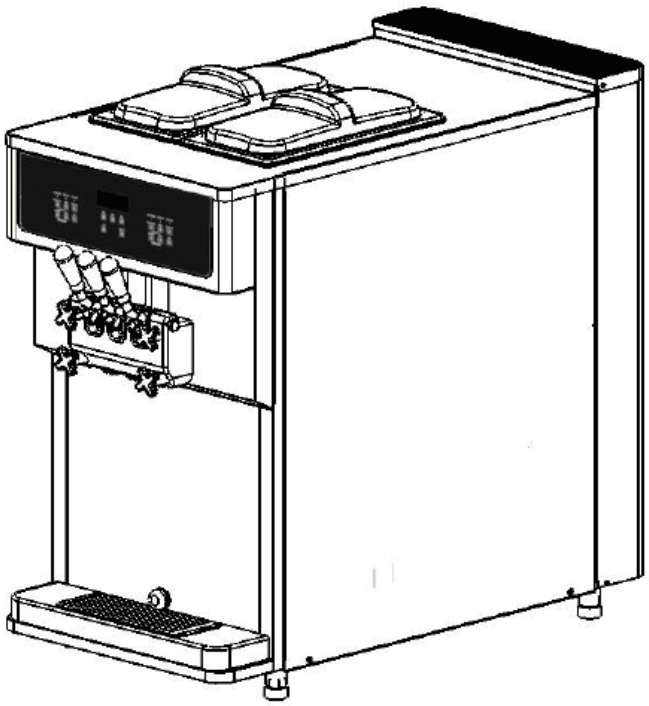
Soft Ice Cream Maker
User Manual



ISI-163TTH (230V, 50Hz / R-404A, R-449A)

- Read this manual carefully before using the product.
  Keep the booklet in a safe place after reading.
- The product is to be used indoors.
  Be sure to install it inside a building.
- Appearances, design, color, or parts may be changed
  without prior notice for the most effective manufacturing process.

ICETRO

Soft ice cream freezer offers the following advantages

1. Minimum noise and refreshing cooling system

With a high efficiency and low noise motor, we can achieve minimal noise from the refreshing cooling system

2. MICOM control method

Use of an artificial intelligence control type achieves an optimal cooling system.

3. Pasteurization function implemented

A low-temperature pasteurization process is implemented for heating products at 68°C for 30 minutes to supply sanitary ice cream products sans the spoilage of materials.

4. Defrost function implemented

The soft ice cream inside the cylinder can be defrosted to liquids

5. Body response button used

Push button design for easy operation.

6. Convenient washing system

Feedwater lines are directly connected to the system; the model with pasteurization functions allows using boiling water when cleaning the cylinder and the storage tank to facilitate the cleaning of the system.

7. Inverter system application

By allowing separate speed controls for producing and projecting soft ice-cream, you can have the best ice cream quality.

Dear customers;

Thank you very much for purchasing a soft ice cream maker made by ICETRO. For correct use of the product and its maintenance, please read this manual carefully. If a problem occurs while using the product, you can refer to this manual for troubleshooting. This manual contains a product warranty, so keep it safely for future reference. This product can be installed only by someone qualified for installation. If use of parts and accessories not provided or approved by ICETRO or any part or accessories made by ICETRO but remodeled by other person causes a problem, we are not responsible for it financially.
(The functions and specifications shown in this manual and on the web site are subject to change without notice. Please visit our website at http://www.icetro.com to obtain the latest specifications.

Contents

Acknowledgment

Method of Use

Cleaning Method

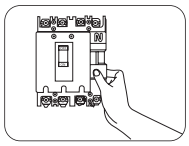
ETC

Cautions for your safety

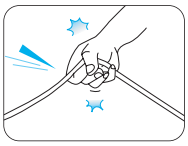
These are safety related items. So, comply with them at all times!
They are meant to protect the safety of users and prevent property damages.
Please, read the cautionary items carefully for correct use.

Danger	If violated, it can cause deathor severe injury.	Warning	If violated, it can cause sever physical injury or property damages.	Caution	If violated, it can cause slight physical injury or property damages.

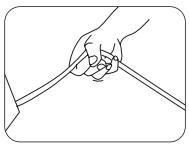
Power supply related items



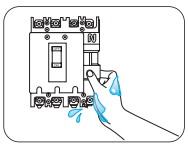
Install it independently with an earth leakage circuit breaker with more than 20~50[A].
It can cause electrical shocks or fire.



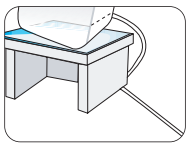
Do not pull on the power cord.
It can cause electrical shocks or fires.



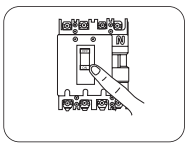
Do not move the product by pulling on the power cord.
It can cause electrical shocks or fires.



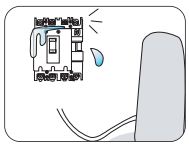
Do not touch the earth leakage circuit breaker with your wet hands.
It can cause electrical shocks or fires.



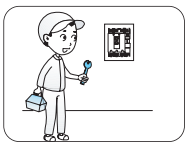
Do not bend the power cord too much or cause damages or deformation by pressing it under aheavy object.
It can cause electrical shocks or fires.



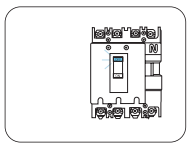
Do not turn the power on/off with the circuit breaker continuously.
It can cause electrical shocks or fires.



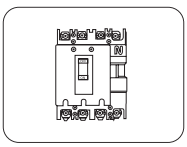
If there is water inside the an earth leakage circuit breaker turn off the earth leakage circuit breaker and dry it before use.
It can cause electrical shocks or fires.



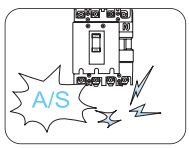
When you repair or inspect the product or replace any parts, turn off the earth leakage circui breaker.
It can cause electrical shocks or fires.



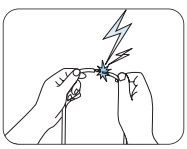
If you want to leave it unused for along time, turn off the earth leakage circuit breaker.
It can cause electrical shocks or fires.



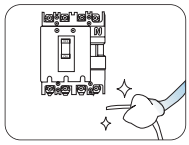
Do not connect many electrical products to the earth leakage circuit breaker. Use it individually.
It can cause fires.



If the power cable is damaged, then do not replace it on your own. Call the service center for cable replacement.
It can cause electrical shocks or fires.



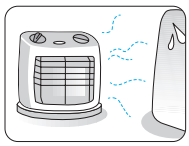
Do not arbitrarily connect the power cord or process it for use.
It can cause fires.



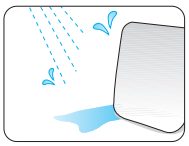
Use a power cable larger than 2.5㎟
The control box for the product should be grounded.
It can cause electrical shocks or fires.

Cautions for your safety

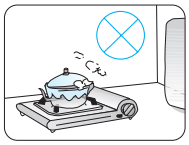
Installation related items



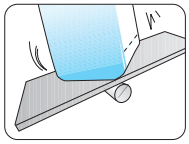
Do not install it near a heating device.
Itcan cause fires.



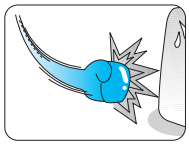
Do not install it near dust, moisture or rainwater (water) popping.
Itcan cause electrical shocks or fires.



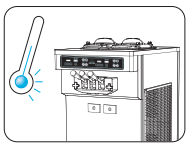
Do not use or store inflammable gas or material near the product.
It can cause electrical shocks or fires.



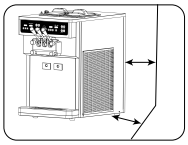
Do not install it on a tilt.
“the appliance has to be placed in a horizontal position” is sufficient.
Itcan cause physical injury or product damages.



Do not apply excessive force or impact to the product.
It can cause damages to the product.

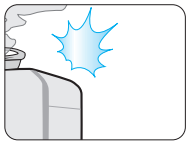


This product shows the best performance at temperature of 10~30℃

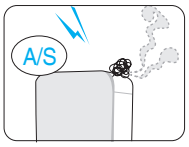


The side and rear of the product should be maintained at least 30cm from the wall.

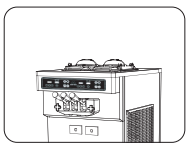
During use



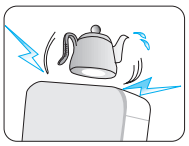
Do not place candle lights or cigarettes light on top of the product.
It can cause fires.



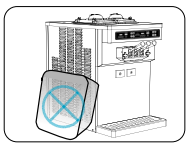
If the product has weird sounds or burning smell or smoke, turn off the earth leakage circuit breaker immediately and call the service center.
It can cause electrical shocks or fires.



While operating the product, please completely close the upper cap.
Bugs or alien substances can enter the product.

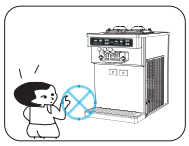


Do not place water containers, medicine, foods, small metal parts or inflammable material on top of the product.
If they go inside the product, it can cause electrical shocks, fire and damages.



Do not obstruct the entrance of the air vent.
If so, the performance will be degraded.

To have good quality soft cream, it is recommended to clean it everyday.
Otherwise, the ingredients can decay.



Don’t let a person who was not educated the product or a child touch or operate the machine.
Comply with the user guideline suggested by the maker.
Otherwise, it can cause malfunctions

Please do not press “WASH” button during empty condition which the cylinder doesn’ t contain any ingredients or water.
The bearing of drum can be frayed because there is no lubrication.

For your information

- Clean the filter periodically. Otherwise, the cooling performance will degrade.
- Comply with the user guideline suggested by the maker.
  Otherwise, it can cause malfunctions. Don’ t let a person who was not educated.

Cautions for your safety

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

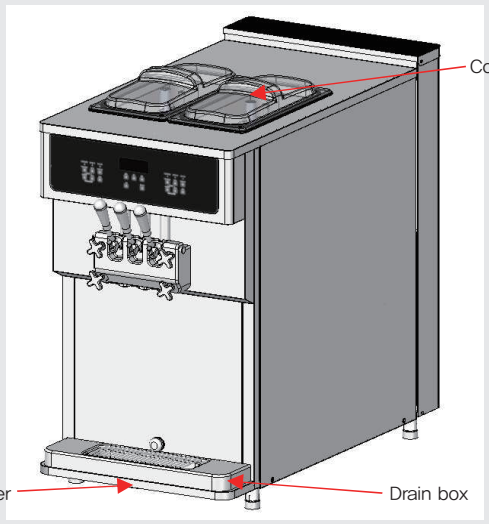
This appliance shall be installed in locations where it can be overseen by trained personnel.

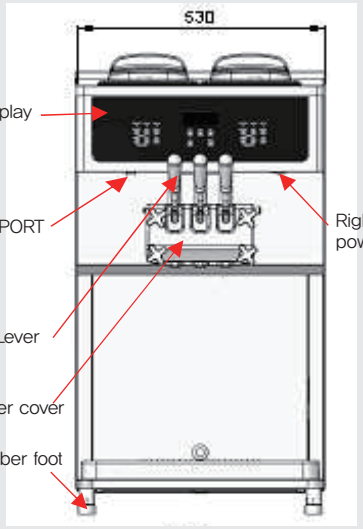
This appliance shall be that access to the service area is restricted to persons having knowledge and practical experience of the appliance, in particular as far as safety and hygiene are concerned.

Part names and controller

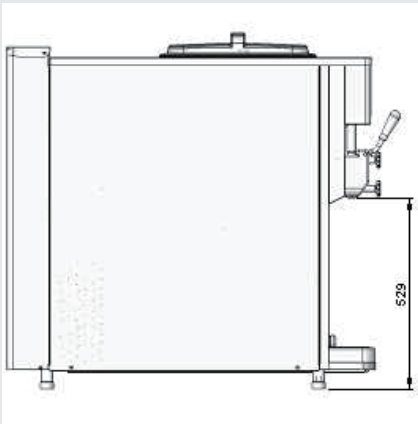
ISI-163TTH

FRONT

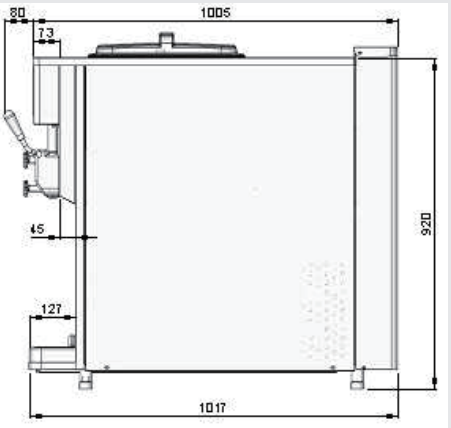




LEFT



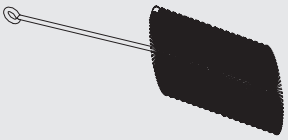
RIGHT



Part names and controller

ISI-163TTH

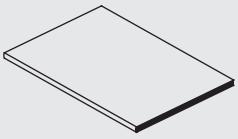
Included accessories



BRUSH DRUM
1EA

CARBURETOR TUBE
2EA

CARBURETOR TUBE
BODY
2EA

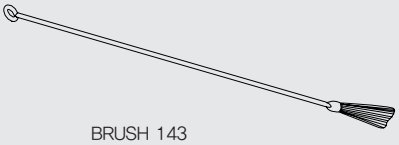


MANUAL
1EA

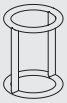
BRUSH 3
1EA

BEARING DASHER
2EA

DASHER COVER PACKING
2EA

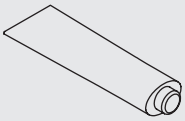


BRUSH 143
1EA

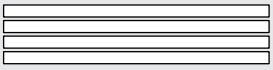


PATITION FOOD
2EA

PACKING CARBURETOR
4EA



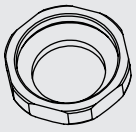
HINES
1EA



DASHER LUG FOAM
4EA

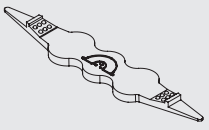
PACKING DOWN 143
2EA

PACKING PISTON
2EA

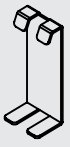


STAR MADE
(CIRCLE SHAPE)
1EA

STAR MADE
(COMB SHAPE)
1EA



PACKING REMOVE HANDLE
1 EA



HANDLE GRIP LOCK
2EA

Check prior to use

【 The following must be checked before using the product! 】

⚠ Please check the rating of the product before starting installation.
Install it independently with an earth leakage circuit breaker with more than 20A and provide anexternal grounding.
(Ask a qualified electrical technician for the installation.)
The power cable should be connected before the product can operate normally.

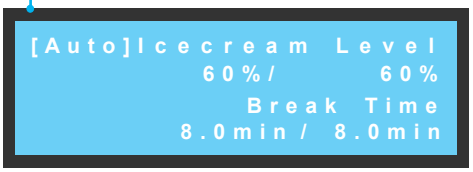
- **Do not block the air vent.**
  The air suction and discharge should be facilitated so that the cooling performance can be optimized.

- **Regular filter cleaning (at least once a week)**
  Do not skip filter cleaning to ensure good-quality ice cream.

- **The condenser has to be cleaned once a month.**
  The daily cleaning of the cylinder, carburetor, hopper, agitator, dasher, piston, and other parts is recommended.
  The condenser has to be cleaned more than once a month.

- **Clean it at least once a day.**
  The cylinder, mix tank, impeller, dasher, and piston inside the product make contact with the ingredients, so you should clean them once every day.

Button display names and functions



‘ DISPLAY WINDOW ’

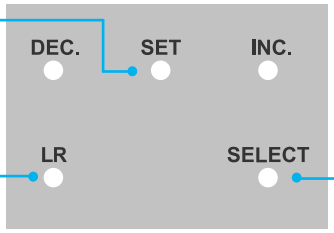
- Displays the degree of soft ice cream formation in operation.

‘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.

‘L/R’

- Display the values of the left and the right items.



‘SELECT’

- Button is used to check the temperature.

‘WASH’

- Button is for wash function

‘PASTEURIZE’ (Heating, Heat)

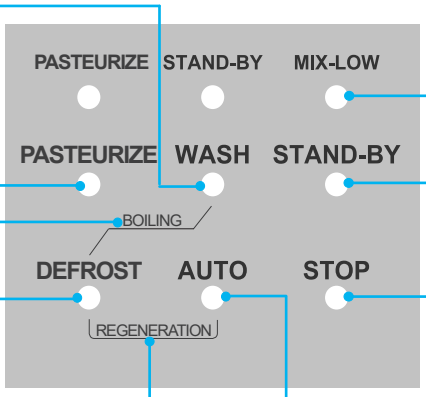
- Used when pasteurizing the soft ice cream or the raw material in the hopper.

‘BOILING’ (‘DEFROST’+‘WASH’)

- Used for boiling water when cleaning the system

‘DEFROST’

- Used when defrosting the soft ice cream.



‘MIX-LOW’

- Lamp blinks when there are insufficient ingredients. The light blinks if there are no raw materials.

‘STAND-BY’

- while the raw material in the cylinder and the hopper is being refrigerated.

‘STOP’

- Button is used to stop all the functions.

‘REGENERATION’

- Used when the Soft ice cream solution is watery.

‘AUTO’

- Button is used to make soft ice cream.

Functional description of the buttons

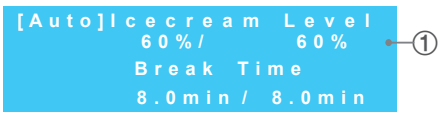
【 Detail description of each mode 】

Pour the raw material in the mixing tank and press the 'AUTO' button. The following status display will be shown.

① Current level of soft ice cream is indicated.

② Press the 'SELECT' button to display the level setting (Current, Set-up, No-load) of soft ice cream. to change soft ice cream level setting, press the 'SET' button for three seconds.
(For futher details, see 'Adjusting Setting Value' section.)

Making soft ice cream in 'AUTO' mode.



To check 'AUTO' mode level set up ②

To see the information of the raw material in the hopper, press 'SET' button:

④ Information including the temperature of the hopper and cylinder can be obtained.
To change temperature, press the 'SET' button for three seconds.
(For further details, see 'Adjusting Setting Value' section.)

To see the raw material information of the mixing tank in the 'AUTO' mode

When soft ice cream has produced,
the compressor will be shutdown for a while, and
the status will be displayer as shown to the right.

⑤ The time remaining until the restarting of the compressor will be displayed in Min unit.
(If the ambient temperature is high, the compressor may start up earlier than the time indicated.)

⑥ Soft ice cream level is indicated.
(After indicating 100%, the value will decrease as time passes, faster if the ambient temperature is higher.).

After making soft ice cream in the 'AUTO' mode.

For your information

The soft ice cream level is set to the default by the manufacturer. Depending on the types of ingredients and the abrasion of the blade, it should be adjusted properly. When installing this equipment, the settings for the ingredients should be based on the suggestion by the installation technician. When changing the ingredients, consult with a professional to adjust the setting.

Functional description of the buttons

【 Detail description of each mode】

If the soft ice cream is not used for a long time, then its shape will be degraded. In this case, you can use the 'Regeneration' function to make it look better.
Press the 'DEFROST' + 'AUTO' button at the same time for more than 2seconds, the status display window shown in the right figure will appear.
※Caution: Activated under the operation conditions only.

'Regeneration' mode.

① : It displays the current temperature of the soft ice cream.
② : It displays the temperature setting of the cylinder.
③ : It displays the duration of time (by minute) to maintain the set temperature(②) after the current temperature(①) reaches the set temperature.
As the duration of the temperature(③) maintenance expires after the current temperature(①) reaches the target temperature(②), it will automatically enter into 'AUTO' mode to make soft ice cream.

For your information

The 'Regeneration' function refers to a process where the soft ice cream is liquidized and then Process of producing soft ice cream; operable in "AUTO" mode only. It takes about 20 to 30 minutes.

Use the 'DEFROST' function to melt the soft ice cream in the cylinder.

'DEFROST' mode

It is used to operate the impeller of the hopper and the dasher motor of the cylinder. Mainly, the Washing function is used to remove the water or the liquid raw material.

④ : It displays the present current value of the dasher motor

'WASH' Mode

Heat the raw material or water in the cylinder and the hopper to reach the set temperature in order to wash with hot water. Press both 'DEFROST' + 'WASH' buttons for longer than 1seconds to display the state window shown in the picture on the right.

Mode of 'BOILING WATER'

⑤ : The set temperature of the cylinder is displayed.
⑥ : The current soft ice cream temperature is displayed.
⑦ : The retention time (minutes) is displayed, after the current temperature(⑥) reaches the set temperature(⑤).

After the current temperature(⑥) reaches the set temperature(⑤), when the retention time(⑦) passes, the operation halts.

Functional description of the buttons

[Detailed description of each mode]

If pasteurization is not done every day, and the ingredients are stored at a temperature below 5℃, after 2 or 3 days, it can cause deformation or decay.
To prevent decay and to maintain the initial refreshing soft ice cream ingredients, then you should heat it at 68~70℃ for more than 30minutes every day.

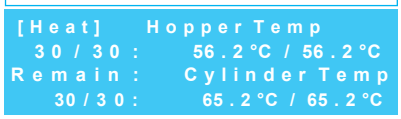
Current temperature and the time (Min.) for pasteurization process are indicated, as shown in the top right.

Press 'SELECT' button to display the Control Temperature in the hopper and cylinder.

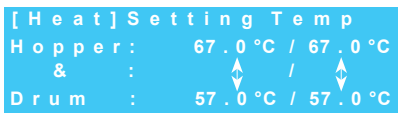
After pasteurization,This stage refrigerates the raw material in the hopper and cylinder cool.
Refrigeration process is applied to the hopper first and the cylinder next, as shown to the right.

When the hopper and cylinder are refrigerated simultaneously, the temperatures of the hopper and cylinder are indicated as shown in the bottom right.

'PASTEURIZE' Mode



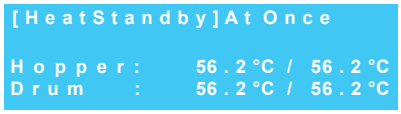
To check 'PASTEURIZE' mode temperature setting



Standy-by the hopper after completing 'PASTEURIZE'

Standy-by the cylinder after completing 'PASTEURIZE'

Standy-by the hopper and cylinder simultaneously after completing 'PASTEURIZE'



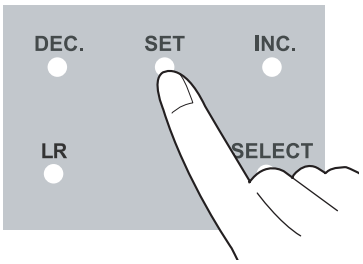
For your information

- While the 'HEATING' function operates, do not touch the dasher cover and the hopper cover because they are hot. Do not disassemble or modify.
  The hot ingredient can cause you bum injuries.
- When the 'HEATING' function operates, all button operations will be suspended as long as the electrical power supply is not cut off.
  But if the supplemental cooling lamp is on, you can use buttons.
- If the 'HEATING' function has not operated, then you should remove the original liquid in the hopper and the soft ice cream and perform a thorough cleaning job.

Functional description of the buttons

[Check the setting]

Press the 'SET' button lightly to enter the mode where set-up value can be confirmed, as shown below.
In the confirmation mode, Press the 'SET' button to see the setting values in the following order.



The temperature setting in the hopper and cylinder appear.

```
[Temperature]

Hopper:     8.2°C /  8.2°C
Drum   :    -6.2°C / -6.2°C
```

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

```
[Power]
Voltage    :          220V
Frequency:            60Hz
Current    : 1.2A/ 1.2A
```

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

```
[Version]
Main:   1.0  Vend:   1.0
Control:    1.0 /   1.0
Door:
```

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

```
[Current time]

        2012. 12. 03
          17 : 01 : 02
```

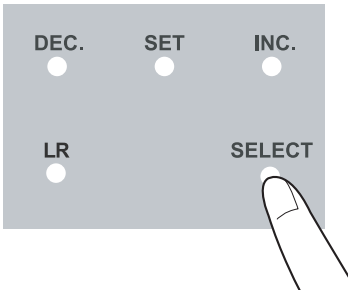
No-load current of the dasher motor is displayed.
First: No-load current when controlling ice cream first
Run: No-load current when controlling ice cream during operation
Draw: No-load current when discharging ice cream

```
[Noload Current]
    First    :  3.0A
    Run      :  3.0A
    Draw     :  2.1A
```

Functional description of the buttons

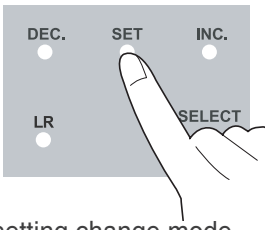
[Check the record]

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



Explanation of the function button

【Change the setting】



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

3-0 : Setting supplementation of cups and materials
Clicking 'YES' changes current number of ups on Checking window to setting on 9-20-1.
Clicking NO the number on the bottom flashes, and number of actual supplementation is displayed.

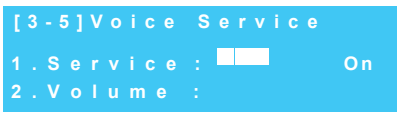
3-1 : Adjust the soft ice cream level.
This item is used to adjust the target current of the soft ice cream.The larger the number is, the stronger the soft ice cream level is. The smaller, the weaker it is.

If the soft ice cream level is too strong, Then the number of soft ice cream cups sold can be decreased. '①' The level of soft ice cream at the start of producing.
After 100%, producing will be done at the level as shown at '②'.
③applied when discharging ice cream.

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.

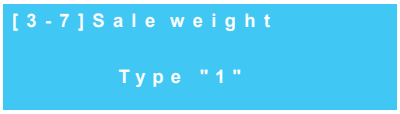
The smaller the number is, the lower the storage temperature is.
If you keep the storage temperature too low, then it can form ice in the ingredients in the hopper.
If you set it too high, it can cause decay of the ingredient in the hopper.

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



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

3-7 : As a category to select the amount of single ejection for a soft ice cream, a selection is made from between the options of '1', '2', '3', '4', and Ice cream product may be dispensed at the preset time.
Set the details of each item can be changed from '3-8'.



For your information

- The soft ice cream 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 ice cream level.

Explanation of the function button

After set the '3-10-6'. It sets the dispensing amount of the ice cream.

3-8-1: Set the detailed category for the '4' ejection amounts from Category '3-7'.
Select from between '1', '2', '3', '4' and press the 'SET' button to enter '3-8-2'.

3-8-2: Set the time for the cup ring(cup holder) to stay above.

3-8-3: Set the time for cup ring(cup holder) to come down and to stop after the time set in '3-8-2'.

3-8-4: Set the time for cup ring(cup holder) to stay when it stops after the time set in '3-8-3'.
When this period elapses, the cup holder automatically descends.

3-8-5: Set the time to open the piston by operating the piston motor. By controlling this time, the ejection amount can be big or small.

3-8-6: Reduced time for the first cup
Reduced time is applied to the first cup from the times set in '3-8-2' / '3-8-5'.
As the amount of ejection for the first cup is large, reduced time is applied for compensation in order to regulate the amount of ejection.

3-8-7: Decision time for the first cup
Set the sales wait time in order to apply the reduced time that was set in '3-8-6'. When a sale is made after the time set in this category, category '3-8-6' is applied.

```
[3-8]Sale Weight
     Detail Setting
1.Weight Choice
  [1]  /  [1]  /  [1]
```

```
[3-8]Sale Weight
     Detail Setting
2.Top Halt     [sec]
  1.8  /  1.8  /  1.8
```

```
[3-8]Sale Weight
     Detail Setting
3.Set Pause    [sec]
  0.2  /  0.2  /  0.2
```

```
[3-8]Sale Weight
     Detail Setting
4.Pause Time   [sec]
  0.2  /  0.2  /  0.2
```

```
[3-8]Sale Weight
     Detail Setting
5.Piston Open  [sec]
  1.8  /  1.8  /  1.8
```

```
[3-8]Sale Weight
     Detail Setting
6.Reduse Time  [sec]
  0.2  /  0.2  /  0.2
```

```
[3-8]Sale Weight
     Detail Setting
7.Break Time   [min]
  1.0  /  1.0  /  1.0
```

3-9: Sales wait time after corn ejection
(Function applied only to semiautomatic vending machine models.)
After coin insertion, corn is ejected and a blue lamp blinks. At this time, a sale is possible when the corn is taken out of the corn ejection hole and placed on the corn ring.
It is a category to set thewait time to place the corn on the corn ring after the blinking of blue lamp, and a sale is not possible when the corn is placed on the cornring after this time.

```
[3-9]Corn Drsw after
     SaleWait

     180sce
```

important

Adjust the categories from '3-8-2' to '3-8-5', set a proper shape and an ejection amount of soft ice cream. When dispensing ice cream in accordance with the values in this item, the volume may vary according to the dispensing.
That is because changes canoccur according to the hardness of the soft ice cream, time, and the characteristics of the raw material.

Explanation of the function button

Item applied after setting the items in 3-10-6; the function sets the discharge quantity of ice cream

1. After putting in the ingredient and pressed 'AUTO'.
2. When pushed 'AUTO'+'DEFROST' button during operation.
3. After pasteurization, when became 'AUTO' automatically.
4. When turned power off and on during Operation

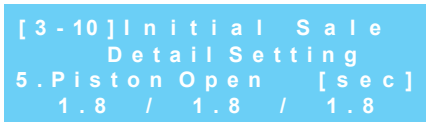
3-10-1: Set the detailed category for the '4' ejection amounts from Category '3-7'.
Select from between '1', '2', '3', '4' and 100g and press the 'DEC.' button to enter '3-10-2'.

3-10-2: Set the time for the cup ring(cup holder) to stay above.

3-10-3: Set the time for cup ring(cup holder) to come down and to stop after the time set in '3-10-2'.

3-10-4: Set the time for cup ring(cup holder) to stay when it stops after the time set in '3-10-3'.

3-10-5: Set the time to open the piston by operating the piston motor. By controlling this time, the ejection amount can be big or small.

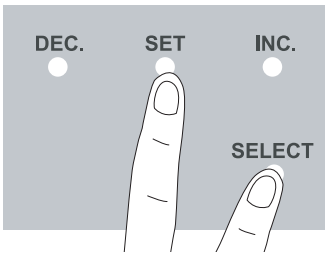


3-10-6: Applicaiton duration of item (3-10) at initial sales of ice cream is indicated. If the duration of the item is exceeded, sales is made in duration set in item '3-8'.

Explanation of the function buttons (set by an Administrator)

Only experts that have been designated by the main office shall adjust this category.
A service charge will be applied if problems occur due to unapproved alterations.

Press 'SET' + 'SELECT' buttons for 2 seconds to enter the stage of inputting the password.
Password has 4 digits and input begins from the left and the relevant digit blinks.
Select the number by 'DEC.' or 'INC.' buttons and press 'SET' button to move to the next digit.
Input the 4 digit password in this way.
Do not let anyone without professional education know the 4 digit password under any circumstances.



[4-0]Model Select
ISIS-273THC_IAA
ICETRO

4-0: This is the category that can be selected according to the characteristic and model of the product and that has a meaning that is different from the model name of the product. When the model is changed in this category, the content in Category '4' is reset to the default setting.

Explanation of the function buttons (set by an Administrator)

4-1: Rest time setting

This is the function to allow the compressor to rest for a certain period of time by minute after the soft ice cream is made. Adjust this category carefully as it can make the soft ice cream melt quickly.

4-2: Set the compressor to restart temperature

This remembers the temperature at the time of making soft ice cream. When the temperature rises above the temperature that was set in this category, the compressor is restarted.

The rest time of the compressor can be extended when the temperature in this category is increased.

4-3: Hopper management temperature setting

This sets the management temperature to refrigerate the raw material in the hopper.

The temperature set in this category is managed as the value added from the value in Categories '3 - 4'.

For example, if '3 - 4' is 2℃ and '4 - 3' is 2℃, the management temperature of the hopper is maintained at 2~4℃.

4-4: Standby OFF temperature setting

This sets the cylinder's raw material storage temperature in the standby mode. When the temperature of this category is too low, the raw material inside the cylinder freezer and soft ice cream can become like porridge.

4-5: Standby management temperature setting

This sets the management temperature to refrigerate the raw material in the hopper. The temperature set in this category is managed the value added from the value in Categories '3 - 4'. For example, if '3 - 4' is 2℃and '4 - 3' is 2℃, the management temperature of the hopper is maintained at 6 ~ 8℃.

4-6: Standby reset time setting

This sets the motor's operation cycle to the standby mode. When one is satisfied with the temperature value of '4-4' + '4-5' and the time of this category, the motor and compressor are operated.

important

The categories that determine the compressor rest time during operation are '4-1'and '4-2'. When one is satisfied with these two categories, the compressor rest time ends.

Explanation of the function buttons (set by an Administrator)

4-7: 1℃ rise level calculation

When the soft ice cream is made, 100% is displayed on the LCD window and the percentage value is deducted from the compressor rest time. At this time, when 1℃ is added to the temperature at which the soft ice cream is made, the value set for this category is deduced from the percentage and is then displayed.

```
[4-7]Level Calculate
(AUTO)
 :5%/1C,1%/30sec
```

30℃ seconds pass level calculation

When the soft ice cream is made, 100% is displayed on the LCD window and the percentage value is deducted from the compressor rest time. At this time, the value set for this category is deduced from the percentage every 30 seconds after the making of the soft ice cream and displayed.

4-8: Upper limit current setting

This category sets the maximum value when adjusting the hardness of the soft ice cream in Category '3-1'. This category value needs to be set within the range, in which excessive current does not flow on the motor.

```
[4-8]Limit Level
(AUTO)
              : +0.8A
```

4-9/4/9-1: Selection of pasteurization

This selects the function to pasteurize the raw material and the soft ice cream in the hopper and the cylinder. The model with the pasteurization function is on and the model without the pasteurization function is off. For the model with sterilization function, the functions of water boiling, defrosting, and regeneration may be used when the sterilization function is turned off.

```
[4-9]Heating
1.Working?    :      On
2.Control Temp:  67.0C
3.Operate Temp:  10.0C
```

4-9-2: Control temperature setting during pasteurization

This sets the highest temperature to pasteurize the raw material and the soft ice cream in the hopper and the cylinder. When lowering the value in this category, pasteurization may not work. When increasing the value in this category, the raw material may become carbonized and the taste of the soft ice cream may change.

4-9-3: Management temperature during pasteurization

This indicates the temperature deducted by the temperature set for this category from the temperature of '4-9-2'. For example, if '4-9-2' is 70℃ and '4-9-3' is 2℃, the raw material in the hopper and the cylinder is maintained at 68-70℃.

4-9-4: Pasteurization maintenance time setting

This sets the time to maintain the temperature for '4-9-2' and '4-9-3' during pasteurization. The time set for this category can be reducedor extended in order to control the time to maintain the effect of pasteurization.

```
[4-9]Heating
4.Hold Time      :30min
5.Limit Time     :4hour
6.NO Heat Alam   : 3day
```

4-9-5: Maximum pasteurization time setting

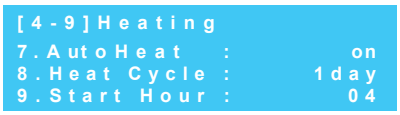
This sets the maximum operation time for the pasteurization time of '4-9-2' ~ '4-9-4'. It is set to stop pasteurization when gas leaks or when problems occur in the pasteurization device. If pasteurization continues until the time set for this category, pasteurization failure is recorded and the machine needs to be checked for problems.

4-9-6: Designation of a warning date when pasteurization is not performed

When the date set in this category is passed when pasteurization failure is recorded, an alarm(Voice Supported Model) is set off for not performing pasteurization. Therefore, perform pasteurization daily.

Explanation of the function buttons (set by an Administrator)

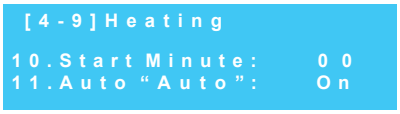
4-9-7: Selection of auto pasteurization
Choose ON for auto pasteurization and choose OFF for no auto pasteurization.
When ON is selected, the following categories are activated.



4-9-8: Auto pasteurization cycle setting
Execute auto pasteurization according to the date set in this category.
For example, '1day' is everyday, '2day' is every other day, and '3day' is every three days.
Auto pasteurization is alway executed in the auto mode and the standby mode and is not executed in any other mode.

4-9-9: Auto pasteurization start time setting
This sets the time to start auto pasteurization. Set the hour for this category.

4-9-10: Auto pasteurization start time setting
This sets the time to start auto pasteurization.
Minutes are set in this category.



4-9-11: Auto set after pasteurization
Select whether to execute auto when stand by has completed after pasteurization.
Set this category as ON and execute auto and make sure to open the carburetor hole.

4-10: Select between Celsius and Fahrenheit
Select between Celsius (℃) and Fahrenheit (℉)

4-11:Environmental temperature detect function setting
The function to detect the environmental temperature can be turned ON/OFF.
Environmental temperature is the temperature of the air coming into the compressor.
Therefore, the temperature for this category can be high and a warning message can be given if the place of installation is small and has no ventilation.
Then the installation environment must be improved.

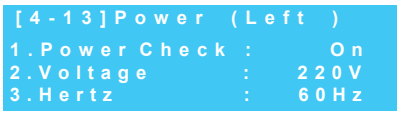
caution

The reference voltage measurement must be in accordance with the measured PCB input voltage.

Explanation of the function buttons (set by an Administrator)

4-12: No load detection function setting
The no load detection function can be turned ON/OFF.
'No load' means the raw material inside the cylinder exists in a liquid condition.
The motor current is then called 'no load current'
If this function is set to on, power is allowed to the product and the noload current is remembered when the temperature of the cylinder is higher than 5℃.

4-13/4-13-1: Supply power standard value setting
Set the voltage and frequency standard of supply power.
When this function is on, the following category appears.



4-13-2: Voltage standard value setting
Measure the voltage at the place of installation and enter the standard value.
This product guarantees ±10% of the supply power. When it is outside of the range a warning sound is given. If used continually, the product can have problems.
As for voltage of single phase, it is required to measure voltage of L and N.
When voltage is 3W, 3 phases, voltage shall be adjusted based on the phase voltage.

4-13-3: Frequency standard value setting
Set the frequency standard of the supply power.
When the standard value of this category is wrongly selected, the present supply voltage of '1-3' can be displayed differently.

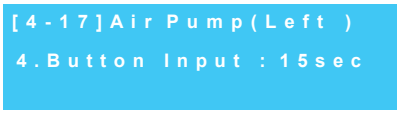
4-16: Current value compensation setting
This is the function for performing overall compensation when the measured current is different from the actual measurement value.

4-17/4-17-1: Air pump selection
If the model has an air pump, this category can be turned on to control the operation of the air pump.

4-17-2: Operation time setting during the initial operation
Set the operation time of the air pump when beginning initial operation.

4-17-3: Operation time setting after sales
Set the operation delay time of the air pump sales. After the motor operation is stopped, the air pump is additionally operated according to the time set for this category.

4-17-4: Operation time set after button input
(Applying the relevant model)
Set the time that the air pump operates every time the button is pushed.



Explanation of the function buttons (set by an Administrator)

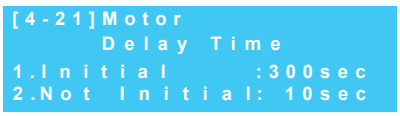
4-18/4-81-1: Select the use of refresh.

4-18-2: Refresh time setting
Set the refresh's Operating time.

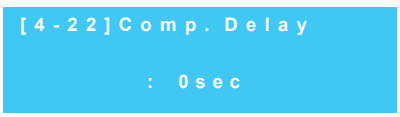
4-18-3: Set the refresh's work limit time
Set the limit time in order to prevent continuous operation after refresh movement.
Refresh can be used again when the time set for this category has passed.

4-20: Calibration of voltage measurement value
The function aligns voltage measured during installation of the product with voltage indicated on [POWER] on the information checking window. The two voltages be shall kept identical to each other with this function.

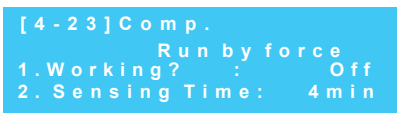
4-21: Dasher motor delay time setting
Sets the motors operation delay time after making soft ice cream.



4-22: Compressor delay time setting
This sets the compressor's operation delay time after making soft ice cream. If this category is given much time, soft ice cream can be frozen too much and problems can occur to the product.

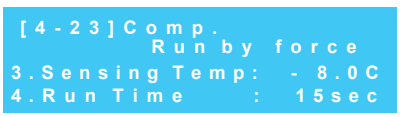


4-23/4-23-1: Selection of the compressor forced operation
This is the function for forcibly operating the compressor during rest time when the compressor is not operating. The following categories appear when this category is turned on.



4-23-2: Temperature detection time setting after stop
This chooses the time to determine the temperature during the rest time.
In case '4min' is chosen, it means, detecting temperature 4minutes after rest.
It sets the temperature for operating the compressor.
The compressor is operated when the temperature reaches the temperature that has been set for this category.

4-23-3: Operation temperature selection
This detects the temperature at the time set in Category '4-23-3' and sets the temperature at which the compressor can be operated.
The compressor is operated when the temperature reaches the temperature that was set for this category.



4-23-4: Operation time control
In case the temperature reaches the temperature of '4-23-3' at the time of '4-23-2', it sets the time for compressor operation.

Explanation of the function buttons (set by an Administrator)

4-24/4-24-1: Wash detection function setting
This is the category to select the wash detection function.

4-24-2: Determine the temperature setting during washing
This adjusts the detection temperature in the cylinder and thehopper during washing when '4-24-1' is activated.

4-24-3:Dasher cover separation time setting during washing
This sets the separation time of the dasher cover during washing. Be careful as a 'wash failure' is recorded when the dasher cover is attached within the time set for this category.

The time for this category means, the minimum time necessary to clean the parts inside the cylinder such as the dasher, the blade, and so forth.

4-24-4: No wash warning date setting
An alarm(Voice Supported Model) is set off when washing is not performed within the value(days) set within this category.

4-24-5: No wash lock setting
The product cannot be used when no washing is performed within the days set for this category.
If this product cannot be used due to no washing, perform cleaning according to the method indicated in the manual.

4-25/4-25-1: Selecting the operation mode of the impeller in the mix tank
The impeller in the reservoir bin operates depending on the ON/OFF adjustment of the sensor of raw material temperature in accordance with the following items:

"COMP" : Activated only when the compressor operates
"TIME" : Operating in accordance with time(4-25-2, 4-25-3) setting independent from the operation of the compressor
"Co.t" : Operating in the same way as the compressor, also activated by time setting (4-25) after the materials in the reservoir bin reach the temperature setting

4-25-2: Operation maximum time setting
This is the function to limit the impeller operation time by providing the maximum operation time under the condition of impeller operation. It is usually used when a lot of foam is created by raw material.
When the agitator operation time is short, ice may form on the wall of the hopper.

4-25-3: Maximum rest time setting
The impeller stops when the raw material in the hopper reaches the set temperature, and the impeller operates when the temperature reaches the operation temperature. At this time, the temperature distribution in the hopper may not be even when it takes a long time to reach the operation temperature.
Then setting the rest time for the agitator can control it.

caution

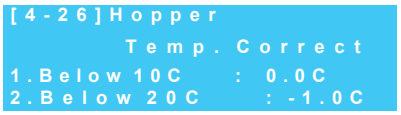
Do not turn off the power switch during the wash cycle.
This is because the program that detects washing is in operation

Explanation of the function buttons (set by an Administrator)

4-26: Hopper temperature compensation function setting
The temperature in the hopper is measured with the temperature sensor on the floor of the hopper. The temperature is correct in the models having an impeller, however it may have deviation in the models without impeller.
As such, the temperature has to be corrected.

4-26-1: Temperature compensation value setting for 10℃ or lower
This sets the temperature compensation value of the hopper to the environmental temperature of 10℃ or lower.

4-26-2: Temperature compensation value setting for 20℃ or lower
This sets the temperature compensation value of the hopper to the environmental temperature of 20℃ or lower.



4-26-3: Temperature compensation value setting for 30℃ or lower
This sets the temperature compensation value of the hopper to the environmental temperature of 30℃ or lower.

4-26-4: Temperature compensation value setting for 4℃ or lower
This sets the temperature compensation value of the hopper to the environmental temperature of 40℃ or lower.

4-26-5: Temperature compensation value setting for 40℃ or higher
This sets the temperature compensation value of the hopper to the environmental temperature of 40℃ or higher.

4-27: Sale lever no return judgment time setting
When the lever does not return to the original position after the ejection of the soft ice cream, an alarm is set off after the time that was set for this category.

4-28/4-28-1: Defrost function selection
The action function can be set to ON/OFF.

4-28-2: Cylinder temperature setting during defrost
Defrosting the soft freezer inside the cylinder to the temperature that was set for this category.

4-28-3: Maintenance time setting during defrost
It sets the delay time after reaching the temperature of '4-28-2'.

4-29/4-29-1: Water boiling function
Water boiling function can be set to ON/OFF.

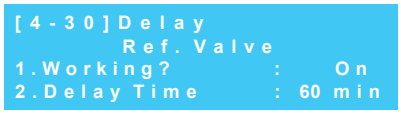
Explanation of the function buttons (set by an Administrator)

4-29-2: Heating temperature setting during water boiling
It sets the temperature of raw material in the cylinder and hopper during water boiling.

4-29-3: Management temperature setting during water boiling
It maintains the temperature of the cylinder and the hopper set at this category from the temperature set at '4-29-2'.

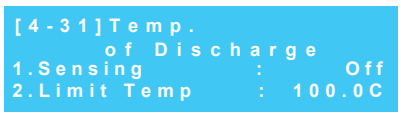
4-29-4: Management time setting during water boiling
It sets the time necessary to maintain the management temperature of '4-29-2' and '4-29-3'.

4-30/4-30-1: Refrigeration value delay function setting
It is the function that is used to make soft ice cream faster by delaying the operation of refrigeration value when making soft ice cream.



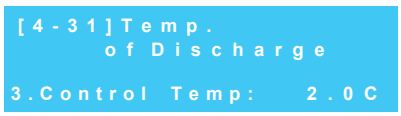
4-30-2: Refrigeration value delay time setting
It sets the time of refrigeration value closure at the time of initial operation, and this time loses its effect after soft ice cream is made. Therefore, it sets the time to keep the refrigeration value closed before the making of soft ice cream.

4-31/4-31-1: Cylinder refrigerants temperature use selection
It can select the use of cylinder refrigerants temperature sensor. It is the function to detect and limit the temperature of refrigerants inside the cylinder when performing pasteurization without any raw material.



4-31-2: Cylinder refrigerants maximum temperature setting
It is the function to prevent the temperature of the refrigerants inside the cylinder from rising above this value set at this category.

4-31-3: Cylinder refrigerants management temperature setting
It manages the temperature of refrigerants inside the cylinder by reducing the value of this category from the temperature of the category '4-31-2'.

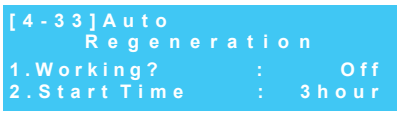


4-32-1: MIX OUT function selection
When this category is activated, all operations are stopped in case there is no raw material.

4-32-2: MIX OUT function selection

Explanation of the function buttons (set by an Administrator)

4-33/4-33-1: Auto recycling function setting
Activate this category when auto recycling is needed. Make sure to block the carburetor hole when performing auto recycling.

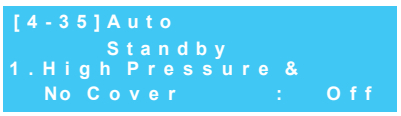


4-33-2 : Auto recycling judgment time setting
Auto recycling is performed when the time set at this category is passed under auto.

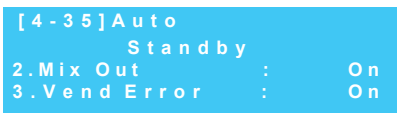
4-33-3: First auto recycling limit time setting
Set up the time while auto-regeneration is not carried out.

4-33-4: Second auto recycling limit time setting
Set up the time while auto-regeneration is not carried out.

4-35-1: Standby auto shift selection
It selects the function to set standby automatically when the machine stops due to high pressure or cover error.
When this category is turned on, standby is activated.
When it is turned off, the operation before error is executed after error is lifted.

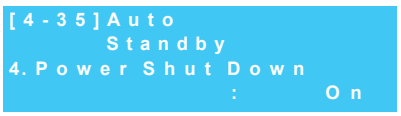


4-35-2: Standby auto shift selection
It selects the function to set standby automatically when '4-32-1 ' (MIX OUT function) is activated and no raw material is detected.



4-35-3: Standby auto shift selection
It selects the function to set standby automatically when dispenser error (Er27, Er28, Er29, Er30, Er33, Er34) appears.

4-35-4: Standby auto shift selection
It selects the function to set auto under auto and standby under pasteurization and standby when the power is allowed after being turned off during operation.



For your information

Turn the power off, for a while to reset Dispenser related errors.

Explanation of the function buttons (set by an Administrator)

4-36: Auto selection(It applies to the fully automatic vending machine, not to the manual system.)
This selects the function to set standby when the category '4-35-1' and '4-35-2' are activated or automatically set auto when supplying raw material or cup during operation.

4-37/4-37-1: Excessive current detection function selection
This category is the function to select the protection function by detecting the excessive current of the dasher motor.

4-37-2: No current detection is performed during the time set at this category.

4-37-3: Excessive current detection current setting
Soft ice cream is controlled by the value set at '3-1' and the machineis operated normally.
When troubles (lack of raw material and soforth) happen and motor stops, this function detects it.
The value set at this category is added to the value of '3-1' , and the function begins to be operated when the set value is reached.

4-37-4: Excessive current detection delay time setting
Excessive current detection function is operated when more than the value of '4-37-3' is detected and the time set at this category is passed.

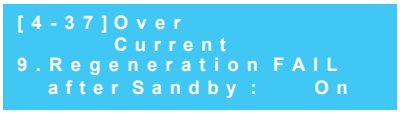
4-37-5: Reset function selection
This category selects reset function when abnormal operations
(excessive current, TP on peration, inverter trouble and so forth) occur in the motor.

4-37-6: Reset number setting
When category '4-37-5' is activated, it selects the number of resets.

4-37-7: Recycle after the number of resets is terminated.
It selects the function to recycle automatically when an error occurs even after auto reset.

4-37-8: Recycling number setting
When category '4-37-7' is activated, it selects the number of recyclings.

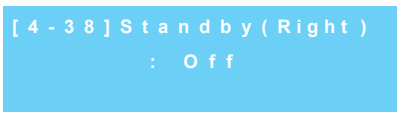
4-37-9: Standby in case of defrost / auto error
It selects the function to set final standby when the processes from '4-37-5' to '4-37-8' all failed.



Explanation of the function buttons (set by an Administrator)

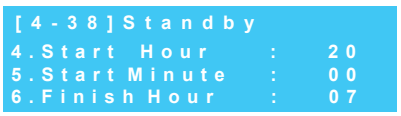
4-38-1: Select whether to use 'Standby' button
When this category is activated, press the 'refresh' button for longer than 3 seconds to operate the standby function.

4-38-2: Selection of auto 'Standby'
Choose ON for auto Standby and choose OFF for no auto Standby.
When ON is selected, the following categories are activated.



4-38-3: Auto 'Standby' cycle setting
Execute auto Standby according to the date set in this category.
For example, '1day' is everyday, '2day' is every other day, and '3day' is every three days.
Auto Standby is alway executed in the auto mode and the standby mode and is not executed in any other mode.

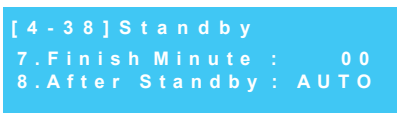
4-38-4: Auto 'Standby' start time setting
This sets the time to start auto Standby.
Set the hour for this category.



4-38-5: Auto 'Standby' start time setting
This sets the time to start auto Standby.
Minutes are set in this category.

4-38-6: Auto 'Standby' finish time setting
This sets the time to start auto Standby. Set the hour for this category.

4-38-7: Auto 'Standby' finish time setting
This sets the time to start auto Standby.
Minutes are set in this category.



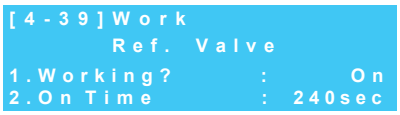
4-38-8: Auto set after 'Standby'
Select whether to execute auto when stand by has completed after Standby.
Set this category as AUTO and execute auto and make sure to open the carburetor hole.

Select whether to execute auto when stand by has completed after Standby.
Set this category as HEAT and execute auto Pasteurization.

Select whether to execute auto when stand by has completed after Standby.
Set this category as STAN and execute auto stand by.

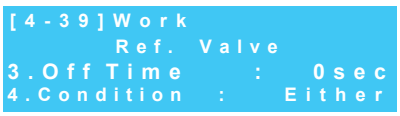
Explanation of the function buttons (set by an Administrator)

4-39/4-39-1: Refrigeration valve operation selection
It selects the use of operation time of refrigeration valve that refrigerate the raw material in the hopper.
Activate this category when refrigerating the cylinder and the hopper with a single compressor.



4-39-2: Refrigeration valve operation time setting
It sets the operation time of refrigeration valve that refrigerates the raw material in the hopper.
Be careful as ice can be formed on the wall of the hopper when the time of this category is adjusted too much.

4-39-3: Refrigeration valve rest time setting
It sets the rest time of refrigeration valve that refrigerates the raw material in the hopper.
soft ice can be formed on the wall of the hopper when the time of this category is too short, and the raw material in the hopper may not be refrigerated when the time of this category is too long.



4-39-4: By choosing refrigeration valve operation mode, effective storage of ingredient can be done.
Either : At the operation of either the freezing valve or refrigeration valve, the compressor starts to operate.
Drum on : Only when the freezing valve operates, refrigeration valve starts to operate.

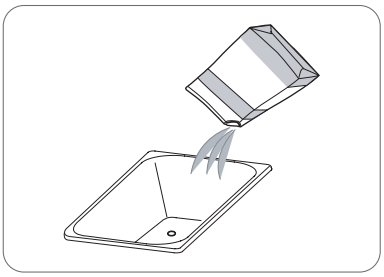
4-40: Set up compressor cooling fan delay time
This function sets up the delay time in compressor cooling fan start-up.

4-41: Set up hot gas valve operation in standby mode
Set up the operation of the hot gas valve during standby status.

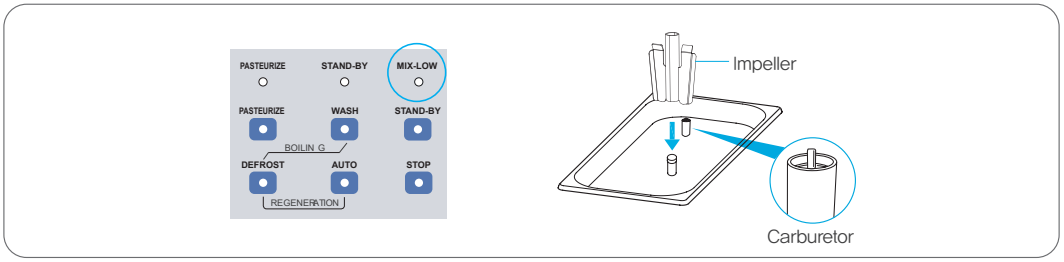
4-42: Set up hot gas valve operation in ‘ AUTO’ mode
Set up the operation of the hot gas valve during AUTO status.

Making soft ice cream

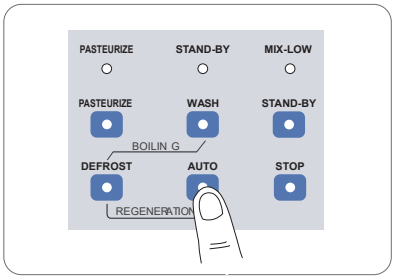
1. Open ingredient bin cover and put in sufficient amount of ingredient.
   (10°C or lower). Otherwise, the materials in the storage tank may be spoiled.
   Highly viscous materials may not be injected smoothly.
   Do not start the machine until all materials are injected.



2. Fill the storage bin to the brim with material, insert the impeller and oripis, and close all the lids. (See if the 'MIX LOW' Lamp is turned off)



3. Pressing the 'AUTO' button on the button panel initiates the production of ice cream.

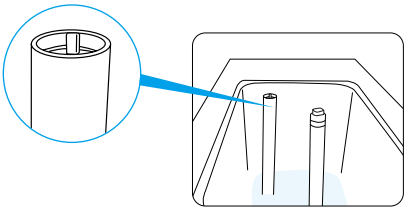


For your information

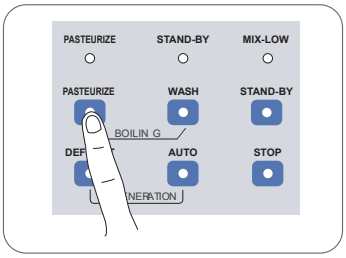
- The manufacturer shall not be responsible for any trouble (e.g., spoilage of materials, overcooling, non-production of ice cream) caused by using materials in non-frozen state (10℃).

How to pasteurize the soft ice cream

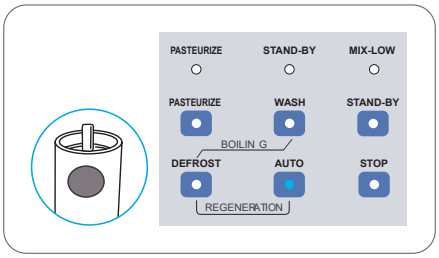
1. If you align the protrusion of the upper area of the carburetorbody with thearea having no hole in the upper area of the tube, then the hole in the lowerarea of the carburetorbody will be blocked.



2. Press the ‘HEATING’ button.
This function is used to suppress the growth of micro organisms and maintain the ingredients fresh for a long time by performing low temperature heating on the ingredients and the soft ice cream in the hopper and the cylinder(68-70℃ 30 minutes).
This function should be executed every day.
If it is not pasteurized every day, it should be washed every day.

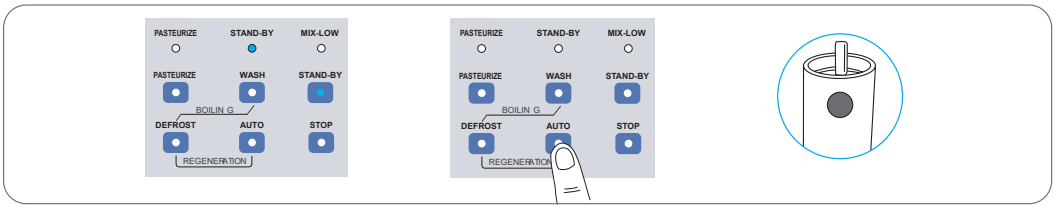


3. When the pasteurization is complete, the ‘AUTO’ lamp is on.
In this case, it means that pasteurization is completed and the Sale on standby



4. When the pasteurizationis complete, the ‘STAND-BY’ lamp is on.
In this case, it means that pasteurizationis complete and the ingredients in the mixing tank and the cylinder be Keep refrigerated.

5. Press the “STOP + AUTO” button. When the soft ice cream is made, open the carburetor hole of the carburetor tube.



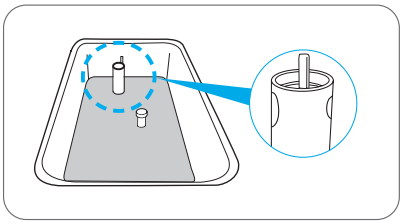
For your information

- The lease raw materials shall be kept in the storage tank during sterilization, and materials shall smoothly be agitated by the impeller.
- The 12-liter storage tank shall be filled with material of 2 liters at least, and 19-liter storage tank with materials of 4 liters at least (cylinder kept fully filled).
- This product has a built in automatic pasteurization function. Auto pasteurization only operates in 'AUTO', 'STAND-BY' mode. You must block the mix valve hole before pasteurization. and Operation of every function button stops during sterilization.
- The automatic pasteurization function of this product operates 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 are decayed due to the absence of pasteurization, the manufacturer will not assume any responsibility for it.

How to make the soft ice cream look better

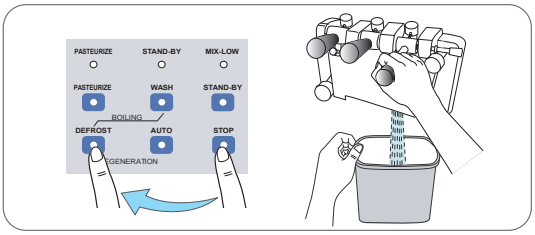
【 Manual regeneration method 】

1. Block the carburetor hole of the mixing tank.

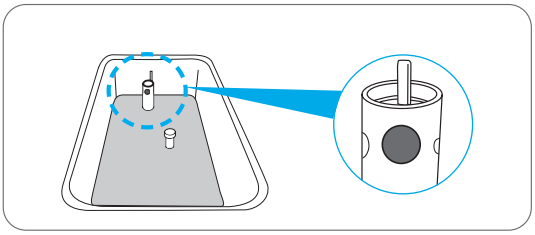


2. Press the stop button of the control panel, then press the defrost button.

3. Pull the projection lever to make 200~300g of soft ice cream, then put it in stroage bin again.



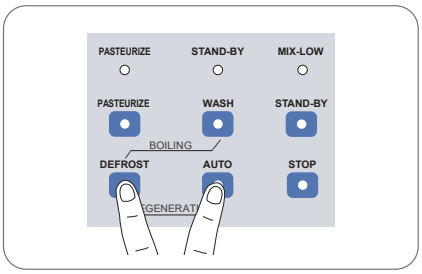
4. When the soft ice cream is made, open the carburetor hole of the carburetor tube.



【 Automatic regeneration method 】

1. Hold 'REGENERATION' button for more than 3 seconds.

2. Defrosting and making ice cream will be automatically performed, ice cream can be served as needed.

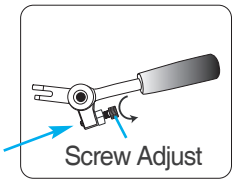


For your information

- IIngredient with too much milk fat may result in soft ice cream with poor shape if demand rate remains slow for 5~6 hours.
  In this case, use the function as above to adjust the shape.
- For models with orifices, adjustment of carburetor is not need for "regeneration".

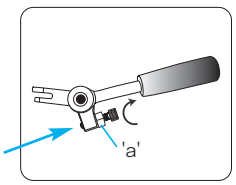
Soft ice cream out-speed control

1. By adjusting 'Screw Adjust' at the bottom of the lever (out lever), you can adjust the out-speed of the soft ice cream. As shown in the figure on the left, release the 'Screw Adjust' to increase the out-speed of the soft ice cream.



2. As shown in the figure on the right, fasten the 'Screw Adjust' to reduce the out-speed of the soft ice cream.

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

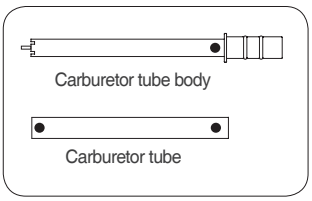


For your information

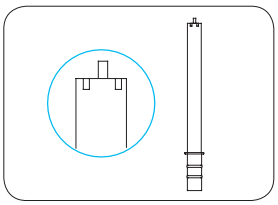
- If you release the Screw Adjust to increase the out speed of the soft ice cream, then the ingredients in the mixing tank will be supplied to the cylinder relatively slowly. Suddenly, the soft ice cream may no longer come out. Therefore, you are recommended to adjust the vending speed for one cup every 6 to 8 seconds.

Carburetor control(for pump type, refer to separate manual)

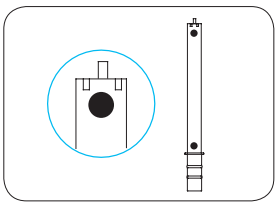
The carburetor is made up of two parts.
The part that is inserted into the hole of the mixing tank is called the body and a tube is inserted into this. The tube has a hole at the top and at the bottom. It can't be inserted in the reverse direction.



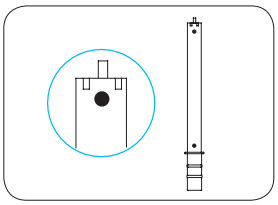
The figure shows the carburetor with a blocked hole.
If you align the protrusion of the upper area of the carburetor body with the area having no hole in the upper area of the tube, then the hole in the lower area of the carburetor body will be blocked.
Condition of use: ① Initial soft ice cream making
② "Heating" mode executed
③ "Regeneration"mode execute



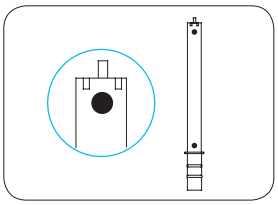
This figure shows the carburetor aligned with a large hole.
Align the protrusion of the upper area of the carburetor body with the large hole in the upper area of the tube.
Decrease the overrun and increase the amount of ingredients injection in this way when you need continuous vending of the product.
Condition of use: ① When the "Auto" mode is executed



This figure shows the carburetor aligned with a small hole.
Align the protrusion of the upper area of the carburetor 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 carburetor body. Increase the overrun and decrease the amount of ingredients injection in this way when you expect a small amount of sales.
Condition of use: ① When the "Auto" mode is executed



This figure shows the carburetor aligned with a medium hole.
Align the protrusion of the upper area of the carburetor 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 carburetor 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

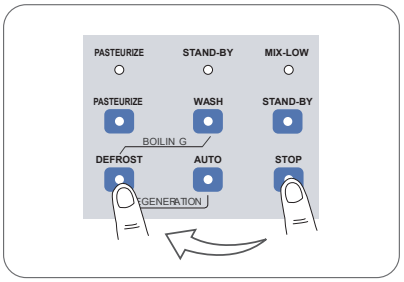


For your information

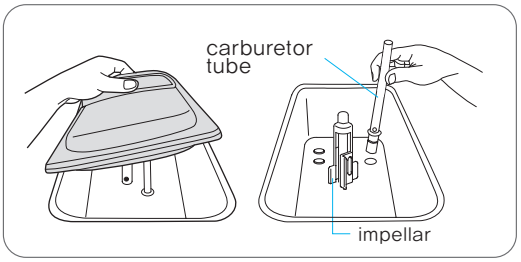
A small hole can improve the overrun, but it may depend on the amount of ingredients in the mixing tank. The fewer ingredient is in the mixing tank, the higher the overrun becomes. The more the ingredient is, the lower the overrun becomes.

Cleaning method(for pump type, refer to separate manual)

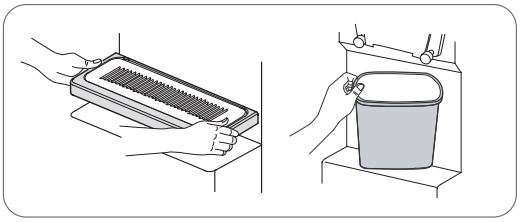
1. Press ‘STOP’ button, and then ‘DEFROST’ on the operation panel.
(Wait about ten minutes until soft ice-cream is melted in the cylinder.)



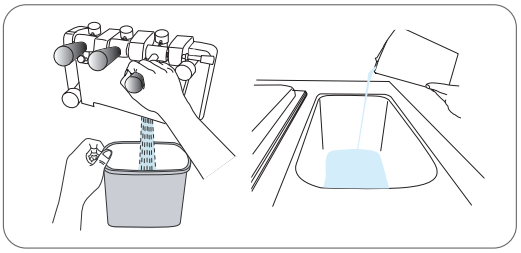
2. Open the cover of the MIX TANK, and then remove and clean the carburetor (the body), Impeller.



3. Remove the drain box and put on the drain bin.

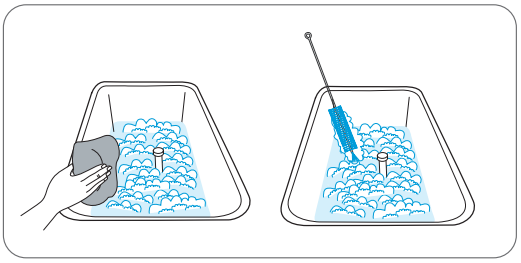


4. Remove the soft ice cream liquid in themixingtank and pour faucet water into it.Repeat it two or three times until you get clean water from it.



5. In order to remove residue of ingredients in agitation shaft in storage bin, drain hole or water level sensor, use neutral detergent in the stroage bin, clean with brush and apply steam cleaning process.

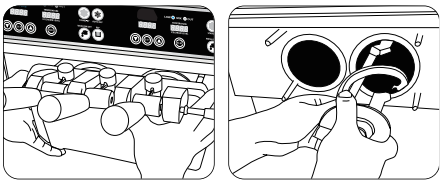
6. After steam-cleaning process, press the STOP button to release the water and rinse the machine with clean water.



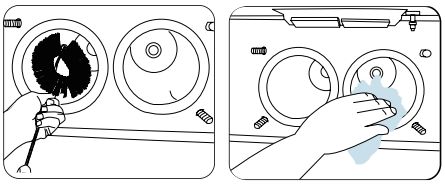
Caution
- When sterilization is performed once a day, the system shall be cleaned every 14 days as shown in the figure.
- The carburetor, impeller, and ice cream discharge port shall be cleaned once a day.

Cleaning method

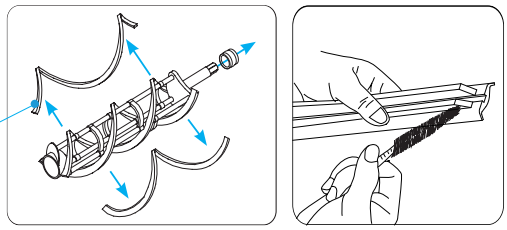
7. Separate the dasher cover from the main body. Disassemble parts of dasher assay.



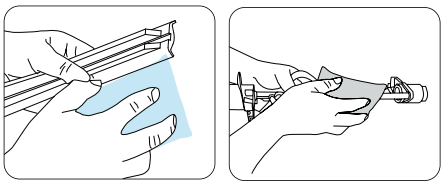
8. Brush off the inner area of the cylinder and wipe it off with a soft cloth.



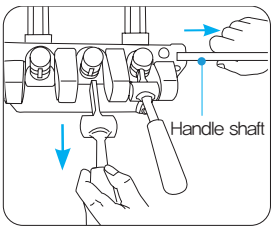
9. Disassemble the dasher assembly, wash all the parts using neutral detergent and wipe them with soft cloth.



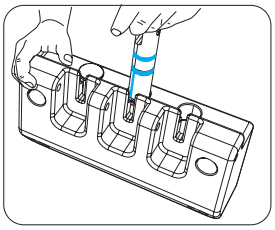
10. Clean up the dasher with a soft cloth.



11. Extract a handle shaft and separate the lever from the dasher cover.



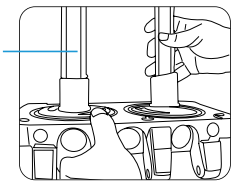
12. Pull out each piston from the dasher cover and clean it up with brush (Please make sure not to switch the middle piston with left and the right piston.)



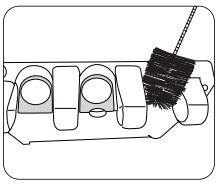
Cleaning method

【 Washing of each parts 】

13. Disassemble the mixing shaft and wipe it off with a brush.

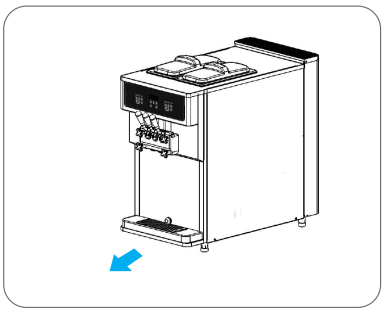


14. Take out the piston of the dasher cover and clean the edge of the piston with a soft towel.



15. After cleaning off all parts, dry them and reassemble them in the reverse order.

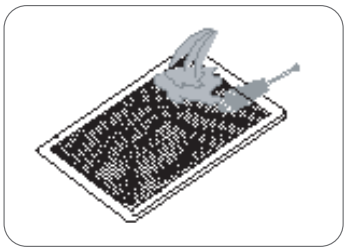
【 Condenser and filter cleaning method 】



1 . Filter Decomposition method

Slowly pull the filter from the front bottom part to remove it.

2 . Shake off filter dusts and wash it off thoroughly with water.
(After washing it, Dry the filter)



3 . The condenser surface has lots of dust.
Remove it by using a small brush
•Located at the bottom of product.

4 . Clean and dry the filter and insert it into the machine.

● The Cleaning cycle :
- Filter: Once a week
  ※ The pollution status may differ depending on the installed location, so clean the polluted filter occasionally.
- Condenser: Once a month
  ※ Clean the condenser with a clean brush.

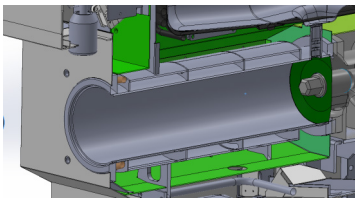
caution

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

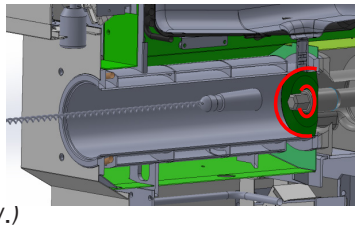
Cleaning method

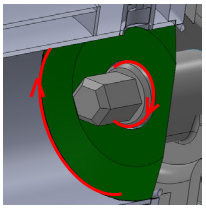
【 How to clean inside the drum 】

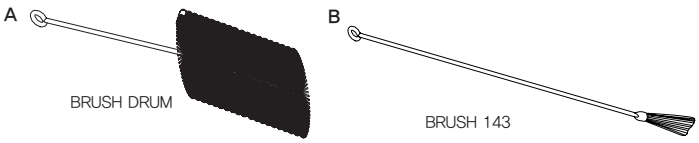
1. Using the "A" brush You have to clean the entire drum.



2. Using a “B” brush so that the inner edge of drum.
While pushing the brush a little into the shaft gap and the peripheral gap.
The residue should be cleaned thoroughly.
(Every time you clean it, clean it with "B"
It's hygienic and there's no foreign body.)



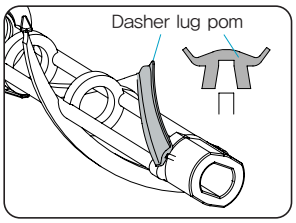


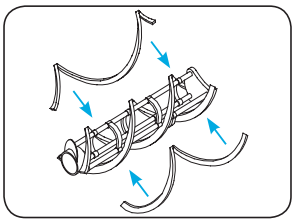


Dasher and dasher cover assembly method

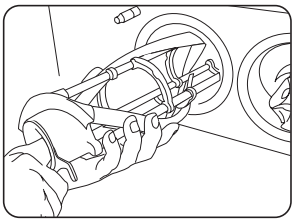
【 Dasher assembly 】

1. Please assemble the blades (LUG POM) on the dasher ass'y.





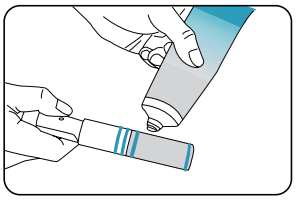
2. Please insert the assembled dasher into cylinder.



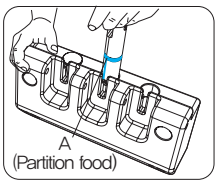
Dasher and dasher cover assembly method

【 Dasher cover assembly 】

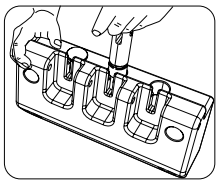
1. Apply edible vegetable oil to the ring inserted into the piston.



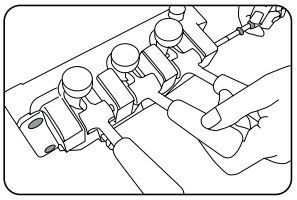
2. Insert the piston in the dasher cover.
   ※Please make sure not to switch the middle piston with left and the right piston.
   ※ When reassembling, the (A) part of the middle piston should be placed as shown in the (Picture 1). When the Partition Food (rubber packing) is inserted fully, please turn the piston to look forehand as shown in the (Picture 2). (Prevention of the rubber from getting entangled)



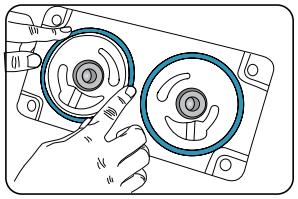
(Picture 1)


(Picture 2)

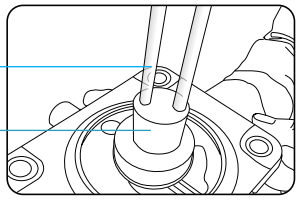
3. Insert the discharge lever into the piston and then insert the lever in line with the dasher cover and the discharge lever.



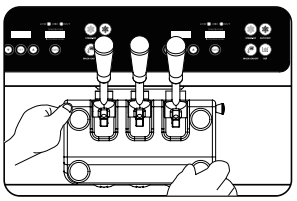
4. Insert the packing dasher to the dasher cover.



5. Insert the mixing shaft and align the dasher bearing.



6. Fasten the two pairs of dasher cover bolts facing each other diagonally.
   If they are loose, then the soft cream can leak.
   Fasten it tightly.

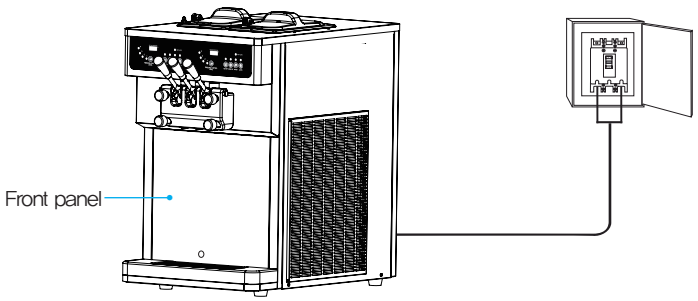


Installation method

【 Electrical connection 】

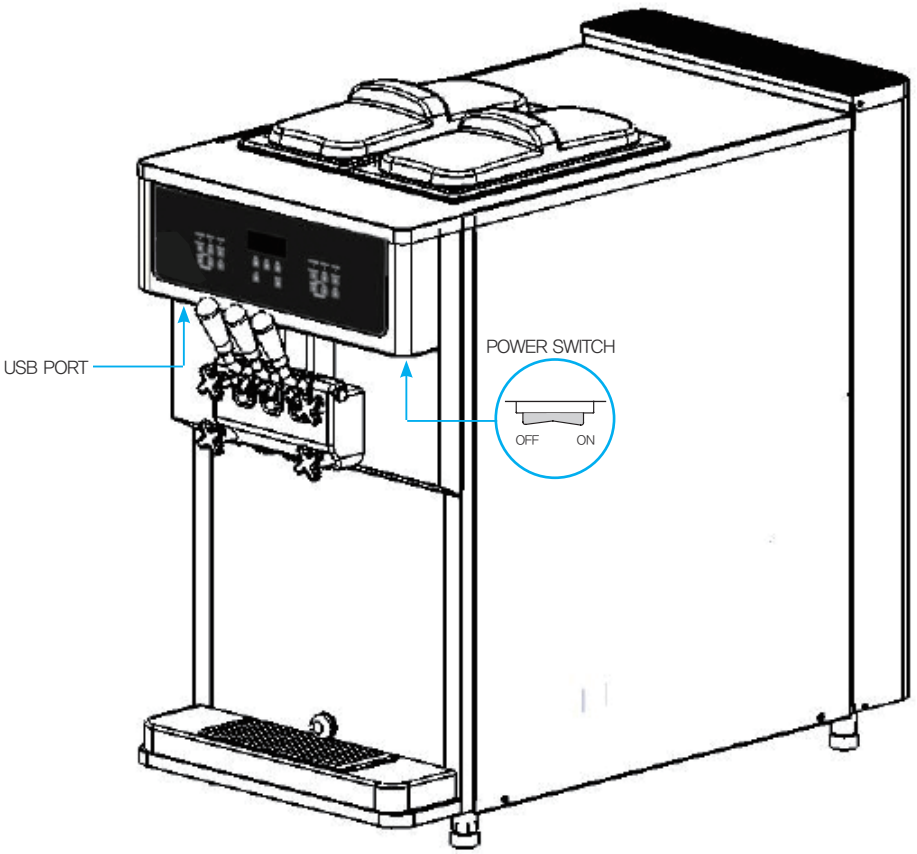
1. Please set up the earth breaker box for only the machine (above AC 20A for 1phase) and connect electricity.

'Instruct the user to determine in consultation with the supply authority that the equipment is connected only to a supply of that impedance or less.'

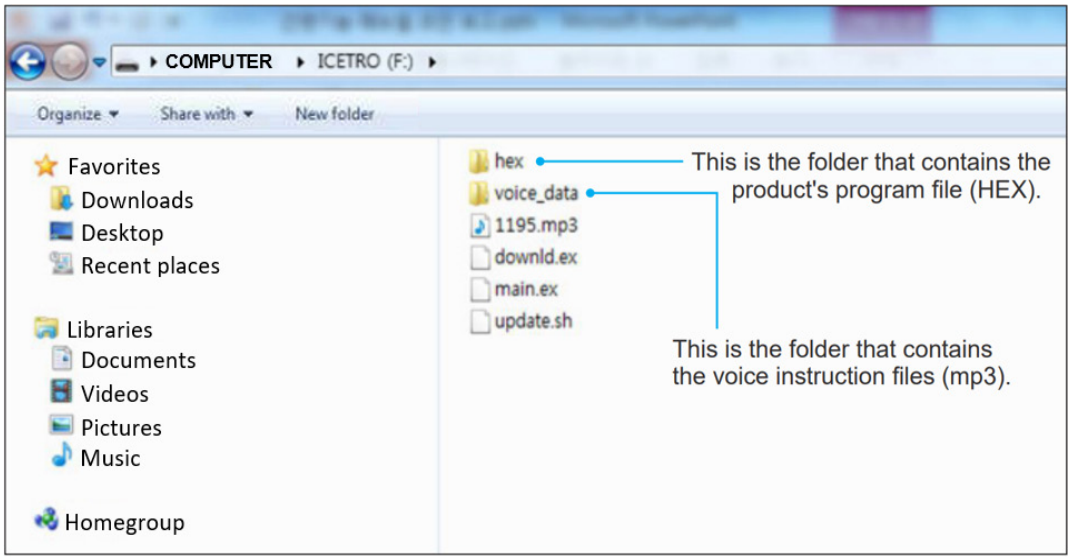


How to upgrade the program

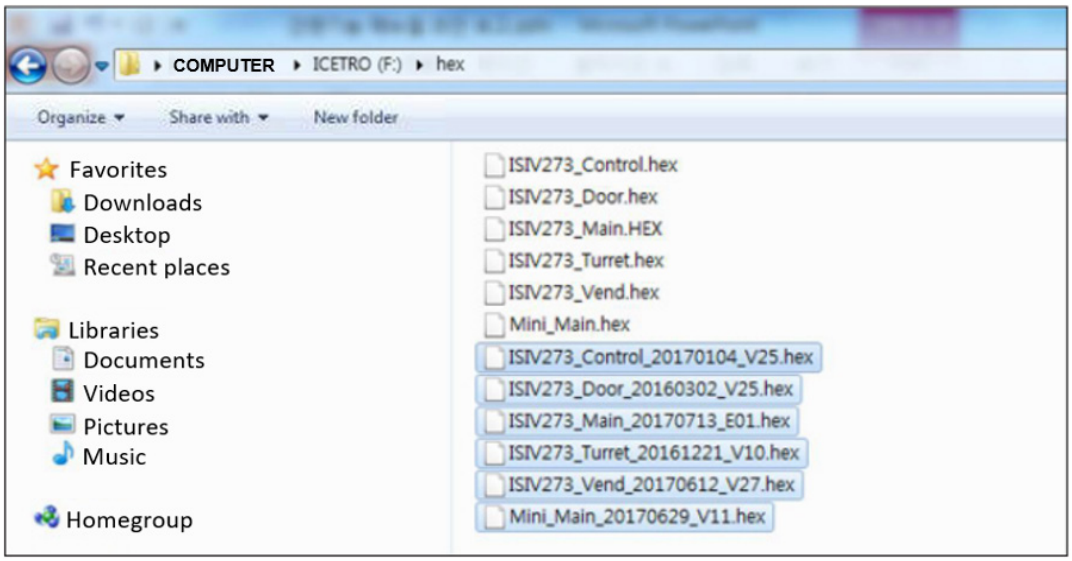
1. Download the program received from the homepage or the customer service center of the company to a USB memory.
2. USB port is located at the left of front cover bottom.
3. Turn off the power switch on the front side of the system, and then turn it on.
4. Wait until the indicator of the USB Download PCB turns green (about 5 ~ 10 minutes).
5. Remove the USB memory.



How to copy a program to USB



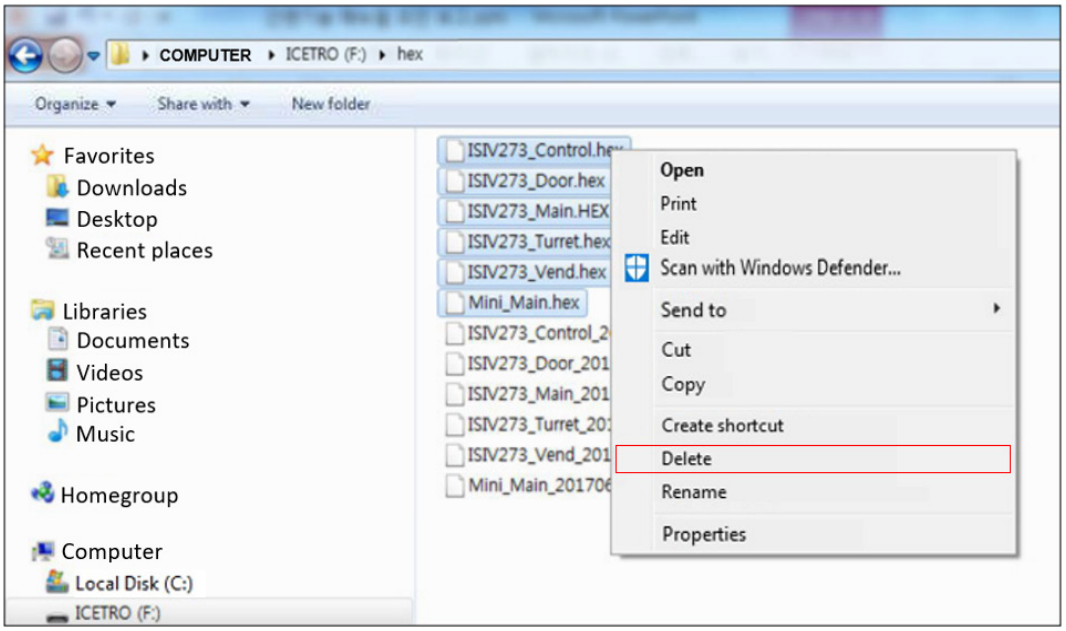
1. Create hex folder and voice_data folder as above in the USB root and copy four files (1195.mp3, downld.ex, main.ex, update.sh) into the root.



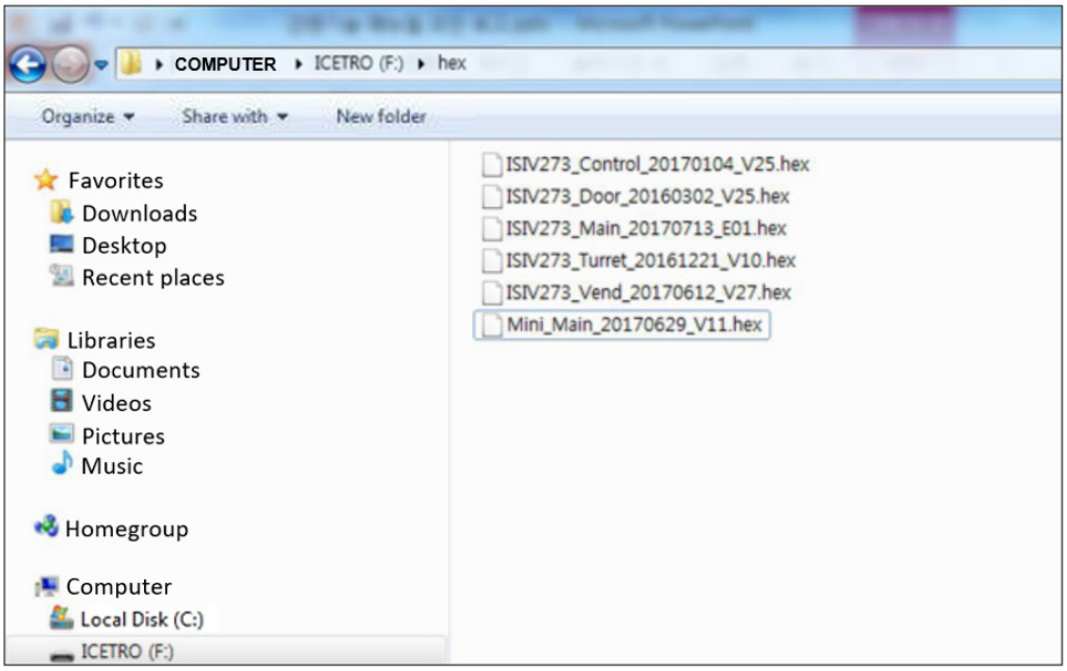
2. Copy downloaded HEX files into USB's hex folder.

NOTE

- If the files are not written on the USB for 30 minutes or longer, then turn off the power and reinsert the USB memory.
- USB must be prepared in FAT32 format.



3. Delete hex files in existing hex folder.



4. Delete all existing hex files and only leave the copied files.

Service for Refrigerant Lines

Removal and replacement of freezing parts

CAUTION

1. This unit should be diagnosedd and repaired only by qualified service personnel to reduce the risk of death, electric shock, serious injury, or fire.
2. Move the ELCB switch to the "OFF" position before servicing
3. CHOKING Hazard : Ensure all components, fasteners, and screws are securely in place after the unit is serviced.
4. Make sure hopper and cylinder in the ice-cream maker are clean after the unit is serviced.

A. Service for Refrigerant Lines

WARNING

1. Repairs requiring the refrigeration circuit to be opened must be performed by Properly tarined service personnel.
2. Always recover the refrigerant and store it in an approved container. Do no discharge the refrigerant into the atmosphere.
3. Use an electronic leak detector or soap bubbles to check for leaks. Add a trace of refrigerant to the system (if using an electronic leak detector), and then raise the pressure using nitogen gas (140PSIG). DO NOT use R-404A as a mixture with pressurized air for leak testing

CAUTION

1. The Polyol Ester (POE) oils used in R-404A, R-449A units can sbsorb moisture quickly. Therefore it is important to prevent moisture from entering the system when replacing or servicing parts.
2. Always install a new drier every time the ealed refrigeration system is opend.
3. Do not replace the dried until after all other repair or replacement has been made. Install the new drier with the arrow on the drier in the direction of the refrigerant flow
4. When brazing, protect the drier and 4-way valve by using a wet cloth to provent the drier and 4-way valve from overheating, Do not allow the drier to exceed 250℉ (121℃)
5. Do not leave the system open for longer than 15 minutes when replacing or servicing parts.

Service for Refrigerant Lines

1. Refrigerant Recovery

This ice cream vending machine has a refrigerant service valve (nipple).
Recover the refrigerant through this nipple and keep the recovered refrigerant in an approved storage bin. Never discharge the recovered refrigerant to the atmosphere.

2. Brazing

WARNING

1. R-404A, R-449A itself is not flammable at atmospheric pressure and temperatures is to 176˚F(121˚C)
2. R-404A, R-449A itself is not explosive or poisonous. However, when exposed to high temperatures(open flames), R-404A, R-449A can be decomposed to form hyfrofluoric acid and carbonyl fluoride both of which are hazardous.
3. Do not use silver alloy or copper alloy containing arsenic.
4. Use an electronic leak detector or soap bubbles to check for leaks. Add a then raise the pressure trace of refrigerant to the system (if using an electronic leak detector), and using nitogen gas (140PSIG). DO NOT use R-404A, R-449A as a mixture with pressurized air for leak testing

1) When brazing copper pipe, purge the pipe with nitrogen gas at pressure of 3~4 psig.

CAUTION

1. Always install a new drier every time the sealed refrigeration system is opened.
2. Do not replace the dried until after all other repair or replacement has been made. Install the new drier with the arrow on the drier in the direction of the refrigerant flow
3. When brazing, protect the drier and 4-way valve by using a wet cloth to provent the drier and 4-way valve from overheating, Do not allow the drier to exceed 250˚F (121˚C)

2) Use an electronic leak detector or soap bubbles to check for leaks.
Add a trace of refrigerant to the system (if using an electronic leak detector), and then raise the pressure using nitogen gas (140PSIG). DO NOT use R-404A , R-452A as a mixture with pressurized air for leak testing.

Service for Refrigerant Lines

3. Vacuuming and recharging (R-404A, R-449A)

1) Install the vacuum pump on the system. Connect the charging hoses on the charging nipples of both high-pressure and low-pressure ends.

> **IMPORTANT**
>
> The vaccum level and vacuum pump may be the same as those for current refrigerants. However, the rubber hose and gauge manifold to be used for evacuation and refrigerant charge should be exclusively for POE oils.

2) Turn the vacuum pump on and open the manifold valve.
The oil of the vacuum pump shall not be allowed to leak into the system.

3) Wait until the desired vacuum level is obtained. Vacuuming time may vary depending on the capacity of the vacuum pump.

4) Open the manifold valves on the high- and low-pressure ends.

5) Remove the manifold hose from the vacuum pump and connect the hose to the refrigerant service cylinder. Purge air from the hose with the hose kept slightly open. Use pure refrigerant with no foreign materials.

6) The use of liquid refrigerant is recommended.
Turn the service cylinder upside down on a scale and open the manifold valve on the high-pressure end.

7) Wait until an adequate amount of refrigerant is injected.

8) If necessary, inject the remaining refrigerant into the low pressure-end. Inject refrigerant into the low-pressure end while the system operates.

9) Close the manifold valves on the high- and low-pressure ends. Remove the manifold hoses.

10) Reattach the caps on the nipples.

Removal and Replacement of Compressor

B. Removal and Replacement of Compressor

WARNING

1. Always install a new drier every time the sealed refrigeration system is opened.
2. Do not replace the dried until after all other repair or replacement has been made. Install the new drier with the arrow on the drier in the direction of the refrigerant flow
3. When brazing, protect the drier and 4-way valve by using a wet cloth to provent the drier and 4-way valve from overheating, Do not allow the drier to exceed 250℉ (121℃)

When replacing the compressor with defective winding, replace the start capacitor and the start relay as well.
The compressor shall be replaced and serviced within 15 minutes since the POE oil inside the compressor rapidly absorbs moisture.

1) Turn off the power of ELCB.
2) Open the side door.
3) Recover the refrigerant using an adequate vessel.
4) Remove the terminal cover of the compressor and disconnect the compressor cable.
5) Remove the discharge and the suction pipes.
6) Remove the bolts, washers, and rubber grommets from the compressor.
7) Remove the compressor. Remove the packaging of the new compressor.
8) Insert the rubber grommets in the new compressor.
9) Place the compressor on the system and assemble it on the system by tightening the bolts and the washers.
10) Replace the drier with a new one.
11) While purging with nitrogen gas at pressure of 3-4 psig, braze the copper connections.
12) Inject nitrogen at pressure of 140 psig and check for leaks with electric leak detector or soap water.
13) Vacuum the system and inject the refrigerant.
14) Connect the terminal and assemble the terminal cover on its position.
15) Close the side door.
16) Turn on the power of ELCB.

Removal and Replacement of Capillary Tube

C. Removal and Replacement of Capillary Tube

> ⚠ CAUTION
>
> 1. Always install a new drier every time the sealed refrigeration system is opened.
> 2. Do not replace the dried until after all other repair or replacement has been made. Install the new drier with the arrow on the drier in the direction of the refrigerant flow
> 3. When brazing, protect the drier and 4-way valve by using a wet cloth to provent the drier and 4-way valve from overheating, Do not allow the drier to exceed 250℉(121℃)

1) Turn off the power of ELCB.
2) Open the side door.
3) Recover the refrigerant using an adequate vessel.
4) Remove the capillary tube and install a new one.
5) Replace the drier with a new one.
6) While purging with nitrogen gas at pressure of 3~4 psig, braze the copper connections.
7) Inject nitrogen at pressure of 140 psig and check for leaks with electric leak detector or soap water.
8) Vacuum the system and inject the refrigerant.
9) Close the side door.
10) Turn on the power of ELCB.

Removal and Replacement of Hot Gas Valve or Liquid Line Valve.

D. Removal and Replacement of Hot Gas Valve or Liquid Line Valve.

IMPORTANT

1. Always use a copper tube of the same diameter and length when repalcing the valve lines; otherwise, performance may be affected
2. Always replace the strainer when replacing the hot gas valve

WARNING

1. Always install a new drier every time the sealed refrigeration system is opened.
2. Do not replace the dried until after all other repair or replacement has been made. Install the new drier with the arrow on the drier in the direction of the refrigerant flow
3. When brazing, protect the drier and 4-way valve by using a wet cloth to provent the and drier 4-way valve from overheating, Do not allow the drier to exceed 250˚F (121℃)

1) Turn off the power of ELCB.
2) Open the side door.
3) Recover the refrigerant using an adequate vessel.
4) Remove the bolts and the solenoid valves.
5) Disassemble the valve. When replacing the hot gas valve, replace the strainer as well.
6) Install the new valve and strainer.
7) Replace the drier with a new one.
8) While purging with nitrogen gas at pressure of 3~4 psig, braze the copper connections.
9) Inject nitrogen at pressure of 140 psig and check for leaks with electric leak detector or soap water.
10) Vacuum the system and inject the refrigerant.
11) Connect a new solenoid valve.
12) Install the solenoid on the valve body and tighten the bolts.
13) Close the side door.
14) Turn on the power of ELCB.

Removal and Replacement of Condenser'

E. Removal and Replacement of Condenser'

WARNING

1. Always install a new drier every time the sealed refrigeration system is opened.
2. Do not replace the dried until after all other repair or replacement has been made. Install the new drier with the arrow on the drier in the direction of the refrigerant flow
3. When brazing, protect the drier and 4-way valve by using a wet cloth to provent the drier and 4-way valve from overheating, Do not allow the drier to exceed 250℉(121℃)

1) Turn off the power of ELCB.
2) Open the side door.
3) Recover the refrigerant using an adequate vessel.
4) Remove the condenser filter, if any.
5) Remove the inlet and the outlet from the condenser.
6) Open the back panel cover.
7) Remove the harness from the fan motor.
8) Remove the four screws from the fan motor assembly.
9) Remove the screws fastening the bracket that fixes the condenser (total of 4 screws on the left and the right).
10) Replace the condenser with a new one.
11) Tighten the screws fastening the bracket that fixes the condenser (total of 4 screws on the left and the right).
12) Replace the drier with a new one.
13) While purging with nitrogen gas at pressure of 3~4 psig, braze the copper connections such as the condenser inlet and outlet.
14) Inject nitrogen at pressure of 140 psig and check for leaks with electric leak detector or soap water.
15) Vacuum the system and inject the refrigerant.
16) Tighten the four screws from the fan motor assembly.
17) Connect the harness to the fan motor.
18) Tighten the screws on the back panel cover.
19) Close the side door.
20) Turn on the power of ELCB.

Replacement of Fan motor

F. Replacing the fan motor

1) Turn off the power of ELCB.
2) Open the back panel cover.
3) Remove the harness from the fan motor.
4) Remove the four screws from the fan motor assembly.
5) Remove the fan motor and the fastening brackets (total of four bolts).
6) Replace the motor with a new one.
7) Assemble the fan motor and the fastening brackets (total of four bolts).
8) Tighten the four screws from the fan motor assembly.
9) Connect the harness to the fan motor.
10) Tighten the screws on the back panel cover.
11) Turn on the power of ELCB.

Replacement of 4-way valve

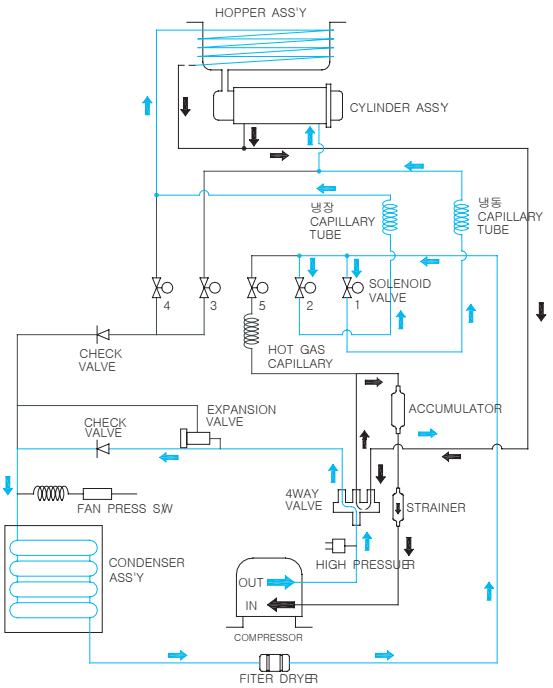
WARNING

1. Always install a new drier every time the sealed refrigeration system is opened.
2. Do not replace the dried until after all other repair or replacement has been made. Install the new drier with the arrow on the drier in the direction of the refrigerant flow
3. When brazing, protect the drier and 4-way valve by using a wet cloth to provent the drier and 4-way valve from overheating, Do not allow the drier to exceed 250℉(121℃)

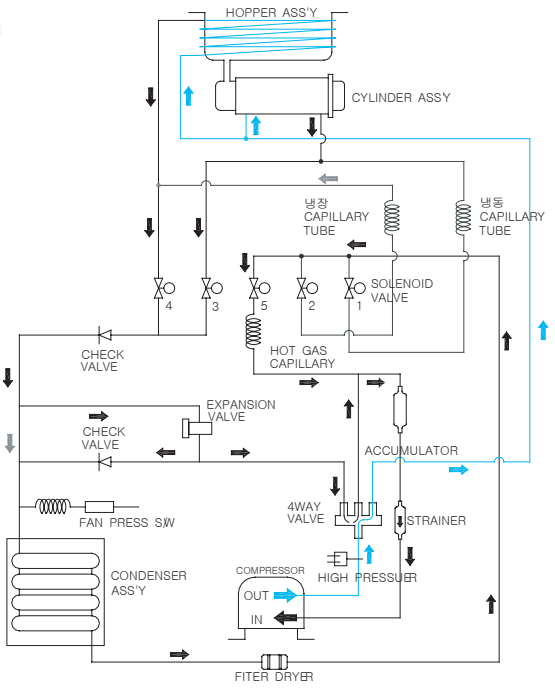
1) Turn off the power of ELCB.
2) Open the side door.
3) Recover the refrigerant using an adequate vessel.
4) Remove the insulator from the 4-way valve assembly.
5) Remove the harness from the 4-way valve.
6) Remove the solenoid coil from the 4-way valve (1 bolt).
7) Remove the 4-way valve (four brazing points).
8) While purging with nitrogen gas at pressure of 3~4 psig, braze a new 4-way valve.
9) Replace the drier with a new one.
10) Inject nitrogen at pressure of 140 psig and check for leaks with electric leak detector or soap water.
11) Assemble the solenoid coil connected to the 4-way valve (1 bolt).
12) Assemble the harness on the 4-way valve.
13) Vacuum the system and inject refrigerant.
14) Close the side door.
15) Turn on the power of ELCB.

Refrigeration circuit diagram

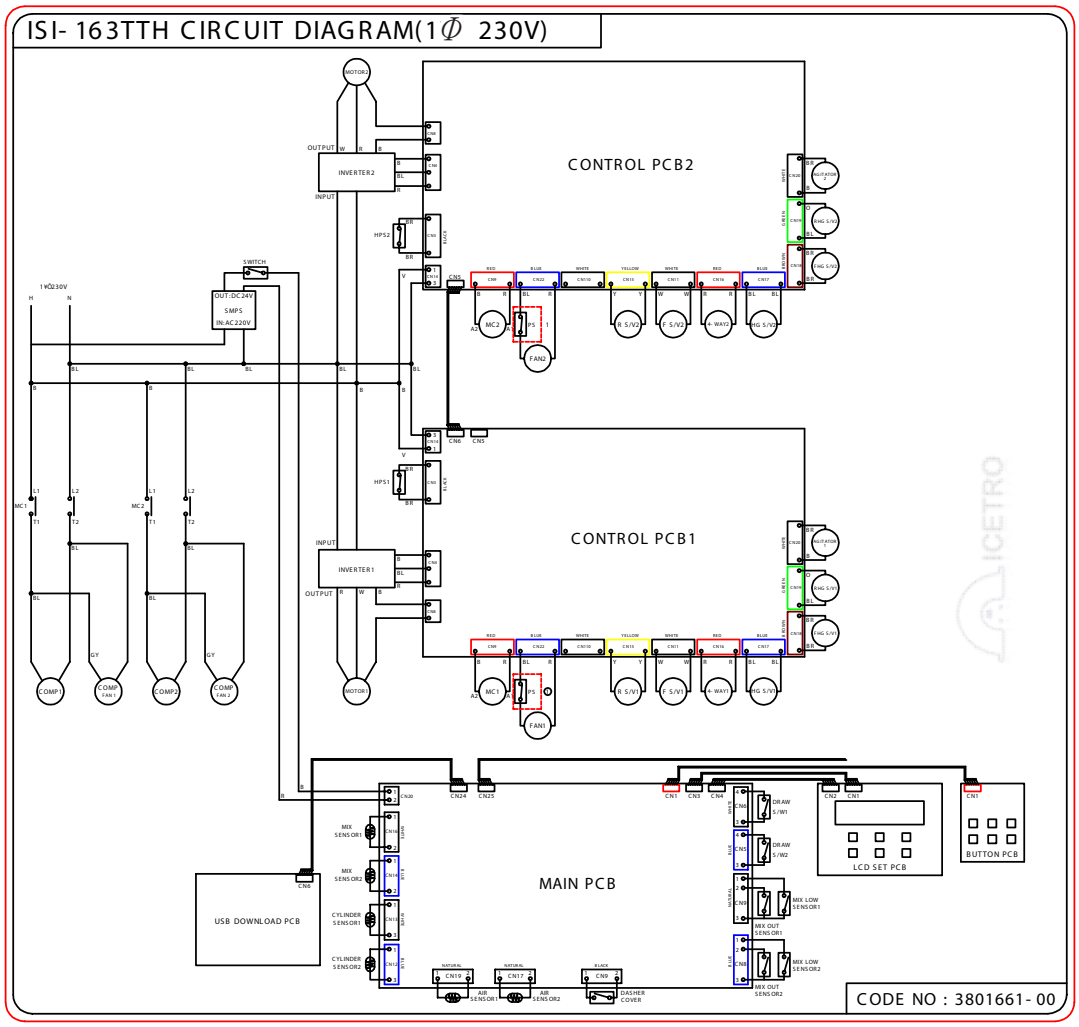
normal operation



Sterilization operation



Wiring diagram



Before requesting service

The soft ice cream 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 the service center. If you still can't resolve it after checking the following items, please contact our service center.

State	Please check
The machine does not work!	1. Contact an electrician or the customer satisfaction team in case a phase error occurred. 2. Check whether the ELB and switch are turned off. 3. In case the display (front display) is on, turn the ELB (breaker) and switch on.
Does not stop but continues to operate!	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 wall and has no ventilation, it can stop. Please, secure it at least 20~50cm from the wall. 3. Check whether the carburetor hole is blocked and if so clean out the hole. 4. Check whether the temperature in the ventilation hole (inhalation hole) is high. Set the inhalation temperature of the condenser lower than 38℃. 5. Replace the dasher blade if it is excessively worn; the blade is a consumable, requiring periodic checking and replacement. 6. Lower the solidity of ice cream if it is set too high.
Soft ice cream is thin!	1. Check whether the carburetor is inserted. 2. In case there are no sales for more than 3 hours, the soft ice cream can be melted and made one more time by using the recycling function (cover the carburetor hole during recycling). 3. Check whether a sweet raw material is being used and adjust the sweetness (when the raw material is different from the one used during the initial installation education, adjust the level value of the soft ice cream or contract the customer satisfaction team).
The noise is disturbing!	1. This product is an industrial machine and has some operation noise when compared to household appliances. This product is designed to generate noise that is less than 70dB. the customer satisfaction team in case abnormal noise is generated during machine operation. 2. A clicking sound can be generated during the initial operation. This is the sound of plastic blade (dasher blade)that cleans the wall of the cylinder while making soft ice cream. 3. The sound of water flow does not mean that the product is malfunctioning; it is from the refrigerant flowing inside the machine.
Soft ice cream dose not come out enough!	1. Is the raw material need lamp blinking? In the case of MIX LOW, the ejection amount can become small. In the case of MIX LOW, replenish the raw material. 2. The ejection amount can change by carburetor hole. The ejection amount can be large when a large hole is used.
Soft ice cream comes out too much!	1. Soft ice cream becomes thin and ejection amount may become large as time passes. Remake soft ice cream by using the recycling function to solve the problem. 2. Ejection amount can change by carburetor hole. The ejection amount can be small when a small hole is used.
Soft ice cream has gone bad.	1. This product must be cleaned daily. The remaining raw material must be wasted and new raw material must be used to make Soft ice cream. The manufacturer is not responsible if this is not observed.
Overrun is not working correctly.	1. Be sure to familiarize yourself with the user instruction. 2. Overrun will be improved by replacing the carburetor with one having smaller holes.
Soft ice creamhas gone bad.	1. This product must be cleaned daily. The remaining raw material must be wasted and new raw material must be used to make Soft ice cream. Pasteurization must be performed daily in case of no cleaning. The manufacturer is not responsible if this is not observed.

Error Codes and Corrective Actions

The soft ice cream 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 After Service Center.

※ Before contacting the After Service Center, 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	Fall short of row material	Refill row material in the storage container	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
Er05	Air. Sensor Op.	Condenser OPEN	Sensor failure(contact A/S Center)	Auto release	operation
Er06	Air. Sensor St.	Condenser SHORT	Sensor failure(contact A/S Center)	Auto release	operation
Er07	EOCR	Motor over current detected	Melt the ice cream and restart the machine	Reset	Reset operation
Er08	High Pressure	High Pressure	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
Er10	Low Voltage	Supply voltage exceeded by -15 %	Power supply problem (contact A/S Center)	Auto release	Stop
Er11	High Voltage	Supply voltage exceeded by +15 %	Power supply problem (contact A/S Center)	Reset	Stop
Er12	Draw Switch Er.	Discharge lever error	Lift the discharge lever .	Auto release	operation
Er13	Condensor OH	Abnormal temperature of condenser	Check the vent for clogging.	Auto release	operation
Er14	Motor Belt Er.	Defective drive shaft	Melt the ice cream and restart the machine	Reset	Reset operation
Er15	EEPROM Error	EEPROM fault	pcb fault(contact A/S Center)	Reset	operation
Er16	Reverse Phase	Reverse phase sensing	Power supply problem (contact A/S Center)	Auto release	Stop
Er17	Heating Error	Defective sterilization function	Replace the ice cream row material and clean the machine	Other operation	operation
Er18	Cover Error	Defective dasher cover	Mount the dasher cover at 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
Er22	Power Fail Er.	Power turned off	Taking place in blackout (no corrective action)	Auto release	operation
Er50	Power IC Er.	Power IC error	Sensor failure (contact A/S Center)	Auto release	Stop
Er51	Invertor DE Er.	Inverter fail	Abnormal(connact A/S Center)	Auto release	Stop
Er52	Invertor Comm.	Inverter communication error	Sensor failure (contact A/S Center)	Auto release	Stop
Er53	Invertor OC	Inverter over current	Sensor failure (contact A/S Center)	Auto release	Stop
Er54	Invertor OE	Inverter over voltage	Sensor failure (contact A/S Center)	Auto release	Stop
Er55	Invertor OH	Inverter over heat	Sensor failure (contact A/S Center)	Auto release	Stop
Er56	Invertor LU	Inverter under voltage	Turn power ON and OFF, then restart the machine	Auto release	Stop
Er57	Invertor TH	Erroneous detection of temperature sensor	Sensor failure (contact A/S Center)	Auto release	Stop
Er58	Invertor COM	Communication failure detected	Sensor failure (contact A/S Center)	Auto release	Stop
Er59	Invertor OL	Mean overvoltage detected	Sensor failure (contact A/S Center)	Auto release	Stop
Er60	Invertor 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

Product specification (R-404A)

CLASSIFICATION		SPECIFICATION
Product name		Soft Ice Cream Maker
Model name		ISI-163TTH
Rated voltage and frequency		230V, 50Hz
Rated current		15 A
Product size (foot inclusion, cover excluded) (mm)	HEIGHT	920
	WIDTH	530
	DEPTH	1007 (Lever excluded)
Cylinder capacity(L)		1.6 X 2
Mixing tank capacity		9.5 X 2
Consecutive selling (At interval of 30 seconds)		∞
Cooling temperature		Can keep under 10 ℃
Ingredient sensor		Applied
FILTER		Applied
Product weight (kg)	Before packing	250
	After packing	280
Refrigerant Material (g)	Freezer (R-404A)	700 X 2

※ NOTE : 220 V, 60 Hz – ETL Certified model
230 V~, 50 Hz – CE/CB Certified model

Product specification (R-449A)

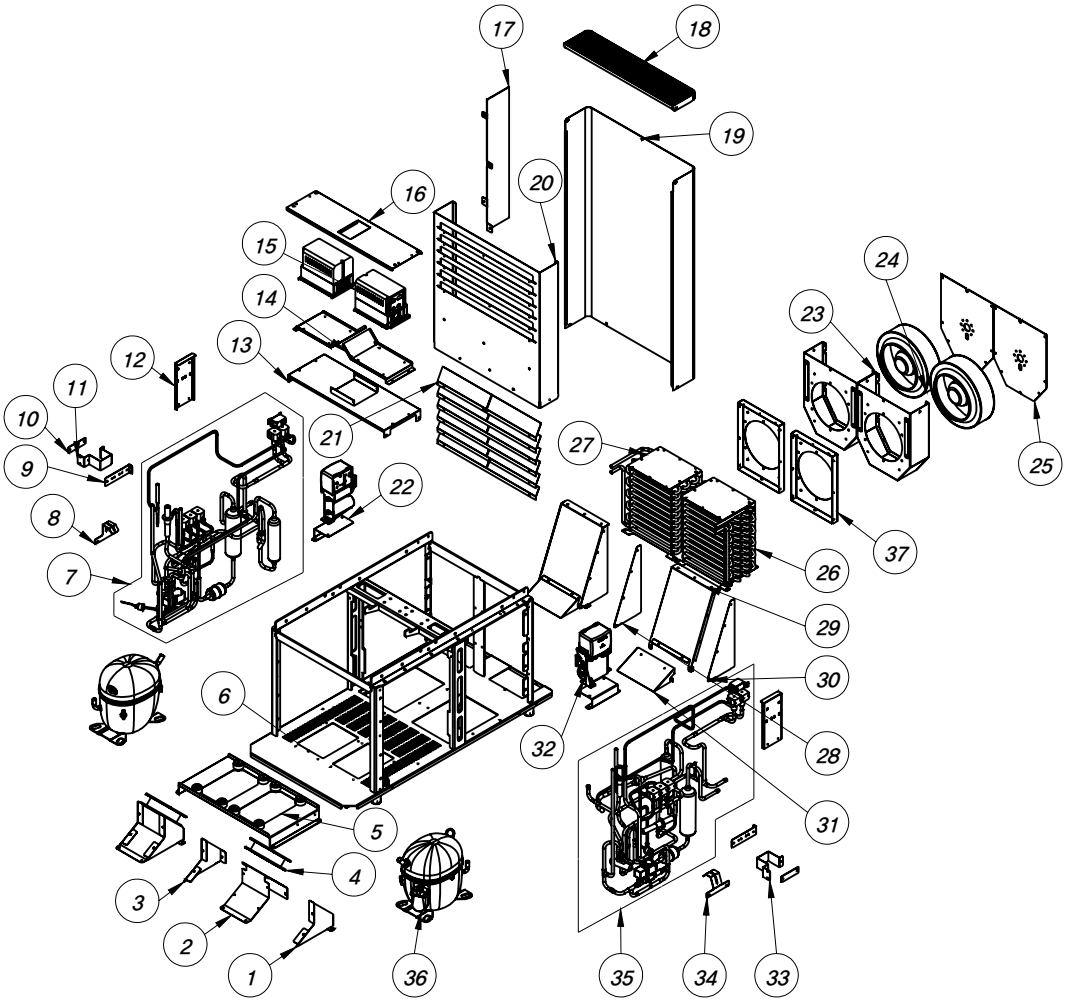
CLASSIFICATION		SPECIFICATION
Product name		Soft Ice Cream Maker
Model name		ISI-163TTH
Rated voltage and frequency		230V, 50Hz
Rated current		15 A
Product size (foot inclusion, cover excluded) (mm)	HEIGHT	920
	WIDTH	530
	DEPTH	1007 (Lever excluded)
Cylinder capacity(L)		1.6 X 2
Mixing tank capacity		9.5 X 2
Consecutive selling (At interval of 30 seconds)		∞
Cooling temperature		Can keep under 10 ℃
Ingredient sensor		Applied
FILTER		Applied
Product weight (kg)	Before packing	250
	After packing	280
Refrigerant Material (g)	Freezer (R-449A)	738 X 2

※ NOTE : 220 V, 60 Hz – ETL Certified model
230 V~, 50 Hz – CE/CB Certified model

Replacement cycle of consumable parts

PART NAME	Replacement cycle	Quantity	SIZE
PACKING DASHER COVER	6 months	1EA	
PACKING PISTON	6 months	2EA	
PATITION FOOD	6 months	1EA	
PACKING DOWN 143	6 months	1EA	
CARBURETOR PACKING	6 months	1EA	
MIXING SHAFT	Once a year (recommended)	1EA	

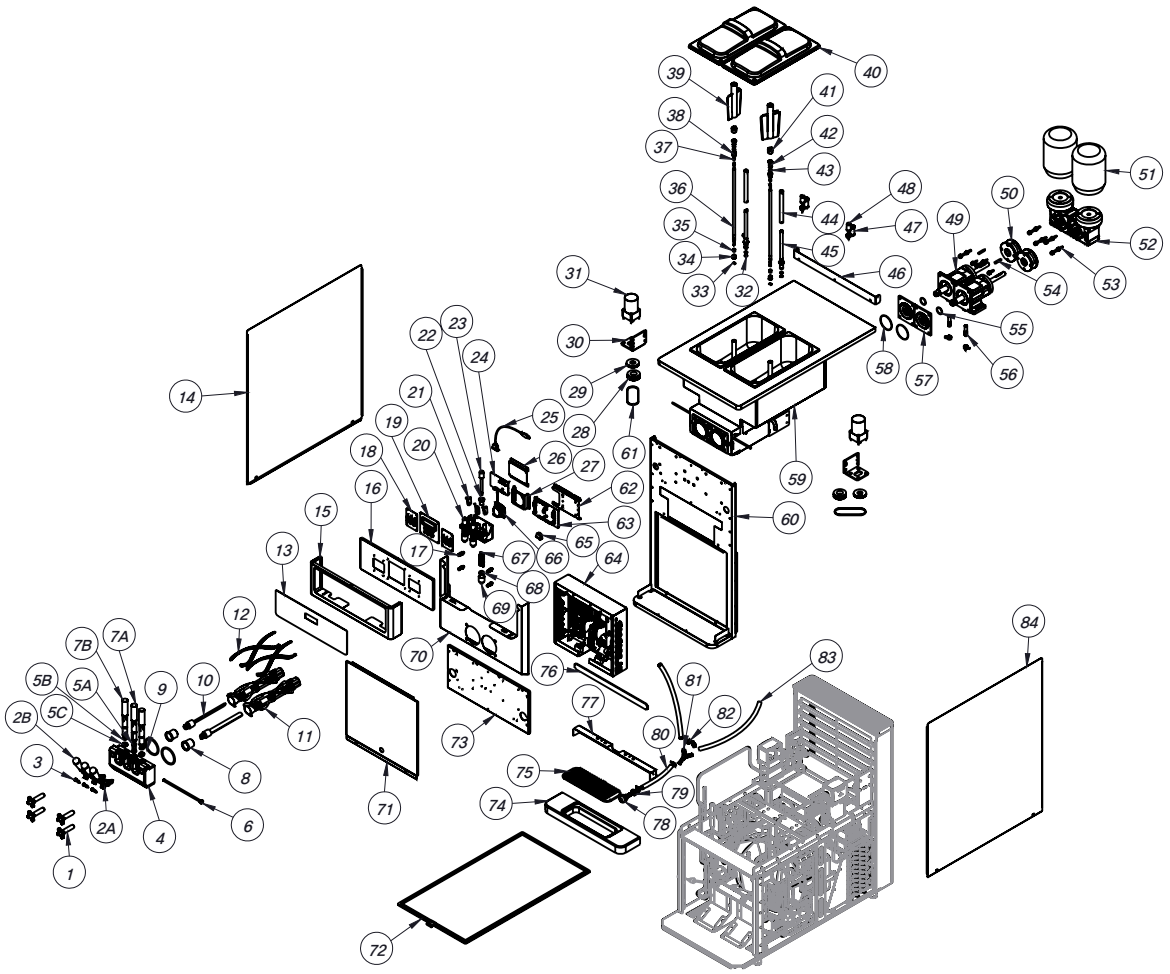
Part list



ITEM	DESCRIPTION	PART NO.	Q'TY
1	AXIAL FAN SIDE BKT_R	3012253-00	2
2	AXIAL FAN BKT	3012254-00	2
3	AXIAL FAN SIDE BKT_L	3012252-00	2
4	AXIAL FAN MOTOR	3530265-00	2
5	COMP BKT	3320514-00	1
6	ANGLE ASS'Y	4430612-00	1
7	FREEZER PIPE ASS'Y_L	-	1
8	DRYER BKT_L	3012237-00	1
9	SOL V/V BKT	3012227-00	2
10	LIQUID RECEIVER BKT_2	3012240-00	2
11	LIQUID RECEIVER BKT_L	3012248-00	1
12	HOT V/V BKT	301233-00	2
13	INVERTER BKT_1	3012235-00	1
14	INVERTER BKT_2	3012236-00	2
15	INVERTER	5000003-05	2
16	WATER COVER	3012242-00	1
17	DUCT OUT PANEL CENTER DIVIDER	3012255-00	1
18	DUCT COVER ASS'Y	6100367-00	1

19	BACK PANEL	3172266-00	1
20	DUCT OUT PANEL	3012229-00	1
21	DUCT OUT PANEL TOP GUIDE	3012230-00	6
22	COMP RELAY BOX BKT	3012228-00	2
23	COND OUT DUCT 183	3012221-00	2
24	ASSY FAN MOTOR(TURBO)/YEH250BGA2-A010	4060293-00	
25	FAN MOTOR COVER	3012222-00	2
26	CONDENSER ASS'Y_R	4110357-00	1
27	CONDENSER ASS'Y_L	4110360-00	1
28	COND IN GUIDE DUCT_L	3012219-00	2
29	COND IN GUIDE DUCT TOP	3012218-00	2
30	COND IN GUIDE DUCT_R	3012220-00	2
31	COND IN GUIDE SUPPORT DUCT	3012224-00	2
32	COMP RELAY BOX	3012228-00	2
33	LIQUID RECEIVER BKT_R	3012239-00	1
34	DRYER BKT_R	3012238-00	1
35	FREEZER PIPE ASS'Y_R	-	1
36	COMP/NTU6234GKV	3940246-00	2
37	COND IN DUCT COVER	3012226-00	2

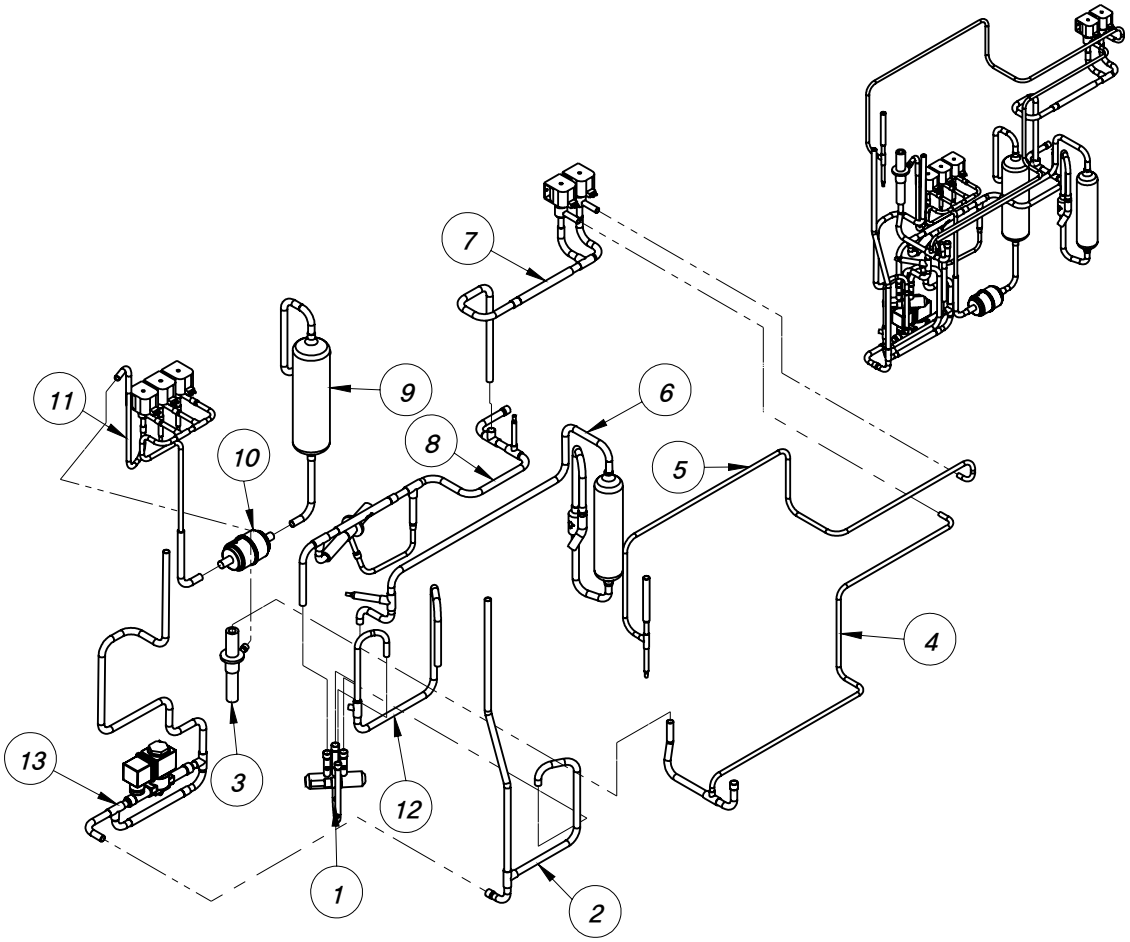
Part list



ITEM	DESCRIPTION	PART NO.	Q'TY	ITEM	DESCRIPTION	PART NO.	Q'TY
1	HANDLE GRIP	3420041-00	44	3	AGITATOR TOP PACKING TWO	3030186-00	4
2A	LEVER DASHER	3090034-10	34	4	CABURATOR OUT TWO	2340054-00	2
2B	GRIP HAND	3420039-00	34	5	ASSY CARBURETOR BODY	7290043-00	2
3	SCREW ADJUST	2108061-00	34	6	TOP COVER DUCT GUIDE	3172265-00	1
4	ASSY DASHER	4030234-10	14	7	ASSY TEMP SENSOR	3190095-00	2
5A	PATITION FOOD	3920007-00	14	8	ASSY MIX SENSOR	6550118-00	2
5B	PACKING PISTON	3030147-00	24	9	ASSY HOUSING SHAFT	4300033-20	2
5C	PACKING DOWN 143	3030280-00	25	0	HOUSING EXTENSION	3700076-00	2
6	DASHER LEVER SHAFT	3140389-00	35	1	DASHER MOTOR/올지/STB-0044-02	3530328-00	2
7A	SHAFT DASHER 143 MIDDLE	3140385-10	15	2	GEAR HEAD(RATIO 15:1)	3530309-00	2
7B	SHAFT DASHER 143	3140386-10	25	3	HEX WRENCH BOLT SEMS(스프링와샤)	2108142-00	16
8	BEARING DASHER	3100035-00	25	4	KEY/ROUND	–	2
9	DASHER COVE PACKING	3030181-00	25	5	PACKING POM FLANGE S	3030334-00	2
10	MIXING SHAFT	3140156-01	25	6	DRAIN PIPE	3360275-00	2
11	DASHER ASSY	4030196-10	25	7	POM FLANGE	3970021-01	2
12	DASHER LUG POM	4030150-00	45	8	PACKING POM FLANGE L	3030333-00	2
13	BUTTON DISPLAY	4400347-00	15	9	DRUM ASSY 163TTH	4100407-00	1
14	SIDE PANEL L	3012241-00	16	0	FRONT COVER ONE ASSY	4320531-00	1
15	FRONT COVER UP	3172257-00	16	1	BELT V S	3070059-00	2
16	FRONT COVER UP BKT	3012208-00	16	2	BKT MAIN PCB	3011031-00	1
17	BOLT DASHER COVER	3170726-00	46	3	MAIN PCB	3670084-00	1
18	BUTTON PCB	3670088-01	26	4	CONTROL BOX ASSY	4260747-00	1
19	LCD SET PCB	3670084-00	16	5	(-)ROCKER SWITCH	3550133-00	1

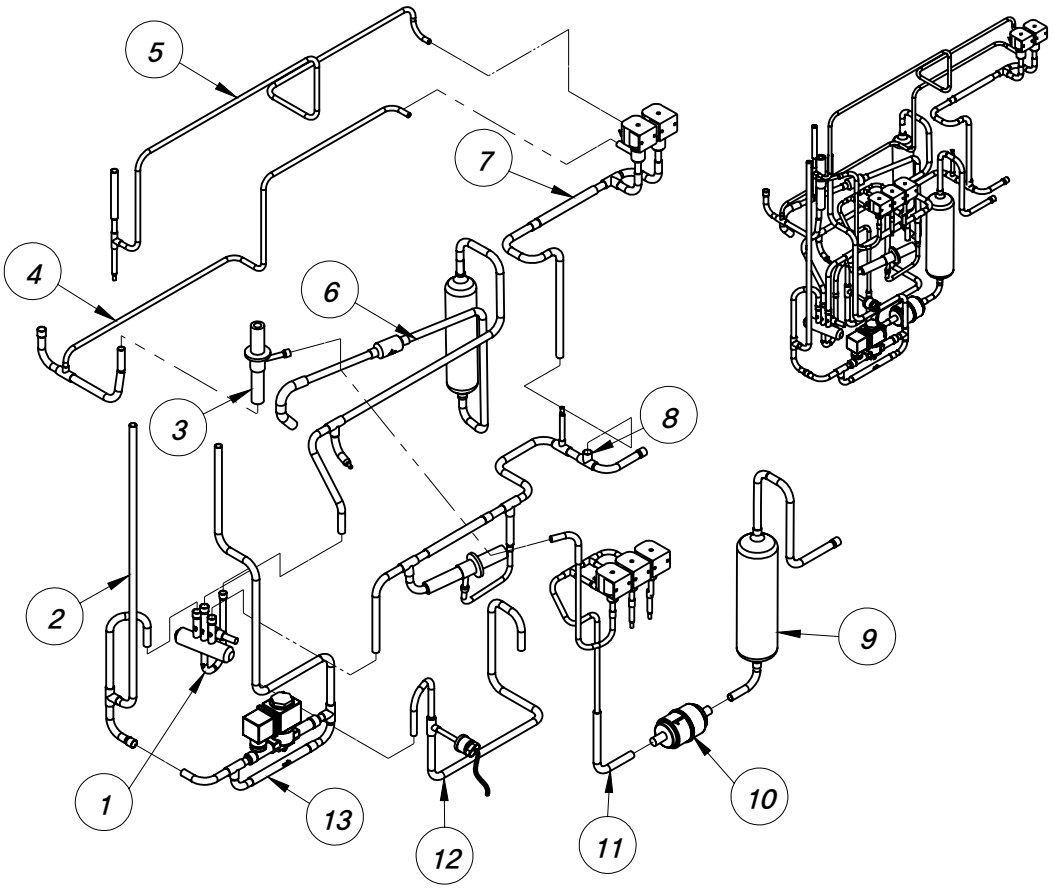
20	LEVER ASSY (ISI-163TTP용)	4250016-10	16	6	SPEAKER	6330003-00	1
21	ASSY MICRO SWITCH	4600027-00	36	7	GUIDE SPRING	3230069-00	3
22	GUIDE SHAFT	3140266-01	36	8	SPACER LEVER PISTON SHAFT	2110071-00	3
23	LEVER PISTON SHAFT	3140388-00	36	9	MICRO SWITCH SHAFT DOWN	3140368-00	3
24	[사급]USB DOWNLOAD PCB	3670093-04	17	0	FRONT COVER TOP	3172259-00	1
25	USB Bracket Cable	3771364-00	17	1	FRONT COVER TWO	3172258-00	1
26	BRACKET USB PCB	3012213-00	17	2	FILTER 163 TTH	6400099-00	1
27	SPEAKER BKT	3011401-00	17	3	FRONT COVER REINFORCE	3012212-00	1
28	PULLEY L	3070057-00	27	4	DRAIN BOX	3360084-00	1
29	PULLEY R	3070058-00	27	5	DRAIN BOX UP	3360086-00	1
30	MOTOR BKT AGITATOR	3011342-00	27	6	CONTROL BOX BOTTOM BKT	3012251-00	1
31	GEARED MOTOR	3530281-00	27	7	DRAIN BUSING	3360295-00	1
32	PACKING CARBURETOR	3030146-00	47	8	VESSEL NUT	2150200-00	1
33	E RING AGITATOR	3030189-00	27	9	SILICON HOSE(EVAP INLET)	2290294-00	2
34	SHAFT DOWN BEARING	3140360-00	28	0	DRAIN Y 관	3251453-00	1
35	BUSHING DU	2320055-00	28	1	BAND SPRING 17	2030032-00	6
36	SHAFT AGITATOR L	3140376-10	28	2	AGITATOR TOP BUSH	3140370-00	2
37	BUSHING DU	2320056-00	2				
38	SHAFT TOP BEARING	3140359-00	2				
39	AGITATOR ASSY	4360023-10	2				
40	COVER BASKET	3171124-01	2				
41	SHAFT CAP	3140357-00	2				
42	AGITATOR SEALING PACKING	3030207-00	2				

Part list



ITEM	DESCRIPTION	PART NO.	Q'TY
1	4 WAY VALVE BODY	3400124-00	1
2	SUCTION SOL V/V PIPE ASS'Y_L	4330500-00	1
3	(-) EXPANSION VALVE	3400323-00	1
4	FREEZER PIPE ASS'Y_L	4330490-00	1
5	REFRIGERATION PIPE ASS'Y_L	4330492-00	1
6	SUCTION PIPE_1 ASS'Y_L	4330498-00	1
7	HOT SOL V/V PIPE ASS'Y_L	4330494-00	1
8	COND INLET ASS'Y_L	4330496-00	1
9	LIQUID RECEIVER ASS'Y_L	4330486-00	1
10	FILTER DRYER	3720013-00	1
11	SOL VALVE ASS'Y_L	4330488-00	1
12	DISCHARGE PIPE ASS'Y_L	4330504-00	1
13	SUCTION SOL V/V ASS'Y_L	4330502-00	1

Part list



ITEM	DESCRIPTION	PART NO.	Q'TY
1	4 WAY VALVE BODY	3400124-00	1
2	SUCTION SOL V/V PIPE ASS'Y_R	4330501-00	1
3	(-) EXPANSION VALVE	3400323-00	1
4	FREEZER PIPE ASS'Y_R	4330490-00	1
5	REFRIGERATION PIPE ASS'Y_R	4330493-00	1
6	SUCTION PIPE_1 ASS'Y_R	4330499-00	1
7	HOT SOL V/V PIPE ASS'Y_R	4330495-00	1
8	COND INLET ASS'Y_R	4330497-00	1
9	COND OUT PIPE ASS'Y_R	4330487-00	1
10	FILTER DRYER	3720013-00	1
11	SOL VALVE ASS'Y_R	4330489-00	1
12	DISCHARGE PIPE ASS'Y_R	4330505-00	1
13	SUCTION SOL V/V ASS'Y_R	4330503-00	1

Warranty

If no receipt or warranty certificate is received, the receipt/warranty certificate is lost, or the date of purchase cannot be confirmed for reasons other than the foregoing, the warranty expires within 6 months of the manufacturing date.

[Free repair]

1. For issues with functions or performance during normal usage within the warranty period

[Paid 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 the relocation of product or moving of the customer
4. If the malfunction is not attributable to the product
5. If the wrong power specification is applied
6. If any accessory or consumable other than that recommended by the manufacturer is used
7. If damage is caused by external force or dropping of the product
8. If damage is caused by natural disaster such as lightning, fire, earthquake, storm, typhoon, etc.
9. If any accessory/consumable goes obsolete or its service life comes to an end (packing, o-ring, blade, cleaning brush, etc.)
10. If foreign object is put into the product such as water, beverage, coffee, toy, etc.)
11. If external force is applied during installation or usage, causing damage or malfunction
12. If any accessory/consumable other than that made by the manufacturer is used
13. If directions for installation or standards are not followed
14. If the customer arbitrarily disassembled and lost or damaged any part
15. If a person other than an authorized engineer from the manufacturer repairs or modifies the product
16. If malfunction is caused by failure to follow the "Safety warning / caution" on the user manual
17. If the water supply pipe froze and burst

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