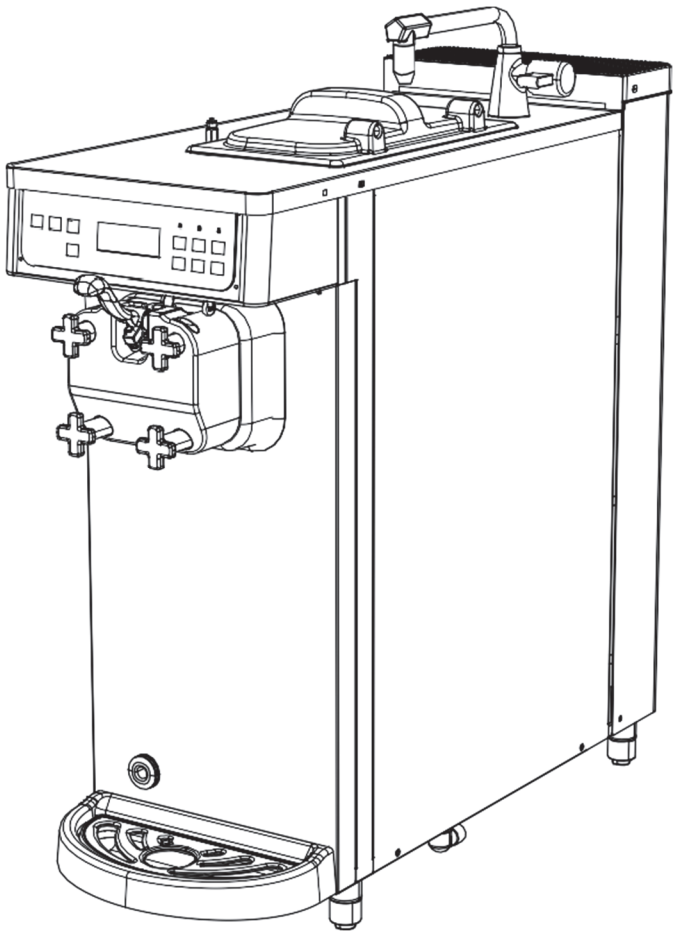
OPERATOR'S MANUAL



ISI-161TH

COMPACT SOFT SERVE & FROZEN YOGURT MACHINE

Operating Instructions

June 2022
(Updated for North America July 2024)

Complete this page for quick reference when service is required:

Taylor distributor: _____

Address: _____

Phone: _____

Fax: _____

E-mail: _____

Service: _____

Parts: _____

Date of Installation: _____

Information found on the data label:

Model Number: _____

Serial Number: _____

Electrical Specs: Voltage_____ Cycle_____

Phase_____

Maximum Fuse Size: _____ A

Minimum Wire Ampacity: _____ A

Note: *Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.*

Note: *Only instructions originating from the factory or its authorized translation representative(s) are considered to be the original set of instructions.*

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ICETRO AMERICA, INC

Thank you for purchasing an ICETRO soft serve dessert and frozen yogurt freezer. For correct use and maintenance of this machine, please read the manual carefully. If a problem occurs while using the unit, refer to this manual for troubleshooting. This manual contains a product warranty, so keep it for future reference. ICETRO equipment should only be installed by a qualified TAYLOR distributor installation professional.

If parts or accessories not provided by your TAYLOR distributor are utilized on this equipment or are installed by anyone other than a TAYLOR distributor installation professional, it can void the warranty.

The functions and specifications shown in this manual and on the website are subject to change without notice. Please visit our website at http://www.icetro.com to obtain the latest specifications.

This soft serve product machine offers the following advantages:

- **Simple installation**
  Easy to install thanks to compact design and small footprint.
- **Minimized noise**
  With a high efficiency and low noise motor, the cooling system creates minimal noise or vibration.
- **Microprocessor control system**
  Use of a state-of-the-art microprocessor control system achieves an optimal cooling system.
- **Pasteurization** Heat treatment provides a daily heating and cooling cycle to safely maintain dairy products up to 14 days before a complete disassembly and cleaning is required
- **Defrost function**
- **Ergonomic button premium LCD display panel**
  Push button design for easy operation.
- **Easy to Clean**
  Water lines are connected directly to machine for ease of cleaning and sanitation
- **Taste and Texture Control System** Separate speed controls for producing and dispensing soft serve products.

Table of Contents

Section 1 Safety

Caution and warning symbols are intended to alert the user and prevent accidents or danger due to improper use. Please familiarize yourself with these symbols and their meanings accordingly.

DANGER
If you ignore this symbol and wrongly use the equipment, it may cause fire, serious injury or death.

WARNING
Ignoring the warning symbol and incorrect use of equipment can result in injury or death.

CAUTION
This means that it can cause injury or property damage when the details are violated.

※ Personal Injury
Minor cuts, burns or electric shocks that do not need hospitalization or long-term hospitalization.

※ Property Loss
Loss or damage caused to buildings and property.

[Each symbol has the following meanings]


This symbol means danger is possible under certain conditions.


This symbol means never to do the described action.


This symbol means not to touch specific parts with bare hands.


This symbol means to unplug the power from the outlet.


Must be grounded.


This symbol means not to disassemble the unit.


This symbol means to be careful because there is a possibility of electric shock.

 For relocation of the equipment, call an authorized ICETRO distributor. *Machine may present a tipping hazard unless properly installed. It should be installed in accordance with related regulations such as the road and traffic act, the firefighting act and the food sanitation act.*
※ Call your distributor.

 Only authorized ICETRO service personnel should perform installation and repairs on this machine. Incorrect service or repair *may cause fire, electric shock or injury.*

※: If you think the unit needs service, call your distributor or service technician.

 Keep the power cable away from heat and heat sources. Excessive heat can *damage the power cord, resulting in fire or electric shock.*

 If the power cable needs replacement or repair, contact authorized ICETRO service personnel.

 Do not inject flammable material such as benzene, gasoline, paint thinner or LP gas into the machine or store flammable materials near the machine. *Explosion, fire or injury may occur.*

 Before cleaning the inside of the unit, unplug from the Ground Fault Circuit Interrupter (GFCI wearing rubber gloves. *Failure to wear rubber gloves may result in electrical shock or injury.*

 Do not disassemble or alter the unit.
Electric shock, fire or injury may occur

 Keep your warning and caution labels clean for easy legibility. *If the user misunderstands the content of such a label, serious accident or injury may occur.*

 Do not put anything on the power cable. Make sure that the power cable is not twisted or knotted. *Fire or electric shock may occur.*

 Stop using the machine, if you find the power cable or any other cable to be defective*. Fire or electric shock may occur.*

 Do not spray or use any flammable products (insecticide, solvents, deodorizers etc) near the machine. *Fire or electric shock may occur.*

 Machine operates best at room temperature between 10~30℃ (50 – 80 degrees F)

 Do not touch the power cable or any electric part with wet hands. *Death or injury may occur.*

 Stop operating the unit if you notice any unusual noise, smell or smoke coming from it. *Continued operation under such conditions may result in electric shock or fire.*

 When you replenish soft serve product ingredients, do not allow outside moisture to get into any interior electric part. *Defective operation may occur.*

 Make sure that no electrical part of this unit has come into contact with water. *If the unit has been immersed in water (for example, due to flooding) call an authorized ICETRO service center for assistance. Fire or electric shock due to electric leakage may occur.*

 Do not touch any moving part inside the machine. *Serious injury can occur.*

 Do not climb onto the unit or shake or tilt it. *Tipping or damage may occur.*

 When you dispose of the unit call your distributor to determine proper disposal method. Follow all local safety and disposal regulations.
※ *Call your distributor.*

If you sell or relinquish your ICETRO unit, make sure to provide the correct user's manual with it. *Without the manual, an accident may occur because of erroneous handing or operation.*

Do not place any obstacle in front of the air vent. *It may adversely affect unit's performance.*

While operating the unit close the upper cap completely to keep out bugs, dust and foreign materials.

Never operate the discharge lever during sterilization or defrosting*. Hot material can be discharged and it may cause burns.*

Do not install unit on a tilted surface. *Physical injury or equipment damage can occur.*

Do not apply excessive force or impact to the unit. *Damage to the machine can occur.*

Do not use or store any flammable or combustible materials near the unit. *Fire or electrical shocks can occur.*

Do not press "WASH" button when cylinder is empty. Drum bearing can be damaged because there is no lubrication.

To produce safe, consistent soft serve product it is recommended to pasteurize or clean this unit every day according to instructions. *Neglecting the heat treatment or cleaning process will result in product spoilage.*

Do not place containers, utensils, or any other items on top of the unit. *These can fall into the unit, causing electrical shock or equipment damage.*

Do not install machine near dust, moisture, or water. *Electrical shock, fire or other dangerous conditions may result.*

Do not let untrained personnel touch or operate the machine. The machine can be damaged and injury may occur.


If unit will be left unused for an extended period, close the water supply valve and disconnect from power source.

If there is water inside the power supply, turn off power and disconnect unit from GFCI. Unit, power cord and GFCI must be completely dry before returning to use.

Do not change or make modifications to the power cord. *Modifications can cause fire*.

Do not turn the power ON/OFF with the circuit breaker continuously*. It can cause electrical shocks or fire.*

Do not connect too many devices into one electrical outlet. Dedicate one outlet to this machine. *Overloaded circuits cause fire.*

Do not touch the GFCI with wet hands. *It can cause electrical shocks or fire.*

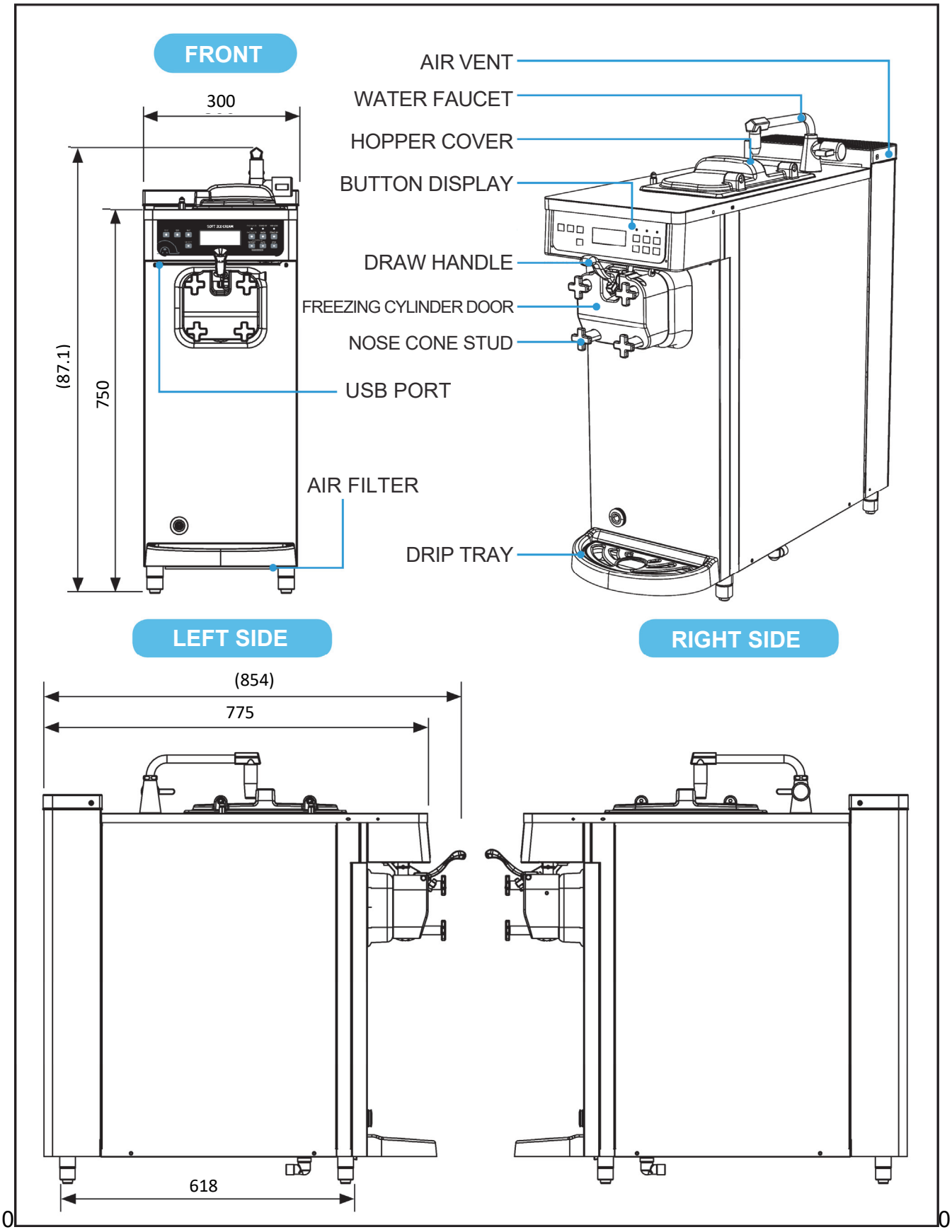
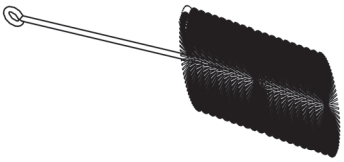
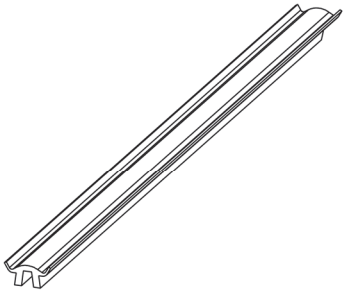

FRONT
300
(87.1)
750
AIR VENT
WATER FAUCET
HOPPER COVER
BUTTON DISPLAY
DRAW HANDLE
FREEZING CYLINDER DOOR
NOSE CONE STUD
USB PORT
AIR FILTER
DRIP TRAY
LEFT SIDE
RIGHT SIDE
(854)
775
618

Figure 1

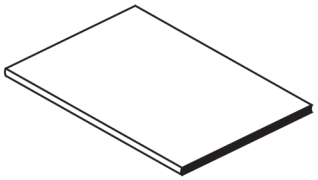
ACCESSORIES & ATTACHMENTS



CYLINDER (“DRUM”)
BRUSH
1EA



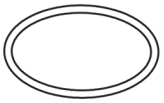
SCRAPER BLADE
6EA



MANUAL
1EA

FREEZER DOOR
BRUSH
1EA

FEED TUBE
1EA

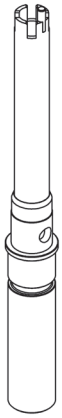


FREEZER DOOR GASKET
1EA

FEED TUBE GASKET
1EA

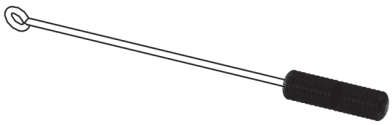
FEED TUBE BODY
BRUSH
1EA

DRAW VALVE GASKET
2EA

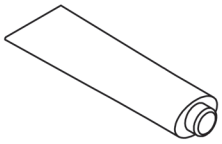


FEED TUBE BODY
1EA

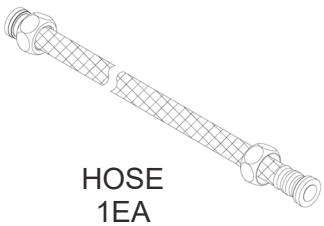
BEATER BLADE BEARING
1EA



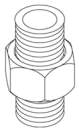
FEED TUBE
BRUSH
1EA



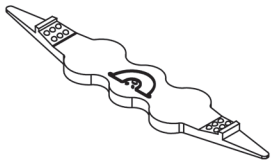
LUBRICANT – FOOD GRADE
1EA



HOSE
1EA



UNION FITTING
1EA



O-RING REMOVAL TOOL
1EA

Figure 2

Section 3 Specifications

CLASSIFICATION		SPECIFICATION
Product name		Soft Serve Machine
Model name		ISI-161TH
Voltage Rating		1 PH, 115V, 60Hz
Power consumption		1.35 KW
Amps		13 A
Dimensions including lever and feet	WIDTH(W)	300 mm (12”)
	DEPTH(D)	838 mm (33”)
	HEIGHT(H)	838 mm (33”)
Cylinder capacity		1.4 L (1.5 qt)
Hopper capacity		3 L (3.2 qt)
Consecutive selling (30 second interval)		3 Cups (15 Cups)
Initial sales hours		8 minutes once operator hits “AUTO”
Hopper and Standby temperature		Maintain under 5° C (41° F)
Compressor		Hermetic
Heat Treatment		68° C (155° F) for 30 Minutes
Air filter for condenser		Located at bottom
Refrigerant amount		500 g (17.64 oz.)
Refrigerant Material		R-404A
Display system		LCD screen
Net weight (before crating)		90 kg (216 lbs)
Gross weight (Shipping)		103 kg (227 lbs)

Section 4 User Interface

Install machine in a dedicated outlet equipped with a GFCI (Ground Fault Circuit Interrupter) with more than 15 amps

The power cable must be connected before the unit can be operated normally

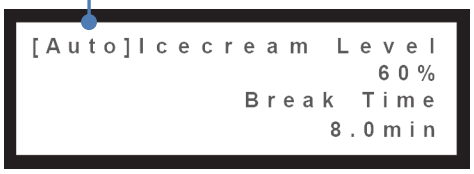
For your information

If you intend to leave machine unused for an extended period, wash and sanitize it and turn off the water supply valve.

Check Prior to Use

- **Do not obstruct air intake and discharge**
  Air suction and discharge must be kept clear for optimum cooling performance.
- **Recommended Daily Cleaning**
  It is recommended that the barrel, the hopper, agitation impeller, beater, feed tube, draw spout and the draw valves are cleaned every day.
- **Weekly Air Filter Cleaning**
  For better machine performance, clean air filter weekly.
- **Clean the condenser once a month.**
  Clean the condenser at least once a month. More frequent cleaning is recommended.

Button Display Names and Functions

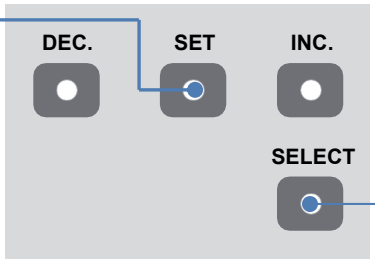


'DISPLAY WINDOW'

- Displays the progress of soft serve formation in operation.

'SET'

- Button is used to change the setting. Press the 'DEC.' & 'INC.' buttons at the same time for five seconds to lock or unlock the touch buttons.



'SELECT'

- Press SELECT button for three seconds to check temperature, heat treatment success or failure, cleaning success or failure and error record and logs.

'WASH'

- Button is for wash function.

'PASTEURIZE'

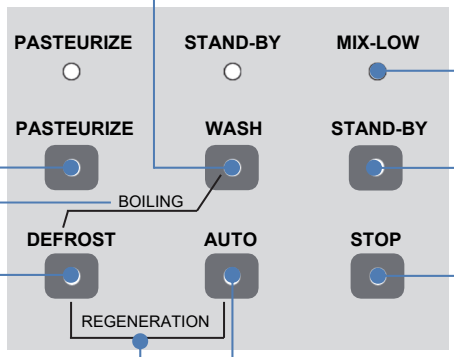
(Heating, Heat)

- Used when pasteurizing the soft serve product or ingredients in the hopper.

'BOILING'

('DEFROST' + 'WASH')

- Raises water temperature to kill bacteria and sanitize while cleaning the system.



'MIX-LOW'

- Light blinks when ingredient level is running low.
- Light remains on if ingredients are empty.

'STAND-BY'

- While the ingredients in the drum and hopper are being refrigerated.

'STOP'

- Button is used to stop all the functions.

'DEFROST'

('DEFROST' + 'AUTO)

- Used when defrosting the unit.

'REGENERATION'

('DEFROST' + 'AUTO)

- Used when the soft serve product appears watery.

'AUTO'

- Sets mode to automatically make soft serve products.

Figure 3

'AUTO' Mode' Making soft serve product

Pour the raw mix or ingredients into the hopper and press the 'AUTO' button. The following status display will be shown.

Figure 4

Current level of soft serve product is indicated.

To check 'AUTO' Mode level set up

Press the 'SELECT' button to display the level setting (Current, Set-up, No-load) of product.

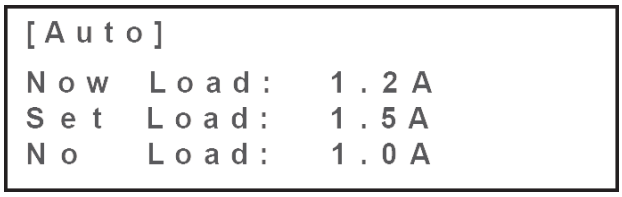


Figure 5

To change product level setting, press the 'SET' button for three seconds.
(For further details, see 'Adjusting Setting Value' section.)

To check condition of ingredients

To confirm the condition of the ingredients in the hopper, press 'SET' button.

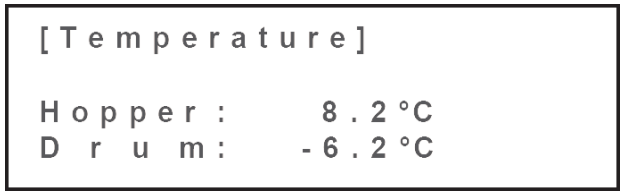


Figure 6

Information including the temperature of the hopper and cylinder can be obtained. To change the temperature, press the 'SET' button for three seconds. *(For further details, see 'Adjusting Setting Value' section.)*

AUTO Mode continued…

When soft serve product has been produced, the compressor will be shut down for a while, and the status will be displayed.

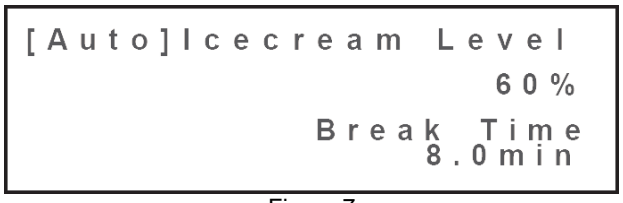


Figure 7

TIME: The time remaining until compressor restarts will be displayed in minutes (min). If the ambient temperature is high, the compressor may start up sooner than the indicated time.

PRODUCT LEVEL: Soft serve product level In the unit is indicated. Starting at 100%, the value will decrease as time passes, faster if the ambient temperature is higher.

For your information

The soft serve product level default is set by the manufacturer. The types of ingredients and amount of wear to the scraper blades will impact correct settings. These should be adjusted accordingly by the installation technician.

When changing the ingredients, consult with a TAYLOR distributor installation professional to adjust the settings.

‘REGENERATION’ Mode

If soft serve product sits in the freezing cylnder and is not dispensed, product appearance will deteriorate. In this case you can use the ‘Regeneration’ function to improve appearance. Press the ‘DEFROST’+‘AUTO’ button at the same time for more than 2 seconds. The status display window will appear.
※Caution: Activated only when machine is in AUTO mode.

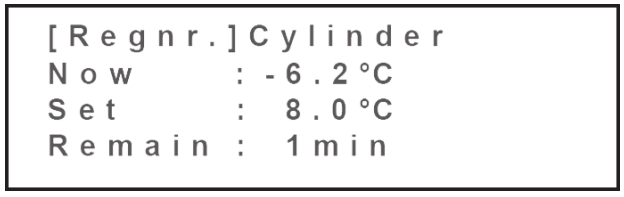


Figure 8

Window displays the current temperature of the product as well as the temperature setting of the freezing cylinder. Window also displays the number of minutes to maintain set temperature.

When temperature maintenance time expires (after target temperature is reached) unit will automatically enter into ‘AUTO’ mode to make soft serve.

For your information

The 'Regeneration' function refers to a process where the soft serve product is liquidized. The process of producing soft serve can then take place again. This function operates in "AUTO" mode only and takes about 2 to 3 minutes.

‘DEFROST’ Mode

Use the ‘DEFROST’ function to melt the soft serve in the cylinder.

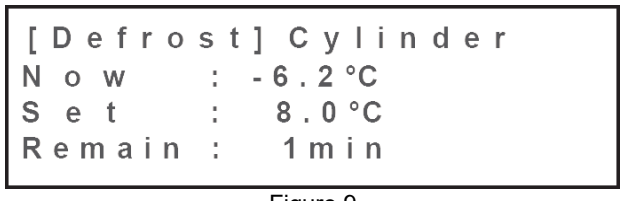


Figure 9

‘WASH’ Mode

WASH Mode is used to operate the hopper agitator and the cylinder beater motor. WASH Mode is primarily used to remove water and liquid raw material.

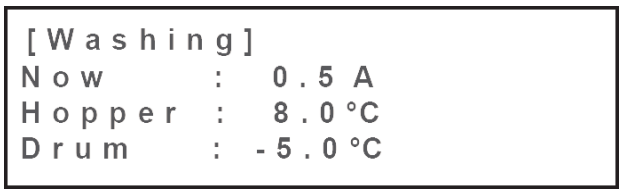


Figure 10

Window displays the present current value of the beater motor.

‘BOILING’ Mode

“Boiling Mode” heats the raw ingredients or water in the cylinder and hopper to reach a set temperature of 60° C (140° F) in order to wash and sanitize. Press both ‘DEFROST’+‘WASH’ buttons for longer than 1 second to display the window.

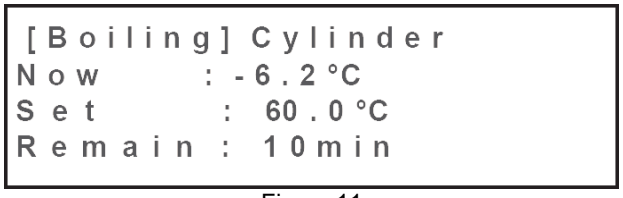


Figure 11

The set temperature of the freezing cylinder is displayed. The current soft serve product temperature is displayed. The retention time (minutes) is displayed after the “current” temperature reaches the “set” temperature.

After the “current temperature” reaches the “set temperature” and the retention time is complete, the operation halts

‘PASTEURIZE’ Mode

Pasteurization must be done every day and the ingredients must be kept at a temperature below 5°C (41°F) or ingredients will deteriorate and spoil. To prevent spoilage and maintain product safety PASTEURIZE Mode must be run at 68~70°C (154°F) for at least 30 minutes every day.

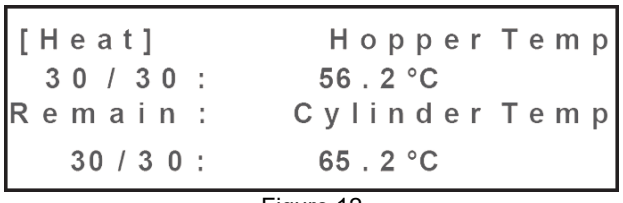


Figure 12

To check ‘PASTEURIZE’ mode temperature setting

Current temperature and duration of pasteurization process are indicated, Press ‘SELECT’ button to display the Control Temperature in the hopper and cylinder.

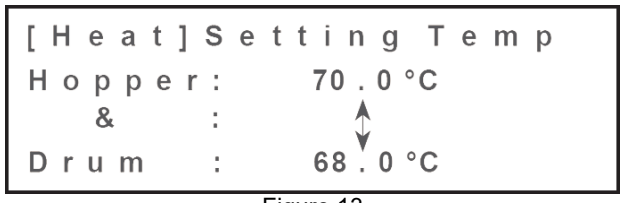


Figure 13

‘HEAT STAND-BY’ Mode - Hopper

After pasteurization, this stage refrigerates the raw material in the hopper and cylinder (“drum”) to keep it cool. The refrigeration process is applied to the hopper first and the cylinder (“drum”) next.

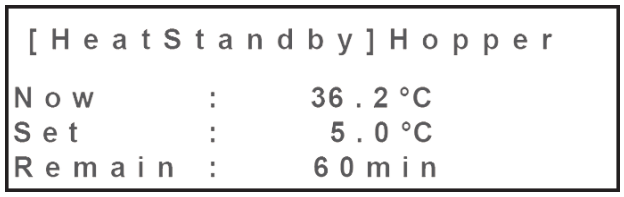


Figure 14

‘HEAT STAND-BY’ Mode – Cylinder

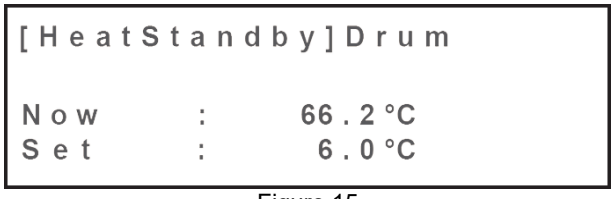


Figure 15

Standy-by hopper and cylinder (“drum”) simultaneously after completing ‘PASTEURIZE’

When the hopper and cylinder (also called a “drum”) are refrigerated simultaneously, the temperatures of the hopper and cylinder are indicated as shown in Figure 16 below.

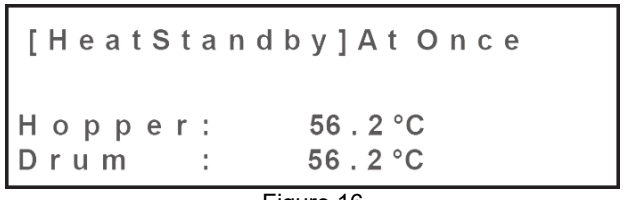


Figure 16

For your information

While the ‘PASTEURIZE’ function is operating, do not touch beater cover or hopper cover because they are hot. Do not disassemble or modify. The hot ingredients can cause bum injuries.

If the ‘PASTEURIZE’ function has not been done, remove any ingredients or product in the hopper and perform cleaning.

Check the setting

Press the ‘SET’ button lightly to enter the mode where set-up value can be confirmed.

In the confirmation mode, Press the ‘SET’ button to see the setting values in the following order.

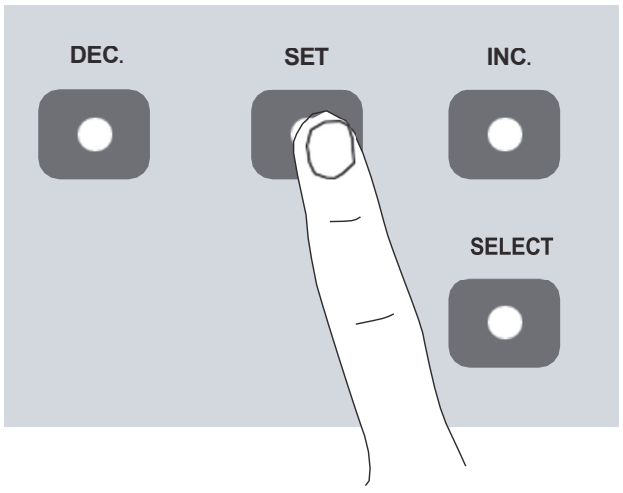


Figure 17

The temperature setting in the hopper and the cylinder is displayed.

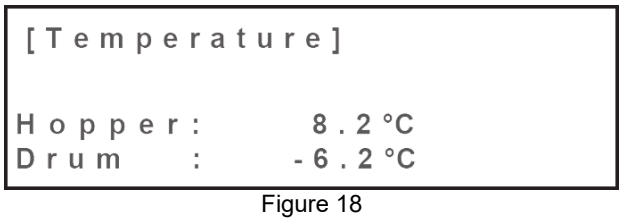


Figure 18

The rated voltage, frequency and current of the freezer are displayed.

Figure 19

The version No. of the software operating the Main PCB, Vend PCB, Control PCB, and Door PCB are displayed.

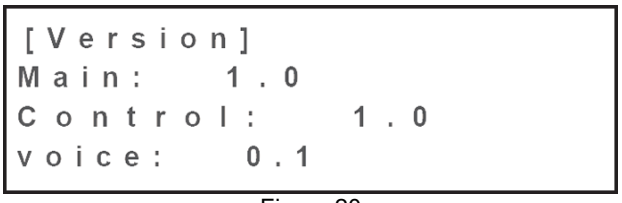


Figure 20

The time and date set up in the freezer are displayed.

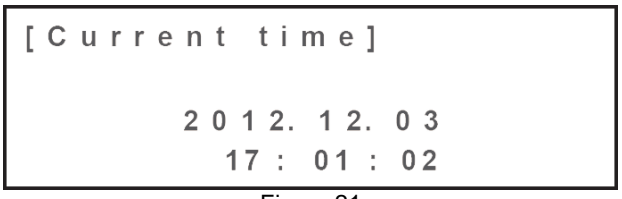


Figure 21

No-load current of the beater motor is displayed. First: No-load current when controlling soft serve product first Run: No-load current when controlling product during operation

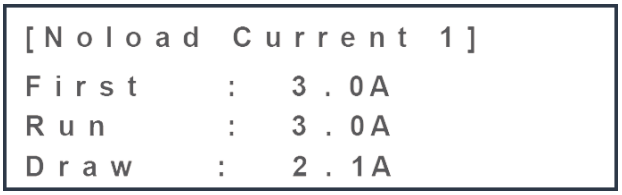


Figure 22

Draw: No-load current when discharging After Draw: No-load current after draw

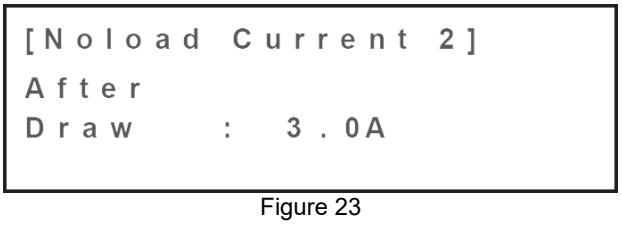


Figure 23

Check the record

Press the ‘SELECT’ button for three seconds to check the records in the order of Sterilization, Washing, and Error.

Display items can be changed with the ‘DEC.’,‘INC.’ buttons.

To check the date, there has to be at least one record. Press the ‘SELECT’ button shortly to see the year, month and date. Multiple records can be viewed using the ‘DEC.’ and ‘INC.’ buttons.

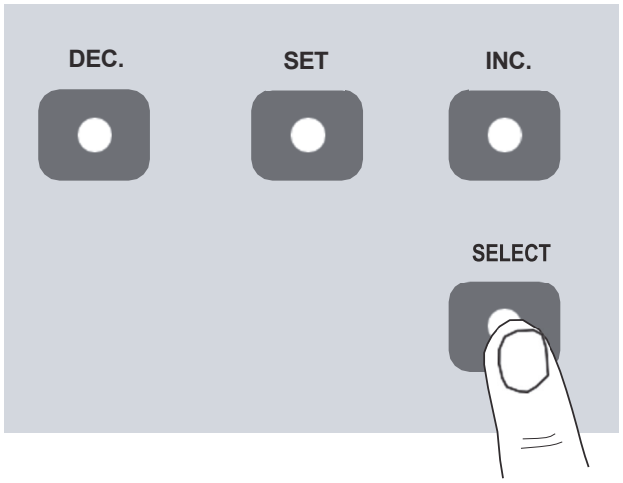


Figure 24

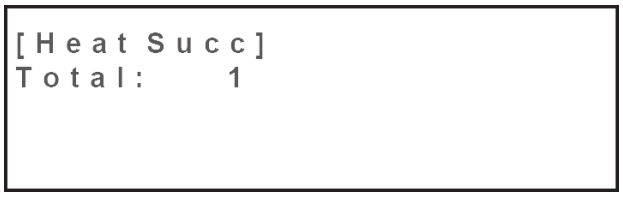


Figure 25

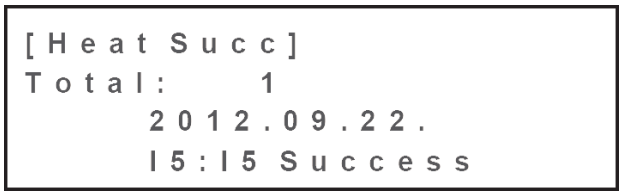


Figure 26

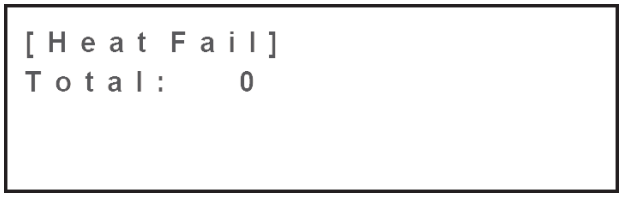


Figure 27

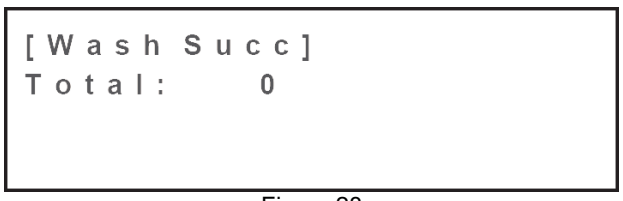


Figure 28

[Wash Fail]
Total: 0

Figure 29

[Error]
Total: 0

Figure 30

Change the setting

Press the ‘SET’ button for three seconds to enter the setting change mode as follows.

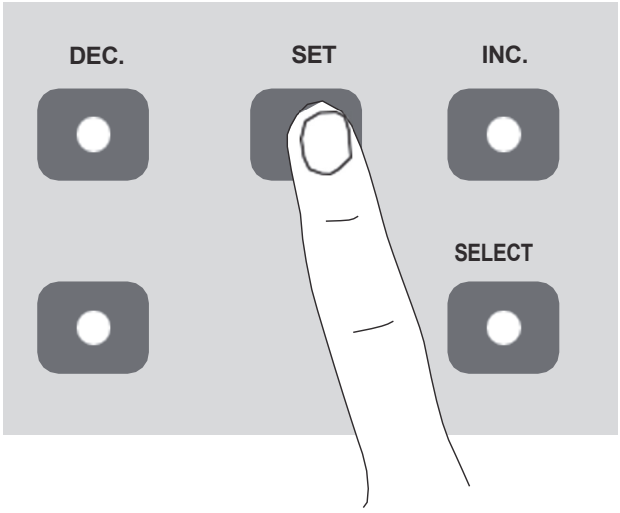


Figure 31

Move to other items using the ‘DEC.’ and ‘INC.’ buttons. Press the ‘SET’ button. While the setting value is flashing, change the value using the ‘DEC.’ and ‘INC.’ buttons.

Press the ‘SET’ button again to go to another item. To change several values in an item, move to another value using the ‘SET’ button.

When the last value is changed, the first screen of the item appears. If you press the ‘SET’ button again for three seconds, then you can exit the setting change mode.

3-1 : Adjust viscosity set point.

This item is used to adjust the viscosity set point by amperage draw (current draw) in product formation stages such as first, Run, Draw and After draw. The larger the number is, the harder the soft serve level is. The smaller, the softer it is. If viscosity set points are too high, then the number of soft serve cups sold can be decreased.

[3-1]Setting Current
First : 1.0A
Run : 1.2A
Draw : 1.8A

Figure 32

The level of soft serve at the start of production. After 100%, production will be done at the level as shown at ’Run’. ‘Draw’ is applied when discharging product.

[3-1]Setting Current
After
Draw : 1.0A

Figure 33

3-4: Adjust the hopper cooling temperature.

This item is used to adjust the cooling temperature of the ingredients in the hopper. The larger the number is, the higher the storage temperature is. The smaller the number is, the lower the storage temperature is.

If you keep the storage temperature too low, then it can form ice in the ingredients in the hopper. If you set it too high, it can cause decay of the ingredient in the hopper.

[3-4]Control Temp.
Hopper(AUTO+STANDBY)
4.0C

Figure 34

3-5: Voice guidance and volume level can be selected.

Voice guidance time can be set up.

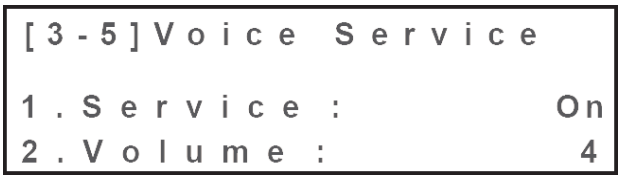


Figure 35

3-6: The time and date of the internal clock can be set up.

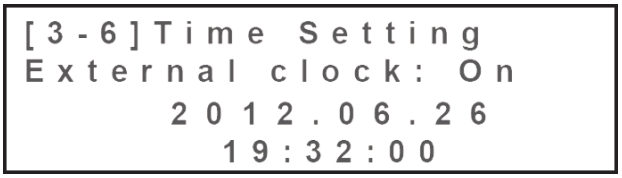


Figure 36

Important

The soft serve level is configured to the default factory setting and shall be adjusted depending on the raw materials. Adjust the settings upon consulting with the installation engineer when changing the soft serve level.

Section 5 Operating Procedures

Making soft serve

1. Open hopper cover and put in the correct amount of ingredients.

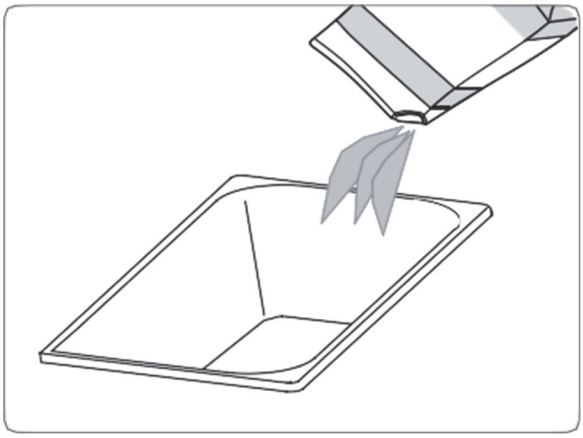


Figure 37

2. Insert the feed tube body and feed tube into the hopper.

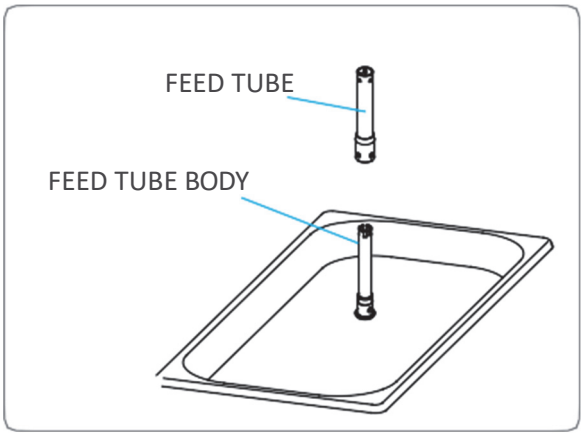


Figure 38

3. Close the feed tube hole and insert the agitator paddle. Discharge 300g and pour it back into the hopper with the ingredients.

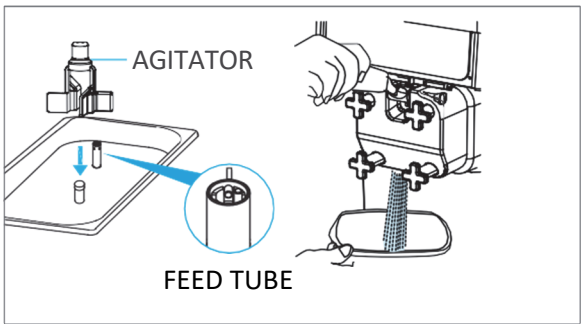


Figure 39

4. Operate the machine by pressing the AUTO button.

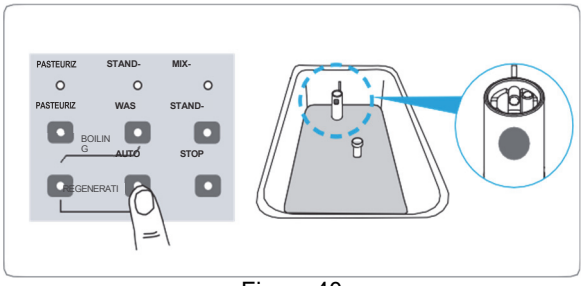


Figure 40

5. Open the feed tube hole after ice cream is fully formed.

For your information

The smaller the feed tube hole is, the higher the overrun (air content) will be.

- In case of continuous sales, the ingredient supply gets lower and the soft serve is let out slowly.
- The feed tube hole can get clogged, so check it and wash it periodically during use.
- The manufacturer will not be liable for any problems (e.g., spoilage of materials, overcooling, non-production of soft serve) caused by using materials in non-frozen state 10°C (50°F).
- Using very thick ingredients such as acai berry, please remove feed tube and its body. Using feed tube with these types of ingredients may starve the cylinder.

.

How to pasteurize the soft serve

1. Cover the feed tube hole inside the hopper.

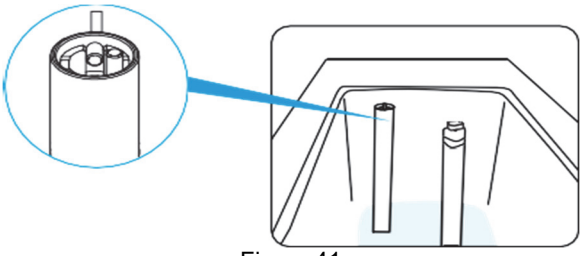


Figure 41

2. Press the ‘PASTEURIZE’ button.

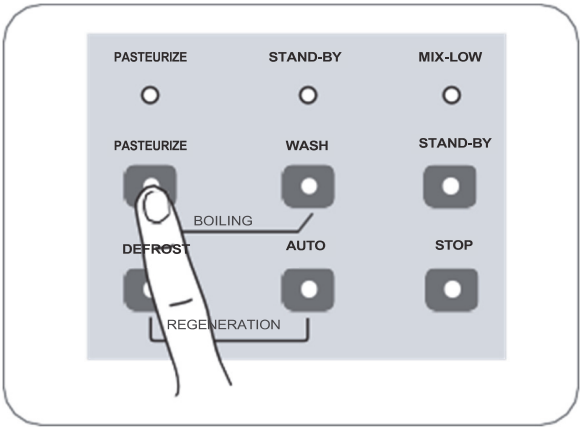


Figure 42

This function is used to suppress the growth of bacteria and maintain product freshness by performing low temperature heating of the ingredients and product in the hopper and cylinder (68-70°C 30 minutes 154-158° F). This function should be done every day. If it is not pasteurized every day, the machine must be cleaned every day.

3. When the pasteurization is complete and the ‘**AUTO**’ lamp is on: Pasteurization is complete and the unit is generating product. When you move to 'AUTO' mode after 'STAND-BY' mode, you must clean the feed tube and feed tube body and ensure that the feed tube hole is clear to prevent clogging.

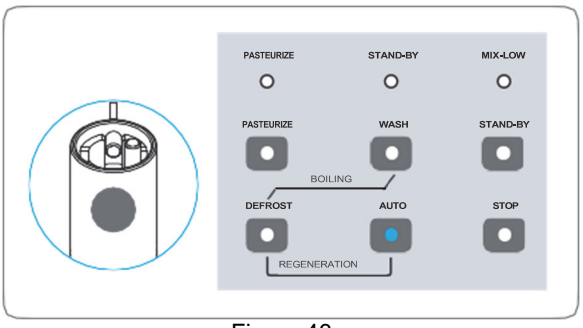


Figure 43

※Caution:
After pasteurization, to prevent feed tube clogging, please make sure to clean feed tube and fill the hopper with the ingredients as the condition of initial operation.

4. When pasteurization is complete and the ‘**STAND-BY’** lamp is on: Pasteurization is complete and the ingredients in the hopper and the cylinder are being refrigerated.

   Be sure to discharge 300g of ingredients by closing the feed tube hole before pressing the 'AUTO' button. Start serving soft serve when it is fully formed and be sure to open the feed tube hole before dispensing.

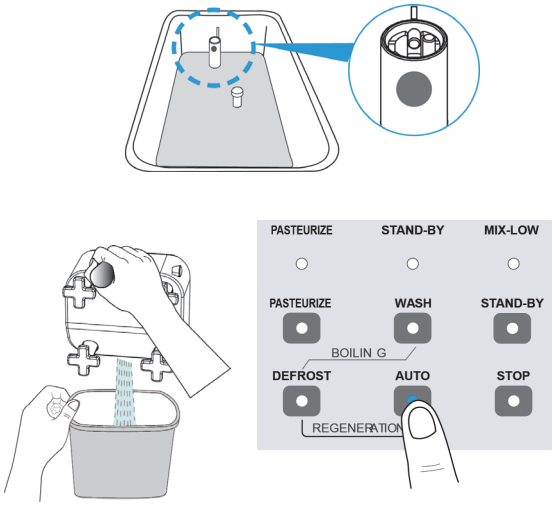
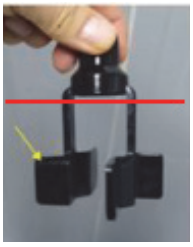


Figure 44

For your information



Fill ingredients to level of red line as shown above

- The raw materials should be kept in the hopper during sterilization and filled with at least 1 liter of ingredients (cylinder must be kept fully filled)
- This product has a built-in automatic pasteurization function. Auto pasteurization only operates in 'AUTO', 'STAND-BY' mode. You must function button stops during sterilization.
- The automatic pasteurization function of this unit operates at four o’clock in the morning. Startup time of the function may slightly vary among models. Automatic pasteurization only works in 'AUTO', 'STAND-BY' mode; you must not cut off electrical power supply during the pasteurization process. If the ingredients spoil due to the absence of pasteurization, the manufacturer will not assume any responsibility for it.

Improving soft serve product consistency

1. Remove the feed tube from the hopper.

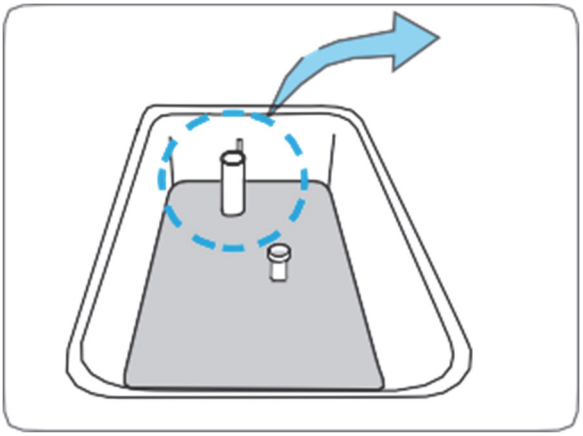


Figure 45

2. Press 'STOP' and 'DEFROST' on the control panel.

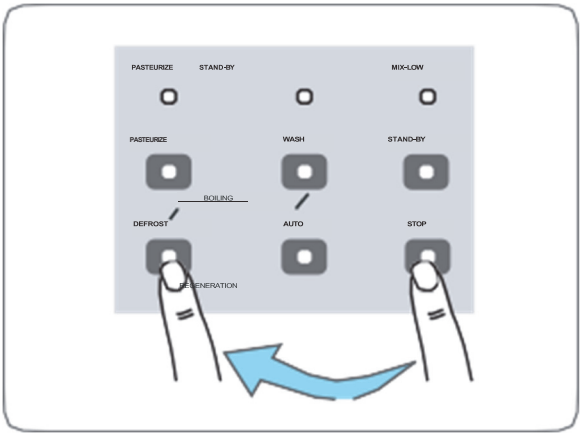


Figure 46

3. Insert the feed tube back after defrosting is complete and cover the hole.
When you move to 'AUTO' mode after 'STAND-BY' mode, please make sure to clean the feed tube and feed tube body so you can see the feed tube hole. This prevents clogging.

   Discharge 300g of ingredient by pulling the discharge lever and put it back in the hopper. Press 'AUTO' to start making soft serve.

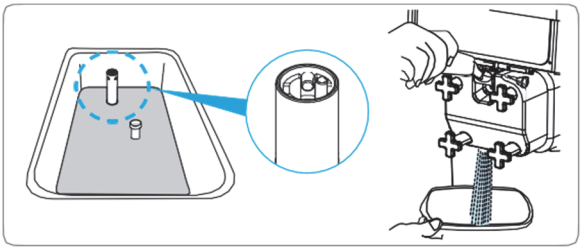


Figure 47

4. When soft serve quality that can be served is fully produced, open the feed tube hole again in the hopper.

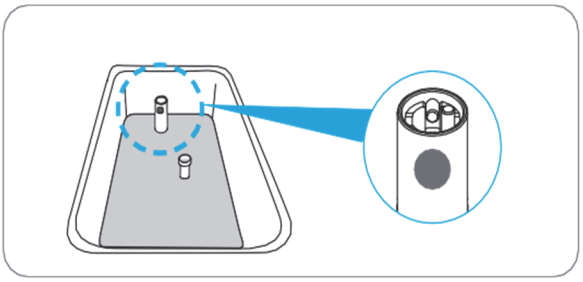


Figure 48

For your information

- When ingredients with too much milk fat are used, the consistency of the soft serve product will appear poor if only a small amount of product is served over 5-6 hours. In such case, use the above-mentioned method to improve the consistency of the product.
- The feed tube hole gets easily blocked: Be sure to check and clean it frequently while operating the machine.

Soft serve dispense speed control

1. By adjusting 'Screw Adjust' at the bottom of the lever (out lever), you can adjust the discharging speed of the soft serve.

   As shown in the figure below, release the 'Screw Adjust' to increase the discharging speed of the soft serve.

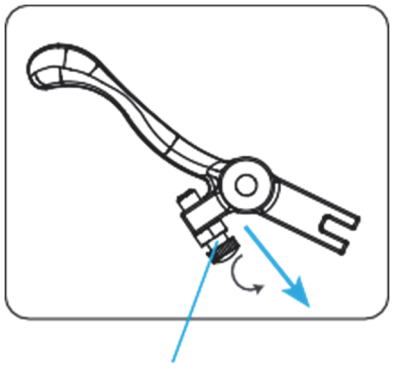


Figure 49

2. As shown in the figure below, fasten the 'Screw Adjust' to decrease the discharging speed of the soft serve.

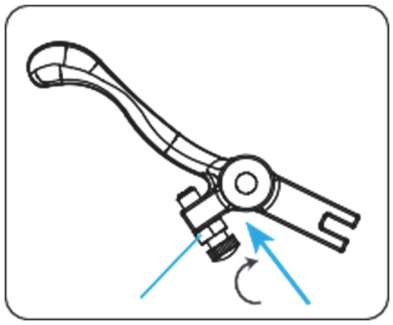


Figure 50

※ After setting up the adjustment bolt position, tighten the set nut ‘a’ to fix the 'Screw Adjust' position and maintain constant dispensing volume.

<Maximum open> - Soft serve dispensing speed is maximized. Please avoid loosening the bolt more than shown in the right picture. Otherwise, dispensing can be interrupted for the Screw Adjust may touch the beater cover.

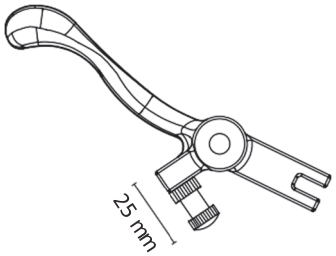


Figure 51

<Minimum open> - Soft serve dispensing speed is minimized when the Screw Adjust is tighten as shown in the right picture.

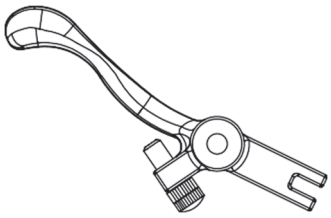


Figure 52

For your information

- If you loosen the Screw Adjust it increases flow rate of product. It will quickly starve the cylinder so that it becomes unable to dispense. Therefore, it is recommended to adjust the dispensing speed (flow rate) to one cup every 6 to 8 seconds.

Adjustment method for Feed Tube

The feed tube is made up of two parts.

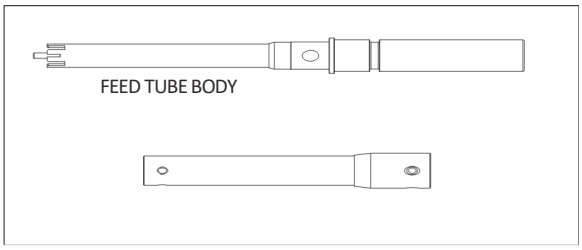


Figure 53

The part that is inserted into the hole of the hopper is called the body and a tube is inserted into this. The tube has a hole at the top and at the bottom. It can't be inserted in the reverse direction.

Figure 54

Figure 55 shows the feed tube with a blocked hole.

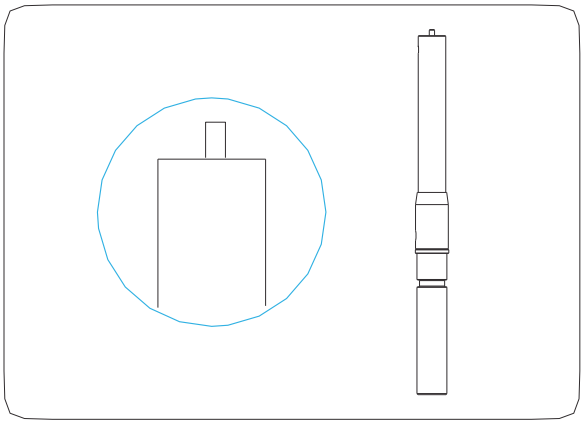


Figure 55

If you align the protrusion of the upper area of the feed tube body with the area having no hole in the upper area of the tube, then the hole in the lower area of the feed tube body will be blocked.
Condition of use:

1. Initial soft serve making
2. "Heating" mode executed
3. "Regeneration" mode executed

Figure 56 shows the feed tube aligned with a large hole.

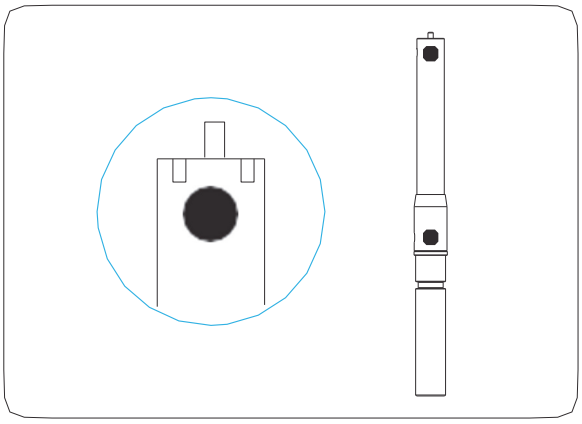


Figure 56

Align the protrusion of the upper area of the feed tube body with the large hole in the upper area of the tube. Decrease the overrun and increase the amount of ingredients injection in this way when you need continuous vending of the product.
Condition of use:

1. When the "Auto" mode is executed

Figure 57 shows the feed tube aligned with a small hole.

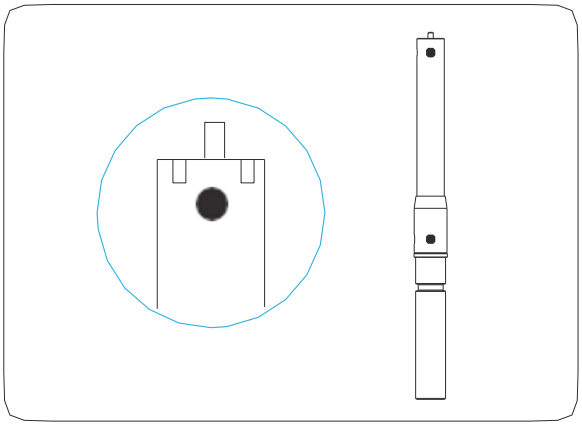


Figure 57

Align the protrusion of the upper area of the feed tube body with the small hole in the upper area of the tube. Then it will be aligned with the small hole in the lower area of the feed tube body. Increase the overrun and decrease the amount of ingredients in this way when you expect a small amount of sales.

Condition of use:

1. When the "Auto" mode is executed

For your information

A small hole can improve the overrun, but it may depend on the amount of soft serve mix (ingredient) in the freezing cylinder. The lower the amount of mix in the freezing cylinder, the higher the overrun. The higher the amount of mix (ingredient), the lower the overrun.

Figure 58 shows the feed tube aligned with a medium hole.

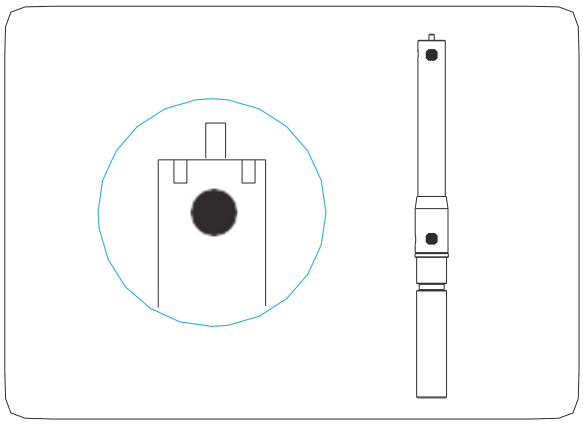


Figure 58

Align the protrusion of the upper area of the feed tube body with the medium hole in the upper area of the tube. Then, it will be aligned with the medium hole in the lower area of the feed tube body. It will make the overrun and the amount of ingredients injection adequate for sales.
Condition of use:

1. When the ”Auto” mode is executed

Cleaning method

1. Press ‘STOP’ button, and then ‘DEFROST’ on the operation panel.

   (Wait about ten minutes until soft serve product is melted in the cylinder.)

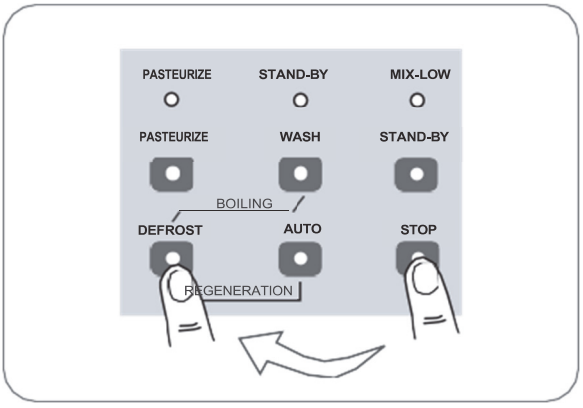


Figure 59

Open the cover of the hopper, then remove and clean the feed tube (the body), and agitator paddle.

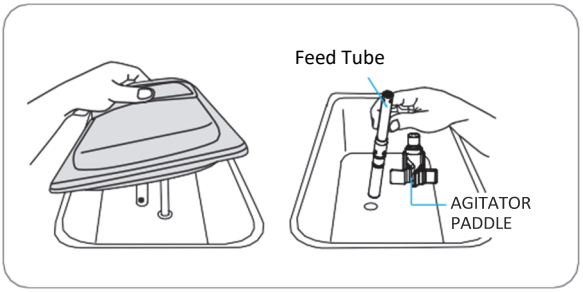


Figure 60

3. Remove the drip tray and place drain bin under the opening.

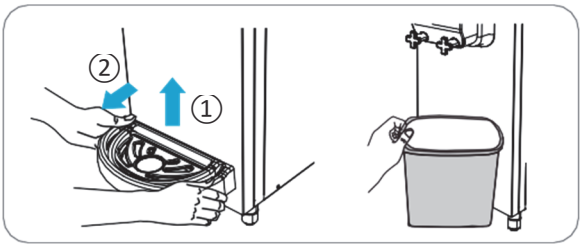


Figure 61

4. Remove the soft serve liquid in the hopper and pour faucet water into it. Repeat it two or three times until you get clean water from it.

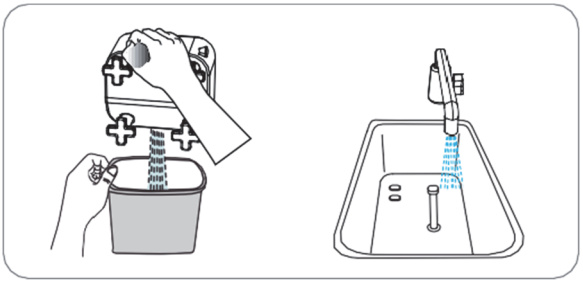


Figure 62

5. In order to remove product residue from the baffle, freezing cylinder, hopper cover, drain hole and water level sensor, use neutral detergent in the clean water with brush.

2.

Caution

- When sterilization is performed once a day, the system should be cleaned every 14 days.
- The feed tube, drip tray, agitator paddle and soft serve discharge port must be cleaned once a day.

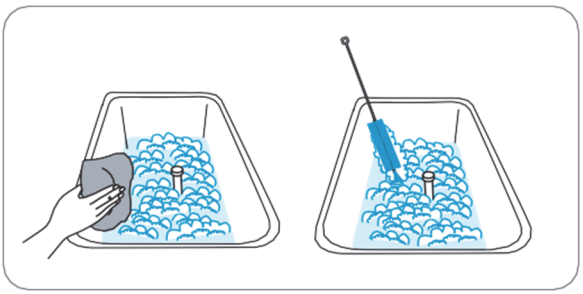


Figure 63

6. After process, press the WASH button to release the water and rinse the machine with clean water.
7. Stop the wash by pressing stop button (do not turn off the power switch) and loosen the freezer door bolts diagonally by the order shown in the picture and separate the freezer door from the soft serve freezer.

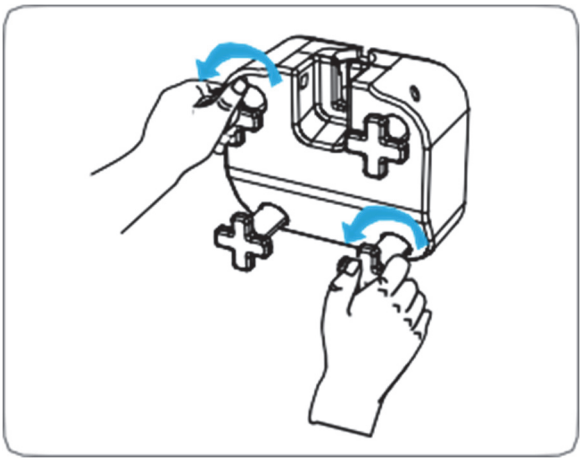


Figure 64

Remove the beater and separate it from the freezing cylinder. Clean the inside of the cylinder with a brush and wipe with a soft cloth.

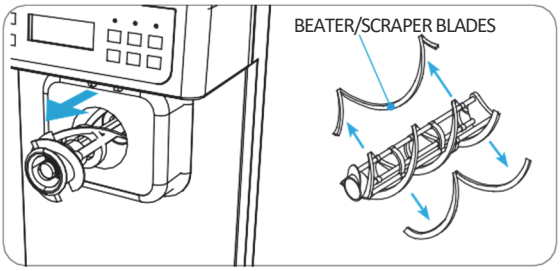


Figure 65

8. Remove the beater blade and clean the blade hole with a brush. Wipe out moisture with a soft cloth.
9. Draw valve handle and pivot pin should be taken out of freezing cylinder door to clean as shown in Figure 66.

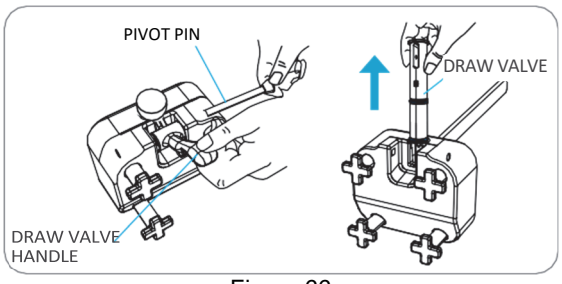


Figure 66

10. Using a brush, clean the inside of the draw valve hole on the freezing cylinder door and remove any remaining moisture with a soft towel.

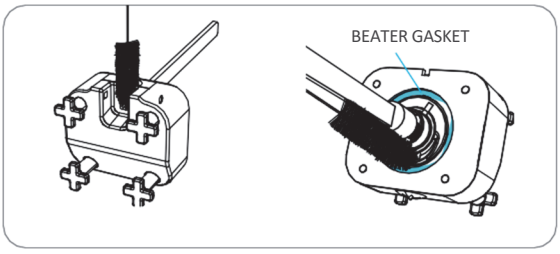


Figure 67

Please use the “O-ring Removal Tool” when removing O-rings from the draw valve to avoid damaging them. Wash the O-rings and draw valve parts thoroughly. Clean the agitator using bushes included with this unit.

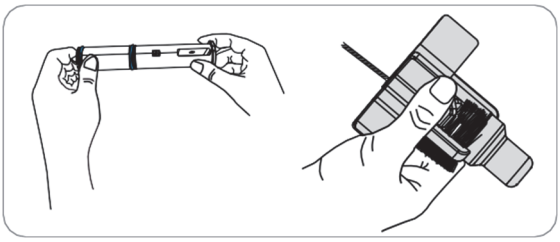


Figure 68

11. Clean feed tube body and tube with brush.

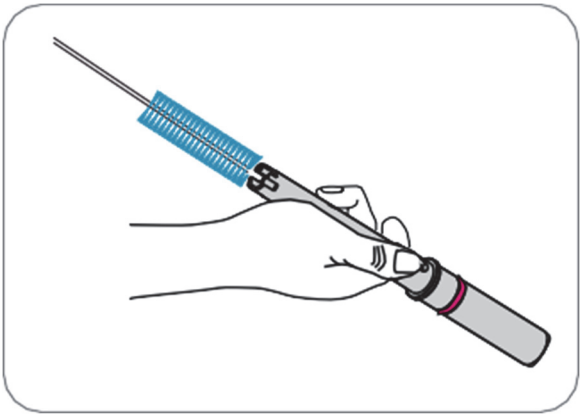


Figure 69

12. After cleaning, dry and reassemble the parts in reverse order.

Caution

- Wear rubber gloves when cleaning the inside of the system. Otherwise, electric shock or injury may be caused.

Condenser and filter cleaning method

1. Filter Cleaning method
   The filter is located at the bottom front of the unit, below the drip tray. (See item 3 in Figure 70) Lift and remove the drip tray and splash guard, then gently pull out the filter.

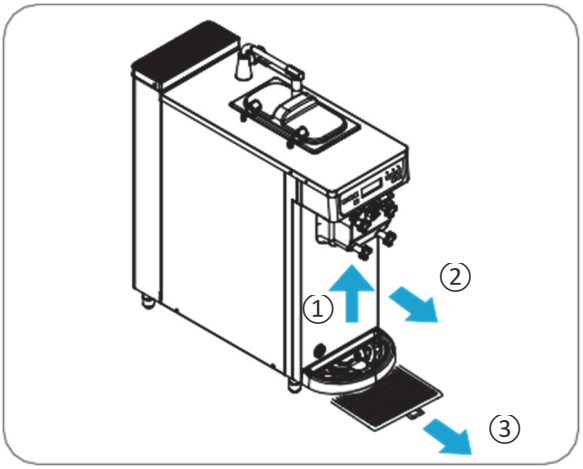


Figure 70

2. Shake off filter dust. Using a brush, wash it thoroughly with water. Figure 71 (After washing dry the filter)

.

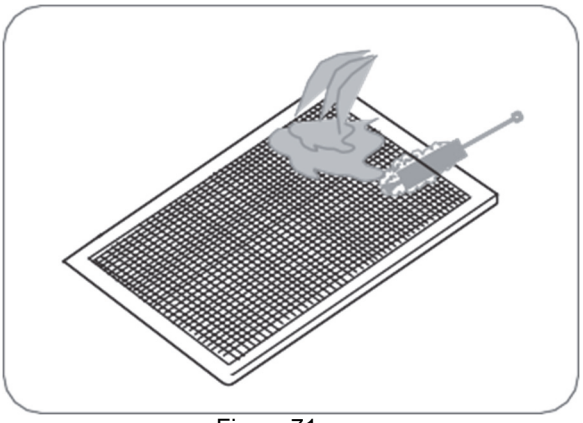


Figure 71

3. When filter is dry replace it back into the machine. Do not run unit without the filter.

The Cleaning cycle:

- Filter: Once a week

※ The dust collection on filter will vary depending on the installed location.

- Condenser: Once a month

※ Call your distributor to clean it.

Unpacking

This soft serve freezer has been fully inspected and tested at the factory prior to shipping. If you detect damage to the wooden package or apparent distortion of the shape of the system after unpacking the unit, immediately inform your distributor or manufacturer.
Find the serial number marked on the packing and the machine before starting installation. Inform us of the serial number if you have any inquiry. Request the dealer or service provider for assistance when the machine is to be moved.

1. Remove the wooden packing, taking care not to damage the exterior of the soft serve freezer.
2. Remove the wooden packaging and the protective tapes and make sure that all parts of the system are complete.

※ When tilting or moving the machine, take care not to overturn the machine.

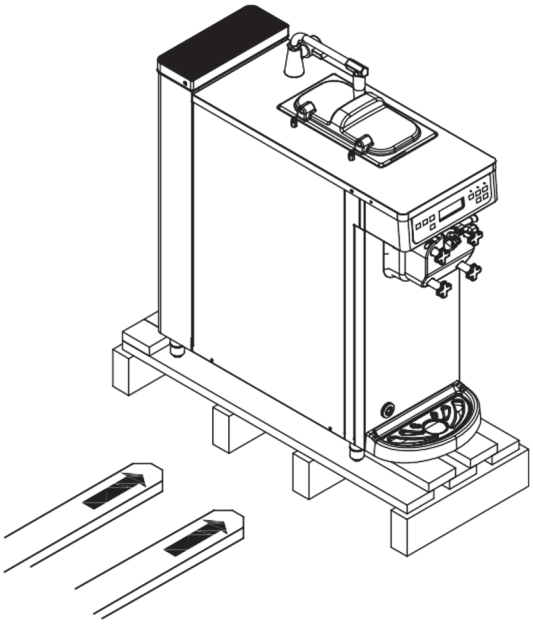


Figure 72

Location and Precautions for Installation

1. Avoid sloping or irregular surface.
   Installation on a sloping or irregular surface may result in machine overturning, malfunction, or failure.
2. Avoid direct sunlight, rain, snow, and wind.
   Fire or electric shock may occur due to wet or dirty conditions.
3. Avoid the direct exposure to sea wind and hazardous gases. These conditions can impact the taste and quality of the soft serve product.

Installation

- The water supply connector fitting for the unit is ½" union.

For your information

- Consult with your nearest TAYLOR distributor to arrange installation of the unit and to ensure optimal performance.
- Change of installation site also requires consultation with nearest TAYLOR distributor.
- Do not install the unit in a place with adverse conditions such as uneven floor, exposure to direct sunlight, dirt, dust or wood shavings, or splashing water.
- Reset the current time and clean the unit when restarting it after a period of non-operation.

Water Supply Connection

1. Insert rubber packing in the corrugated tube nut of the feed water line and join it to the water inlet at the bottom. Tighten the nut firmly with a tool.
2. Pay special attention not to damage "A" when assembling.

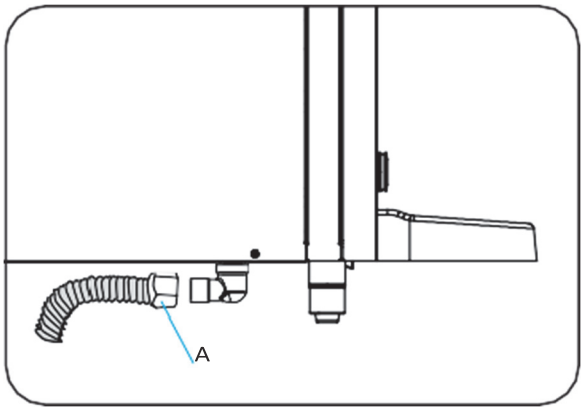


Figure 73

※ Check the following after connecting the feed and discharge water lines:

1. Feed water pressure should be between 20psi~80psi .

   ▶ If the water pressure is too high, water may leak at connections.

3. If ambient temperature can go down below 10℃, (50°F) provide a means to prevent freezing.

   ▶ Freezing can cause water leakage or system failure.

3. There should be a tap water valve when you connect the system to tap water.
   Close the tap water valve if there is water leak due to a defect of the tap on top of the unit.

Electrical connection

1. Connect the main power for single-phase power distribution box.
2. Install GFCI (with capacity of 15A or higher) in the distribution box.
3. Grounding must be provided for the safe operation of the system.
4. Maintain space of 20"(50cm) or more from the top of unit for ventilation. No space is required for each side and rear side.
5. Precisely seat the rubber feet at the bottom to prevent slipping.

※ Make sure that the air vent is never blocked. Make sure that the air inlet (A) and top exhaust (B) are never blocked.

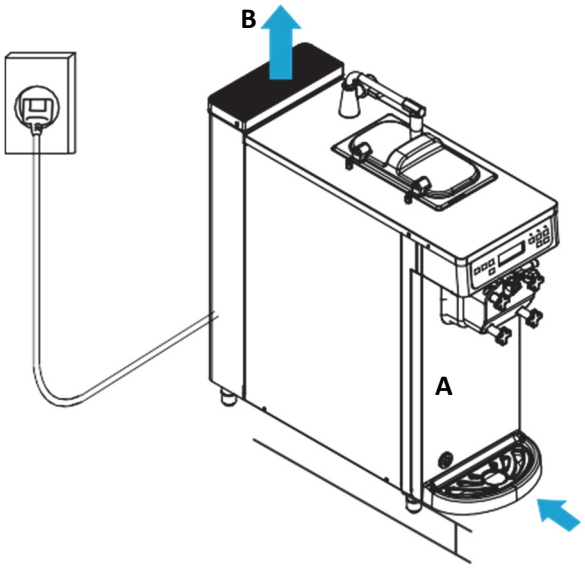


Figure 74

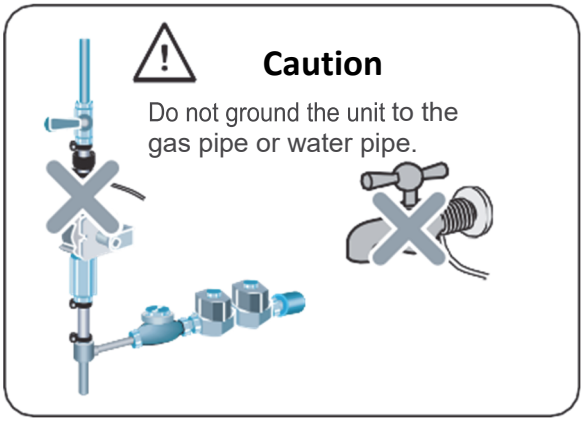


Figure 75

Warning

- Before installing the unit, be sure to earth for a place with no power supply for earth connection.
- Bury the copper plate or ground rod at a depth of 30 cm or more underground.
- Failure to perform groundwork may cause electric shock caused by leakage.

Beater and beater cover assembly method

Beater assembly:

1. Assemble the beater blades by rotating on the beater wing.

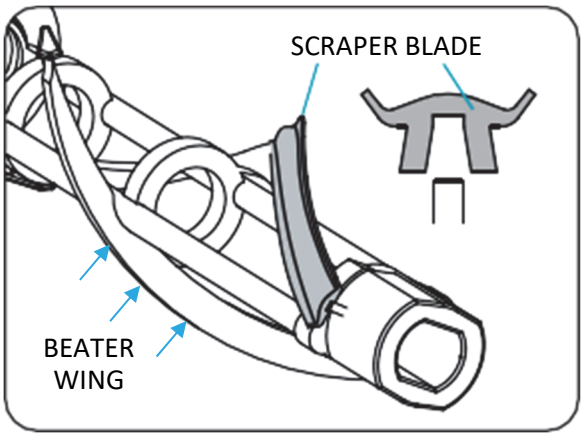


Figure 76

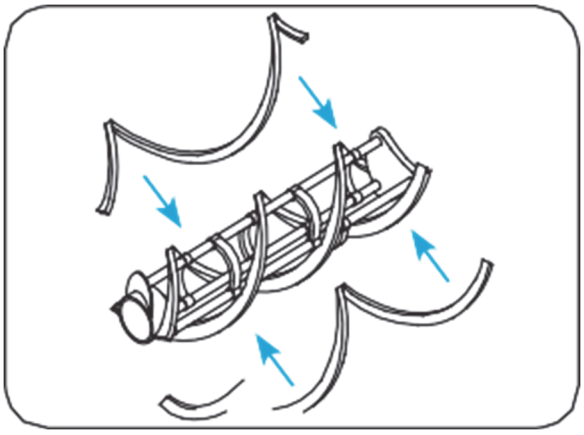


Figure 77

2. Insert the assembled beater assembly into the cylinder.

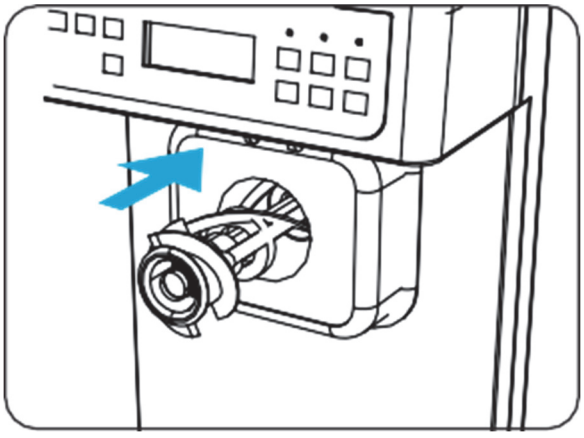


Figure 78

Beater cover assembly:

1. Apply some food grade lubricant on the O-rings of the piston (draw valve) and slowly insert the piston into the piston hole making sure its head is horizontal to the beater cover (freezer cylinder door).

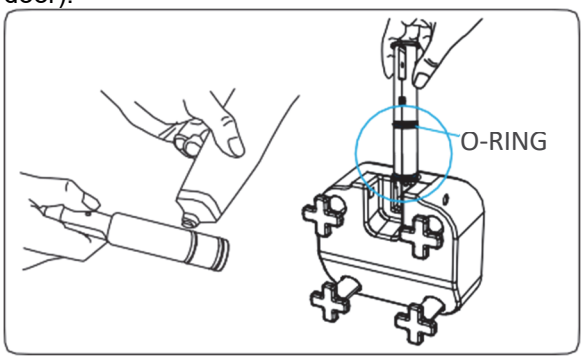


Figure 79

2. Insert the O-ring for the beater cover (freezer cylinder door) along to groove on inner side of the beater cover (freezer cylinder door)

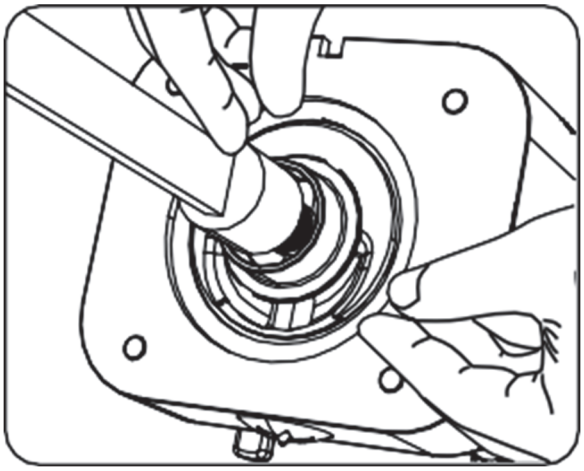


Figure 80

3. Insert the draw handle into the piston hole (draw valve hole) in upper part of draw valve and the pivot lever into the beater cover and the lever hole.

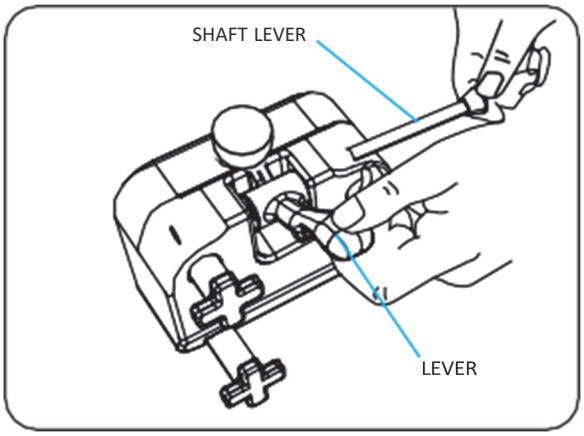


Figure 81

4. Assemble the mixing shaft and the beater bearing.

5. Fully tighten the 4 beater cover nut studs. Soft serve product may leak if they are not fully tightened.

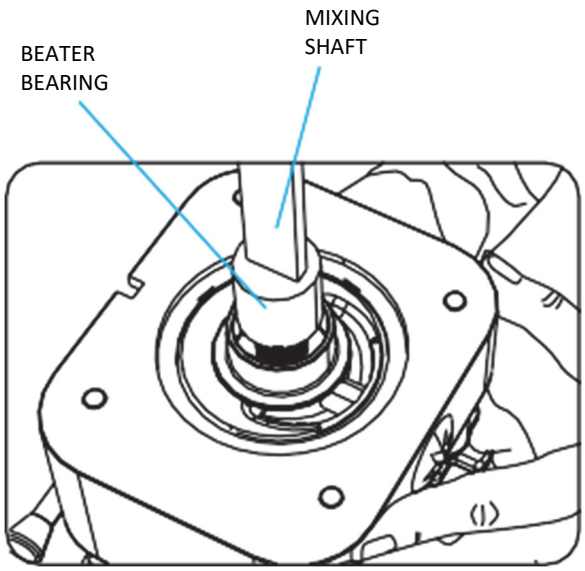


Figure 82

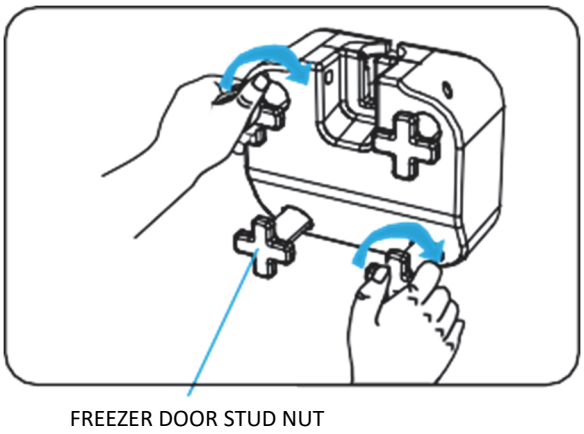
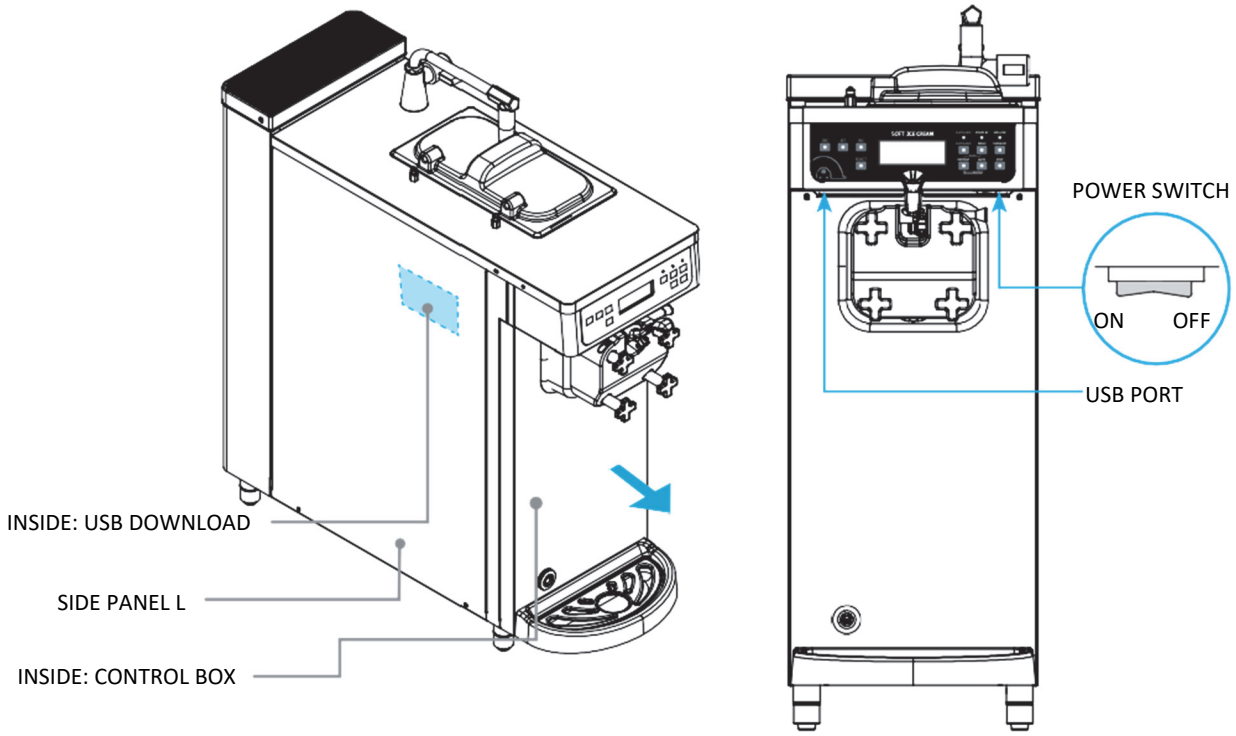


Figure 83

How to upgrade the program

1. Download the program from our website or the customer service center of the company to a USB driver.
2. Insert the USB memory stick into the USB port on the front of the product.
3. Turn off the power switch on the front side of the unit, and then turn it on.
4. Wait for approximately 5~10 minutes until the front LCD screen lights up.
5. To initialize the unit after software update: Select any other model on menu 4-0, save it and exit. Then return to menu 4-0 and select original model. Save and exit. (For example: ISI-161TH USA to ISI-161TH Korea for reset and come back to ISI-161TH USA.)
6. Power off the product and restart it.
7. Pour soft serve ingredients and use the product as per the instructions herein.



USB DOWNLOAD PCB

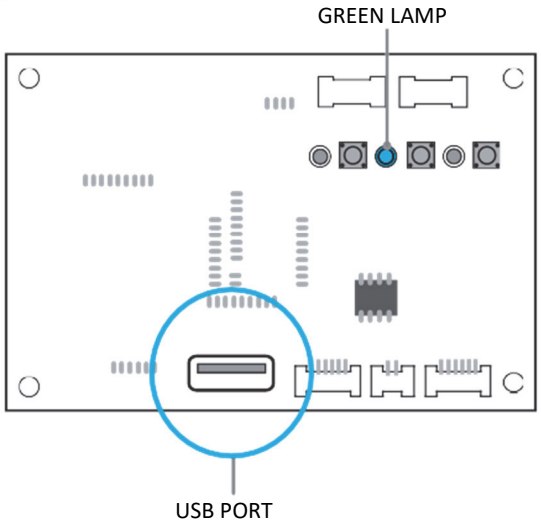


Figure 84

How to download new software to USB memory stick

How to write a new software on USB memory stick.

1. Copy new software on the USB memory stick to folders named "MINI_Main.hex" and “Voice”.

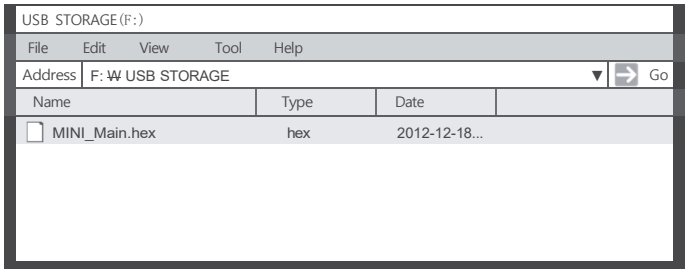


Figure 85

2. Insert the USB memory stick in the USB downloader.
3. Turn on the power.
4. The front LCD will light up when the software is fully downloaded.
5. Reset the product as per the instructions on page 27 after removing the USB memory stick.

For your information

- If upgrade is not complete within 30 minutes, turn off the power, insert the USB memory again, and turn it on again. If the problem persists, please contact your nearest Taylor distributor.
- Delete the date and version from the name of the original file “MINI_Main_2017.02.03.hex” and copy the file as follows: “MINI_Main.hex”

Section 6 Troubleshooting Guide

Cautions for operation of soft serve machine

1. We highly recommend using the proper liquid ingredients. If you intend to use powder ingredients by mixing it with water or milk, be sure to follow the mixture ratio suggested by its manufacturer.

   (This machine should use properly mixed ingredients in order to produce good-quality soft serve. Please use additional caution if you intend to use powder-type ingredients. They tend to get lumpy or separate over time from the water or milk, which results in over-freezing, poor product quality and issues with machine operation.)

2. Even if you use the proper liquid ingredients, adding an additive to it or arbitrarily adjusting the dilution ratio may result in poor quality of the soft serve or over freezing.

   We do not provide warranty or assume responsibility for issues related to the ingredients. Be sure to check and follow the dilution ratio.

3. Powdered ingredients must be mixed manually and slowly.

   If the powdered ingredients are mixed fast using mechanical means, too much oxygen will be mixed into the final product, which causes oxidization and coagulation over time.

   In this case, the ingredients will become lumpy like pieces of tofu, causing trouble with the supply of the ingredients and over-freezing.

4. Over-freezing may also occur when there is not enough ingredient supplied to the freezing cylinder. Be sure to check the volume of ingredients, so the unit is always operated with a sufficient amount. Due to the nature and viscosity of soft-serve ingredients and “mix” it can get lumpy and block the feed tube (mixing valve) hole through which the ingredients are supplied to the freezing cylinder (drum). Be sure to remove and wash feed tube frequently.

5. If the unit is not used for an extended period of time, ice crystal formation may occur in the freezing cylinder. In this case, the product will become too thin, or over freezing will occur. Be sure to operate the unit on a regular basis even when there is no demand, in order to minimize wait time and to ensure quality of product.

6. Re-use of ingredients will result in poor quality soft serve product and over freezing. When making a fresh batch of product, refill unit with new ingredients and re-start.

Before requesting service

The product freezer can operate abnormally because you are not familiar with the method for use or due to another insignificant reason. It does not necessarily mean a malfunction. In this case, check the following items to resolve a simple problem on your own without the help from your distributor. If you still can't resolve it after checking the following items, please contact your nearest Taylor distributor.

State	Please check
The machine does not work!	1. Contact an electrician or your distributor in case a power supply error occurred. 2. Check whether the circuit breaker and switch are turned off. 3. In case the display (front display) is off, turn the ELB (breaker) and switch on.
The machine works but does not make ice cream!	1. Check whether dust is stacked in the ventilation hole. Take out the filter and remove the dust. 2. If the machine is close to the bottom and has no ventilation, it can occur. Please, secure it at least 50mm from the bottom. 3. Check whether the feed tube hole is blocked and if so clean out the hole. 4. Check whether the temperature in the ventilation hole (inhalation hole) is high. Make the inhalation temperature of the condenser lower than 38℃.
Soft serve texture is thin!	1. Check whether the feed tube is inserted. 2. In case there are no sales for more than 3 hours, please melt the soft serve and remake product by using the "regeneration" function (cover the feed tube hole during regeneration). 3. Check whether a sweet content of an ingredient has changed from what was used before and adjust the setting value (When the raw material is different from the one used during the initial installation, adjust the level value of the product or contact your distributor).
Unit makes too much noise!	1. This product is a commercial machine and has some operation noise when compared to household appliances. This product is designed to generate noise that is less than 70dB. Contact your distributor in case abnormal noise is generated during machine operation.
Unit does not discharge sufficient serving size	1. The operator can adjust the amount of soft serve product dispensed. The factory default amount is set but may require change depending on the condition of the ingredient or overrun. Be sure to refer to the user manual to adjust the amount appropriately. 2. 'MIX LOW' lamp is blinking. In the case of MIX LOW, the amount of product dispensed can become small. Replenish the ingredients. 3. The amount of product discharged can change by changing the size of the feed tube hole. 4. Was the level of viscosity set too high? If the level is too high, machine may fail to discharge product. However, if the level is low, too much product may be dispensed.
Too much product is discharged!	1. The operator can adjust the amount of product being discharged. The mini soft serve machine is set up with factory default settings. These can be changed depending on the condition of the ingredients or overrun. Be sure to refer to the user manual to adjust the settings and amount appropriately. 2. The soft serve product will get thinner over time, causing the unit to discharge product too quickly. If the product gets too thin, use the regeneration function to restore the quality. 3. Discharge amount can be adjusted by changing the size of the feed tube hole. Amount can be large when a large hole is used. The amount will decrease if the hole is smaller. 4. Was the product level set too low? If the level is too low, too much product may be dispensed. But if the level is too high, machine may fail to discharge product.
Overrun seems to be poor (Soft serve product seems to lose air)	1. Please familiarize yourself with the instructions on how to make soft serve product included in this user manual. 2. Overrun will be improved with a smaller feed tube hole. 3. Overrun may deteriorate after serving product for an extended period of time. If this appears to be the case, cover the feed tube hole in the tank to defrost the ingredients fully and check the amount in the hopper. Overrun will be improved by discharging 300g of ingredient from the cylinder and producing product again. Discharging too much ingredient (more than 1/3 of the volume in the cylinder) will cause over-freezing and poor production of soft serve.

State	Please check
There are lumps of milk fat in the product.	1. If the ingredient has too much milk fat, lumps may formed. The feed tube hole needs to be smaller if you serve fewer cups of soft serve per unit hour. Try defrosting and resuming soft serve production if soft serve appears to be too thin. (This will not be the case if a sufficient number of cups of soft serve are served.)
The amount of soft serve produced in a session does not seem to be consistent!	1. Please check if the level of soft serve is set too high. The deviation of amount of produced soft serve will get bigger if the level of soft serve is set too high. 2. Please understand that precise control of the amount is extremely difficult since the machine controls the amount of production based on the time of operation, making it sensitive to the quality and conditions of ingredient, amount of ingredient in the hopper, the quality after producing soft serve, and changes in quality after no production for an extended period. Please familiarize yourself with this user manual to ensure consistency of operation.
The soft serve has gone bad!	1. This product requires cleaning on a daily basis, Any ingredient left in the unit after a day's service must be discarded before starting production the next day. Start each day with a fresh batch of mix or ingredient. This product requires at least “Pasteurization” if cleaning is not possible. We do not assume responsibility for spoilage or poor product quality if these requirements are not followed.

Replacement cycle of consumable parts

PART NAME	Replacement cycle	Quantity
DOOR GASKET	3 months	1EA
DRAW VALVE O-RING	3 months	2EA
FEED TUBE O-RING	3 months	1EA

Error codes and corrective actions

The soft serve freezer may malfunction due to incorrect operation procedure or a trivial cause other than machine defect or failure. If the following corrective actions fail to correct the problem, or the error code is not presented below, or the same error persists, contact the nearest Taylor distributor.
※ Before contacting the Taylor distributor, turn power off, wait for five minutes, then turn power on and start the machine again.

Error code		Possible Cause	Corrective Action	Release	Action
Er00	Mix Out	Low quantity of ingredients	Refill raw material in the hopper	Auto release	Stop
Er01	Hop. Sensor Op.	Cooler sensor OPEN	Sensor failure (contact A/S Center)	Auto release	Stop
Er02	Hop. Sensor St.	Cooler sensor SHORT	Sensor failure (contact A/S Center)	Auto release	Stop
Er03	Cyl. Sensor Op.	Cooler sensor OPEN	Sensor failure (contact A/S Center)	Auto release	Stop
Er04	Cyl. Sensor St.	Cooler sensor SHORT	Sensor failure (contact A/S Center)	Auto release	Stop
Er07	EOCR	Motor over current detected	Melt the soft serve and restart the machine	Reset	Reset operation
Er08	High Pressure	Over voltage detected	Clean the filter unit, check exhaust air line	Auto release	Stop
Er09	noLA	Product immature yet	Refrigerant problem (contact A/S Center)	Auto release	operation
Er12	Draw Switch Er.	Discharge lever ERROR	Lift the discharge lever	Auto release	operation
Er13	Condenser OH	Abnormal temperature of condenser	Check the vent for clogging.	Auto release	operation
Er14	Motor Belt Er.	Defective drive shaft	Melt the soft serve (Regeneration) and restart the machine	Reset	Reset operation
Er15	EEPROM Error	EEPROM fault	PCB fault (contact A/S Center)	Reset	operation
Er17	Heating Error	Defective sterilization function	Replace the soft serve raw material and clean the machine	Other operation	operation
Er18	Cover Error	Defective Freezing Cylinder Door	Mount the Freezing Cylinder Door in correct position	Auto release	Stop
Er19	Eva. Sensor Op.	Eva. Sensor OPEN	Sensor failure (contact A/S Center)	Auto release	operation
Er20	Eva. Sensor St.	Eva. Sensor SHORT	Sensor failure (contact A/S Center)	Auto release	operation
Er21	Motor Power Er.	Failed to detect electric motor current	Machine failure (contact A/S Center)	After reset release	Reset operation
Er50	Power IC Er.	Power IC ERROR	Sensor failure (contact A/S Center)	Auto release	Stop
Er51	Feed tube Er.	Feed tube sensor error	Sensor failure (contact A/S Center)	Auto release	Stop
Er52	Inverter Comm.	Inverter communication error	Sensor failure (contact A/S Center)	Auto release	Stop
Er53	Inverter OC	Inverter over current	Sensor failure (contact A/S Center)	Auto release	Stop
Er54	Inverter OE	Inverter over voltage	Sensor failure (contact A/S Center)	Auto release	Stop
Er55	Inverter OE	Inverter overheat	Sensor failure (contact A/S Center)	Auto release	Stop
Er56	Inverter LU	Inverter under voltage	Sensor failure (contact A/S Center)	Auto release	Stop
Er57	Inverter TH	Erroneous detection of temperature sensor	Sensor failure (contact A/S Center)	Auto release	Stop
Er58	Inverter COM	Communication failure detected	Sensor failure (contact A/S Center)	Auto release	Stop
Er59	Inverter OL	Mean overvoltage detected	Sensor failure (contact A/S Center)	Auto release	Stop
Er60	Inverter OT	Max. output protection	Sensor failure (contact A/S Center)	Auto release	Stop
Er61	Control Comm.	Control pcb communication error	PCB fault (contact A/S Center)	Auto release	Stop

Section 7 Parts List

Operator Parts

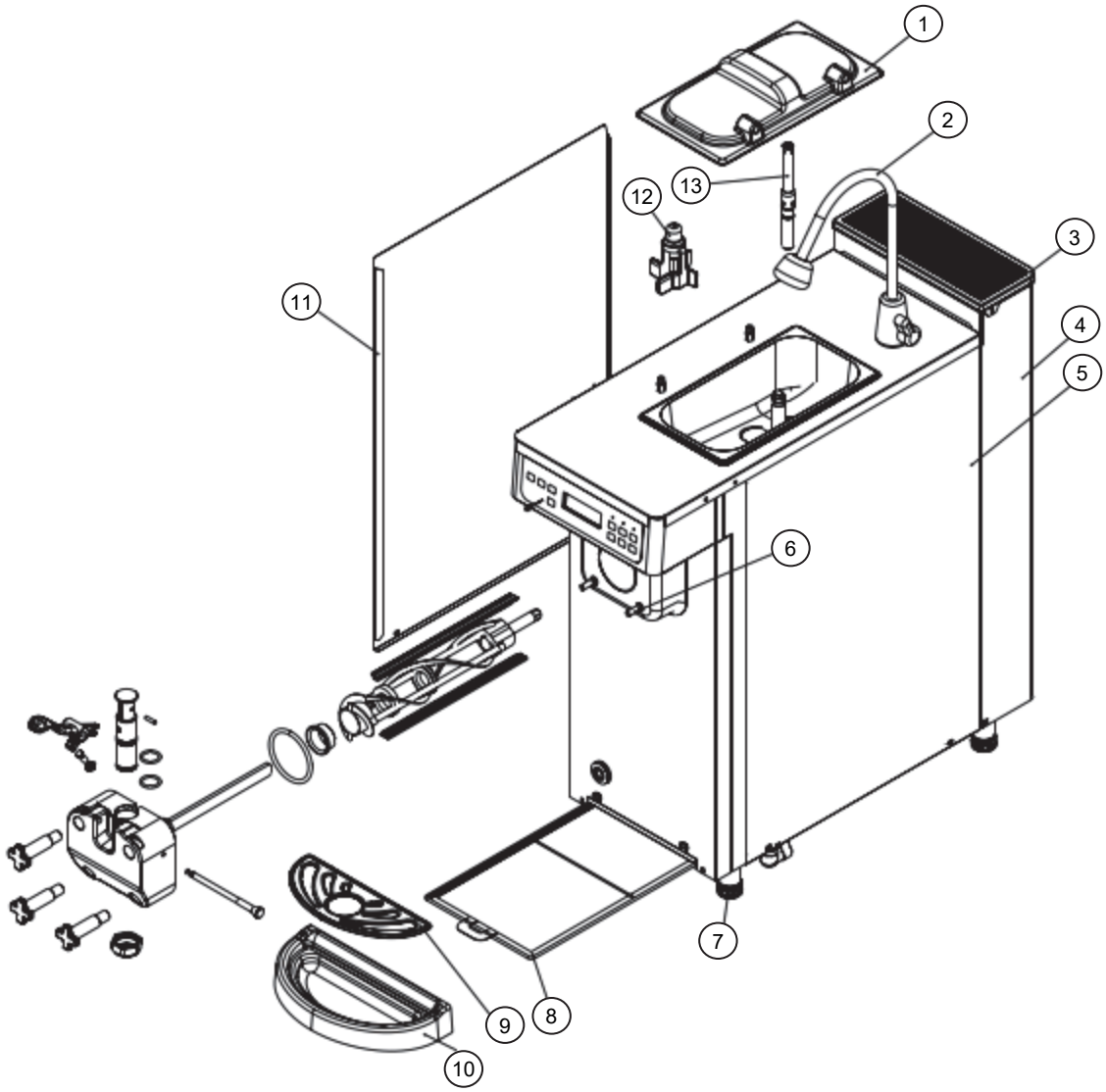


Figure 86

ITEM	DESCRIPTION	Part No.
1	Hopper Cover	317140700
2	Water Faucet	241000100
3	Air Vent	317185800
4	Back Panel	317180700
5	Side Panel - Right	317180600
6	Nose Cone Stud	317072600
7	Foot - Rubber	302006600

ITEM	DESCRIPTION	Part No.
8	Air Filter	640007800
9	Shield - Splash	336027900
10	Tray - Drip	336027800
11	Side Panel - Left	317180500
12	Agitator	390001400
13	Feed Tube	729008400

Beater Assembly

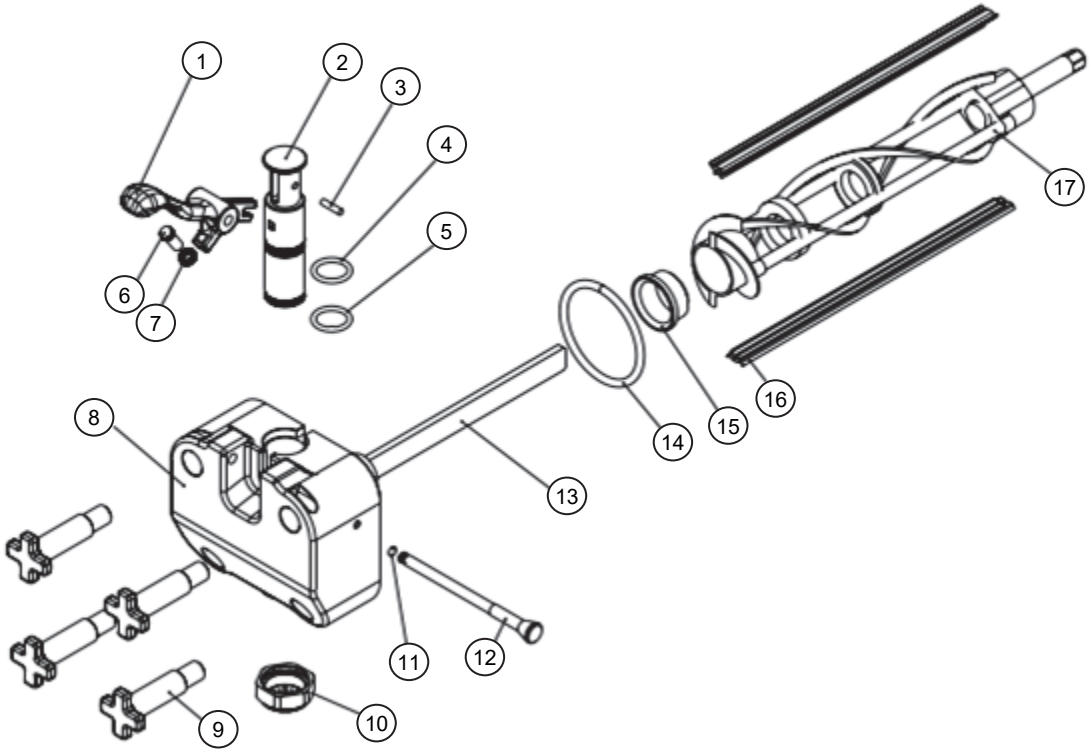


Figure 87

ITEM	DESCRIPTION	Part No.
1	Draw Handle	309005400
2	Draw Valve	303304600
3	Shaft - Pin	315002900
4	O-ring – Draw Valve, Upper	303039500
5	O-ring – Draw Valve, Lower	303041300
6	Screw - Adjustment	210818100
7	Hex Nut	215011000
8	Door – Freezing Cylinder	303018100
9	Nut - Stud	342004100

ITEM	DESCRIPTION	Part No.
10	Cap – Design	388008200
11	O-ring – Lever Shaft	303020000
12	Pin - Pivot	314040300
13	Baffle	314015601
14	Gasket - Door	303018100
15	Bearing – Door Hub	310003502
16	Scraper Blade	403015000
17	Beater	403022400

Section 8 Warranty

If the warranty is not registered through your distributor, or if it is hard to determine the date of purchase due to other reasons, warranty is applied after 6 months from the manufacturing date.

Free repair

1. Error in performance or functionality during normal operation before the warranty expires

Billable repair

1. If the warranty has expired.
2. If installation is required again due to incorrect installation by the customer or the store.
3. If installation is required again due to relocation of the machine.
4. If the malfunction is not attributable to the machine.
5. If the wrong power specification is applied.
6. If damage is caused by using accessories that are not recommended by the manufacturer.
7. If damage is caused by external force or dropping of the machine.
8. If damage is caused by natural disaster, such as lightning, fire, earthquake, storm, typhoon, etc.
9. If any accessory or consumable becomes obsolete or its service life comes to an end. (Gaskets, O-rings, blades, cleaning brushes, etc.)
10. If foreign objects are put into the machine such as water, beverage, coffee, toy, etc.
11. If external force is applied during installation or usage, causing damage or malfunction.
12. If directions for installation or standards are not followed.
13. If the customer arbitrarily disassembled and lost or damaged any part.
14. If a person other than an authorized engineer from your Taylor distributor repairs or modifies the machine.
15. If malfunction is caused by failure to follow the "Safety warning / caution" on the user manual.

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Notes: