

INSTRUCTION MANUAL



Preface

We employ all-digital computer control systems, brand-name high-quality electrical components, and advanced production technologies to produce commercial Ice-cream Dispensers of various colors allowing simple, safe and reliable operation. The Ice-cream Dispenser is featured by high puffing rate, high yield, and delicate taste. Our Ice-cream Dispensers are widely used in catering service industries such as cold drinks stores, fast food chain stores, western restaurants, and convenience stores.

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I. Safety Precautions

1. Unpacking & Inspection

1) Cut and unfasten the straps and planks securing the carton; remove the carton, foam boards, and packing bags to see if there is any damage to the device's appearance. (Note: The device must not be tilted more than 45° during transportation.)

2) Open the cylinder cover and check whether all the accessories contained in the packing list are available.

3) Remove the upper and lower panels at the rear of the device to check whether the internal motors, belts, compressors, and other components are loose due to transportation. If any abnormalities are found, contact the supplier in time to solve the problem.

(Note: When installing or removing each panel, insert an internal hexagonal wrench or cross screwdriver into the screw groove on the panel, then press slightly and rotate to loosen or fasten)

4) Install the stirrer and valve body to the device (Fig. A & B).

Note: Do not forget to install the sealing ring



Fig. A
Bellows type sealing ring + stirrer



Install the stirrer

Fig. A

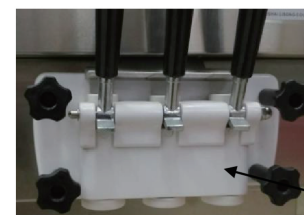


Fig. B
Install the valve body

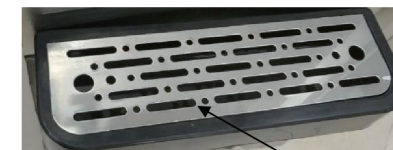


Fig. C

Install the water receiver

5) Install the water receiver as shown in (Fig. C).

6) Check the nameplate affixed to the rear panel of the device and ensure that the voltage specified on the device matches the local supply voltage.

7) Be sure the dispenser is properly grounded. Otherwise, an electric shock may occur in the event of a malfunction or electric leakage. (For some models, the grounding line is the yellow-and-green line at the bottom)

8) Never damage, break, twist or stretch the soft power cord.

2. Operating Environment

1) The minimum operating temperature is 10 °C, and the maximum operating temperature is 35 °C. Never use the device in moist environment or places exposed to

rain. Do not use in places exposed to much sulfuric acid or salt, such as hot springs areas, or gulf areas.

2) The minimum slurry temperature is 5℃ and the highest is 40℃; low temperature storage is preferred to improve the production efficiency of ice cream.

3) Please put on a level and firm surface in a well-ventilated place.

4) A clearance of at least 80cm behind the Ice-cream Dispenser, and a clearance of no less than 30cm on both sides shall be ensured, for in-flow of cold air and discharging of hot air to facilitate the device's condensation cycle; regular cleaning of the dust on the condenser is suggested.

Note: The device will inevitably be oscillated during transportation, so it is suggested to place stably for 4 hours prior to initial use.

3. Power Connection

All the internal wires have been fully connected before delivery of our Bingzhile Ice-cream Dispensers. The only thing for users to do is to select proper wires according to the required power and connect with the power cord at the bottom rear-end of the device, in addition to proper grounding.

Note: All external wiring, plugs and sockets shall comply with the requirements of national standards

4. Power Voltage Requirements

The deviation of the rated voltage of the incoming power supply shall not be too high or too low. If so, the indicator (red) will flash and an alarm (buzzing) will be given, resulting in failure of the refrigerating function.

+6%

Note: Voltage:220V-10% (198V-245V)

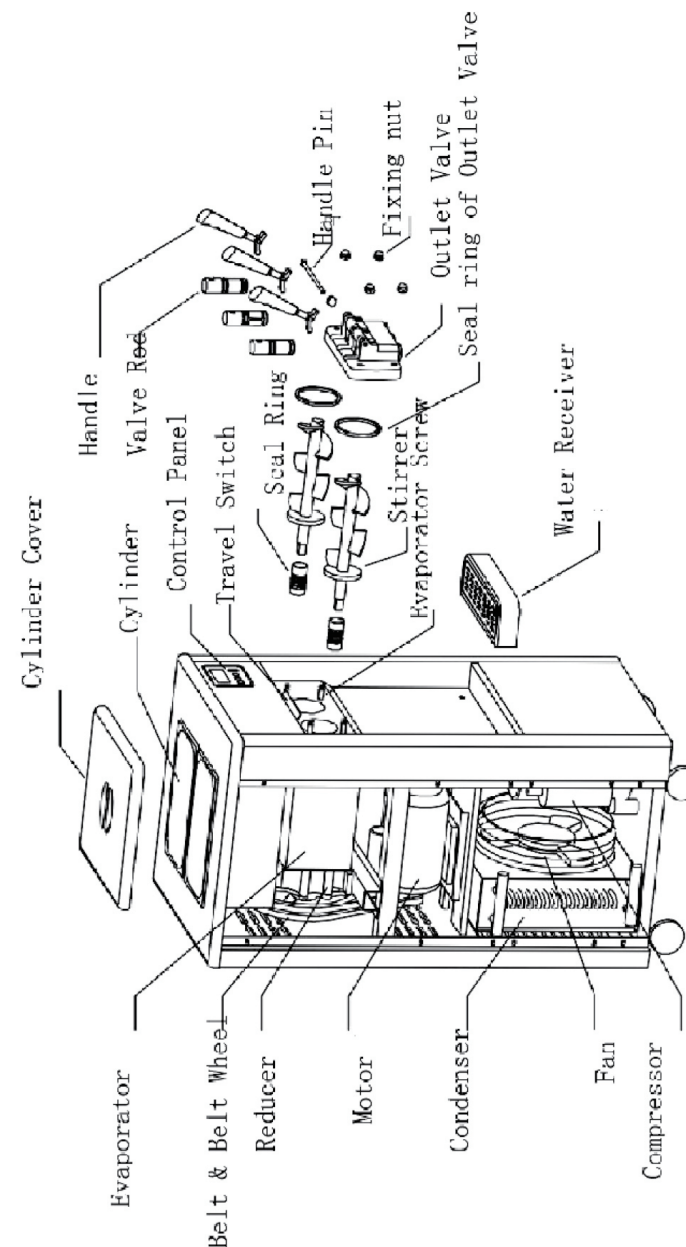
+6%

380V-10% (342V-403V)

5. Refrigerating Conditions

- Refrigeration is not allowed when the stirring shaft is in the empty cylinder.
- Refrigeration is not allowed when there is water in the cylinder.

II. Product Structure Diagram



III. Operation Panel & Functions

The operation panel is divided into a key fluorescent screen and an LCD screen (select the corresponding operation)

Operate as shown in Fig. D, E, and F

1) Cleaning/Unfreezing key:

In standby mode, press the key to trigger cleaning mode. As the cleaning indicator lights on with a buzzing sound, the stirring motor starts running, and the LCD screen displays the current value of the stirring motor. Press this key again to enter the standby mode.

Hold down the key for 5 seconds to launch the unfreezing function with the cleaning icon flashing, followed by pressing the key again to close the unfreezing function. (Only applicable for models with this function)

2) Refrigerating key:

In standby mode, press the refrigerating key to trigger refrigerating mode. As the refrigerating indicator lights on with a buzzing sound, the stirring motor, compressor, and fan motor start running, and the LCD screen displays the current value of the stirring motor. Press this key again to enter the standby mode.

3) Puffing key:

If you press the "puffing" key with the air pump indicator lighting on in standby mode, the air pump will be disabled; If you press the puffing key in cleaning or refrigerating mode, the pump indicator will flash to indicate the air pump is enabled. (Only applicable for models with this function)

4) Hardness setting key:

Hold down "△" or "▽" for 1 second to trigger hardness parameter setting mode, followed by pressing the key again to change the hardness value. The greater the hardness value is, the harder the ice cream will be, and vice versa.

5) Preservation key:

In standby state, press the "preservation" key, and the preservation indicator lights on with a buzzing sound. Delay start occurs to the stirring motor, compressor, and fan motor, and the current value of the stirring motor is shown on the LCD screen. Press this key again to enter the standby mode. (Only applicable for models with this function)

6) Timing/Resetting key

In standby mode, press this key to trigger timer resetting mode. Press this key again to change the timer resetting value.

Hold down this key for 10 seconds to reset the number of cups. (Resetting switch for some models are shown as Fig. D)

7) The number of ice creams display:

Every cup of ice cream discharged will be automatically recorded.

8) Slurry level/shortage display (Only applicable for models with this function):

When the device is short of slurry, the code of shortage will be displayed in the cup-number display area and the buzzer will give an alarm intermittently.

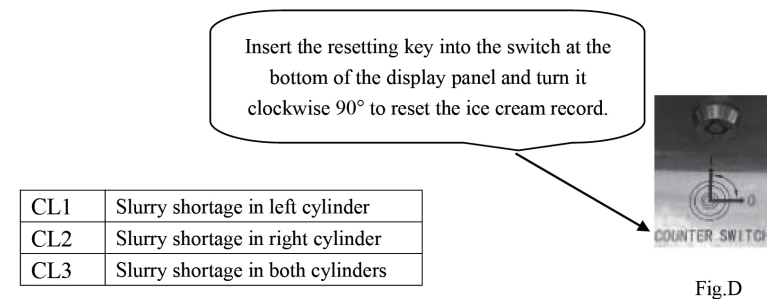


Fig.D

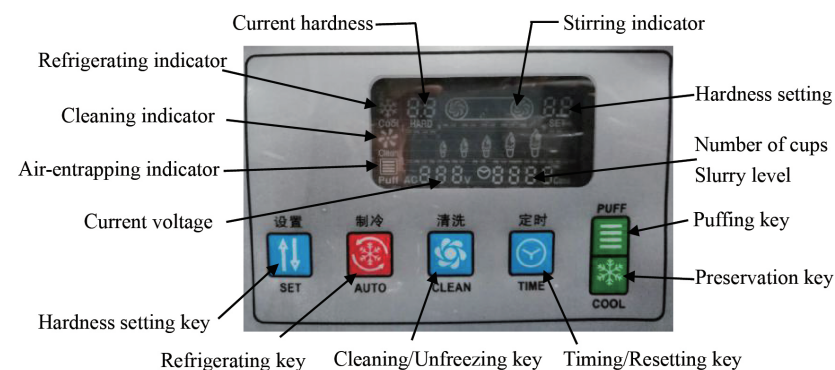


Fig. E



Fig. F

IV. How to Make Ice Cream

1) Leave the prepared ice cream slurry standing for 15 minutes before pouring it into both cylinders at the top of Ice-cream Dispenser; Note: The slurry shall not cake.

2) Power on the Ice-cream Dispenser to enter the standby mode, then press the "cleaning key" to let the device run for 3-5 minutes. After that, hold down the handle to discharge 2-3 cups of slurry and pour them into the upper cylinder again to prevent the water from icing at the discharging outlet, which may affect the production of ice cream; Note: The slurry shall be prepared in accordance with the mixing ratio specified in the Manual of ice-cream powder.

3) Press the "refrigerating" key to trigger the refrigerating mode; Hold down "△" or "▽" key for 1 second to adjust the hardness of the ice cream as required.

Note: In the previous *cleaning mode*, you are required to keep an eye on the "current hardness" value displayed on the screen. If the "current hardness" displayed is 2.2, the hardness of ice cream shall be set between 3.5-5.0; if the "current hardness" is 3.5, the hardness of ice cream shall be set between 4.5-6.5.

4) When the hardness of the ice cream reaches the set value, the device will automatically pause; The intermittence between pauses may be varied from 3 to 9 minutes. At this moment, time adjustment key can be pressed to set the time for the machine to enter the next refrigeration cycle. The time will be increased by one minute for each pressing, until 9 minutes. And the value will return to 3 minute if pressing again.

Note: When in hot weather, a shorter pause interval is preferred; when in cold weather, a longer pause interval is preferred.

5) Place a cone or a cup under the outlet of discharging valve and hold down the discharging handle to squeeze out ice cream. Release the handle to close.

V. Cleaning & Maintenance

1. Cleaning of refrigerating cylinder

To ensure the health of ice-cream consumers and extend the service life of the Dispenser, the refrigerating cylinder must be cleaned and disinfected after every use.

1) Press the cleaning key to discharge all the slurry in the cylinder, and press it again and pause for a while.

2) Add lukewarm water mixed with an appropriate amount of liquid antiseptic into the cylinders to fill both cylinders with approximately the same amount of water.

3) Press the cleaning key again to stir for about 5 minutes before discharging the cleaning fluid.

4) Use lukewarm water instead to rinse the machine for 2—3 times. Pause for a while.

5) Power off, disassemble and wash the parts:

Loosen the four screws on the outlet valve and disassemble the outlet valve unit.

Take out handle fastening pin, handle, valve rod, seal ring from the outlet valve in turns.

Take out the stirrer from the refrigerating cylinder.

Clean all the disassembled parts. Replace the damaged part with new one.

Re-assemble the parts in reversed order.

2. Cleaning of the dispenser body

What consumers need is a fine-looking, clean and sanitary device. Please keep the body clean. A warm towel can be used to wipe the machine body and remove stains. Never rinse directly with water to prevent the device from malfunctioning.

3. Cleaning of condenser

The condenser will be covered with dust after operating for a period of time, resulting in poor heat dissipation and refrigeration, so it must be cleaned every two months. It is best to ask a professional cleaning worker to clean it. Before cleaning, be sure to cut

off the power and not to damage the condenser fins.

4. Adjustment of the belt

After operating for a period of time, the drive belt of the stirring system may be lengthened and loosened, which shall be adjusted in time, preferably by a professional technician. The dispenser must be cut off from power supply before being adjusted. If you still feel that the belt is too loose, you shall replace with a belt of the same type.

VI. Troubleshooting Analysis & Solution

S/N	Problems	Causes	Solutions
1	The dispenser fails to start	1. The power cord is not properly connected	1. Check the power cord and re-connect it
		2. The null line is not connected	2. Check the null line and make sure it's properly connected
		3. The function switch is not turned on	3. Turn on the function switch
		4. Problems with function switch plug and connection	4. Check the plug and wire connection
		5. Problems with the PCB	5. Replace the PCB
2	Cleaning function fails to work	1. Loose connection	1. Reconnect
		2. The motor or capacitor is broken	2. Repair or replace the motor or capacitor
		3. The contactor is broken	3. Replace the contactor
3	The compressor fails to operate	1. Low voltage	1. Check the supply voltage
		2. The contactor is broken	2. Replace the contactor
		3. Problems with the PCB	3. Replace the PCB
		4. The capacitor malfunctions (220V series)	4. Replace the capacitor
		5. The compressor is broke	5. Replace the compressor
4	The compressor fails to work	1. Loose connection of function switch	1. Reconnect the function switch wire
		2. Problems with the PCB	2. Replace the PCB
5	The dispenser fails to refrigerate	1. Refrigerant leakage	1. Repair the leakage and vacuumize it to replenish the refrigerant
		2. Condenser blockage	2. Clean the condenser
		3. The fan fails to operate	3. Repair or replace the fan
6	The belt slips	1. The belt is too loose	1. Adjust the belt or replace the belt
		2. Problems with the reducer	2. Repair or replace reducer
		3. Frozen cylinder, stirring shaft crack	3. Replace the stirring shaft

S/N	Problems	Causes	Solutions
7	Fail to make ice cream	1. No slurry in the cylinder	1. Add slurry to the cylinder
		2. The puffing discharging pipe for slurry is blocked	2. Remove the discharging pipe and clean it
		3. Improper slurry ratio, too thick	3. Prepare new qualified slurry
		4. The travel switch of the panel is broken or disconnected	4. Reconnect the line or replace the travel switch
		5. The belt is too loose and slips	5. Adjust the belt or replace the belt
		6. Problems with the reducer	6. Repair or replace reducer
8	Poor puffing effect	1. The puffing pipe is not inserted	1. Reinsert puffing pipe
		2. The puffing switch is not turned on	2. Turn on the puffing switch
9	Ice cream is too soft	1. The slurry ratio is wrong	1. Prepare new qualified slurry
		2. Improper hardness setting	2. Set the hardness value again
		3. Motor current is too large and there is a short circuit	3. Repair or replace the motor
10	Ice cream is too hard	1. Too much water is added in the slurry	1. Prepare new qualified slurry
		2. Improper hardness setting	2. Set the hardness value again
11	Slurry Leakage	1. Outlet valve leaks	1. Replace the seal ring of the outlet valve
		2. The valve rod leaks	2. Replace the valve rod
		3. Slurry leakage	3. Replace the seal ring of the outlet valve
		4. The seal ring of the stirring shaft is broken	4. Replace the seal ring
12	LCD screen fails to display	1. Problems with the PCB	1. Replace the PCB
		2. The plug is loose	2. Check the connection plug
13	Word missing in the LCD	1. The LCD monitor is damaged	1. Replace the monitor
14	The compressor stops after the ice cream is formed, but the motor does not stop	1. The travel switch contact is connected	1. Repair or replace the travel switch

15	When making ice cream, the motor does not operate and no cream comes out	1. The travel switch is damaged	1. Repair or replace the travel switch
16	Stirring shaft cracks	It will not happen under normal circumstances. The abnormal situation is as follows:	Replace the stirring shaft
		1. There are too much water in the slurry, cylinder frozen	
		2. Press the refrigerating key by mistake when cleaning, resulting in refrigeration with water	
		3. Refrigeration with one cylinder filled and the other empty	
		4. Refrigeration with no slurry	
		5. Abuse of one cylinder when making ice cream	
		6. Hot slurry is poured into the cylinder for rapid refrigeration	
		7. Refrigerating of slurry with the motor reversely connected	

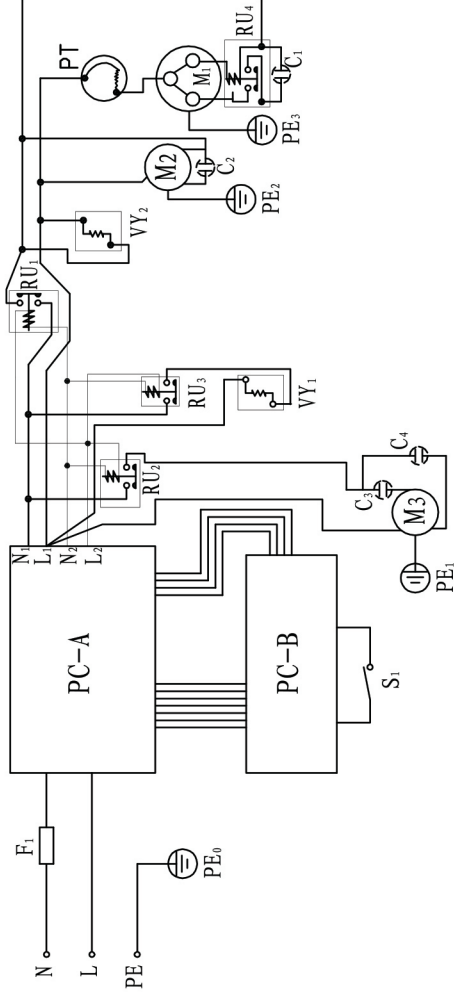
Accessories

1. An internal hexagonal wrench
2. A set of seal rings
3. A User's manual
4. A warranty card

Technical Parameters:

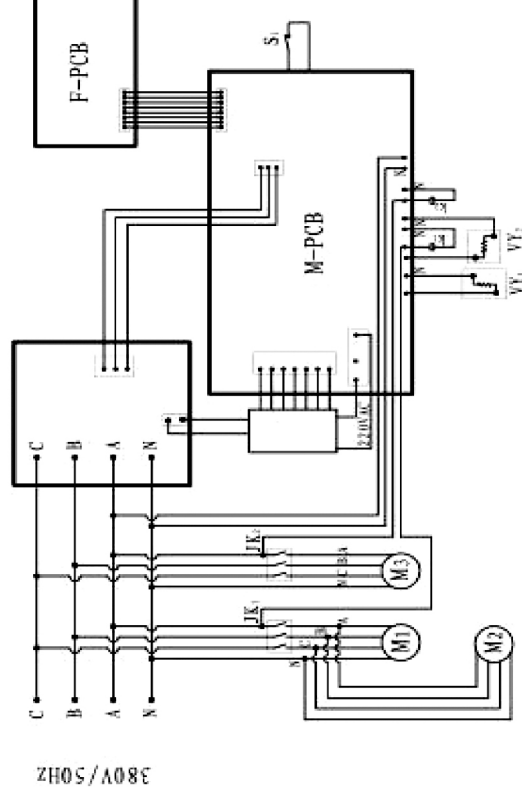
Please refer to the nameplate for specific technical parameters and refrigerant performance.

Circuit Diagram of Ice Cream Maker



Note: N, N1, L1,-----Motive Power supply, N2, L2---Control Power(12v), PC-A, PC-B are circuit boards, M1---compressor, M2-----fan motor, M3---stirring motor, YV1, YV2--- Solenoid valve, S1- Travel switch, F1-Fuse, RU1,RU2,RU3,RU4-Relay, PE, PE1, PE2,PE3-grounding , C1,C2, C3,C4-Capacitance, PT- Thermal protector

380V Voltage Ice-cream Dispenser Schematic Circuit Diagram



Note: M-PCB -Main Circuit Board; F-PCB —Functional Circuit Board; M1—Compressor; M2— Fan Motor;M3—Stirring Motor; YV1, YV2—Magnetic Valve; S1—Travel Switch; JK1, JK2—Electric Relay.