incurred for limited access facilities including, but not limited to, government and military buildings, and airports.
- f) Failure, damage, or repairs due to faulty installation, misapplication, abuse, lack of service, or improper service, unauthorized alteration, improper operation as indicated in the Stoelting operators manual, including but not limited to failure to properly assemble and/or clean, improper tool usage, or use of unapproved lubrication, or cleaning and sanitizing supplies.
- g) Any costs associated with electricity, including utility increases, from any reason whatsoever.
- h) Damage resulting from the use of refrigerant other than that specified on the Equipment model identification nameplate.
- i) The use of this equipment as a rental asset negates all warranties associated with the equipment.
- j) Any special, indirect or consequential property or commercial damage of any nature whatsoever, if the jurisdiction allows this exclusion.
- k) Costs not covered by the Stoelting Travel Pay policy. Stoelting covers only the first trip travel which is a flat rate by mileage one-way from the service company's home location to the job site. The flat rate is calculated as follows:
 - o 0-50 Miles \$85
 - o 51-110 Miles \$127
 - o 111-160 Miles \$165
 - o Over 160 Miles The maximum reimbursed by Stoelting is \$165

Any travel costs not covered may be invoiced to the customer.

7. Limitations:

THE REMEDIES SET FORTH IN THIS WARRANTY SHALL BE THE SOLE LIABILITY STOELTING AND THE EXCLUSIVE REMEDY OF BUYER WITH RESPECT TO EQUIPMENT SUPPLIED BY STOELTING; AND IN NO EVENT SHALL STOELTING BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING AS EXAMPLES BUT NOT INTENDED TO BE LIMITED TO DOWNTIME, OVERHEAD, MATERIALS, PERFORMANCE PENALTIES, LOST SALES, LOST PROFITS, PRODUCT LOSS, OR PROPERTY DAMAGES, WHETHER FOR BREACH OF WARRANTY OR OTHER CONTRACT BREACH, NEGLIGENCE OR OTHER TORT, OR ON ANY STRICT LIABILITY THEORY.