



Oceanpower Soft Ice Cream Machine Operating Manual

NE2430L



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Foreword

Dear Oceanpower customers:

Thank you for using our products, Oceanpower products will bring to you excellent quality and good performance. For your convenience, please read this manual carefully.

Please follow instructions at each step from the beginning to end. Oceanpower brand also means excellent service that will accompany you regardless of your questions and needs. Please refer to warranty card or your local representative for service contact information.

With continuous product improvement, the piece of equipment you have received may not match exact description in the manual; we apologize for any inconvenience if it should occur.

Oceanpower ice cream machines are manufactured with integration of advanced refrigeration and electronic control technologies and application of a good number of patents, and thus fine craftsmanship. The company's soft ice cream machines feature prominent look, high refrigeration efficiency, good operating performance and ease of operation.

Equipped with hermetic compressor and Oceanpower's patented evaporator, the machine freezes while beating the product until the product forms semi-solid shape and reaches to a certain temperature. In order to better understand this manual and to use the machine, please follow the explanation of the icons in the manual:



Forbidden

Any action marked with this symbol is prohibited. Otherwise, the product may be damaged and/or the user safety is at risk.



Warning

Any action marked with this symbol is related to machine and user safety. The warnings must be strictly followed. Otherwise, the product may be damaged and/or the user safety is at risk.



Caution

The user must pay attention to the parts with caution sign marked; otherwise it may result in product damage or other losses due to improper operation.

Chapter1 Safety Instruction

Precautions:

- ◆ Prevent conductive liquid such as water from splashing into the machine, and do not rinse the machine with a nozzle;
- ◆ The angle of inclination of the machine during handing and movement shall not exceed 45°;
- ◆ When placed, the machine should be level, and after leveling, level the four feet;
- ◆ When the machine is running, do not put your hands or foreign objects into the air inlet and outlet and the inlet;
- ◆ If the refrigerating cylinder is free of material (or water), the machine is not allowed to operate, otherwise the agitator and the sealing sleeve may be damaged;
- ◆ Keep the working environment ventilated and well-dissipated, dry and clean, avoid heat source and direct sunlight, the exhaust surface should be more than 30 cm away from the wall or similar obstacles, and the other surfaces should be at least 10 cm away;



Note

Safety Warning:

- ◆ The machine is repaired by a professional, and the operator must be trained to be employed;
- ◆ To ensure personal safety, please ground the unit reliably and ensure that the power supply line is equipped with short-circuit protection and leakage protection devices;
- ◆ The power cord must be oil-resistant and must be replaced by a professional when it is replaced;
- ◆ Never perform any repair work on the machine before disconnecting the main power supply;
- ◆ Make sure that the power supply is the same as the nameplate on the machine, and the working voltage must not deviate from the rated voltage by $\pm 10\%$. The wiring is carried out by professionals;



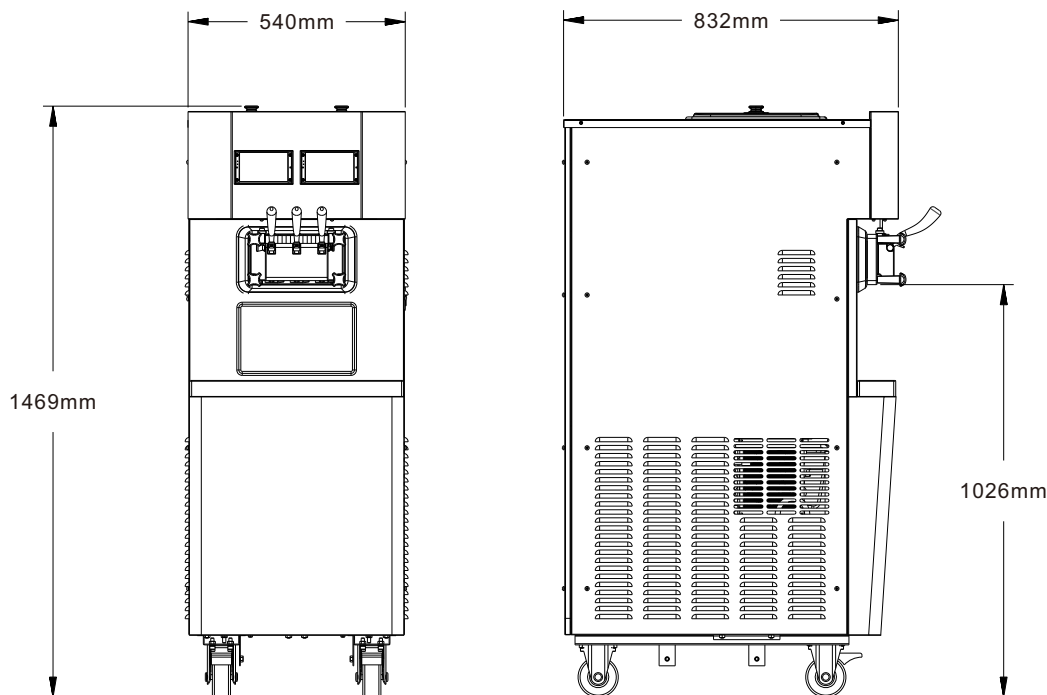
Warning

- ◆ Please turn off the power when you stop using, cleaning and maintaining the machine;
- ◆ Please do not soak or spill liquid on plugs, motors, and other electrical components, to avoid electric shock.
- ◆ The foamed layer material is flammable, and the user shall not dispose of it at will or handle it by itself. It shall be recycled by the designated department in accordance with relevant state regulations.

**Please keep this manual in a safe place so that you can check it at any time.
Due to continuous technical updates, the information contained in this
manual is subject to change without prior notice.
This product is suitable for commercial use.**

Chapter2 Product Introduction

1.Outline Drawing



2.Technical Parameters

Voltage	Power	Capacity	Puffing Pump	Mix Hopper	Main Refrigeration System
220V/50HZ 220V/60HZ	4400W	65L/H	Standard	12L×2	6400BTU/Hr×2
Feeding Method	Cooling Way	Main Motor	Net Weight	Refrigeration cylinder	Pre-cooling System
Bottom-up	Air exhaust at back	750W×2	229Kg	2.0L×2	400BTU/Hr×2

Note: The above parameters are for reference only. Please refer to the machine nameplate for specific parameters

Chapter3 Installation and Commissioning

1. Installation

1) Unpack the box and move the machine to a suitable position. Take out the packing list and check the random attachments. (**Note: The tilt angle of the machine during moving or handling must not exceed 45°**)

2) Placement Conditions

A. The machine should be placed at a stable level, and then leveled to four feet.

B. The machine should be dry and clean, and there should be no pollution sources such as dust.

C. The machine should be placed in a place with good heat dissipation and ventilation, and avoid the heat source and direct sunlight. The exhaust surface should be more than 30cm away from the wall or similar obstacles and the other surfaces should be at least 10cm away.

D. After the machine position is fixed, it needs to be left for 12 hours before commissioning.

3) Terms of Use

Environmental temperature: 5 °C ~ 40 °C

Ambient humidity: relative humidity ≤ 90%

Power supply voltage: 220±10%

Frequency range: 50/60±1Hz

Refrigeration room temperature: 2~10°C

Note: The ambient temperature will directly affect the output. My company's product design yield parameters are indoor temperature 23~25°C, the temperature of the refrigerator is 4~10°C. In a high temperature environment of 40°C, the machine can be produced normally, but the output will be reduced.



Warning

- ◆ Make sure the power outlet is equipped with an effective ground wire.
- ◆ Make sure that the machine's power supply line is equipped with short-circuit protection and leakage protection.
- ◆ All external wiring and electrical appliances should comply with relevant national standards.

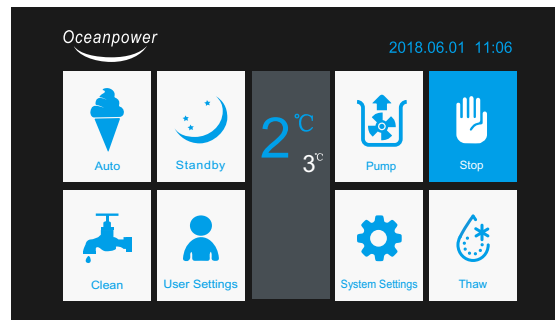
2.Commissioning

- 1)Click the box switch to the "on" position. At this time, you will see the initial screen of the touch screen(Figure1),and enter the standby screen after 3 seconds(Figure 2);
- 2) Press the "Cleaning" button, the corresponding indicator light is on. At the same time, you can hear the sound of the motor starting and stirring system working. Press the "Stop" button to stop;

Note: The agitator must be turned counterclockwise when viewed from the freezing cylinder.



(Figure 1)



(Figure 2)

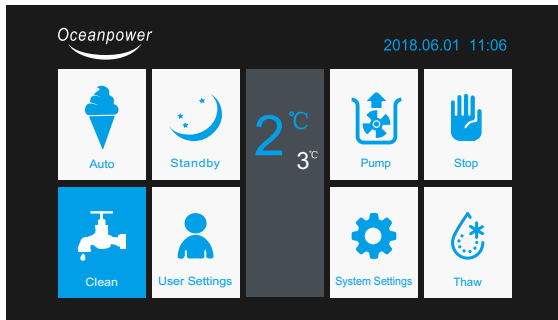
- 3) Press the "Auto" button, the corresponding indicator light is on, the stirring system works, the delay is 3 seconds, and the refrigeration system is also started. The motor, compressor and fan of the equipment are all working. This means that the machine is working properly. Please press the "Stop" button again to turn off the machine.

Chapter4 Operation Instruction

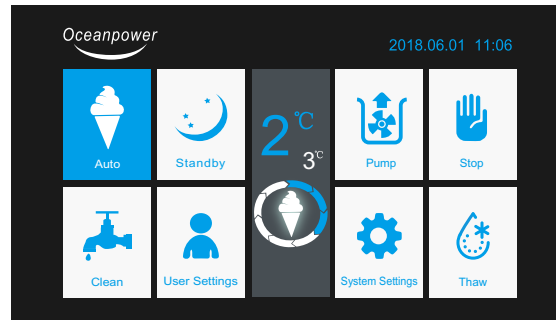
1. Working Mode

1) Standby mode: After the machine is turned on, the machine displays the standby mode (Figure 2). If no button is pressed, it is standby.

2) Cleaning mode: Press the “Cleaning” button, the cleaning button lights up, the stirring motor is started, the main compressor is turned off, and the cleaning state is entered (Figure 3). Press the stop button again to exit the cleaning state and return to the standby mode.



(Figure 3)



(Figure 4)

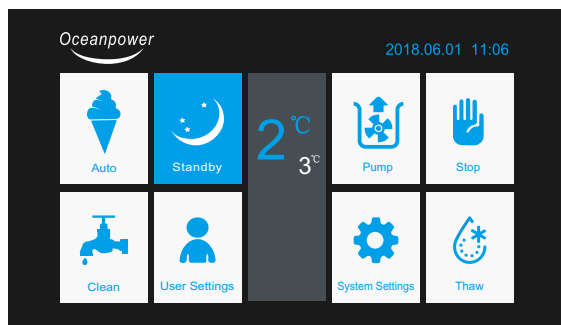
3) Cooling mode: Press the “AUTO” button, the auto button will light up and enter the cooling mode (Figure 4). After entering the cooling mode, the stirring motor starts immediately. After 3 seconds, the main compressor starts. As the cooling process progresses, the hardness of the ice cream material reaches the set value, the main compressor is stopped, and the motor is stopped after 10 seconds to complete a complete refrigeration process. . If no material is discharged within 7 minutes, the system will automatically repeat the above cooling process. After the cooling is completed, if the discharge lever is pressed, the cooling mode is restarted. In the cooling mode, if the discharge rod is pressed, the expansion pump starts working immediately. After the discharge rod is reset, the expansion pump starts working immediately. After the discharge rod is reset, the expansion pump will continue to work until it reaches the design pressure. In the cooling mode, press the stop button again to exit the cooling state and return to the standby mode.(Fit for air pump model)

4) Sleep mode: Press the “Sleep” button, the sleep button lights up and enters sleep mode

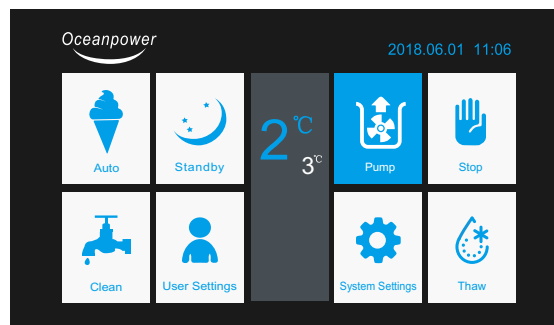
cream material in (Figure 5). After entering sleep mode, the main compressor will start working according to the designed temperature to ensure that the temperature of the icethe freezing cylinder is constant. While in sleep mode, press the stop button again to exit the sleep mode and return to standby mode.

5) Feed mode: Press the “Feed” button and the pump button will light up to enter the feed mode (Figure 6). After entering the feeding modeThe pump is always working. When in the feed mode, press the feed button or the stop button to return to the standby mode.

(Fit for air pump model)



(Figure 5)



(Figure 6)

6) Pre-cooling function: In the cooling mode or sleep mode, the pre-cooling function is automatically activated to ensure that the material temperature of the trough is constant.

Note : This machine does not have thawing function.

2. Parameter Setting

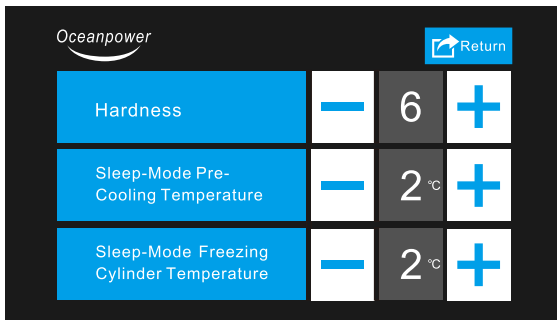
1) User settings

Enter the user parameter settings in the user settings screen. (Figure 7)

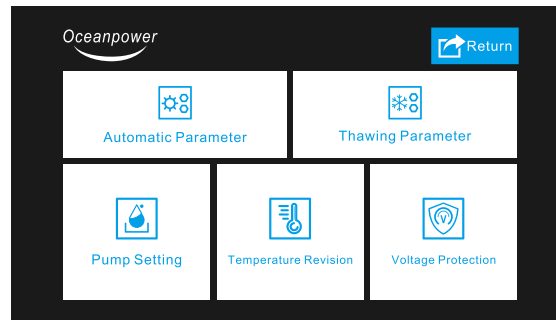
Gear position: The hardness of the ice cream can be adjusted 1-15 Levels according to the type of raw materials used and the temperature of the environment. The higher the gear position, the harder the ice cream is.

Refrigerator insulation temperature: The temperature in the refrigerator can be adjusted, and the adjustment range is 3-6 °C.

Freezer holding temperature: The temperature in the freezing cylinder can be adjusted in the sleep mode, and the adjustment range is 1-6 °C.



(Figure 7)



(Figure 8)

2) In the machine standby screen (Figure 2) Press the System Setup button to enter the System Setup screen (Figure 8).

- A. Automatic parameters
- B. Thawing parameters
- C. Expanding pump setting
- D. Temperature correction
- E. Voltage protection

These parameters have been set when the device is shipped from the factory, and the user must not change it at will, otherwise it will affect the normal operation of the device or even damage the device.



Note

- ◆ If an abnormal sound occurs or the buzzer sounds continuously, stop it immediately and check it out.
- ◆ No-load test machine, stirring and cooling time can not exceed one minute, otherwise it will cause machine wear or failure.

Chapter5 Operation Procedures

This model adopts the method of lower feeding. There is a slurry tank in the refrigerator compartment of the machine to hold the slurry, and then the slurry is pumped from the slurry tank to the freezing cylinder by the expansion pump. The steps in this chapter are described in the order from the morning to the end of the store to the end of the closing of the store. The parts that were removed the night before are placed on the table and dried.

1. Assembly

1) Apply food grade lubricant to the beater drive shaft and install the shaft seal.

Note: The square end of the drive shaft cannot be lubricated

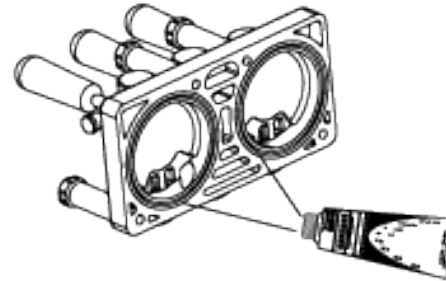
2) Mount the scraper on the beater.

3) Insert the assembled scraper holder into the freezing cylinder and insert the square end first. If it cannot be pushed in completely, it is the four of the scraper holder. The square end is not inserted into the coupling. Please turn the scraper holder left and right to enter.

4) Install the outlet valve stem. Place the seal in the sealing groove of the stem and apply food grade lubricant (Figure 9) . Insert the valve stem coated with food grade lubricant from the bottom into the outlet valve, making sure that the waist opening of the stem is at the top and the opening is forward.



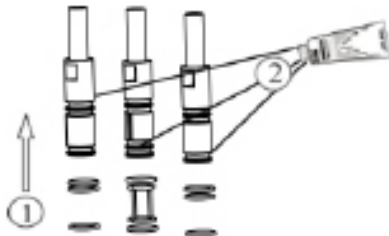
(Figure 9)



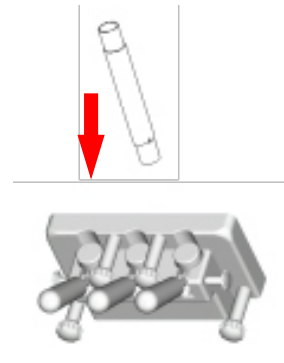
(Figure 10)

5) Install the liquid outlet valve sealed ring. Install a large silicone sealed ring in the annular groove behind the liquid outlet valve and aim the spoiler at the triangular groove of the valve.(Figure 10)

6) Install the exhaust valve stem. Install a sealed ring and smear food grade lubricant on the exhaust valve stem (Figure 11) and insert it into the liquid outlet valve.(Figure 12).



(Figure 11)

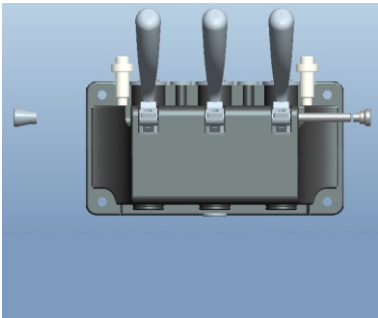


(Figure 12)

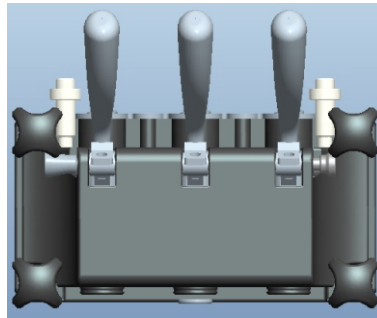
7) Install the handle and secure it with a latch. (Figure13)

8) Assemble the liquid outlet valve. Insert the four holes of the liquid outlet valve into the four bolts on the ice cream machine to make current collector behind the liquid outlet to be inserted into the scraper, and tighten them (cross-tighten them with the same force) to make the rear of the valve to be tightly attached to the front panel of the cylinder and press the sealed ring. (Figure 14)

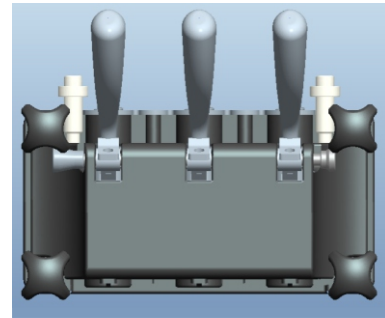
Note: The length of the fastening nuts is different. The upper nuts are longer and the lower nuts are shorter.



(Figure 13)



(Figure 14)



(Figure 15)

9) Install the styling cap. (Figure 15)

2.Sterilization

1) Pour the prepared disinfectant into the mix tank, then put it into the refrigerating chamber, and use the suction pipe of air pump to connect the pressure-relief pipe to the mix tank well.

2) Press the switch.

3) Turn on the Pump button and press the Clean button after 30 seconds to start the agitation of the disinfectant in the freezing cylinder for 5 minutes.

4) Turn off Pump button, pull down the discharge handle, and drain all disinfectant.

**Note: There is pressure in the freezing cylinder.
Keep the cleaning bucket closed to the dispensing
hole to prevent splashing on the body.**

5) When the disinfectant stops flowing, raise the discharge handle and press the Stop button to cancel the operation of the motor.

6) Clean the machine again with clean water.

3. Adding Mix

1) Pour the prepared mix into the mix tank and place it in the refrigerator.

2) Pour the ice cream ingredient into hopper.

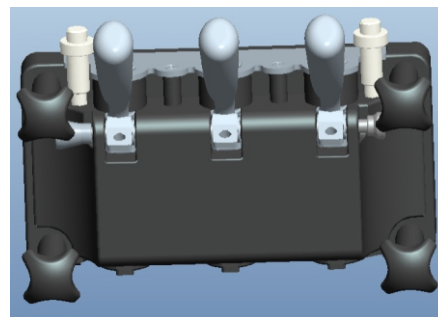
3) Lift the exhaust valve stem on the outlet valve.

4) Open the pump button and place a bucket under the dispensing hole and press the Stop button to stop adding mix when it flows out steadily from the exhaust valve port. Restore the exhaust valve stem in the figure. (Figure 16)

NOTE :

1) 、 2) Fit for air pumpless model;

1) 、 3) 、 4) Fit for air pump model



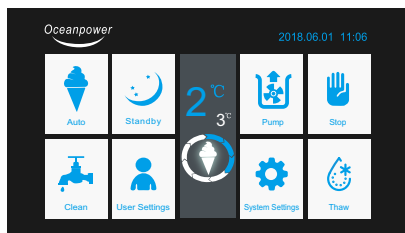
(Figure 16)

4. Start Making Ice Cream

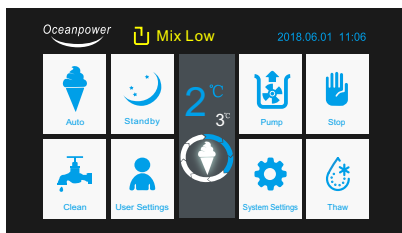
- 1) Make sure the ice cream ingredient's level is higher than low level indicator in the hopper
- 2) Press the User Setting button to set the desired gear position according to the type of mix used and the ambient temperature. (The stiffness level is higher; the ice cream produced is harder)
- 3) Press the Auto button, the refrigeration system will automatically start running. While the compressor and the motor will stop running in sequence when the setting requirements are met, which means the ice cream in the cylinder reaches the specified viscosity at this time. Since the mix used and the ambient temperatures are different, the first dispensing time required will be also varied.

Note: To control the dispensing speed of ice cream, take 100 g ice cream as an example, the time should be controlled for more than 5 seconds.

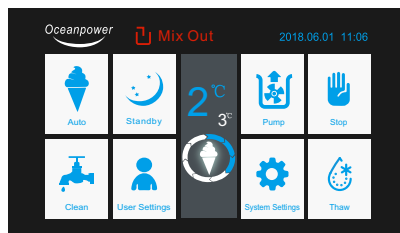
- 4) The screen panel will display three states of the mix, which are full mix (Figure 17), mix low (Figure 18), and no mix (Figure 19). The system will alarm when it displays mix low but the machine will still work normally; When it is displayed no mix, the machine will automatically stop. Therefore, please add the mix in time according to the performance of the store when it displays a low mix alarm.



(Figure 17)



(Figure 18)



(Figure 19)

- 5) At the end of the day's work, press the Standby button and the machine will automatically to keep your mixture chill and fresh.

Note: Even if this machine has fresh-keeping function, you also need to clean the machine regularly. Refer to the next chapter for specific steps.

Chapter6 Cleaning Instruction

When cleaning the machine, you need to prepare the following items:

- ◆ Cleaning bucket
- ◆ Sterilized stainless steel mix tank with cover
- ◆ Bucket brush
- ◆ Cleanser
- ◆ Cleaning towel

1. Drain Mix from the Freezing Cylinder

- 1) Press the Stop button to cancel the operation of the compressor and the stirring motor.
- 2) Press the Thaw button to defrost the ice cream in the freezing cylinder. When the thawing is completed, it will stop. Observe the temperature in the freezing cylinder displayed on the screen panel. If necessary, you can perform another thawing.
- 3) Place the sterilized stainless steel collection bin at the dispensing hole, press the Clean button and pull the discharge handle down. The mix in the freezing cylinder is drained. When the mix stops flowing out, lift the discharge handle and press the Stop button to stop the operation of the stirring motor and then store the mix in the freezer.

Note: There is pressure in the freezing cylinder. Keep the stainless steel collecting bucket closed to the discharge port to prevent splashing on the body.

2.Washing

- 1) Remove the agitator in the refrigerator and take out the mix tank. Replace with a clean bucket filled with purified water.
- 2) Follow the steps as the Disinfection in Chapter 5, in Section 2.
- 3) Turn off the switch.

3.Clean

- 1) Remove the tightening nuts, the outlet valve, the scraper holder, shaft seal, air pump pipeline, sealed rings and other accessories and take these parts to the pool for cleaning.
- 2) Remove the big drip trap and clean it.
- 3) Place those cleaned accessories on the clean and dried surface to make them dried.
- 4) Check the clean drip trap.
- 5) Wipe the inside of the refrigerator and the freezing cylinder of the ice cream machine, as well as the moisture on the surface with a dry cleaning towel.
- 6) Wipe all the outer surfaces of the ice cream machine.

Chapter7 Daily Maintenance

Timely maintenance can effectively extend the life of the ice cream machine, so it is necessary to maintain the ice cream machine regularly. And make irregular maintenance and inspection of the ice cream machine according to the state of use of the product and environmental conditions,

1.Recommended Replacement Period for Easily-worn Parts

Accessories	Per 3 Months	Per 6 Months	Per Year
Scraper Shaft Seal	Check and replace		
Scraper	Check	Replace	
Liquid Outlet Sealed Ring	Check	Replace	
Other Sealed Rings and Check Valve	Check and replace		

2.Routine Maintenance Inspection

- 1) Check and replace scraper.
- 2) Check if the square shaft of the scraper holder is worn.
- 3) Check if the leakage in the drip trap becomes more and the situation of shaft seal wear.
- 4) Regularly clean the leaking condensation around the coupling.
- 5) Regularly check and replace easily-worn parts such as sealed rings and bushings.
- 6) Check the condenser regularly for accumulated dust and fluff. The condenser with the dust will reduce the efficiency and productivity of the machine, so it should be cleaned regularly with a soft brush according to the environment in which it is used. Forbid using a screwdriver or other hard object to clean its fins
- 7) Regularly check the gear reducer for abnormal noise and oil leakage.

Note: Make sure the electricity power of the ice cream machine has been turned off when making maintenance.

Chapter8 Common Malfunction Handling

1. Malfunction Analysis and Elimination

The system will turn off all outputs and display the malfunction information, and the buzzer will always alarm or interval alarm When an abnormality occurs in the system. Table 1 gives a detailed description of each malfunction.

Table One:

Malfunction information	Malfunction Cause	Solution	Example
High Pressure Protection	1.Compressor over-pressure; 2. Compressor Pressure detection switch damage;	1.Strengthen ventilation, adjust the distance between the machine and the wall; 2.Call After-Sales service number;	Figure 22
Mixture Shortage	1.Lack of Mixture; 2.Mixture shortage detection switch malfunction;	1.Add the mixture until the display shows normal; 2.Call After-Sales service number;	Figure 20
Hopper sensor Malfunction	Refrigeration chamber temperature sensor malfunction	Call After-Sales service number	/
Cylinder sensor Malfunction	Cylinder temperature sensor malfunction	Call After-Sales service number	/
Without mixture	1.Without Mixture 2.None of mixture detection switch malfunction	1.Add the mixture until the display shows normal; 2.Call After-Sales service number;	Figure 21
Motor Belt Slip/ Motor Speed Decrease	The over-high gear position caused the ice cream hard so that the beater blocked	Adjust the appropriate gear position	Figure 23

Malfunction information	Malfunction Cause	Solution	Example
Proximity Switch Malfunction/ Motor Malfunction	1.Proximity switch Malfunction 2.Motor Malfunction	Call After-Sales service number	Figure 24
Switch /Handle Malfunction	1.Open the handle and keep pressing 2.Switch/Handle Malfunction	1.Release the handle; 2.Call After-Sales service number	Figure 25
Discharge Valve Misplaced	1.Without discharge valve ; 2.The reed detection switch malfunction	1.Re-install the discharge valve 2.Call After-Sales service number	Figure 26



(Figure 22)



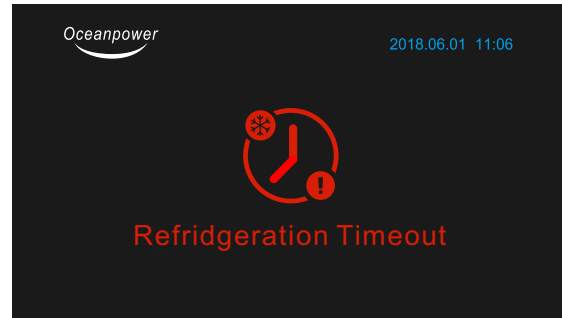
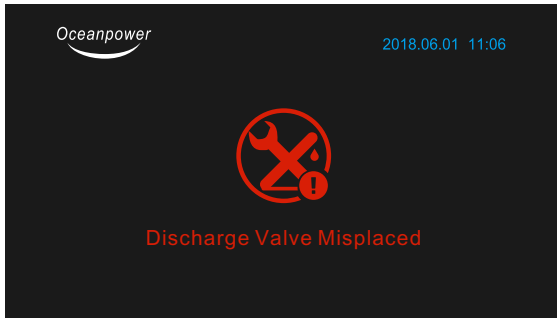
(Figure 23)



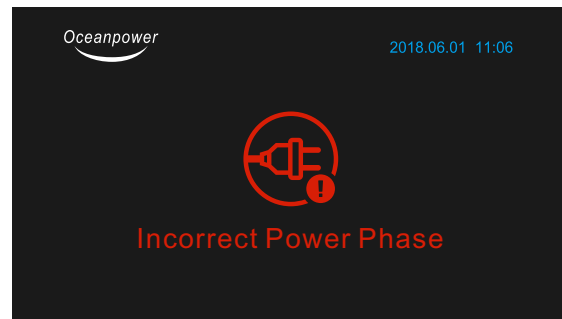
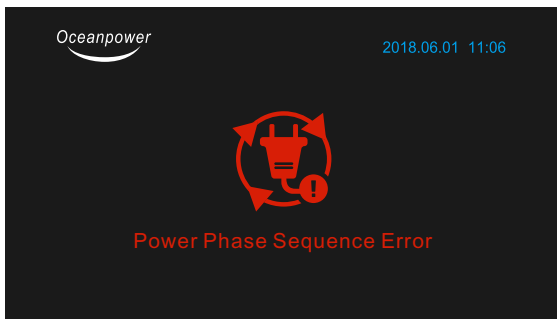
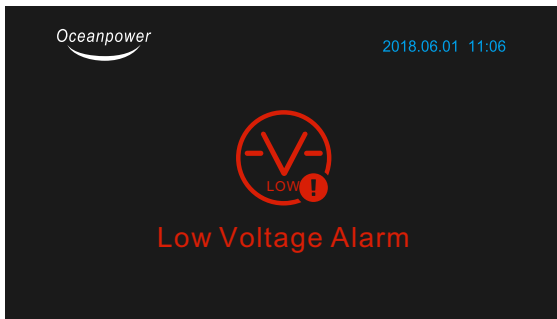
(Figure 24)



(Figure 25)



(Figure 26)



2.Common fault phenomena and solutions

Item	Phenomenon	Possible cause	Solution
1	Power switch trip	Low load capacity of the circuit breaker	Checked and replaced by professional electrician
		Device internal circuit damage	Checked and replaced by professional electrician
		Short circuit of motor compressor	Call the after-sales service for processing
2	The case has static electricity	The power cord is not effectively grounded	Connected to the ground by professional electrician
3	No display after power-on connection	No mains or power plug not plugged in	Check yourself
		The motherboard connection not plugged in	Call the after-sales service for processing
		Insurance tube is broken	Call the after-sales service for processing
		Circuit board malfunction	Call the after-sales service for processing
4	Outlet valve leakage water and raw materials	Exhaust stem seal damaged	Self replacement
		Outlet valve seal damaged	Self replacement
		Outlet stem seal damaged	Self replacement
		The fastening nut not tightened	Self replacement
5	Residual box with water or slurry	Agitator seal is damaged	Self replacement

Item	Problems	Possible Causes	Solutions
6	Cylinder scraped inside	Bushing worn or missing	Self replacement
		The fastening nut was not tightened	Self-processing
7	Frozen cylinder	Unreasonable gear set	Adjust after thawing
		No dispense of ice cream for a long time	Refrigerant after thawing
8	Ice cream too soft	Unreasonable gear set	Adjust gear set
		Space around machine is small, hard to dissipate	Self-processing
		Dirty condenser with dust	Self-clean
		Quality problem of the ice cream powder mix	Self-processing
		Leakage of refrigerant	Call the after-sale service center
		Error of cooling fan	Call the after-sale service center

Note: Maintenance related with electric must be done by professional electrician.

Chapter9 Maintenance Treatment

We will provide one year warranty, customers will not need to pay any charges except worn parts or artificial damage.

When the equipment has a fault, the user can refer to the "common fault handling" to handle, when the fault is much more complex, do not rush to deal with, lest bring you unnecessary loss.

Please fill in and properly keep the equipment maintenance Service guarantee Card.

Equipment Maintenance Service Guarantee Card

Distributor:	User Name:	
Address:	Tel:	
Model No.:	Factory Code:	
Fault phenomenon explanation:		
<p>Notice: 1. Please take good care of this card and read it carefully.</p> <p>2. You will enjoy free maintenance services within one year from the date of purchase of the equipment.</p> <p>3. It is strictly forbidden to change the phase of power supply to prevent serious equipment malfunction.</p> <p>4. Please check the power supply regularly to ensure the reliable connection of the ground wire and prevent the phase-off or voltage fluctuation.</p> <p>5. please keep the equipment clean, make sure the working environment is clean and have good ventilation condition.</p> <p>6. The warranty for free maintenance services will be cancelled when:</p> <p>1) abnormal use, improper storage, handling, high or low ambient temperature, humid environment.</p> <p>2) unauthorized modification and incorrect parameter adjustment.</p> <p>7. Please notify the equipment supplier or maintenance center immediately after the equipment exception occurs.</p> <p>8. The spare parts replaced in maintenance belong to Shenzhen Oceanpower Eco Food Tech Co., Ltd.</p>		
Shenzhen Oceanpower Eco Food Tech Co., Ltd.		
Equipment Maintenance Service Guarantee Card (copy)		
User Name:	Tel:	Model No.:
Factory Code:	Maintenance Date:	Signature of Maintenance Staff:
Fault causes and detection results:		