



STOELTING®
FOODSERVICE EQUIPMENT
Model CF101
OWNERS MANUAL
Manual No. 513624 Rev.2 June, 2009

**Owner's Manual
For CF101
Counter-Top Continuous Flow Machine**

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 the company at the following location:

**STOELTING
502 Hwy. 67
Kiel, WI 53042**

Ph: 800-558-5807

Fax: 920-894-7029

A Few Words About Safety

Safety Information

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

This Owner's 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.

NOTICE

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

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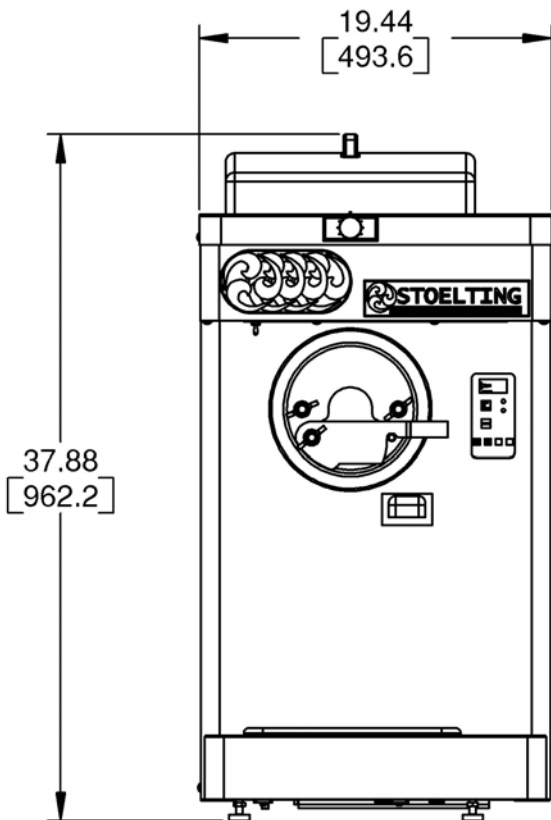
SECTION 1 DESCRIPTION AND SPECIFICATIONS

1.1 DESCRIPTION

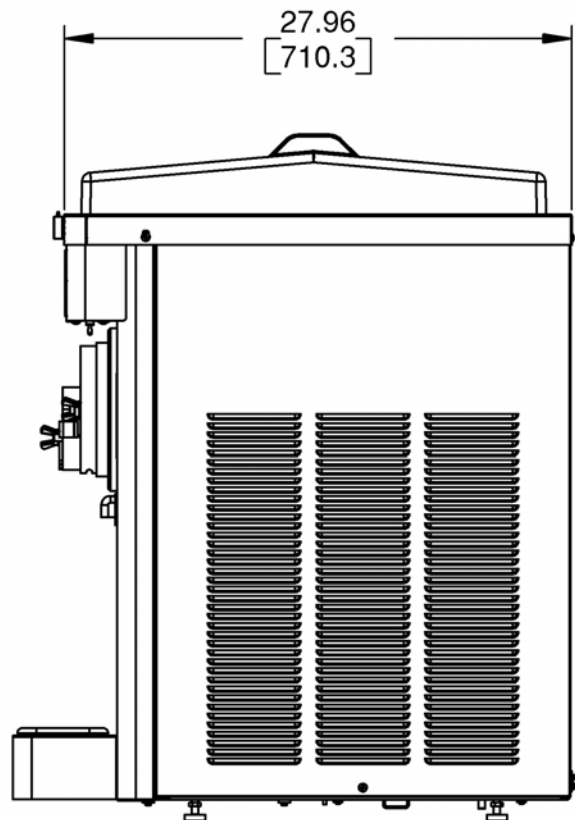
The CF101 is a counter top continuous flow custard machine. It is equipped with fully automatic controls to provide a uniform product and features Quick-Freeze technology. This manual is designed to assist qualified service personnel and operators in the installation, operation and maintenance of the CF101 frozen custard machine.

NOTE

The freezing cylinder of the CF101 is not intended to store product for more than one hour.



FRONT VIEW



SIDE VIEW

Figure 1-2 CF101 Specifications

1.1 SPECIFICATIONS

| CF101 | | | | | | | | | | | | | |
|---------------------------------|--|--------------------|--------------------|--------------------|-------|-------------------|-------------------|--------|-------------------|-------------------|-------|---------------|----------------|
| Dimensions | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%; text-align: center;">Machine</th> <th style="width: 35%; text-align: center;">with crate</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">width</td> <td style="text-align: center;">19-1/2" (49,5 cm)</td> <td style="text-align: center;">38-3/4" (98,4 cm)</td> </tr> <tr> <td style="padding-left: 20px;">height</td> <td style="text-align: center;">37-3/4" (95,9 cm)</td> <td style="text-align: center;">28-3/4" (73,0 cm)</td> </tr> <tr> <td style="padding-left: 20px;">depth</td> <td style="text-align: center;">28" (71,1 cm)</td> <td style="text-align: center;">43" (109,2 cm)</td> </tr> </tbody> </table> | | Machine | with crate | width | 19-1/2" (49,5 cm) | 38-3/4" (98,4 cm) | height | 37-3/4" (95,9 cm) | 28-3/4" (73,0 cm) | depth | 28" (71,1 cm) | 43" (109,2 cm) |
| | Machine | with crate | | | | | | | | | | | |
| width | 19-1/2" (49,5 cm) | 38-3/4" (98,4 cm) | | | | | | | | | | | |
| height | 37-3/4" (95,9 cm) | 28-3/4" (73,0 cm) | | | | | | | | | | | |
| depth | 28" (71,1 cm) | 43" (109,2 cm) | | | | | | | | | | | |
| Weight | <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 30%;"></td> <td style="width: 35%; text-align: center;">310 lbs (140,6 kg)</td> <td style="width: 35%; text-align: center;">380 lbs (172,3 kg)</td> </tr> </tbody> </table> | | 310 lbs (140,6 kg) | 380 lbs (172,3 kg) | | | | | | | | | |
| | 310 lbs (140,6 kg) | 380 lbs (172,3 kg) | | | | | | | | | | | |
| Electrical | 1 Phase, 208-240 VAC, 60Hz running amps approximately 15A connection type NEMA6-20P power cord provided | | | | | | | | | | | | |
| Compressor | 14,000 Btu/hr | | | | | | | | | | | | |
| Drive Motor | 1-1/2 hp | | | | | | | | | | | | |
| Air Flow | Air cooled units require 6" (15,2 cm) air space at left and right sides and 10" (25,4) air space above the machine. | | | | | | | | | | | | |
| Hopper Volume | 5.4 gallon (30,28 liters) | | | | | | | | | | | | |
| Freezing Cylinder Volume | 0.8 gallon (3.2 quart), 3,03 liters | | | | | | | | | | | | |

SECTION 2 INSTALLATION INSTRUCTIONS

2.1 SAFETY PRECAUTIONS

Do not attempt to operate the machine 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 machine. 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 machine. 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
ATTENTION: Customer Service
502 Hwy. 67
Kiel, Wisconsin 53042

2.2 SHIPMENT AND TRANSIT

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

With the method of packaging used, the machine 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 machine has been checked for damage. Have the carrier note any visible damage on the freight bill. If concealed damage 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 MACHINE INSTALLATION

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

- A. Uncrate the machine.
- B. Accurate leveling is necessary for correct drainage of machine barrel and to insure correct overrun. Place a bubble level on top of the machine at each corner to check for level condition. If adjustment is necessary, level the machine by turning the bottom part of each leg in or out. Then separate machine base gasket and install with seam to the back and angle to the top.
- C. Correct ventilation is required. The CF101 requires a minimum of 6" (15,2 cm) air space at left and right sides and 10" (25,4) air space above the machine.



Figure 2-2 Space and Ventilation Requirements

CAUTION

Failure to provide adequate ventilation will void warranty.

- D. Place the Main Freezer Power Off/On switch in the OFF position.
- E. Connect the power cord to the proper power supply. The plug is designed for 208-240 volt/20 amp duty. Check the nameplate on your machine for proper supply. The unit must be connected to a properly grounded receptacle. The electrical cord furnished as part of the machine has a three prong grounding type plug. The use of an extension cord is not recommended, if necessary use one with a size 12 gauge or heavier with ground wire. Do not use an adapter 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 warranty.

SECTION 3 INITIAL SET-UP AND OPERATION

3.1 OPERATOR'S SAFETY PRECAUTIONS

SAFE OPERATION IS NO ACCIDENT; observe these rules:

- A. Know the machine. Read and understand the Operating Instructions.
- B. Notice all warning labels on the machine.
- C. Wear proper clothing. Avoid loose fitting garments, and remove watches, rings or jewelry that 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 machine until the main electrical power has been disconnected.
- G. Do not operate under unsafe operating conditions. Never operate the machine if unusual or excessive noise or vibration occurs.

3.2 OPERATING CONTROLS AND INDICATORS

Before operating the machine, it is required that the operator know the function of each operating control. Refer to Figure 3-1 for the location of the operating controls on the machine.



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. Main Freezer Power OFF-ON Switch

The Main Freezer Power OFF-ON switch is a two-position toggle switch used to supply power to the control circuit. When the switch is in the OFF position, power will not be supplied to the control board or refrigeration system. When the switch is put in the ON position, the machine will be in standby mode. The display will read Standby and the amber LED will light.



Figure 3-1 Machine Controls

B. Product Selector Switch

The product selector switch changes the refrigeration profile to allow two different products to be made. Before the machine is in ready mode, this switch can be moved to the desired profile.

C. PUSH TO FREEZE Button

The PUSH TO FREEZE button is used to initiate the run mode. To start the machine, place the Main Freezer Power OFF-ON switch in the ON position and press the PUSH TO FREEZE button.

D. LEDs

The membrane switch features two lights; a green LED and an amber LED. The green LED will flash when the freezing cylinder is near ready mode and stay lit during ready mode. The amber LED is lit during standby, purge and clean modes.

NOTE

If the machine enters an error condition, alternating green and amber lights will flash. The LCD will display an error. Turn the Main Freezer Power OFF-ON switch to the OFF position, correct the problem (Refer to Troubleshooting in Section 4) and turn the machine back on.

E. PURGE/CLEAN Button

PURGE Mode - When the PURGE/CLEAN button is pressed, the auger will rotate. A PURGE message will display on the screen along with a 5 minute timer. Hopper refrigeration will continue to run. When the timer gets to 0:00 and no other buttons are pressed, the machine will go into standby mode.

CLEAN Mode - During PURGE mode, if the PURGE/CLEAN button is pressed and held for 3 seconds, the CLEAN mode will begin. The auger will continue to rotate and hopper refrigeration will stop.

F. Mix Low Light Indicator

The MIX LOW message will appear on the LCD display to alert the operator to 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 hopper immediately.

NOTE

Failure to refill hopper immediately may result in operational problems.

G. Menu Navigation Buttons

The Menu Navigation Buttons are primarily used for machine calibration.

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

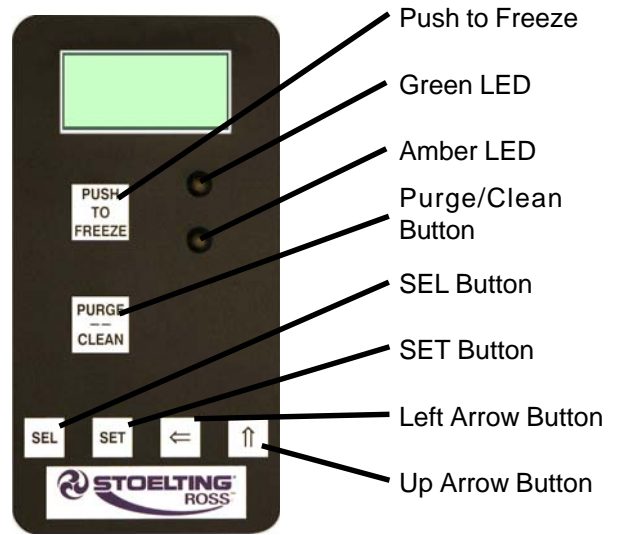


Figure 3-2 IntelliTec Control

Set Button (SET) The SET button is not functional in the normal operation mode. This button is only used by service technicians for machine calibration.

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 lit, 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 (↑) The ↑ button is not functional in the normal operation mode. This button is only used by service technicians for machine calibration.

H. 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 not in place and closed when the door is properly installed.

3.3 SANITIZING

Sanitizing must be done after the machine is cleaned and just before the hopper is filled with mix. Sanitizing the night before is not effective. However, you should always clean the machine and parts after each use.

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 machine, 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 90° to 110°F (32° to 43°C) 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.

In general, sanitizing may be conducted as follows:

- A. Prepare Stera-Sheen Green Label Sanitizer or equivalent according to manufacturer's instructions to provide a 100ppm strength solution. Mix the sanitizer in quantities of no less than 2 gallons of 90° to 110°F (32° to 43°C) water. Any sanitizer must be used only in accordance with the manufacturer's instructions.
- B. Place the tapered end of the flow valve into the hopper drain hole with the arm pointing towards the left. Connect the flow control rod to the flow valve and the flow valve arm (Fig. 3-3).



Figure 3-3 Flow Control Assembly

- C. Make sure the flow control valve is shut by turning the control knob counterclockwise to the 12:00 position.
- D. Place a bucket under the slide.
- E. Pour the sanitizer into the hopper.

NOTE

A small amount of sanitizer may drain into the bucket with the flow control shut and may seep out of the rear seal.

- F. Place the Main Freezer Power OFF-ON switch in the ON position and press the PURGE/CLEAN button. The display will read PURGE.
- G. Press and hold the PURGE/CLEAN button for 3 seconds. The display will read CLEAN and a 20 minute timer will start.
- G. Turn the flow control knob fully open (clockwise).
- H. Clean sides of hopper, flow valve and underside of hopper cover using a sanitized soft bristle brush dipped in the sanitizing solution.

- I. When the sanitizer has drained from the hopper, press and hold the PURGE/CLEAN button for 3 seconds to stop the auger. Allow the freezing cylinder to drain completely.
- J. Shut off the flow control valve by turning the flow control knob counterclockwise to the 12:00 position.

3.4 FREEZE DOWN AND OPERATION

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

- A. Sanitize just prior to use.

NOTE

Make sure the flow control assembly is in place before adding mix and that the flow control knob is set to the 12:00 position.

- B. Fill hopper with approximately 3 gallons (11.4 liters) of pre-chilled (40°F or 4°C) mix.
- E. Place the Main Freezer Power OFF-ON switch in the ON position. The display will read STANDBY MODE.
- F. Press the PUSH TO FREEZE button. The display will read CUSTARD and a bar on the second line will start to fill. To change product typew, move the Product Selector switch to the Product 2 position.

NOTE

The Product Selector switch can be changed until the READY message is displayed on the second line.

- G. When the display reads CUSTARD READY, the freezing cylinder is at the correct temperature (Fig. 3-4).
- H. Open the front gate.

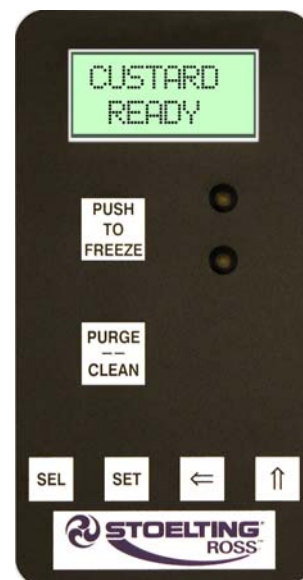


Figure 3-4 Custard Mode

- I. Turn the flow control knob clockwise to the 2:00 position. A small amount of mix and remaining sanitizer will drain from the machine.
- J. Turn the flow control knob to the 1:00 position. After a few minutes, a ribbon of product starts to form.
- K. Adjust the flow control knob until the product flow fills the faceplate outlet and is at the desired texture (Fig. 3-5). The flow control knob setting will be different for each type of product.

NOTE

Adjustments take up to 1 minute before a noticeable difference is seen in the product.

NOTE

A high-pitched noise from the freezing cylinder is an indication that there is not enough mix entering the barrel. Slowly turn the flow control knob clockwise to increase the flow. It can take up to 1 minute for the adjustment to stop the noise.

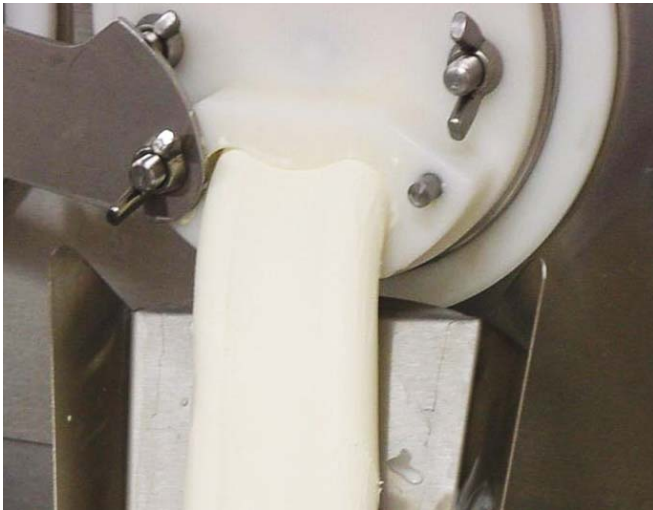


Figure 3-5 Proper Flow

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 machine performance that cannot be explained by a technical problem may be related to the mix.

Proper product serving temperature varies from one manufacturer's mix to another. When checking the temperature, stir the thermometer in the frozen product to read the true temperature.

Old mix or mix that has been stored at elevated temperatures will produce poor-quality product with a bad taste and unacceptable 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).

3.6 REMOVING MIX FROM MACHINE

To remove the mix from the machine, refer to the following steps. Make sure the gate on the faceplate is open.

- A. Press the PURGE/CLEAN button. The display will read PURGE.
- B. Press and hold the PURGE/CLEAN button for 3 seconds. The display will read CLEAN and a 20 minute timer will start.
- C. Open the flow control valve fully by turning the flow control knob clockwise until the pointer is near the 12:00 position.
- D. After the hopper and freezing cylinder have drained, place the Main Freezer Power OFF-ON switch in the OFF position.

3.7 CLEANING THE MACHINE

NOTE

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

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

- A. Place a container under the slide of the faceplate. Fill the hopper with 2 gallons (7.5 liters) of tap water.
- B. Place the Main Freezer Power OFF-ON switch in the ON position. Press the PURGE/CLEAN button. The display will read PURGE.
- C. Press and hold the PURGE/CLEAN button for 3 seconds. The display will read CLEAN and a 20 minute timer will start
- D. When the water has drained, place the switch in the OFF position. Allow the freezing cylinder to drain completely.
- E. Prepare detergent water by mixing 2 oz. of Palmolive detergent or equivalent in 2 gallons of 90° to 110°F (32° to 43°C) water. Repeat steps A through D using the detergent solution.

3.8 DISASSEMBLY OF MACHINE PARTS

Inspection for worn or broken parts should be made each time the machine is disassembled. All worn or broken parts should be replaced to ensure safety to both the operator and the customer and to maintain good machine performance and a quality product. Frequency of cleaning must comply with local health regulations.

To disassemble the machine, refer to the following steps:



CAUTION

Hazardous Moving Parts

Revolving auger shaft can grab and cause injury. Place the Main Freezer Power OFF-ON switch in the OFF position before disassembling for cleaning or servicing.

- A. Remove the flow control rod and flow control valve from the hopper by pulling straight up.
- C. Remove the slide from the faceplate and remove the faceplate.
- D. Remove the front wear bushing.
- F. Remove the auger assembly from the machine. Pull the auger out of the freezing cylinder slowly. As the auger is being pulled out, carefully remove each of the blades and springs.
- G. Keep the rear of the auger shaft tipped up once it is clear of the machine to avoid dropping rear seal.
- H. Remove the rear seal, rear seal adapter and rear seal o-ring.
- I. Wipe socket lubricant from the drive end (rear) of the auger with a cloth or paper towel.

3.9 CLEANING THE MACHINE PARTS

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

- A. Prepare detergent water by mixing 2 oz. of Palmolive detergent or equivalent in 2 gallons of 90° to 110°F (32° to 43°C) water.
- B. Place all parts in detergent solution and clean with provided brushes.
- C. Wash the hopper and freezing cylinder with the detergent water and brushes provided.
- D. Wash the rear seal surfaces on the inside of the freezing cylinder with the detergent water.
- E. Rinse all parts with clean 90° to 110°F (32° to 43°C) water.

NOTE

If the machine is not going to be immediately operated, store the faceplate in a clean and sanitized container in a cooler.

3.10 ASSEMBLY OF MACHINE

To assemble the machine 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 the 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. Coat the rear seal with a generous amount of Petrol Gel.
- B. Install the rear seal onto the auger.
- C. Lubricate the auger drive (rear) with a small amount of white socket lubricant. A small container of socket lubricant is shipped with the machine.
- D. Install two of the springs and auger blades onto the rear of the auger and insert part way into machine barrel. Rotate auger so another spring and blade can be placed onto the shaft.



Figure 3-6 Installing Auger Blades

- E. Install the remaining auger blades, push the auger into the machine barrel and rotate slowly until the auger engages the drive shaft (Fig. 3-6).



Figure 3-7 Install Front Wear Bushing

- F. Lubricate the inside and outside of the front wear bushing and install it onto the auger (Fig. 3-7).



Figure 3-8 Install Faceplate

- G. Install the large o-ring onto the front plate and install the faceplate onto the machine (Fig. 3-8).
- H. Install slide, hopper cover and drain tray.

3.11 ROUTINE CLEANING

To remove spilled or dried mix from the machine exterior, 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.

3.12 PREVENTATIVE MAINTENANCE

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

A. DAILY

- 1. The exterior should be kept clean at all times to preserve the luster 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 machine exterior or plastic parts. Use of these types of cleaners will cause equipment damage.

B. 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 machine with a soap solution.

C. QUARTERLY

Lubricate Flow Control Assembly

- 1. With 3-In-One oil, or equivalent, place a few drops of oil between the flow control arm and grommet (Fig. 3-9).
- 2. Rotate flow control knob to ensure proper coverage.



Figure 3-9 Flow Control Arm Lubrication

Clean Condenser and Filter

The air-cooled condenser is a copper tube and aluminum fin type. Condensing is dependent upon airflow. A plugged condenser filter 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 machine 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. Make sure the machine is not pulling over 100° F (37° C) air from other equipment in the area.

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


! WARNING

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

- 1. Remove the Phillips head screw from the bottom of the right side panel, and then slide the panel 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.
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.
5. Using a vacuum, carefully clean the condenser coil from the inside and outside of the machine. A stiff bristled brush may help in releasing debris from between the condenser coils.

D. SEMI-ANNUALLY

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

1. Check drive belt for proper tension. Push belt in with one finger, belt should deflect about 3/8".
2. Lubricate condenser fan motor with S.A.E. 20 weight oil. Three to six drops is required.

| |
|--|
| CAUTION |
| Do not over-lubricate; resulting damage could cause motor failure. |

E. CLEANING AND SANITIZING INFORMATION

Special consideration is required 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 buildup.

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.

NOTE

Using a SANITIZER 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 machine 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. Individual parts are also soaked in a deliming solution for an extended period (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 its 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.

3.13 EXTENDED STORAGE

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

- A. Turn the Main Freezer Power OFF-ON switch to the OFF position.
- B. Disconnect (unplug) from the electrical supply source.
- C. Clean thoroughly with a warm water detergent all parts that are exposed to the mix. Rinse in clean water and dry parts. Do not sanitize.

NOTE

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

- D. Remove, disassemble and clean the faceplate, flow control assembly and auger parts. Place the auger blades and the front auger wear bushing in a plastic bag with a moist paper towel to prevent them from becoming brittle.

SECTION 4 TROUBLESHOOTING

4.1 ERROR CODES

When the machine experiences a problem, one of the following error codes will be displayed on the control panel. Each error code directs you to the system location of the malfunction.

ERROR CODE MALFUNCTION

| | |
|----|----------------------|
| 1 | Soft |
| 2 | High Torque |
| 3 | Extended Run Time |
| 4 | Clean |
| 5 | Barrel Sensor |
| 6 | Hopper Sensor |
| 7 | Drive Motor |
| 8 | Cab Sensor |
| 9 | High Pressure Cutout |
| 10 | Auxiliary Sensor |

To return the machine to normal operation, any error causing condition must be corrected and the Freezing Cylinder Off/On switch must be placed in the OFF position and back in the ON position before the machine will return to normal operation.

4.2 TROUBLESHOOTING ERROR CODES

Error Code 1 - Soft Error

The Soft Error (E1) is an internal control board error that is logged for future analysis. The refrigeration is never stopped and the machine will continue to operate normally.

Error Code 2 - High Torque

If the control panel displays a High Torque Error (E2), the controller has sensed that the drive motor is running at 125% of the service factor amps (SFA) for 10 or more seconds. Place the Main Power Off/On switch in the OFF position, wait until the product in the barrel thaws to a reasonably soft consistency and return the switch to the ON position. If the error persists, contact your Authorized Stoelting Distributor for further assistance.

Error Code 3 - Run Time

The Run Time Error (E3) occurs when the compressor runs continuously for 20 minutes. This error could happen if the cutout value is not attained during "Standby Mode" or if the "Ready" signal does not come on in "Custard Mode" or "Lemon Ice Mode".

The Run Time Error may occur if airflow within the machine has reduced or stopped or if there is a

refrigeration issue. Check the sides of the machine for anything that would restrict airflow.

If the error persists after attempting to clear it, contact your Authorized Stoelting Distributor for further assistance.

Error Code 4 - Clean

If the machine 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 machine itself. The Clean Error has been programmed into the controller as a safeguard to protect the machine from potential damage caused by the machine being accidentally left in "Clean Mode". The control will attempt to restart itself after 5 minutes. The display will then flash and read Restart. To immediately clear the Clean Error, place the Main Power Off/On switch in the OFF position and back in the ON position. After the Clean Error has been cleared, the machine will start a refrigeration cycle to protect the product in case the clean button was pressed by mistake.

Error Code 5 - Freezing Cylinder Sensor

The Freezing Cylinder Sensor Error (E5) indicates a failure of the barrel sensor or an extreme out of range condition (< -34°F or > 99°F). If the control panel displays an E5, place the Freezing Cylinder Off/On switch in the OFF position and back in the ON position. If the error persists, contact your Authorized Stoelting Distributor for further assistance.

NOTE

When the machine encounters a Freezing Cylinder Sensor Error, the machine will continue to run using preset timers. This mode will allow the machine to continue making product until the machine can be serviced.

Error Code 6 - Hopper Sensor

The Hopper Sensor Error (E6) indicates a failure of the hopper sensor or an extreme out of range condition (< -34°F or > 99°F). If the control panel displays an E6, place the Freezing Cylinder Off/On switch in the OFF position and back in the ON position. If the error persists, contact your Authorized Stoelting Distributor for further assistance.

Error Code 7 - Drive Motor

If the control panel displays a Drive Motor Error (E7), the control does not sense current coming from the drive motor. Place the Freezing Cylinder Off/On switch in the OFF position and back in the ON position. If the error persists, contact your Authorized Stoelting Distributor for further assistance.

Error Code 8 - Cab Sensor

A Cab Sensor Error (E8) will not occur on the CF101 machine.

Error Code 9 - High Pressure Cutout

High Pressure Cutout Errors (E9) are usually caused by a dirty or inefficient condenser. If the control panel displays an E9 on an air cooled machine, check for proper air clearance around the machine. In a water cooled machine, check that the water is not shut off. If the error persists, contact your Authorized Stoelting Distributor for further assistance.

Error Code 10 - Auxiliary Sensor

An Auxiliary Temperature Sensor Error (E10) occurs if the temperature sensor on the control board fails. Place the Freezing Cylinder Off/On switch in the OFF position and back in the ON position. If the error persists, contact your Authorized Stoelting Distributor for further assistance.

ALTERNATING FLASHING CONTROL PANEL LIGHTS

The display panel lights will flash in an alternating sequence under any error codes. Clear the error and place the Freezing Cylinder Off/On switch in the OFF position and back in the ON position.

4.3 TROUBLESHOOTING TABLES

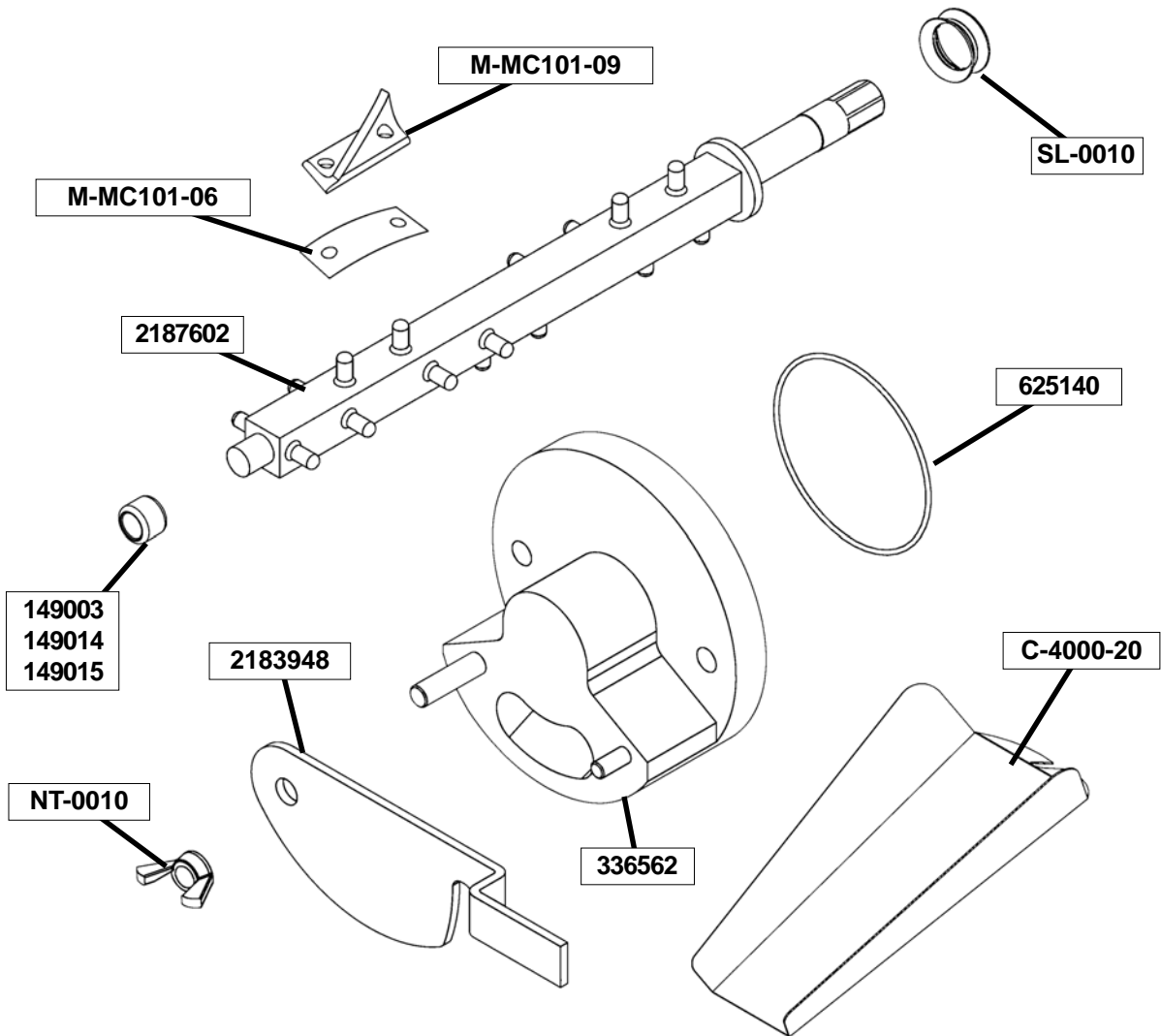
| PROBLEM | POSSIBLE CAUSE | REMEDY |
|--|--|--|
| Custard is running too cold or auger blades chatter during running. | 1. Flow is not high enough. 2. Hopper is low or out of mix. 3. Flow valve is plugged. 4. The refrigeration system is set too cold for the mix. | 1. Increase the flow. Machine needs to run for at least a minute before you see a change in the product. 2. Add Mix 3. Check flow valve. 4. Call Stoelting service department and we can help over the phone to adjust setting properly. |
| Custard is running too soft. | 1. Flow is too high. 2. Flow valve is plugged. 3. The refrigeration system for that barrel set too warm for the mix. 4. Condenser on remote unit is blocked. 5. Water cooled machine has water shut off. 6. Refrigeration system not functioning correctly. | 1. Decrease the flow. Machine needs to run for at least a minute before you see a change in the product. 2. Check flow valve. 3. Call Stoelting service department and we can help over the phone to adjust setting properly. 4. Check for blockage and clean if necessary. 5. Check that water is connected and turned on. 6. Call Stoelting service department. |
| Beater motor freezes up in the run mode. | 1. Hopper is low or out of mix. 2. Flow valve is plugged. 3. Flow valve is set too low. 4. Belt is loose and slipping. | 1. Add Mix 2. Check flow valve. 3. Increase the flow setting. 4. Check the belt and tighten if necessary. |

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| SECTION 5 REPLACEMENT PARTS |
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5.1 DECALS AND LUBRICATION

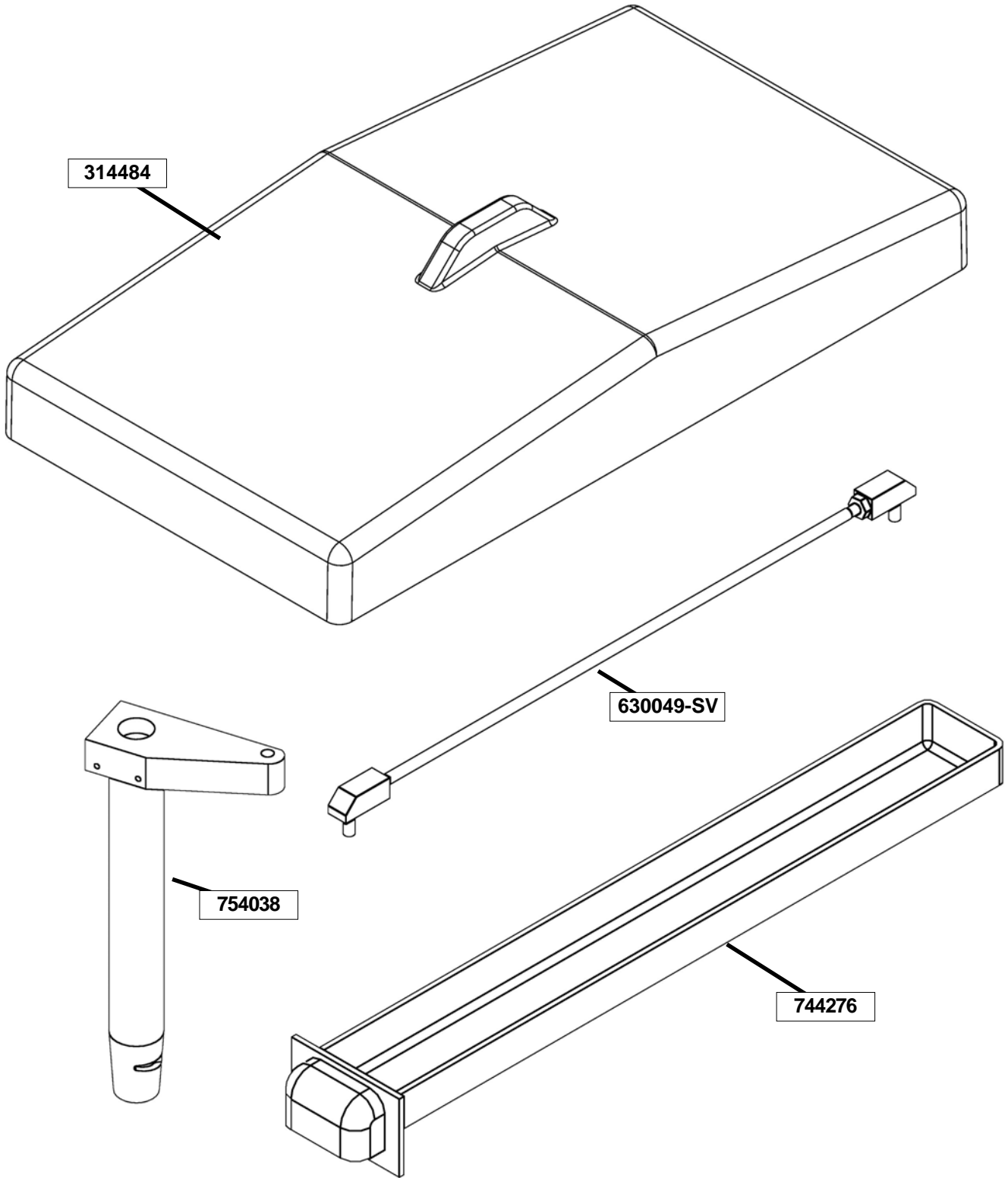
| Part | Description | Quantity |
|-------------|---|-----------------|
| 324105 | Decal - Caution Electrical Shock | 1 |
| 324106 | Decal - Caution Electrical Wiring Materials | 1 |
| 324107 | Decal - Caution Hazardous Moving Parts | 1 |
| 324151 | Decal - Field Connections | 1 |
| 324208 | Decal - Attention Refrigerant Leak Check | 1 |
| 324566 | Decal - Wired According To | 1 |
| 324584 | Decal - Adequate Ventilation 3" | 2 |
| 324594 | Decal - Attention Heat Sensitive | 1 |
| 324686 | Decal - Danger Automatic Start | 1 |
| 324728 | Decal - Contactor Identification | 1 |
| 324803 | Decal - Domed Stoelting Logo (Large) (Header Panel) | 1 |
| 324804 | Decal - Domed Stoelting Swirl (Header Panel) | 1 |
| 324825 | Decal - Main Freezer Power | 1 |
| 324856 | Decal - Stoelting Ross Logo | 1 |
| 508048 | Lubricant - Spline (2 oz Squeeze Tube) | 1 |
| 508135 | Petrol Gel - 4 oz Tube | 1 |

5.2 AUGER SHAFT AND FACEPLATE PARTS



| Part | Description | Quantity |
|------------|---|----------|
| C-2000-40 | Wearguard - Beater Shaft (Ser. #0 - #26918) | - |
| C-4000-19 | Slide - Long (Chute) | 1 |
| C-4000-20 | Slide - Short (Chute) | 1 |
| M-MC101-06 | Spring - Auger Blade | 8 |
| M-MC101-09 | Blade - Auger | 8 |
| NT-0010 | Wing Nut - Stainless Steel | 4 |
| SL-0010 | Seal - Beater Shaft (Ser. #26919 Plus) | 1 |
| 149003 | Wearguard - Beater Shaft (Ser. #26919 Plus) | 1 |
| 149014 | Wearguard - Front Beater Shaft (Small) | - |
| 149015 | Wearguard - Front Beater Shaft (Large) | - |
| 336557 | Face Plate - Italian Ice | - |
| 336558 | Face Plate (Ser. #0 - #26918) | - |
| 336562 | Face Plate (Ser. #26919 Plus) | 1 |
| 624678 | O-Ring - Rear Seal - Black (Ser. #0 - #26918) | - |
| 625140 | O-Ring - Face Plate | 1 |
| 667868 | Seal - Rear Auger (Orange) (Ser. #0 - #26918) | - |
| 674182 | Beater Shaft (Ser. #0 - #26918) | - |
| 1151859 | Adapter - Rear Seal (Code 1) (Ser. #0 - #26918) | - |
| 2183948 | Gate - Face Plate | 1 |
| 2187602 | Beater Shaft (Ser. #27789 Plus) | 1 |
| 2187609 | Beater Shaft (Ser. #26919 - # 27431) | - |
| 2187654 | Beater Shaft (Ser. #27432 - #27788) | - |

5.1 HOPPER PARTS



| Part | Description | Quantity |
|-----------|------------------------------|----------|
| 314484 | Cover - Hopper | 1 |
| 417010 | Grid - Drip Tray | 1 |
| 630049-SV | Rod - Flow Control | 1 |
| 744276 | Tray - Drain | 1 |
| 744287 | Tray - Drip | 1 |
| 754038 | Tube - Flow Control (Hopper) | 1 |

