



The instruction is the undivided  
part of the ice machine  
The user must keep it properly.

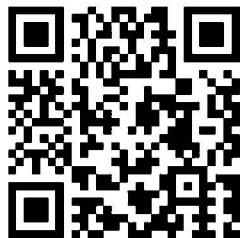
110V~/50Hz Control:SK	110V~/50Hz Control:SA	220V~/50Hz Control:SK	220V~/50Hz Control:SA
P70-408.v1	P70-408.v1s	P70-408.v2	P70-408.v2s
P70-409.v1	P70-409.v1s	P70-409.v2	P70-409.v2s
P70-508.v1	P70-508.v1s		P70-508.v2s
P70-509.v1	P70-509.v1s		P70-509.v2s
L80-508.v1	L80-508.v1s		L80-508.v2s
L80-509.v1	L80-509.v1s		
L80-511.v1	L80-511.v1s		

## Customer Support Team

Mon-Fri 9:00 am - 5:00 pm

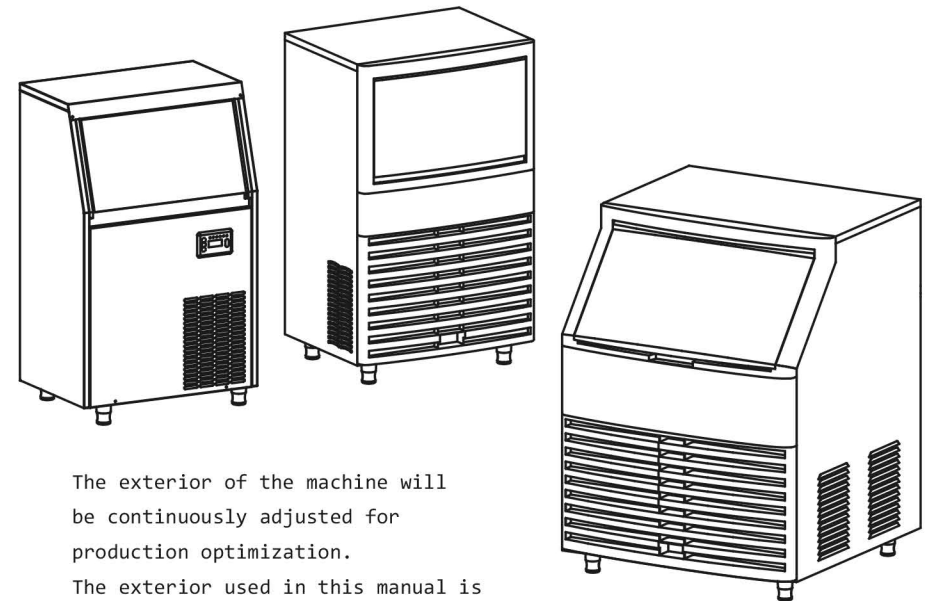
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# Commercial Kitchen FACTORY

Water flow system ice machine



The exterior of the machine will  
be continuously adjusted for  
production optimization.  
The exterior used in this manual is  
for reference only.

ISO 9001-2008 

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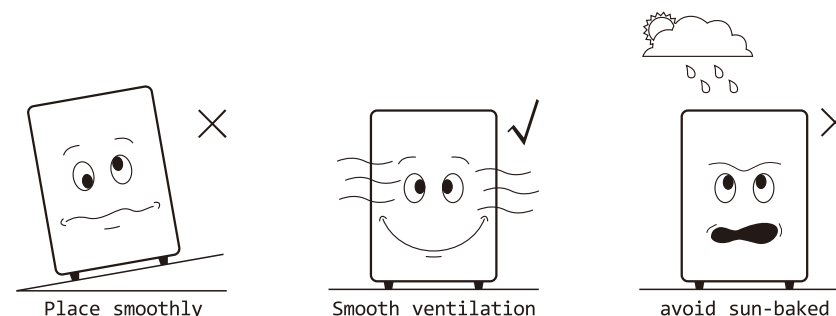
## Receiving And Checking

Thank you for selecting our company's automatic ice machine. In order to protect your legitimate rights and interests, please pay attention to the following things when receiving and checking the machine:

1. The outer packing of the machine is intact.
2. Machine's model is consistent with your purchased.
3. The appearance of the machine is in good condition.
4. The attaced part sare complete.
5. The internal components of the machine are in good condition.

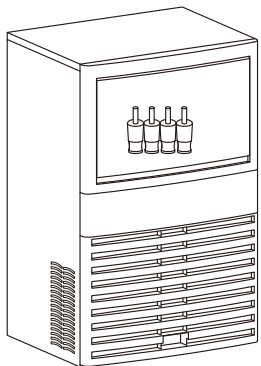


In the process of transportation, due to improper stacking or handling, the lubricating Oil in the compressor will flow into the refrigeration pipeline, resulting in a serious lack of oil for the compressor. Once the electricity is switched on, the compressor will be burned in a short time. Therefore, we strongly suggests that after the customer receive our machine, place the machine in the right position for a day, so that the lubricating oil can flow back to the compressor, then install and use the machine.

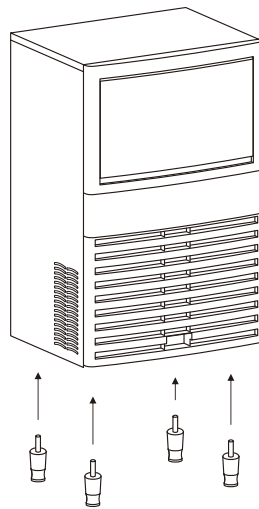


## Foot Installation & Placement

1. Screw the feet of the ice machine to the baseplate.
2. Each foot must be screwed up and tightened so as not to bend.
3. Put the ice machine in a sturdy and flat position.
4. Adjust the height of the foot to make the ice machine level.
5. The ice machine is not suitable to be used in the outdoors. The normal using ambient temperature is between 10~38 degree centigrade, and the water temperature is between 5~30 degree centigrade.
6. High temperature will seriously reduce the amount of ice output. We suggest that the client put the ice machine in a room with cold air. It is strictly forbidden to put together with high temperature equipment (such as refrigerators, ovens)
7. Ice machine should not be installed in environments without sewers and drainage.
8. Air-cooled ice machine relies on air circulation for heat dissipation. Therefore, more than 15 cm of space should be reserved around to facilitate heat dissipation.



The machine foot is in the machine barrel and can be taken out.



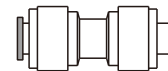
Tilt the machine and screw in the foot

## Electrical safety

1. It is strictly forbidden to plug in and out when hands are wet. The power supply must be unplugged before maintenance and cleaning.
2. It is necessary to ensure that sockets are equipped with grounding wires and are grounded safely.
3. Electrical control system has more than 36V voltage, do not open and touch at will in use.
4. The power connection should be marked according to nameplate, the specified power supply should be used, and the specifications of the wires used in the connection circuit should be determined to meet the requirements.
5. The power plug should be unplugged or cut off when the ice machine stops using.
6. If the soft wire of the power supply is damaged, it must be replaced by the manufacturer or other maintenance department or similar professional staff in order to avoid danger.

## Installation of Water Supply

1. The ice machine must use direct drinking water at room temperature.
2. Water supply pressure must be controlled between 0.1 and 0.63 MPa.
3. The ice machine is drained by gravity. Therefore, it is necessary to ensure that the drainage pipe has sufficient slope and drop.
4. Random donated water filters are only used for machine testing.
5. The filter is disposable. Change regularly according to local water quality.
6. Connections on filters need to be disassembled with appropriate tools.



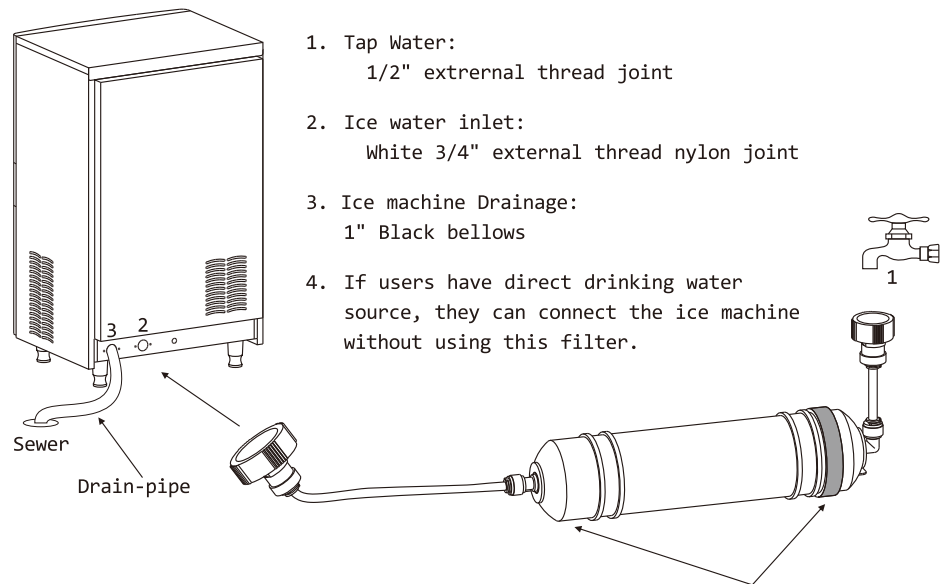
The clamp is stretch and locked, and the intubation cannot be pulled out.



The clamp is pressed and unlocked, and the intubation can be pulled out.

## All-in-one Machine Installation Diagram

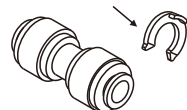
This diagram is used for water connection of air-cooled machines.



1. Tap Water:  
1/2" external thread joint
2. Ice water inlet:  
White 3/4" external thread nylon joint
3. Ice machine Drainage:  
1" Black bellows
4. If users have direct drinking water source, they can connect the ice machine without using this filter.

Direction of Inlet water of Filter = Thicker on the right: Inlet water  
No thicker on the left: Outlet water

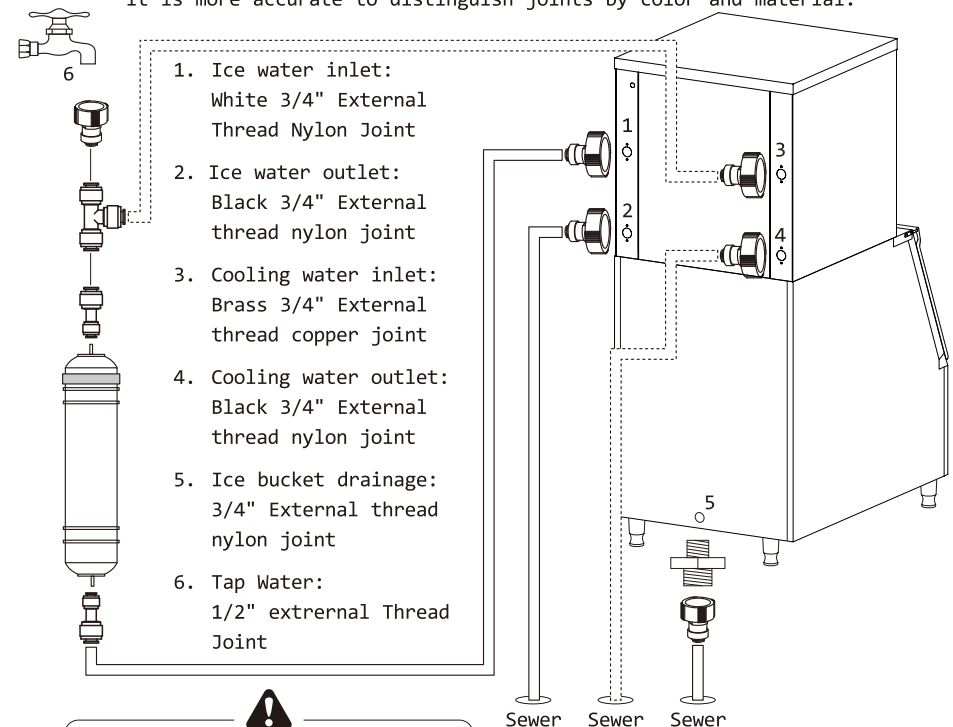
	1/2" internal screw thread/ PE 1/4" fast connection		3/4" internal screw thread/ PE 1/4" fast connection
	PE 1/4" fast connection/ straight		PE 1/4" fast connection/ right angle
	PE 1/4" fast connection/ Tee		6" Single stage Filter



Clasp, after installation,  
the intubation can be locked.

## Split Machine Installation Diagram

This diagram is used for water connection of water-cooled machines.  
It is more accurate to distinguish joints by color and material.



1. Ice water inlet:  
White 3/4" External  
Thread Nylon Joint
2. Ice water outlet:  
Black 3/4" External  
thread nylon joint
3. Cooling water inlet:  
Brass 3/4" External  
thread copper joint
4. Cooling water outlet:  
Black 3/4" External  
thread nylon joint
5. Ice bucket drainage:  
3/4" External thread  
nylon joint
6. Tap Water:  
1/2" external Thread  
Joint

Three drains cannot be joined  
together and must be independently  
inserted into the sewer.

	1/2" internal screw thread/ PE 3/8" fast connection		3/4" internal screw thread/ PE 3/8" fast connection
	PE 3/8" fast connection/ straight		PE 3/8" fast connection/ PE 1/4" fast connection
	PE 3/8" fast connection/ Tee		6" Single stage Filter



## Ice Machine Steps

The working steps of the ice machine are divided into three parts :

### 1. The automatic cleaning of the ice machine (once, 2 minutes )

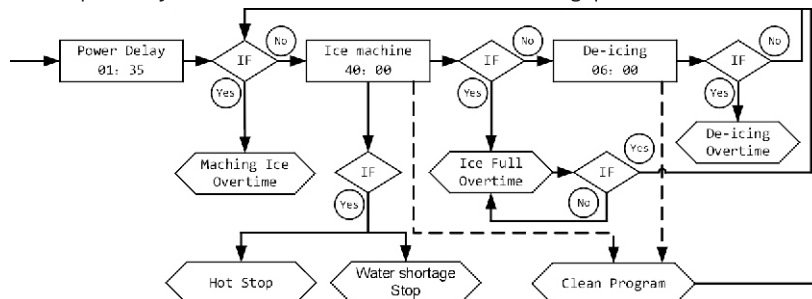
When each ice machine starts, the automatic 2 minutes cleaning program is automatically carried out to clean the floating objects in the evaporator and the tank. In 2 minutes the tank uninterrupted water, pump run. The user can hear the noise of the pump work flow from the top of the evaporator down into the tank, and then overflow from the tank, from the drain outlet of the ice storage bucket.

### 2. Ice (loop's work, the longest 40 minutes )

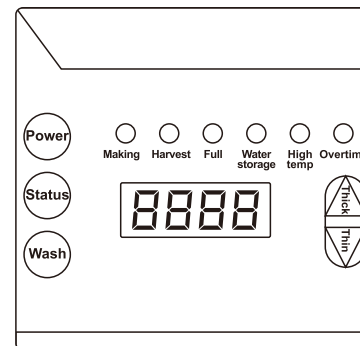
After the completion of automatic cleaning, the pump will delay 45 seconds to start, When making ice, the water pump works continuously from above the evaporator to the tank, and the water will slowly become cold until it freezes. Ice thickness is measured by the ice thickness detector during the ice making process. When the thickness of the test is reached, the program will turn to the de-icing step. If the gap of the ice thickness detector is too large, it will be forced into the de-icing program after more than 40 minutes of ice making time.

### 3. De-icing ( cycle work, up to 4 minutes )

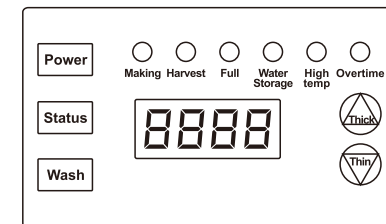
In the de-icing procedure, ice will be heated, ice and evaporator will be the connection will be melted, when the ice to weight and can not be attached to the evaporator, it will fall off, complete a de-icing process. When the ice falls, the water plate will be turned over, and then the water retaining plate will be reset due to the dead weight, and then the machine starts to make ice again. When the ice storagebin is too much ice, the ice block can not be reset, and the control chip is judged to be full of ice and temporarily shut down until the water retaining plate is reset.



## SK/SM Control Panel Operating Manual



SK5 Screen



SM5 Screen

- Power**
1. When the machine is in working state, press this key to stop the program and shut down automatically.
  2. When the machine is not working, press this key to start it immediately.
- Status**
- When the machine is in working state, press this key to jump to execute the deicing subroutine. There are two situations:
1. When appropriate ice is available, this key can stop the ice making process and turn to the deicing process.
  2. When there is no ice or too thin, this key will be transferred to the deicing process, which will automatically jump to the ice making process after 6 minutes of deicing time.
- Wash**
1. Short press once to control the blue light's turn on/off
  2. Press 3 seconds long to execute the cleaning subroutine. After 4 minutes, jump the ice making subroutine automatically.
- Thick**
1. Press once, the screen number is +1, ice making time is +1 minutes.
- Thin**
1. Press once, the screen number is -1, ice making time is -1 minutes.

⚠

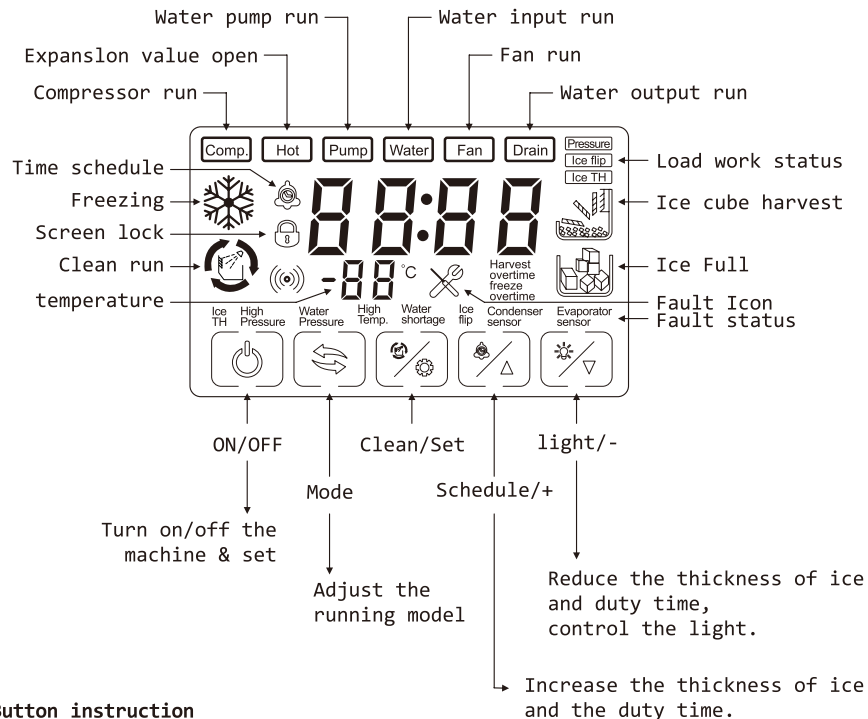
Adjusting ice thickness can only be observed after de-icing.  
Ice-making time under normal conditions is mostly within 15-30 minutes.  
No more than 3 minutes at a time to adjust ice thickness

## SA Control Panel Operating Manual

General description: This is a fully automatic ice making machine, all programs of the SA control panel have been set up in the factory.

Usually, the user just need to do some simple operation. Please place the machine in the appropriate location and connect to power supplies.

IF you machine has red switch on the machine's back or left side, Please turn on it. Then the SA control panel will light up, the machine will run automatically, the user need no any other operation.



### I. Button instruction



#### ON/OFF Button

1. Press it to turn off ice machine in the status of power ON .
2. Press it to turn on ice machine in the status of power OFF.
3. Press it to schedule time in the status of time schedule setting.
4. Press it to turn off the machine in the status of time schedule.

## SA Control Panel Operating Manual



#### Clean/Set Button

1. Press the button in the status of power OFF , releasing the button when it flashes, machine works on manual clean.
2. Press the button in the status of manual clean, machine go to drain step and then enter into rinsing process after drain finished. Press the button in the status of rinsing, machine will go to drain and then go to next procedure.
3. Press the button goes to manual clean, in the status of ice freezing, ice harvest and ice full.



#### Schedule/+ Button

1. Press it to enter time schedule setting when power OFF.
2. In the status of time schedule setting, press the button to increase 1 minutes, long pressing to increase time continuously.
3. In the status of setting, press the button to increase one of the parameter, long pressing to increase continuously.



#### Light/- Button

1. In the status of setting, press the button to reduce one of the parameter, long continuously.
2. In the status of time schedule setting, press the button to reduce 1 minutes, continuously.
3. In the status of non set , press the button to turn on/off the blue light.

### II.SA control panel status instructions (Drawing instruction)

1. Switch on: LCD control panel lights up.
2. Switch on time-delay:  
Water inlet: Display time C00, icons of Clean, Freezing, Ice cube harvest and Ice full of storage light up.  
Switch on clean: Display time is cleaning time, Clean icon lights up.  
Pressure balance: Icons of Clean, Freezing, Ice cube harvest and Ice full of storage light up. If condenser sensor had fault, Fault icon lights up, Condenser sensor icon lights up, temperature displays EE.

## SA Control Panel Operating Manual

3. Manual clean: Clean icon flashes. Displays time is cleaning time.(It will not display icon, if the program has no cleaning function..
4. Ice freezing: Freezing, Comp. and regarding icons light up. Display time is ice freezing time. After entering the countdown program, it displays remaining time for ice making. In the status of delayed shutting down, Freezing icon flashes.  
If condenser sensor had fault, Fault icon light on, Condenser sensor icon lights up, temperature displays EE.
5. Ice harvest: Ice cube harvest icon light up. Display time is ice cube harvest time. In the status of delayed shutting down, Ice cube harvest icon flashes.  
If condenser sensor had fault, Fault icon lights up, Condenser sensor icon lights up, temperature displays EE.
6. Ice full: Ice full of storage icon lights up. Display time is ice full time. All the load works will be turned off.  
Ice full of storage icon works with water plate. When the water plate close, Ice full of storage icon lights up, Ice full of storage icon goes out when water plate opens. No button pressed for 60 seconds, screen locked, screen lock icon lights up. Press any key to unlock.  
Ice full is released (compressor is on delayed status), Ice full of storage icon flashes, turn on delay. If condenser sensor had fault, Fault icon light on, Condenser sensor icon lights up, temperature displays EE.
7. Fault: Fault icon lights up, corresponding fault status icons light on. All the load works will turn off.
8. Switch off: Displays OFF.
9. Schedule time setting: Time schedule icon lights up. Display time is the schedule time to turn on the machine.
10. Schedule status: All icons of Clean, Freezing, Ice cube harvest, Ice full of storage light up. Time schedule icon flashes. Displaying scheduled time counts down.
11. Condenser fault, Fault icon lights up, Condenser sensor icon lights up, and the machine working.

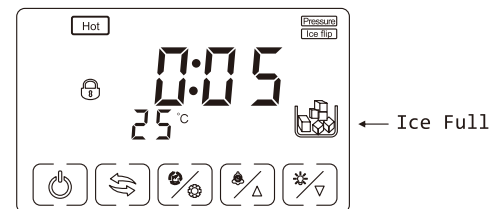
## SA Control Panel Operating Manual

12. Water plate or ice full switch faults, Ice flip lights up, Fault icon flashes.
13. Overtime ice making fault, if it happens 10 times consecutively, Freeze overtime icon lights Fault icon flashes.
14. Overtime ice harvest fault, if it happens 3 times consecutively, Harvest overtime icon lights Fault icon flashes.
15. High temperature fault,(condensation temperature is over 65 degree Celsius), High Temp. icon lights up and Fault icon flashes.
16. Water shortage fault, after 4 minutes water inputting continuously, water is still not full, Water shortage icon lights up and Fault icon flashes.
17. High pressure fault, HP switch open (the function is invalid without HP switch), High pressure icon lights up and Fault icon flashes.

### III. Several frequently-used procedures setting for your reference

Please operate as the following steps when you need.

- A. How to set the program when the ice storage is full?  
When the ice storage is full, the control panel will display "full ice" pattern as the following picture.
1. Use ice shovel to clean the ices which cover on the water plate.
2. Press the discretionary one of the five buttons to unlocked.
3. Press On/Off button to turn off the machine, the control panel will appear "OFF".
4. Press On/Off button to turn on the machine, then press 3 times Model button to back to making ice model.

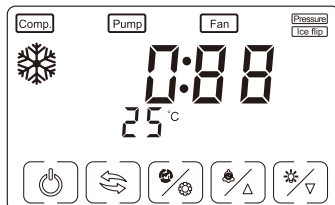


## SA Control Panel Operating Manual

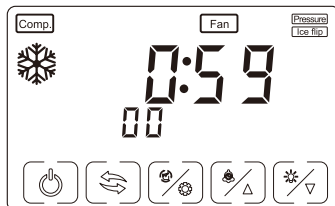
### III. Several frequently-used procedures setting for your reference

Please operate as the following steps when you need.

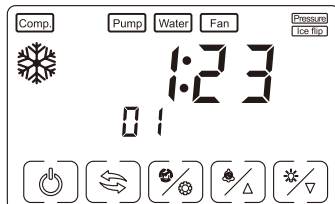
#### B. How to adjust the thickness of the ice?



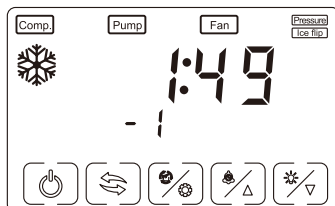
1. When the is on making ice model. Press the discretional one of the five buttons to unlocked.



2. Press Schedule/+ button, the position which displays temperature will flash "00".



3. Press Schedule/+ button and Light/- button to adjust. Press Schedule/+ button for one time, the position which displays temperature will appear "01" as the following picture. It means the ice making time will be increased 1 min, the ice will become thick.



4. Press Light/- button for one time, the position which displays temperature will appear "-1" as the following picture. It means the ice making time will be reduced 1 min, the ice will become thin. After setting, you need no other operation, the machine will resume making ice automatically.

## SA Control Panel Operating Manual

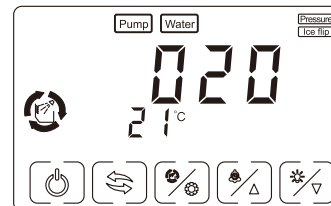
### III. Several frequently-used procedures setting for your reference

Please operate as the following steps when you need.

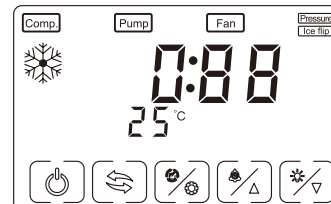
#### C. How to clean the machine?



1. Press the discretional one of the five buttons to unlocked.
2. Press On/Off button, the control panel will appear 'OFF' as the following picture.



3. Press Clean/Set button, the control panel will display clean pattern. Usually, 2 minutes to clean the machine is enough.

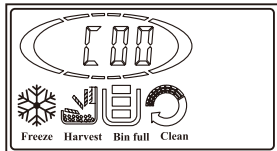
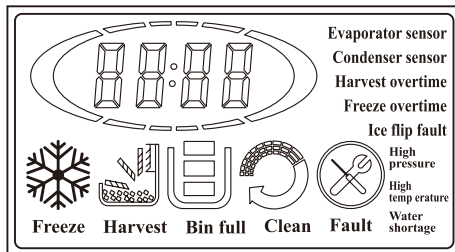


4. Press Model button 3 times to back to making ice model.

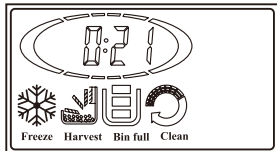


Adjusting ice thickness can only be observed after de-icing.  
Ice-making time under normal conditions is mostly within 15-30 minutes.  
No more than 3 minutes at a time to adjust ice thickness

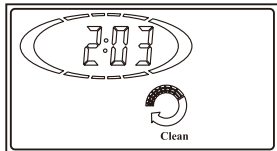
## DZ Control Panel Operating Manual



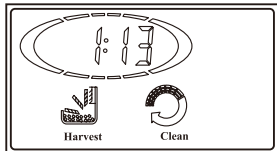
Power-on delay water intake Situation Display.



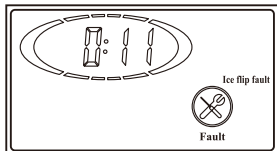
Power-on Delay: After water intake finish, displays Standby time.



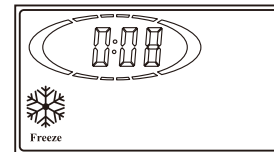
Clean display



When ice harvest, press clean button display: Clean light flashes, enter into cleaning.

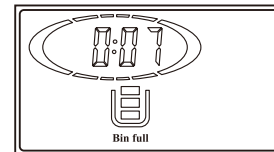


Fault: light flashes, corresponding fault item lights ON.

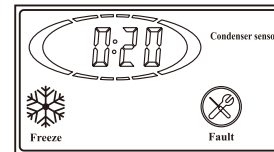


Freeze: displays ice freezing time, after freeze finish, began to harvest, it will display 30s countdown.

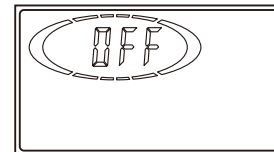
Harvest: display ice harvest time.



Bin Full: light ON when ice bin full. Light flashes after ice were taken out.



Condenser sensor and fault light ON.



Standby display: no operations within 2mins, the back-light becomes dark, will recover bright against any operations.



Adjusting ice thickness can only be observed after de-icing.  
Ice-making time under normal conditions is mostly within 15-30 minutes.  
No more than 3 minutes at a time to adjust ice thickness

## Routine Cautions

1. When transportation and mobile location, the ice machine tilt shall not exceed 45 degrees.
2. Ice machine, please use independent water source, and check regularly to prevent water pressure is too low, fluctuations or filter clogging.
3. Do not store any sundries in the ice storage bin, or freeze any food in the ice storage bin and keep the ice shovel clean.
4. Switch the ice storage bin plastic door, should be light open and light closed, don't beat box door, after taking the ice, please turn off the sliding door of the ice storage bin.
5. Ice machine should be far away from the heat source. It is strictly prohibited to use in high temperature or low temperature environment. It is necessary to avoid direct sunlight in order to avoid affecting the heat dissipation of the machine.
6. It is forbidden to wash the surface of ice machine directly with water, otherwise it may lead to short circuit, leakage and other faults.
7. After the ice machine is used for a period of time, if it is stopped for a long time, it should be electrified every two months for four to six hours.

## Falut self-diagnosis

1. Pump--can directly observe whether there is water flowing from the evaporator up, if there is no pump failure.
2. Refrigeration--after 10 minutes of ice making, the water in the sink will be significantly cooler, and you can feel the water temperature directly by touching the evaporator or running water.
3. Influent--one by one in the automatic cleaning process can be observed in the tank overflow pipe constantly flowing into the ice storage bin. In the process of ice making, you can put your hand into the water tank to feel the amount of water, the normal situation accounts for more than half of the tank.

## Maintenance

In order to improve the reliability and service life of the ice machine, and to avoid the increase of the energy consumption of the ice output, the maintenance should be carried out according to the requirements of this manual.

1. Often clean the environment around the ice machine to keep clean, do not plug the case of ventilation shutters.
2. The shell can be cleaned with a neutral cleaning agent, and then wipe clean with a rag which is made of soft material. Commercial stainless steel cleanser and polishing agent can be used when necessary.
3. Filter element should be checked regularly. Most of the ordinary filter element is replaced in half a year, and the senior core should be replaced on time according to the description.
4. Water pipes can be washed directly when the water tank and the ice storage bin are cleaned. Do not let water pressure is too large, do not directly flush the water pump and the above part of the ice, to prevent the leaching circuit part.
5. Air-cooled ice machine condenser maintenance : three months to clean an air-cooled condenser. A vacuum cleaner with a soft brush or a brush is arranged in the direction of the fin to avoid the damage of the fin to affect the refrigerating efficiency.
6. Maintenance of the wintering : in addition to turning off the water source and power supply, the water tank of the ice machine is also needed to be cleaned, residual water in the inlet and drain pipes needs to be cleared away.



Any maintenance of the ice machine is not within the manufacture's warranty.



The wind condenser fin edge is sharp, please be careful when cleaning.



Before cleaning and maintenance work, be Sure to turn off the water and power, pull out the plug.

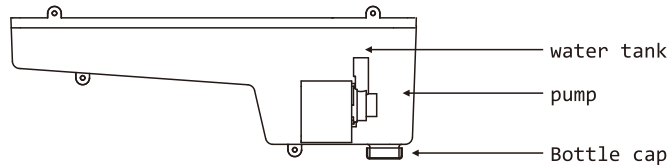


The filter cartridge should be replaced periodically.

## P70 Water Tank Clean

If there is impurity scale in the water tank, the ice machine will deposit scale inside after a period of time, which will affect the color, quality and taste of ice. If not handled in time, the machine will not work properly.

P70 water tank has which was applied by our company for a new appearance patent to facilitate customers to clean scale by themselves, as shown in the figure:



The bottle cap at the bottom of the tank can be screwed off to drain water from some scales in the tank.

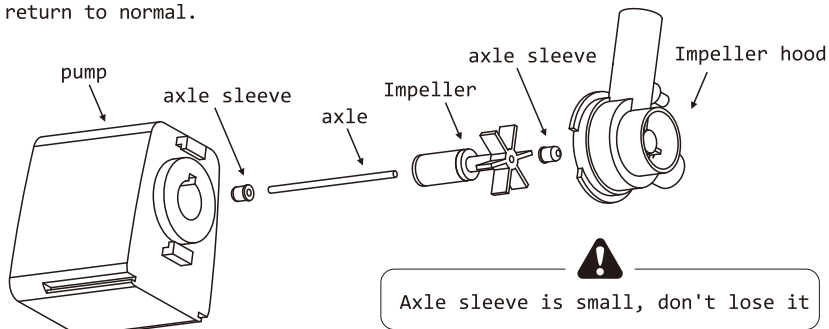
Then a large amount of water is used to wash the scales deposited in the flume and discharge them from the drainage outlet.

The cleaning process is completed by tightening the installation of the bottle cap first.

## Submersible Pump Clean

The serious scale in the tank will jam the impeller of the pump and cause the water inside the machine to be unable to circulate. At this time, it is necessary to power off and take out the water pump to dismantle and clean.

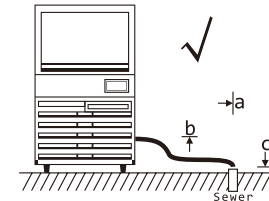
Some machine models use submersible pumps, as shown in the figure, after decomposing the pump, use toothbrush to remove scale, and then return to normal.



## Drainage Pump Application

The drainage pipe is short or the sewer is too high. Drainage pump can be carried out according to this figure. Drainage pump is fully automatic gap work, when the waste water accumulates to a certain height, automatically start the pump drainage.

The drainage pump connects the pipe of the sewer, which needs the user to solve by himself.



Best case

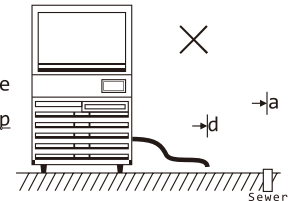
Distance of sewer < length of drain pipe

Height of sewer < drainage height

No need to use drainage pump

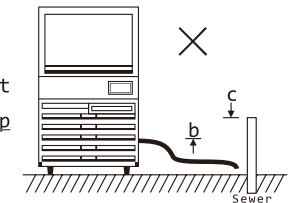
Distance of sewer > length of drain pipe

need to use drainage pump

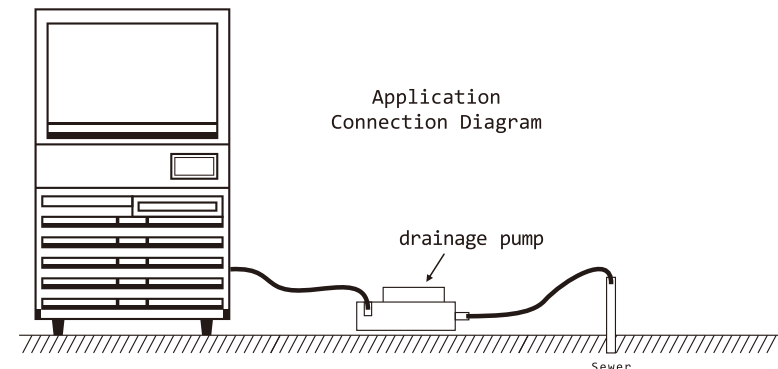


Height of sewer > drainage height

need to use drainage pump



Application  
Connection Diagram





## Fault Detection

Fault	Possible Cause	Solution
Ice machine does not start	Poor contact of socket.	Replace the socket.
	Ice storage bin is full of ice.	Remove the ice, the machine will run automatically.
	The cover of evaporator does not reset.	Adjust the cover to make it reset free.
Ice machine shuts down after operation	The water supply has not been opened or not connected firmly.	Recheck the water supply.
	Ice machine didn't be placed horizontally.	Adjust the feet to be horizontal.
	High-voltage temperature control switch action.	Open the front panel, clean the condenser.
Lack of ice production	Didn't clean more than two months.	Open the front panel, clean the condenser.
	The water temperature is too high (Usually it happens in summer).	
	The environment temperature is too high.	Clean up the surrounding sundries and use electric fan to makes the temperature cool down and the air circulating.
	The environment space is small or closed.	Clean up the surrounding sundries to make air circulating.
	The water inlet valve fails and keeps open (the water tank is overflowing).	Replace the water inlet valve.
The transparency of ice cube is poor or the shape of the ice is incomplete.	Imporper adjustment of ice thickness detector.	Reset the ice thickness detector
	The water quality is poor.	Install the filter, replace the filter element
	The water tank and evaporator is too dirty.	Clean the ice machine and replace the filter element.
	The water inlet valve filter screen is dirty.	Clean the water inlet valve filter screen.
	Large amount of running water above evaporator.	Tighten silicon tube of water pump, regulate water flow.
	The drain valve fails and keeps close (split ice maker).	Replace the drain valve.
The ice cube can not drop from the evaporator.	The ice is too thick.	Adjust the ice thickness.
	The ice detector is dirty and loose.	Clear the probe and check the connection.
Excessive noises	The ice machine placed instability, foot hangs in the air.	Place the ice machine smoothly.
	The shell of the ice machine touch other objects.	Avoid touching other objects.
the shell of the ice maker has condensed water	The door of ice storage bin is not completely closed.	Completely shut down the ice storage tank.
	Working in a high temperature and humid environment.	Normal phenomenon.

## Before Contacting After-sale Service

If the ice machine is abnormal, please confirm the following contents before making a phone call :

- Is the water source supply of the ice machine normal?  
The method of inspection is to loosen the ice water inlet ( 6" joints ) behind the machine, when loosening to a certain extent, the water will leak out. The water source supply will be normal when the water is exuded for a long time, otherwise, there is no water.
- Whether the ice machine has been connected to the power supply or not?  
The ice machine produced by our company is fully automatic without manual operation. You just need to connect the power supply and open the red switch on side of the back of the ice maker. Please let the person who understands the electricity to check whether the ice machine is electrified , focus on checking the plug base.
- Model and series No. of our ice maker.  
There is model and series No. nameplate on the side panel of the machine.



Failure due to user's reasons ( such as no water supply, no electricity supply, environmental factors, etc. )  
Door-to-door service charges will be charged.



When checking the water source, do not completely unscrew the ice making inlet interface to prevent high pressure water jetting.



Plastic parts of the ice machine do not belong to the scope of warranty.