



**ICE CREAM  
EQUIPMENT  
SPECIALISTS**

**TOP CHURN ICE-CREAM MACHINE**

# **OPERATION MANUAL**

(Please read this manual carefully before operating the machine)



# WELCOME

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## Thank you for choosing the Top Churn series ice cream machine!

Top Churn series ice cream machine is an intelligent, multi-functional machine that's aimed to replace the traditional ice cream machines and display case combination. The purpose is to improve the visual production and move the entire process to the front of house. It can be applied to a variety of retail scenarios such as ice cream shops, hotels, restaurants, tea shops, bakeries, cafes, and bars.

The Top Churn series has multiple intellectual property patents. Its cutting-edge technology has improved operating intelligence, better safety protection, and is energy efficient. It can adjust and save refrigeration temperatures, churn frequency, blade speed, and other parameters to achieve the optimal production through its intelligent interface.

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✓ This manual is provided by the equipment manufacturer and is an indispensable part of the equipment. The information provided in this manual is applicable to all operators of the machinery.

✓ The manual contains the functions of the equipment, along with all the information on proper assembly, and safe operation.

✓ Additional technical information not included in this manual can be found in the technical documentation prepared by Texas Frozentech Inc.



**Be sure to read this manual carefully before installation or use of the equipment.**

✓ The routine inspection rules contained in this manual can ensure the safety of operators and equipment, reduce operating costs, and extend the service life of equipment.

✓ The instructions made by Texas Frozentech Inc. can minimize the risk of use. Please ensure that all operations strictly comply with this manual and keep the manual properly near the equipment for easy reference at any time.



**Be sure to remove the power supply before performing any operation or overhaul.**

✓ Diagrams and drawings are provided as examples. For the sake of continuous development and innovation, our company will make changes to the equipment without prior notice.

✓ Please take good care of this manual. In the event of loss or damage, please ask the manufacturer for a replacement copy. Please ensure that the technical information on the equipment name plate is correct.

✓ Texas Frozentech Inc. welcomes valuable comments from all customers on improving the equipment, which our company will implement appropriately.

✓ This manual is the exclusive property of Texas Frozentech Inc. and is strictly prohibited from disclosing any information to any third party without written authorization or permission from the company.



Texas Frozentech Inc. reserves all legal rights.

NAME	PARAMETER
Model	TOP CHURN V4C
Single Pot maximum load / minimum load	3L/1.5L
Production per hour	500Cups/80g
Weather applicable	ST
Refrigerant	R290
Power supply option 1	20A Single phase 220V
Power supply option 2	20A Single phase 110V (X2)
Power	3800W
Volume	59.00×36.20×94.50Inch
Net weight	794Lbs

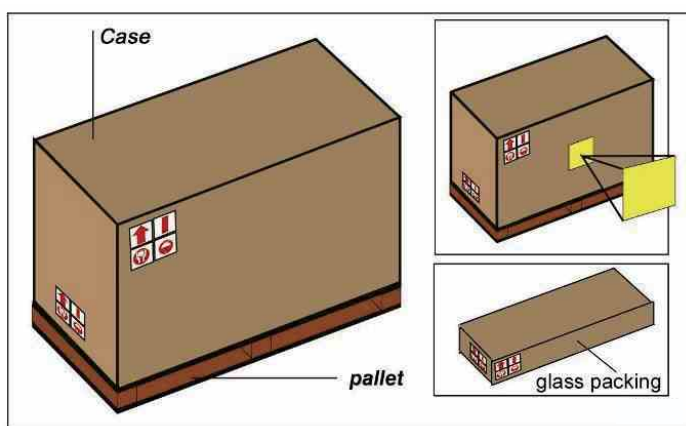
### 3.1 RECEIVING

The machine has carefully packaged externally to ensure that it is not damaged during transportation and storage.

External packing include:

- A wooden bracket
- A wooden box

The standard packaging is shown in **Figure 3-1**, **Figure 3-2**



**Figure 3-1**



**Figure 3-2**

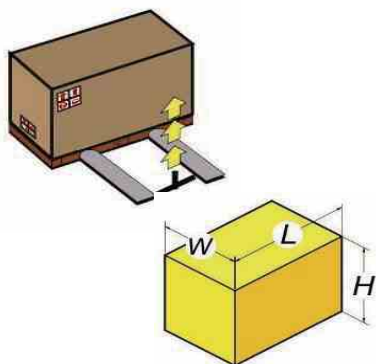
There are labels on the packages that give details of the equipment.

- Dimensions: length \* width \* height
- Lifting connection point



**Note:** after packing, please keep it in a dry indoor environment to avoid rain or snow.

#### Forklift rising



#### External dimension

MODEL	L	W	H
TOP CHURN V4C	67.70Inch	44.10Inch	50Inch

#### Storage

Whether short-term or long-term storage it must be kept indoors to avoid the impact of weather factors.


Handle with care.

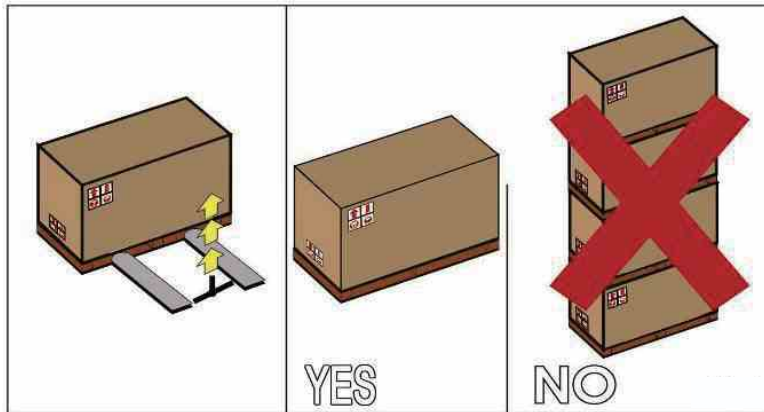


**Any damage caused by operational errors is not covered by the warranty.**

## 3.2 UNLOADING


The placement of the packaged machine must follow the instructions in the notes or on the packaging.

 Please use the appropriate forklift to unload (its load must match that of the packaged machine), as shown in **Figure 3-3**



**Figure 3-3**


## 3.3 PACKAGING INSPECTION

 Please check whether the outer packing is in good condition when you receive the goods. If the outer packing has obvious damage, then the product may have been damaged, customer must unpack and inspect the goods with the shipper on site. All damage caused by improper handling and storage irrelevant to the manufacturer.

In case of the above situation, Please:

- A) Contact your regional agent or manufacturer
- B) Present the relevant written report
- C) Send a copy of the relevant report to the manufacturer or regional agent

## 3.4 UNPACKING

 All packaging materials are recyclable and can be treated in accordance with local laws. Please ensure that the plastic materials of the equipment are properly disposed to prevent harm to children.

## 3.5 PORTER REQUIREMENTS

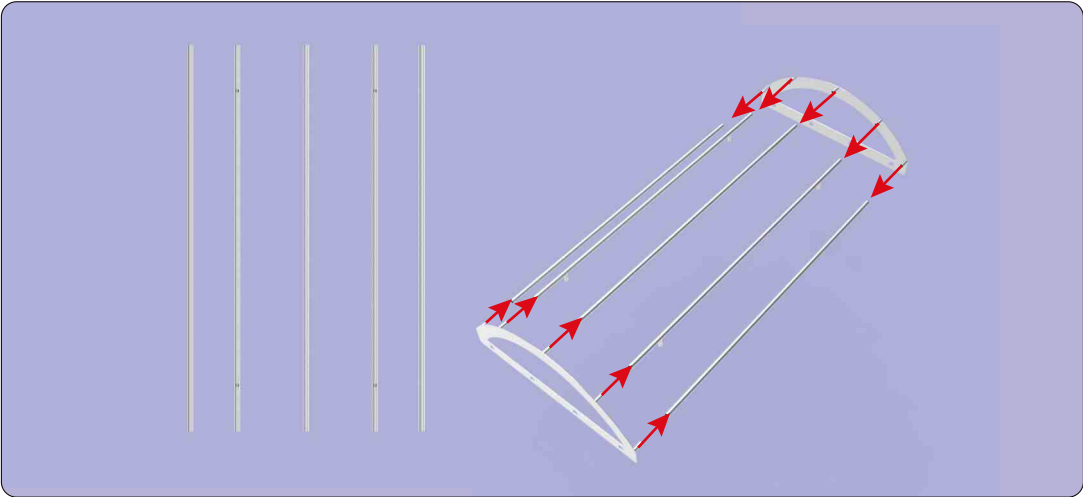
We recommend that the ice cream machine should be handled by someone skilled with a forklift and operated in strict accordance with safety standards.

## 3.6 HANDLING

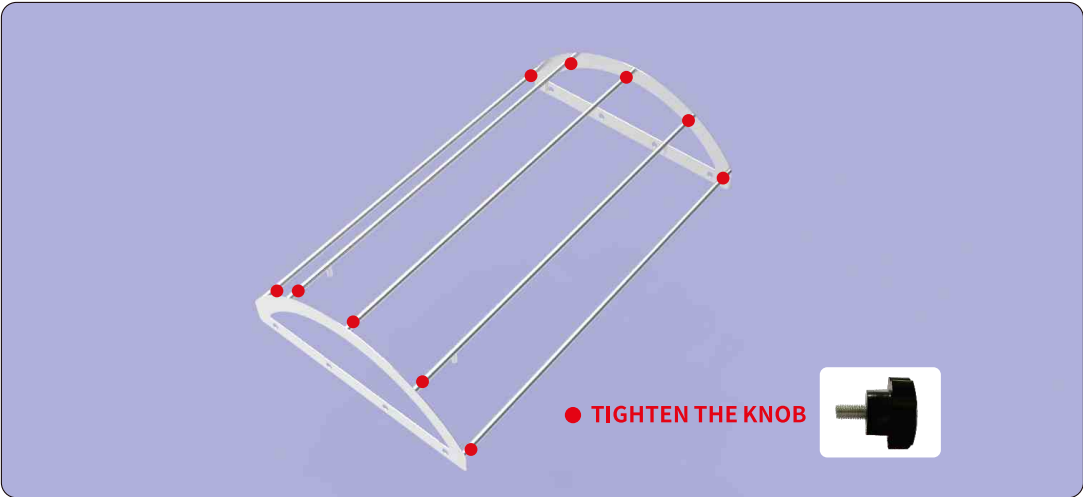
The machine needs to be lifted by a forklift truck or another tool that can carry twice the weight of the cargo (see nameplate for weight). Operators must maintain a certain distance from the cargo area to ensure that personnel and other property will not be damaged if the cargo falls due to improper handling. Please move the cargo slowly to prevent tipping over.

### 3.7 CEILING INSTALLATION

Ceiling installation procedures, as shown in **Figure 3-4**, **Figure 3-5**, **Figure 3-6**  
**Figure 3-7**, **Figure 3-8**



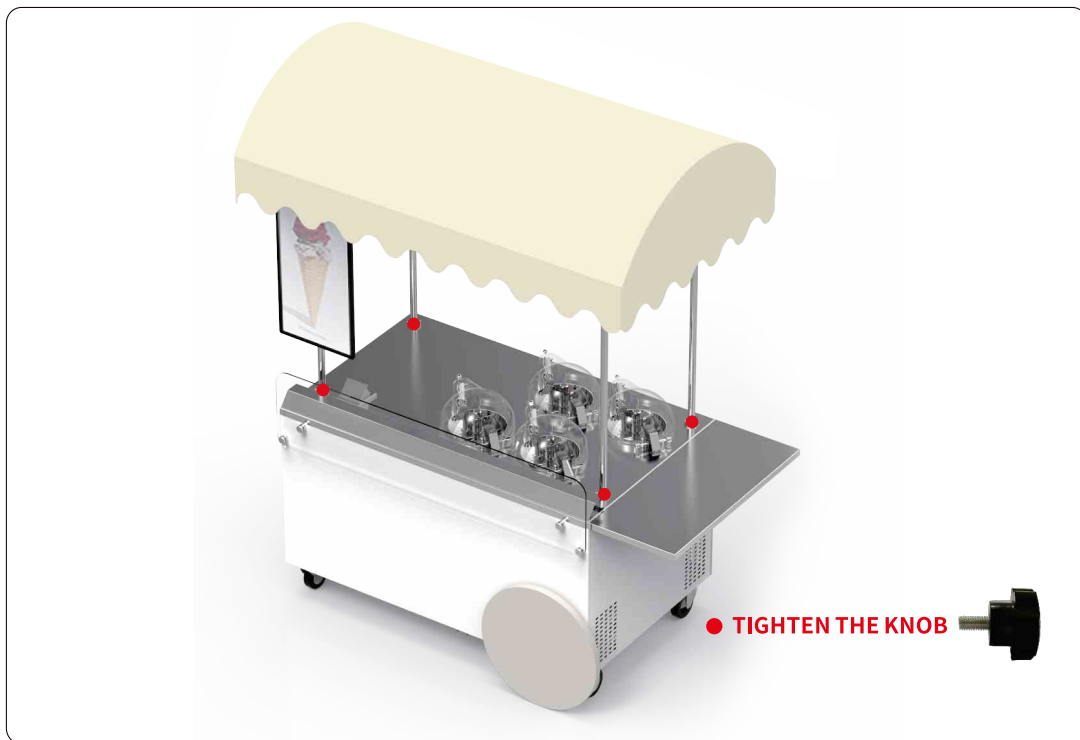
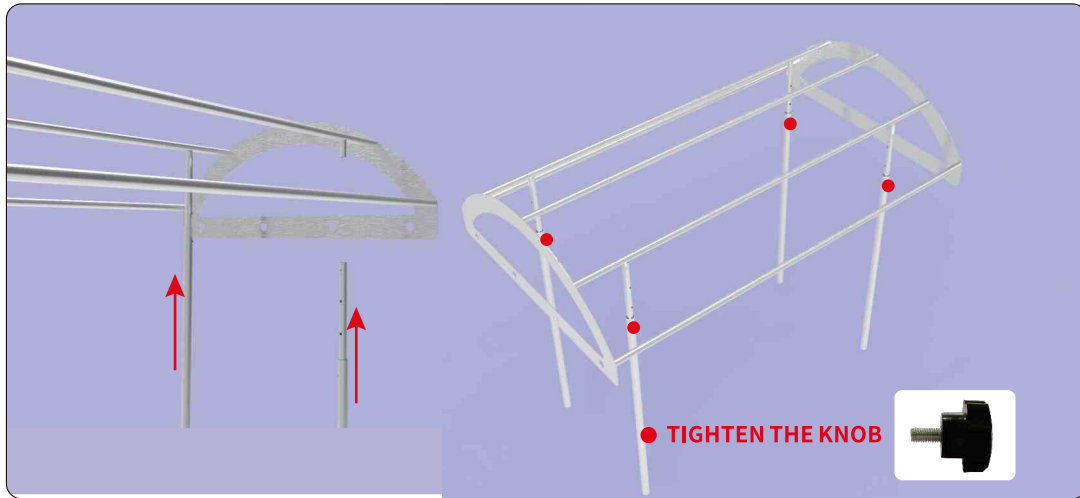
**Figure 3-4**

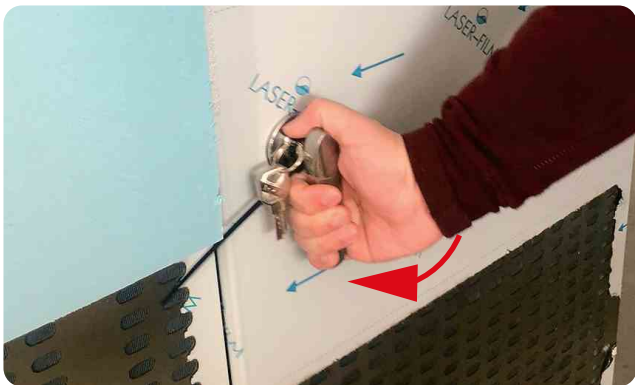
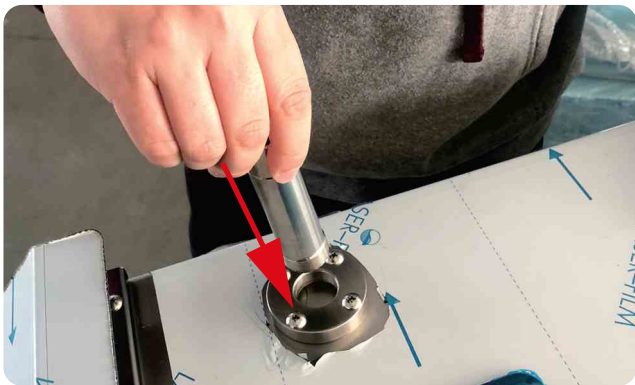
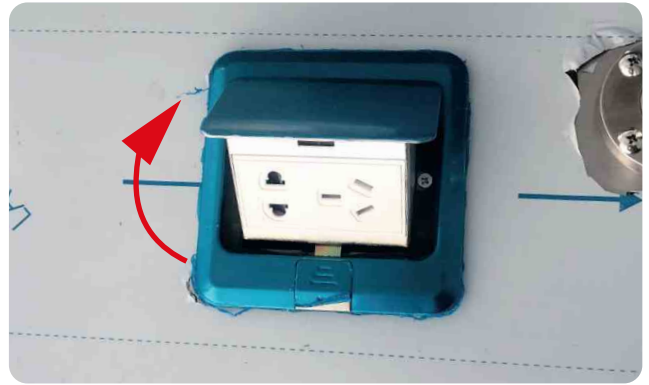
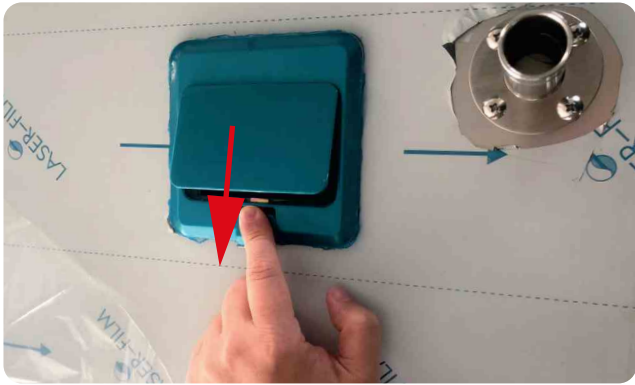


**Figure 3-5**



**Figure 3-6**





## 4.1 PRODUCT APPEARANCE

One machine, as shown in **Figure 4-1**.

A diagram of each perspective, as shown in **Figure 4-2**.

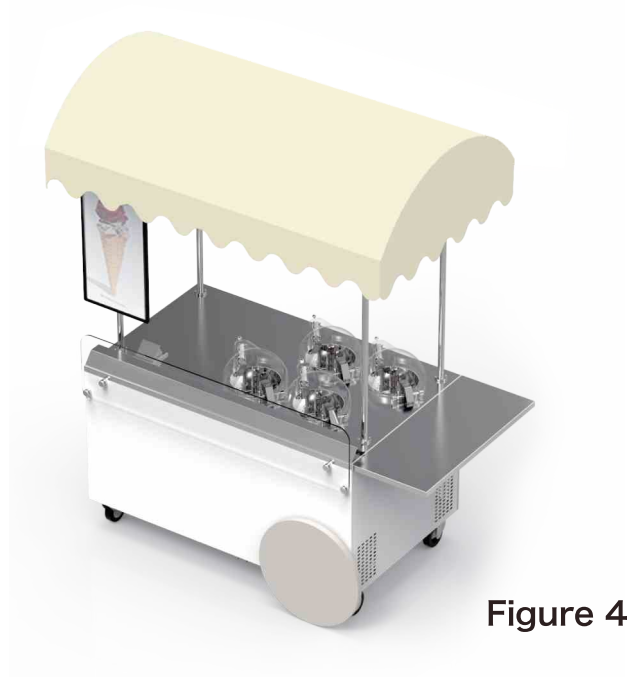


Figure 4-1

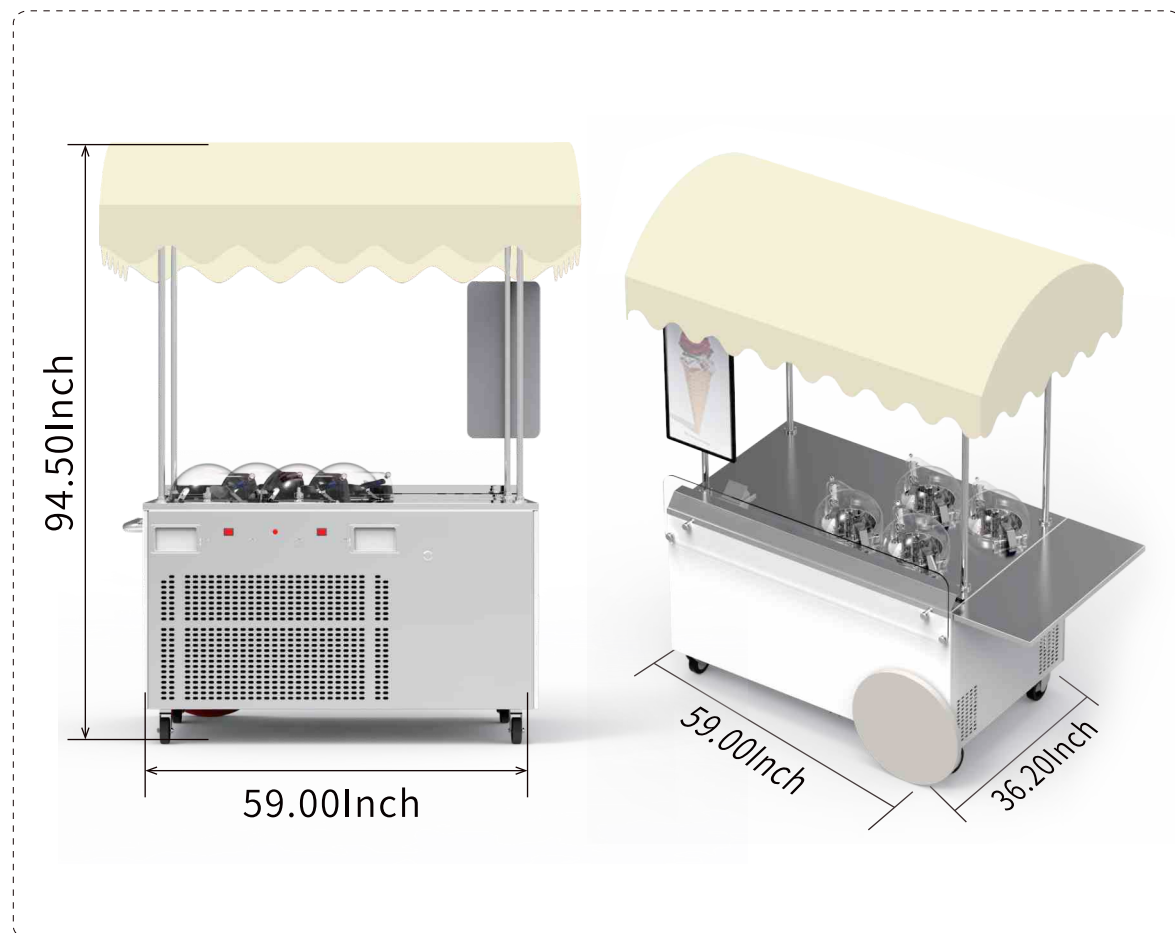


Figure4-2

## 4.2 ACCESSORIES

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1. Four transparent plastic lids, as shown in **Figure 4-3**.
2. Four metal Lid fixed axis for transparent plastic lid, as shown in **Figure 4-4**.
3. One tempered glass baffle, as shown in **Figure 4-5**.
4. Four agitator blades which are usually equipped with the machines, as shown in **Figure 4-6**.
5. Four spare scrapers, which can be used to put on the agitator blade, as shown in **Figure 4-7**.
6. Four rubber rings for fixed head which are usually equipped with the machines, as shown in **Figure 4-8**.
7. Eight rubber rings for water plug which usually are equipped with the machines, as shown in **Figure 4-9**.
8. Four stainless steel leak-proof rods which are usually equipped with the machines, as shown in **Figure 4-10**.



Figure4-3



Figure4-4



Figure4-5



Figure4-6



Figure4-7



Figure4-8

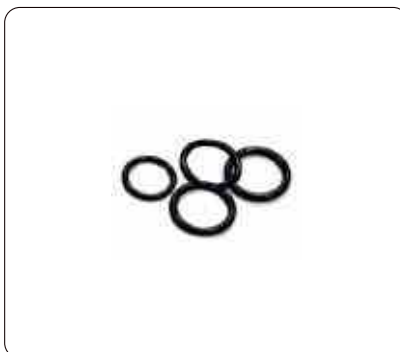


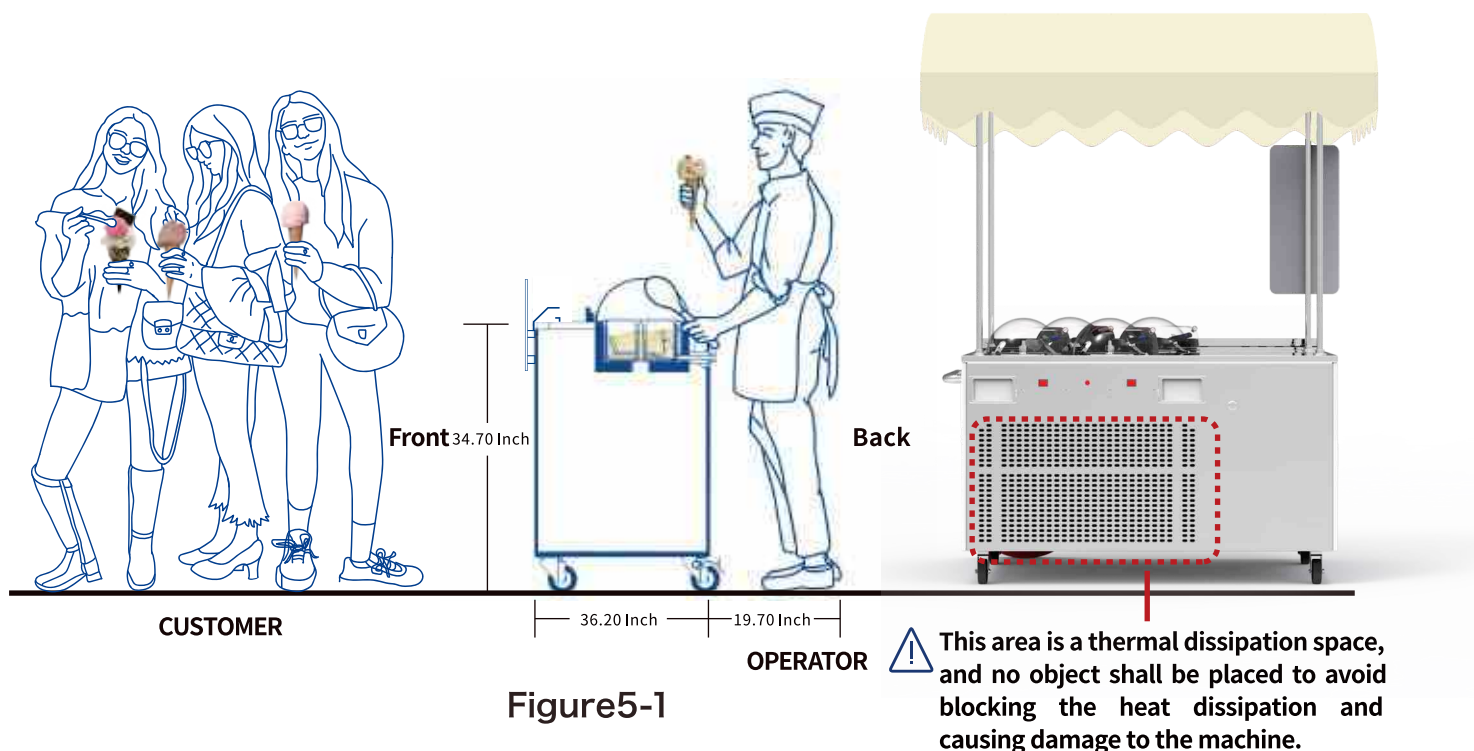
Figure4-9



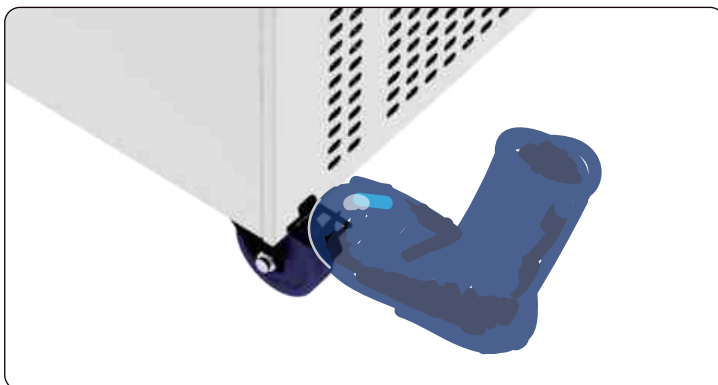
Figure4-10

## 5.1 CAUTION

1. After the machine is in place, it must sit for more than six hours before being plugged in and turned on.
2. This machine uses an air-cooling system, and the operating environment must ensure that the air inlet and the heat outlet is unobstructed.



3. Once the machine is positioned, lock up the two front wheels to avoid moving or swinging during operation, **Figure 5-2**.



4. Put up four transparent lids, fixing and lock them with the metal Lid fixed axis, **Figure 5-3.**



**Figure5-3**

5. The installation of the stirring shaft is shown in **Figure 5-4.**

1)Align the round hole at the bottom of the scraper with the agitator blade and install the two item together.

2)Push the scraper toward the center axis of the agitator blade until it is completely immovable.

3)Use both hands to hold the left and right ends of the agitator blades together, and slowly insert the agitator blades along the central axis of the cylinder to the bottom of the cylinder.

4)After fixing into the top fixator of the central shaft, tighten the fixed head.



**Figure5-4**









6. Before turning the machine on, make sure the agitator blade is positioned accurately, the blade is pressed all the way to the bottom, and the stainless-steel top knob is tightened fully, as shown in **Figure 5-5.**



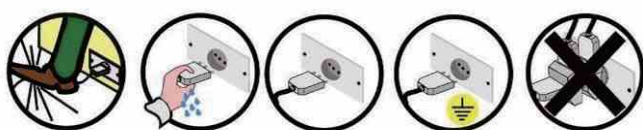
**Figure5-5**

## 5.2 POWER CONNECTION PRECAUTIONS

Please read this safety note carefully before use and strictly observe it.

 The possibility of death or serious injury	 The possibility of accidental injury to an individual or material damage	 Forbidden
 The power supply for the ice cream machine must be consistent with the power supply specified on the nameplate, the standard three-hole socket (above 16A) must be used independently, and the socket must be grounded.	 Plug in ensuring the socket is firmly in contact. Otherwise, this may cause fire. Do not squeeze or pull the power plug. Do not damage the power cord.	
 If the power supply does not meet the AC 220V/50Hz (187-242V), 750W or more automatic regulators must be installed to cooperate with the use.	 In case of any abnormal phenomenon such as abnormal sound, smell, smoke, and so on, please cut off the power supply and stop using it immediately. Once power supply is off contact the service department of the manufacturer in time.	
 Do not use if the power cord is damaged. Please contact the manufacturer as soon as possible and go to the designated service point to replace. Do not dismantle, repair or modify without authorization.		

- 1) Don't put the wires in the hallway, fix the wires to the floor.
- 2) Do not touch the plug with wet hands.
- 3) Do not connect the ice cream machine to the main line using an outer wire.
- 4) Make sure the main line voltage is consistent with the information on the ice cream machine nameplate. (The maximum allowable error is  $\pm 5\%$ )



## 6.1 STARTING UP

Turn on the power switch ( with red light indication ),**Figure6-1-1**



Turn on the power



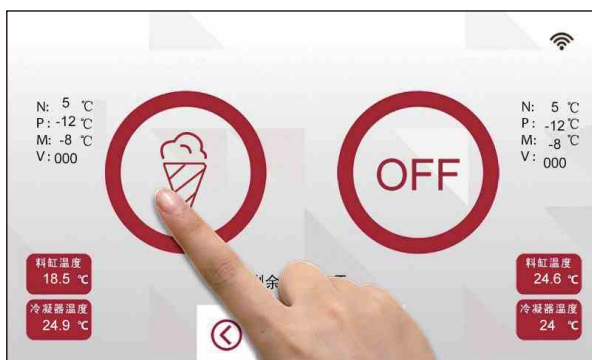
Turn off the power

**Figure6-1-1**

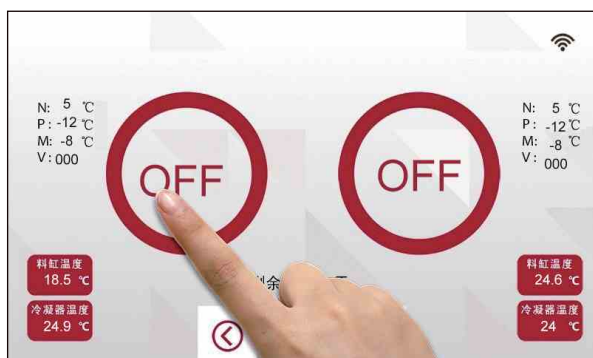
## 6.2 TOUCH SCREENS

After the machine has started, the touch screen will automatically light up and display the main interface. Use a finger to directly touch the interface icon to give instructions to the machine, **Figure 6-2-1**

 Please pay attention when moving the machine or using the touch screen to prevent damages. If damaged it will affect the use of the touch screen.



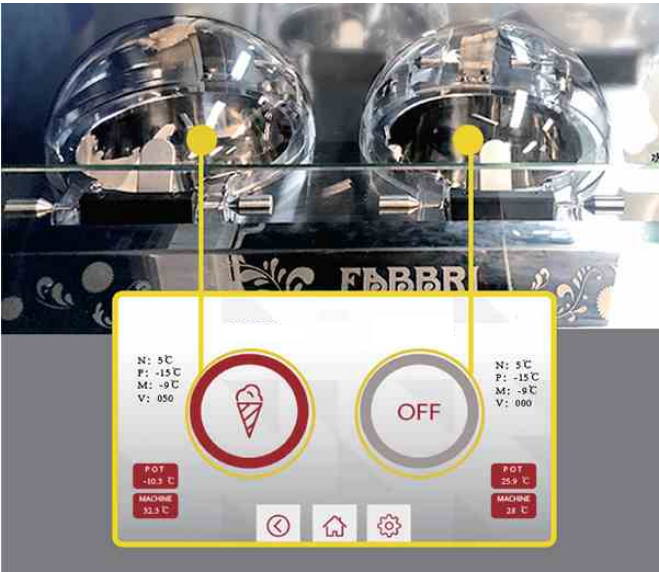
1) Click the icon to give instruction to the corresponding pot



2) Double-click the icon to turn off the corresponding pot

**Figure6-2-1**

### 6.3 INTERFACE INTRODUCTION



N	NIGHT KEEP TEMP
P	RODUCTION TEMP
M	STORAGE TEMP
V	MIXER SPEED
POT	CYLINDER TEMPERATURE
MACHINE	CONDENSER TEMPERATURE
	HOME
	SWITCHING
	PARAMETER SETTING

- Each cylinder of the ice cream machine is controlled and operated independently.
- Each cylinder has its own independent control system, which controls the corresponding motor and compressor refrigeration system.
- On the screen, the left circle represents the left cylinder, and the right circle represents the right cylinder.

#### 1. The home page, **Figure 6-3-1**



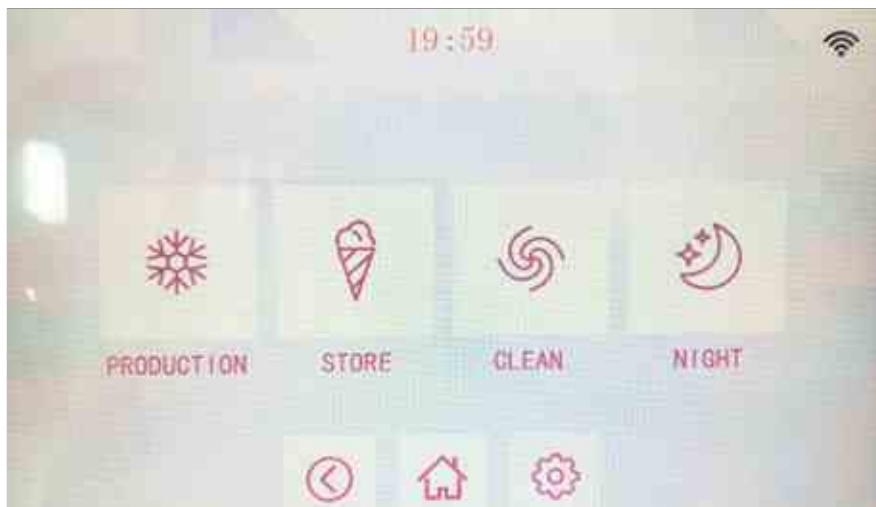
Figure6-3-1

#### 2. The flavor selection page, **Figure6-3-2**



Figure6-3-2

### 3. The mode selection page, **Figure6-3-3**



**Figure6-3-3**



## **PRODUCE MODE**



1). Pour the mixture into the pot.



2). Select the production icon to start the process.



3). Auto batching & churning



4). When completed, the machine will enter the storage mode automatically.



## **FRESH-KEEPING MODE**



- Storage mode.
- The finished ice cream does not need to be removed from the cylinder, since the smart dynamic grinding process will continuously churn the ice cream to keep it fresh.

 During the storage mode, if the machine stops running due to temporary power failure, manually select the fresh-keeping mode to restore the process once power has returned.



## CLEAN MODE



1). Pour fresh water into the pot before starting cleaning mode.



2). Select the clean mode.



3). After 3-5 minutes, pull out the leak-proof rod.



4). The outlet pipe must be cleaned with a tube brush and disinfected water



5). Do not remove the rubber ring during cleaning. To prevent leaking, ensure the rubber ring is installed in place when leak-proof rod is plugged back into the pipe.



6). Use a container to collect the water.



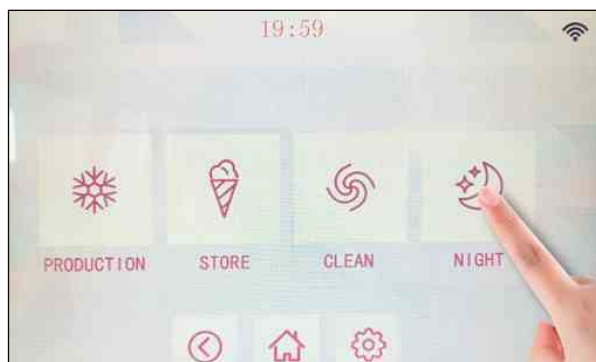
7). Clean the agitator blade.



8). Install the agitator blade in the correct manner.



## NIGHT MODE



At the end of the day, the leftover ice cream can be stored in the cylinder overnight. The ice cream can be stored by switching to night mode.



# SETTING

Users can set up to 16 parameters to create the perfect ice cream for different recipes.

- The default factory setting for "production temperature" is set at -12°C. Which can be manually increased or decreased in the setting menu at any time according to the texture and puffing level of the ice-cream. The storage mode temperature will be set according to the " production temperature" (usually 3–7°C higher than the production target temperature), Figure 6-3-4. Milk-free mixtures, like fruit sorbet, require a lower production temperature than creamy mixtures.
- The default factory setting for storage mode is set to pause for 20 seconds after every 40 seconds of rotation. The timing for rotation and pausing can be tuned freely. (Note: the timing of pause will affect the hardness of the ice cream, and the longer the pause time, the harder the ice cream will be. Conversely, with less pause time, the texture will become softer, **Figure 6-3-4**).

PRODU CTION TEMP	-12	°C (-25-10)
REFINE TEMP	-9	°C (-20-10)
REFINE TEMP GAP	1	°C (1-5)
REFINE MIXER ON	40	S (10-60)
REFINE MIXER OFF	20	S (10-500)
MIXER SPEED1	60	% (10-100)
MIXER SPEED2	80	% (10-100)
TEMP/VEL POINT	-4	°C (-25-15)
REFINE MIXER VEL	30	% (10-100)
REFINE MOTOR ON/OFF	ON	
NIGHT KEEP TEMP	5	°C (-10-5)
NIGHT K EEP T EMP GAP	1	°C (1-5)
NIGHT KEEP MIXER ON	10	S (10-60)
NIGHT KEEP MIXER OFF	500	S (10-500)
NIGHT MIXER VEL	10	% (10-100)
MOTOR RUNNING DIRECTION	2	(1-2)
NIGHT MOTOR ON/OFF	OFF	

>>> RETURN

PRODU CTION TEMP	-12	°C (-25-10)
REFINE TEMP	-9	°C (-20-10)
REFINE TEMP GAP	1	°C (1-5)
REFINE MIXER ON	40	S (10-60)
REFINE MIXER OFF	20	S (10-500)
MIXER SPEED1	60	% (10-100)
MIXER SPEED2	80	% (10-100)
TEMP/VEL POINT	-4	°C (-25-15)
REFINE MIXER VEL	30	% (10-100)
REFINE MOTOR ON/OFF	ON	
NIGHT KEEP TEMP	5	°C (-10-5)
NIGHT KEEP T EMP GAP	1	°C (1-5)
NIGHT KEEP MIXER ON	10	S (10-60)
NIGHT KEEP MIXER OFF	500	S (10-500)
NIGHT MIXER VEL	10	% (10-100)
MOTOR RUNNING DIRECTION	2	(1-2)
NIGHT MOTOR ON/OFF	OFF	

>>> RETURN

48 X

1 2 3  
4 5 6  
7 8 9  
. 0 +/-  
remove confirm

Figure6-3-4

Click the number, and the number editing interface will pop up, and enter the number that needs to be adjusted.

## 6.4 CONTINUOUS PRODUCTION

Any time that a new mixture is added for continuous production, please terminate the storage mode and re-start the production mode to begin the process of batching, **Figure 6-4-1**.

Figure6-4-1



## 6.5 LED LIGHTS

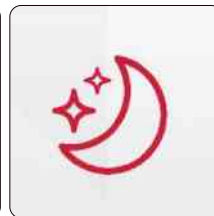
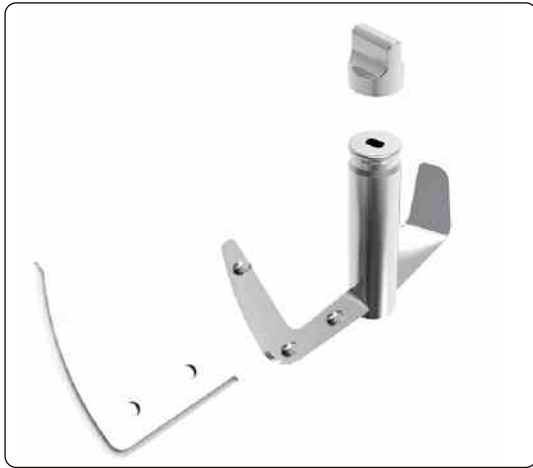
Turn on the LED light to enhance the overall display, so that customers can watch the process of making fresh ice cream, **Figure 6-5-1**.



Figure6-5-1

 When removing the agitator blade out from the cylinder, be careful to avoid impact between the blade and the LED light holder, which may cause damage to the LED Light.

## MECHANICAL OPERATION AND SAFETY



**!** When the cylinder protection lid is closed, the agitator blade will start rotating under any operation mode. When the cylinder protection lid is opened, the agitator blade will stop rotating immediately.

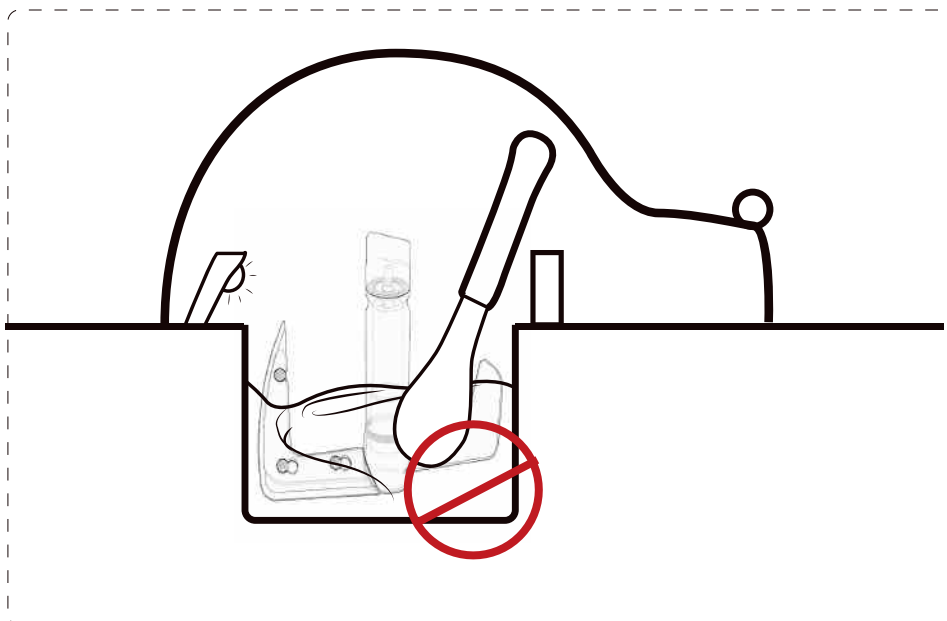



**!** When the pot protection lid is opened for more than 60 seconds on any occasion during the power-on state, the machine will emit a warning sound and will automatically turn off the refrigeration compressor to remind the user to close the lid.

If the agitator blender does not stop rotating when the lid is opened, please turn off the main power immediately and stop the machine completely.



When the pot protection lid is open, this prompt will appear on the interface.



 When the agitator blade is working, do not put any object other than ice cream ingredient into the cylinder, otherwise the agitator blade and the mechanical system will be damaged.



 Be careful with you hand when you close the lid.

## 8

## Daily Maintenance

1. This machine framed uses 304 stainless steel panels, when cleaning the outside of the machine, use the kitchen cleaner first, then use the special cleaner for stainless steel second, which can clean and brighten the surface of stainless, **Figure 8-1**.



**Figure8-1**

2. The transparent plastic lid should be removed to wash, rinse, and dry frequently. Once the cleaning is complete, properly install the lid back on the machine.**Figure 8-2**.



**Figure8-2**

3. Remove the agitator blade and scraper from the machine to clean before beginning to make a different flavor. The plastic scraper must be cleaned and inspected frequently.
4. The white scraper is consumable, which should be replaced according to the frequency of use. The criterion is that it must be replaced when the cylinder wall cannot be scraped completely.
5. Do not operate without ingredients in the cylinder, otherwise parts such as scraper will be damaged.
6. Do not spread liquid into the holes on the stainless panel frame.
7. It is recommended to replace the agitator blade once a year to ensure the accuracy of the operation.

1. The continuous noise during the machine batching process indicates that there is a problem with the scraper and agitator blades.

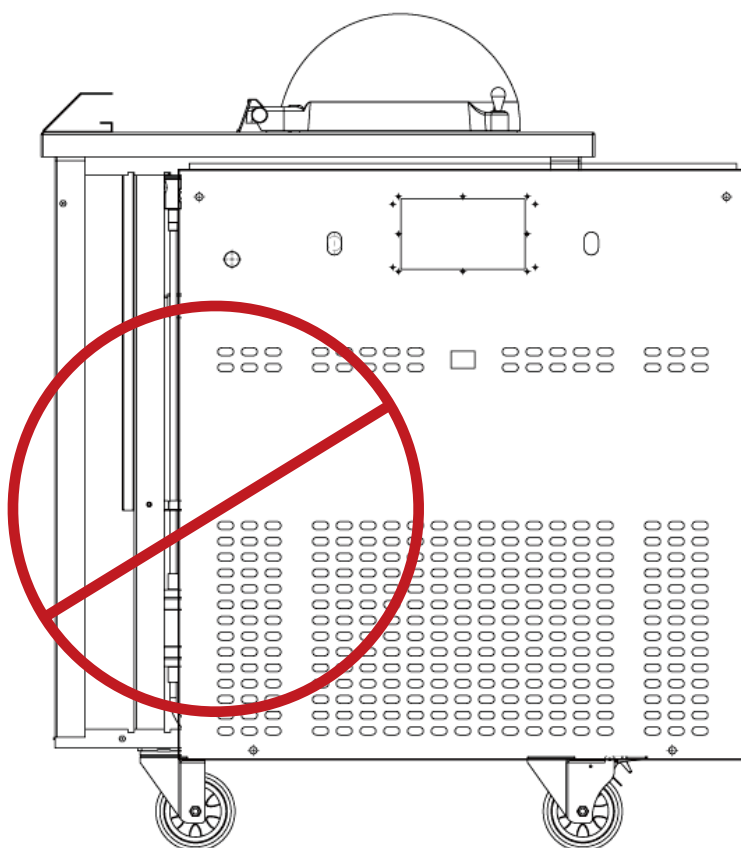
(1) Please check whether the agitator blade is properly fastened in the pot.

(2) Check whether the plastic scraper is worn, causing icing on the pot wall.

If so, please replace the scraper immediately.

2. If raw material mixture leaks into the chassis, the agitator blade should be replaced immediately.

3. In the case of any problematic situation with the machine, please contact the official maintenance agent immediately. Do not disassemble or assemble the machine on its own to avoid causing damage or accidents such as electric shock. The manufacturer will not be liable under these circumstances.



## 10 Warranty Policy

### 10.1 WARRANTY PERIOD

The Warranty service for this product is implemented in accordance with US law. The contents are as follows:

1. Within ten days after receiving the product, any confirmed quality issues rather than artificial damage will be reported to the manufacturer. After being checked and confirmed by the manufacturer, the defective parts will be replaced with a new machine free of charge.
2. Within 24 months from the date of receipt of the product, if any problem is confirmed caused by quality issue rather than artificial damage, the manufacturer will provide any necessary service to fix the machine free of charge.

### 10.2 WARRANTY CONTENT

1. It includes all components and parts.
2. It includes exterior related parts: display screen, exterior cover panels, water outlet pipe, air dissipation plate, and sliding wheels.

### 10.3 NON-WARRANTY REGULATIONS

1. If the Warranty period has expired.
2. No warranty card or non-matching warranty card for specific machine.
3. Damage caused by force majeure.
4. The user fails to use and maintain the machine according to the instructions.
5. Dismantle or repair without the approval of the maintenance personnel designated by the manufacturer.
6. Damage caused by excessive force applied to the equipment, beyond normal operating conditions.
7. Malicious damage to equipment.
8. Failure or damage due to human causes.

### 10.4 PRODUCT WARRANTY CARD

TOP CHURN WARRANTY CARD			
USER NAME			
DATE OF PURCHASE		TELEPHONE	
PRODUCT MODEL		DATE OF PRODUCTION	
PRODUCT PRODUCTION NUMBER			
ADDRESS			
MAINTENANCE RECORD AND SIGNATURE OF MAINTENANCE PERSONNEL			

Table1



**ICE CREAM  
EQUIPMENT  
SPECIALISTS**



[www.ices.cool](http://www.ices.cool)



[sales@ices.cool](mailto:sales@ices.cool)



Gainesville, FL



(775) 283-8274