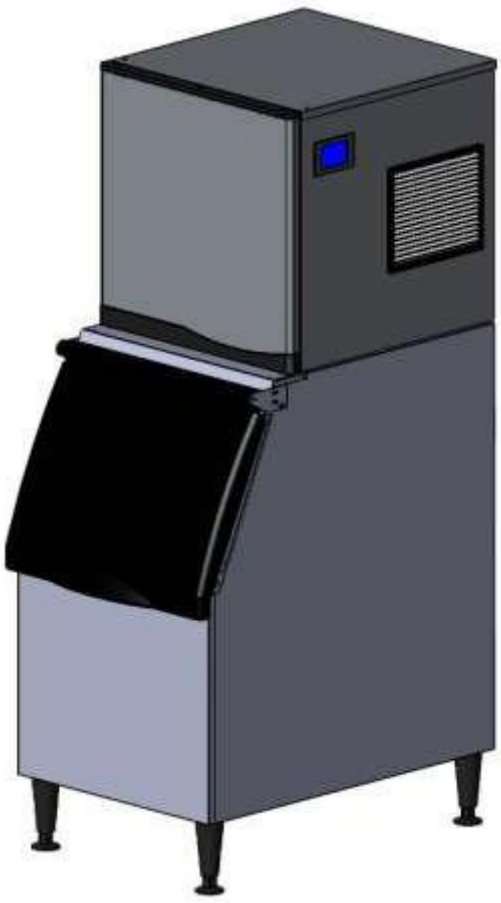
LB Series Ice Maker

Installation and Maintenance Manual

The manual covers the following base models
LB300TA LB400TA LB500TA



Content

File No：1.9.01.00018 Version No：A

Note：Subsequent updated versions of this manual will not be noticed, thank you.

Safety Tips

When operates and maintains an ice maker ,be sure to pay attention to the safety tips in the manual. Ignoring these tips may result in personal injury and ice maker damage.

In this manual, you will see the following forms of security tips：

Warning

Possible personal injury would be happened when not following up regulations of installation, operation or using altered equipment.

Note

The correct installation, usage and maintenance of the ice maker is very important to the output of the ice maker and reduce the failure rate. Please read and understand this manual. which contains valuable information on installation. usage and maintenance. If you encounter problems not covered in this manual, you may contact our company or our service provider at any time.

Important

The mentioned information about adjustment、maintenance and sanitation is not subject of the range of warranty clause.

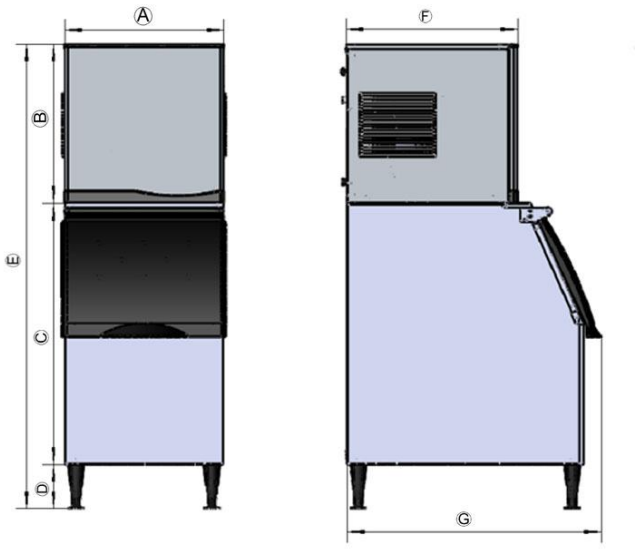
Please preserve this manual well

The manual is an integral part of the product, please keep it properly. Be sure to read carefully the warnings, notices and important matters described in this manual, because these warnings, notices and important matters provide the installer/user with important information needed for proper installation, continuous and safe use and maintenance of the product. Please keep this manual for reference when necessary.

1. Features

- XH series ice maker, with a number of patent control systems, simple operation, accurate control, suitable for different water quality conditions;
- Key components are made from internationally renowned brands to ensure reliable operation in harsh environments;
- Food-grade plastic is used for the parts in contact with water, and stainless steel is used for the outer shell to ensure food safety and excellent anti-rust performance。

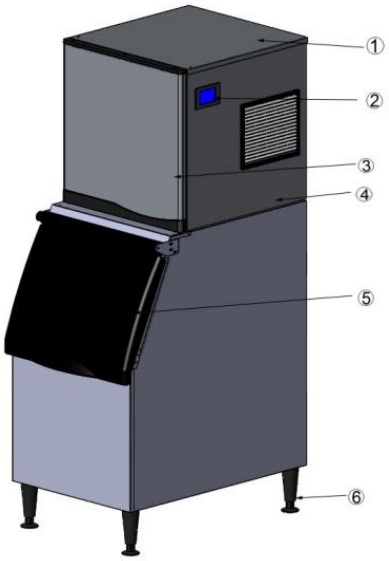
2. Size and apperance

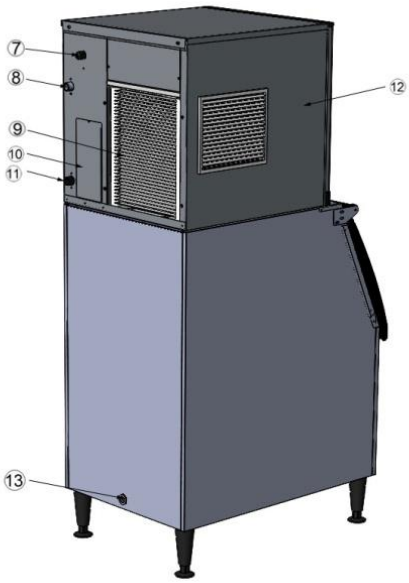


- **Size list** (Unit：cm)

	A	B	C	D	E	F	G
LB300A	57	56.5	92	15	163.5	61	90
LB400A	57	56.5	92	15	163.5	61	90

- **Appearance**





① Top cover plate ②.Pannel
③. Front plate ④. Right side plate
⑤.Door ⑥. Adjustable feet
⑦ Power supply cable ⑧ Inlet value
⑨ Condernser ⑩ Back plate
⑪ Purge pipe connector ⑫ Left side plate ⑬Purge pipe connector

3. Critical Parameter

	Power (V)	Frequency (HZ)	Current (A)	Power (W)	Refrigerant	Liquid (g/oz)	High side Design pressure (psig)	Low side design pressure (psig)
LB300A	110	60	9.2	1100	R290	130/4.6	297	145
LB400A	110	60	8.2	880	R290	140/5.0	260	145

4. Unpack

- Before unpacking, check the anti-tilt sign is in good condition, the outer packing of the machine is in good condition, and the machine model is consistent with what you have purchased;
- Take out accessories and affiliated documents, check for its consistency with packing list;
- Remove its protective film。
- If there is any discrepancy or damage, please contact our company/distributor directly。

5. Installation Location

- The ice maker is not suitable for outdoor usage, the installation location should not be closed to heat source or be exposed under direct sunlight;
- The normal working ambient temperature should be ranged between 10°C～38°C,the water temperature should be between 5°C～32°C,If the ice-making machine operates beyond the above normal temperature range for a long time,its ice making capacity may be affected.
- Ice makers should be installed on solid, flat ground;
- Ice makers should be placed near drinkable water supply. It is recommended that distance between ice makers be less than one meter.
- Do not block the ventilation window of the ice maker. There should be enough air convection space around the ice maker.
- The ice maker can not work at sub-zero temperatures, to prevent supply line failures, empty the ice maker when the temperature is below zero(see “preparation for long-term storage of ice maker”)

6. Leaving and Adjustment

- Screwing home four adjustable parts of the legs first, and then screwing the legs into ice maker bottom plate;
- Moving ice maker to installation place. Adjusting legs to ensure the ice maker is leveling。

Note

Do not put hard object under legs for leveling ice maker. Make sure the four legs touching the ground steadily to prevent vibration during operation.

7. Water supply/Purge

7.1 water supply

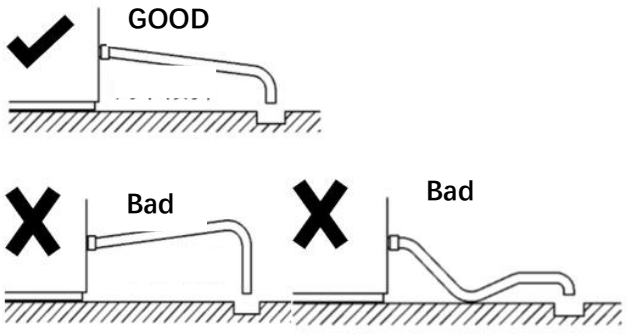
Warning

Ice makers must be connected to potable water pipe

- With local potable water quality, determining if a water treatment system is needed to prevent sediment formation, filtering out impurities and removing bleach smell;
- Please install water supply pipe according to below instruction:
  - Don't connect ice maker to hot water pipe;
  - Water supply pressure range is 1bar～5bar. Using water pressure regulator for water supply pressure over rang;
  - Individual water faucet must be installed for ice maker。

7.2 Purge

- When installing drain hose, follow these guidelines to be sure all purged water flowing into gully drain:
- The main gully drain capacity shall be enough for all drain water;
  - Drain hose should be wrapped with insulation material to prevent condensation;
  - The drain hose of the water-cool condenser and the drain hose of ice bin should be placed separately。
  - bout 2.5 centimeters drop needed for each one meter additional drain hose and must not be bent。



8. Power supply

Warning

The power supply must be reliably grounded and the wiring used must comply with the laws and regulations of the country and region where the ice maker is used.

The voltage, frequency and capacity of the power supply shall be consistent with the nameplate of the machine;

- ±10% fluctuation of rated power voltage is allowed;
- Separate circuit breakers must be installed for the ice maker。

9. Clean after installation

- After the ice maker is installed, clean the shell, liner and ice scoop with a clean wet cloth or sponge;

10. Check after installation

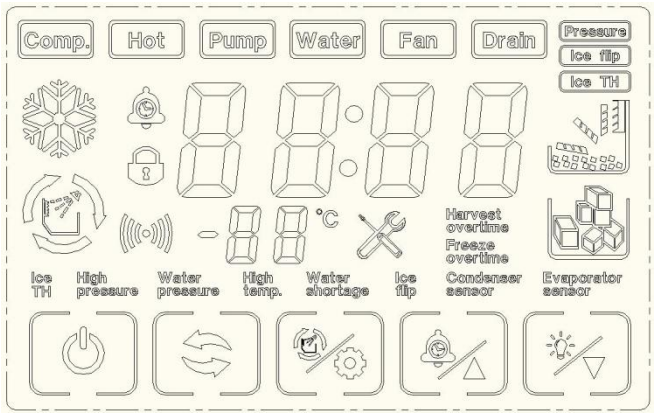
After the ice maker is installed, clean the shell, liner and ice scoop with a clean wet cloth or sponge。

- Is ice maker placed levelly?
- Have you removed all the transportation seals?
- Are all the water and electricity connected well?
- Is the supply voltage consistent with the rated voltage on the nameplate?
- Is the ice maker properly grounded?
- Are there adequate air Spaces around the ice maker?
- Is the ambient temperature of the ice maker between 10°C and 38°C?
- Does the water inlet temperature remain between 5°C and 32°C?
- Are the ice maker and refrigerator cleaned?

11. Operation

11.1 Turn on/off

On： Connect water supply and drainage, plug in power plug, screen start to light up;



Off： the ice making work, press [switch] key once, the ice making machine stop the ice making (standby state), the screen shows "OFF", and then pull out the power plug.

11.2 Ice

a.The ice maker automatically enters the ice the ice-making preparation work after electrification, the preparation process includes water pump start, hot valve open, compressor start, fan start, etc. Under normal circumstances, the ice-making machine begins to make ice automatically after the preparation work is finished, and no more operation is required. The ice-making machine stops making ice until the ice is full; the ice-making machine begins to make ice when the ice is taken away;

> **▲ attention**
>
> **The ice machine has been tested and debugged in the factory before shipment. In general, new machines can make ice without any debugging.**

B.In ice-making state, press "[booking/adding]" or "[light/decreasing]" to see the "temperature display" number on the screen start flashing, press "[booking/adding]" can increase 1 minute, press twice increase 2 minutes, and so on, increase in one unit by 1 minute, press "light/decrease]" once can reduce 1 minute, decline in turn; after adjustment, stop operation ," temperature display" number no longer flicker, ice thickness setting is completed (note: ice thickness adjustment before and after, ice machine is always in ice making).

11.4Forced de-icing

Press the "mode" key to force deicing in ice-making state;

11.5 Manual cleaning

Press "[cleaning / setting]" key in standby state, enter manual cleaning state, cleaning icon flicker, inlet valve open, screen display start timing, about 15 minutes later, cleaning stop, start drainage ,30 s after drainage finished, enter automatic rinsing stage, first wash 3 minutes later, then drain 30 s, rinsing process recirculate 5 times, the whole cleaning process is finished, screen display "OFF", into standby state;

Remarks: If you need to clean quickly, you can press "[Clean/Set]" again for 15 minutes. After 30 s, you can finish the drain and enter the rinse stage. If you don't need to cycle many times, you can press [Switch] to stop the rinse and enter the standby state;

11.6 Booking Ice

standby state (display display "OFF"), first press "[booking/adding]" enter time setting, press "[booking/adding]" again can increase 10 minutes, press twice increase 20 minutes, and so on, increase in 10 minutes as a unit, press "[light/decreasing]" once can reduce 10 minutes, decline in turn; after setting up, press "[switch]" key, the screen shows the countdown of the set time, countdown is 0, the ice machine began to make ice.

11.7 Setup function

standby state (screen display OFF), long press "[clean/set]" key until screen "OFF" disappear jump into parameter setting state, control

addition and subtraction operation by "[reservation/addition]","[light/subtract]", set state light point "[clean/set]" switch next setting, parameter switch one round, cycle again from first parameter."**Setting up functions" is recommended for operation under the guidance of a professional and no private adjustment is recommended (see page 14 for details);**

12. Ice-making workflow

12.1 Power on (power on): after power on the display full light, and then into the power on balance state. Hot valve open, water valve, fan controlled. After 30 seconds press open, after 5 seconds heat valve closed, start ice.。

12.2 during the ice making process. Compressor continues to open, heat valve, drain valve closed, fan controlled, pump opened after 30 seconds, water valve controlled within 5 minutes of the beginning, more than 5 minutes forced closure. If the time is more than 23 minutes or the water temperature is less than 3℃, the ice-making time is delayed.

12.3 After the ice making is finished, enter the deicing state. Compressor continues to open, heat valve open, water valve controlled, water pump, fan, drain valve closed. The maximum time limit for deicing is 6 minutes. If the ice is not removed for 5 minutes, turn on the pump for 1 minute. If the ice is not removed, turn to ice. Three times in a row for more than 6 minutes, go to the deicing timeout shutdown

12.4 After the ice is removed, if the ice in the refrigerator is not full, then enter the ice state, a new cycle. If the refrigerator is filled with ice, it will stop. Water pump, compressor, heat valve, upper water valve, fan, drain valve all closed. If the ice is removed, in 180 seconds, the ice full indicator lights shine, after 180 seconds of ice, turn to power, for a new cycle. If the ice is not taken away, it is always in full state.

▲Attention

- **The ice machine has been tested and debugged in the factory before shipment. In general, new machines do not require any debugging. In order to ensure that the ice-making machine is running normally, it is necessary to carry out the operation inspection if:**

13.Operational inspections

- Initial launch.
- Restart after long downtime.
- confirm the inlet tap is open.
- confirm that the inlet valve has been opened.
- The ice machine is powered on
- Check all water pipes and pipe joints to ensure no leakage

14.Routine cleaning

▲ attention

- **It is strictly forbidden to wash this ice machine with water sprayer. Do not use any alcohol-containing liquid to clean or disinfect the ice maker, otherwise it may cause cracks in plastic parts;**
- **Remove the roof or back panel, the front panel and other recommendations to the relevant knowledge of personnel to remove;**
- **Do not put plastic parts into water or dishwasher with temperature over 40℃ to clean, so as not to damage the parts.**

- Environmental cleaning: often clean the ice machine around to keep the environment clean, so that the equipment to get efficient operation.
- shell cleaning: clean the ice machine with sponge dip neutral cleaning liquid and dry with clean soft cloth. use stainless steel cleaner if necessary.
- Ventilation window cleaning: often wipe plastic ventilation window surface stains with dry rag to ensure smooth ventilation.。

14.1 Remove front panel and top panel of ice maker

- **Remove front panel of ice maker** The front panel and the front panel and the left and right of a plastic buckle, with a word screwdriver head down light pressure plastic buckle, will hear a slight buckle release sound,

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- After the two plastic clasps are completely loosened, gently remove the front panel from the body and place the front panel aside.

- **Demolish the top cover plate of ice machine** Hold the top cover against the front panel, gently lift up, and then gently push back, that is, the top cover should be lowered；

★important

Some parts cleaning if necessary or not recommended to remove the front panel, demolition please have the corresponding knowledge or under the guidance of professionals.

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14.2. Evaporator cleaning

- Scrub the surface of the evaporator with a brush or sponge

Brush the plastic parts around the evaporator with nylon brush;

;

14.3 Cleaning of sinks

- Press [switch] key in standby state, the screen shows "OFF", unplug the power supply, remove the two screws on the pump box with a screwdriver, then loosen the 3 screws on the inner wall of the ice plate, remove the clamps, pull down the upper water pipe, water pump and ;

Clean water pumps

Scrub the sink with soft ground material

such as a brush or sponge.

Important Tips

Please install all parts after clearing, install and cooperate correctly.

15.Cleaning and disinfection

Warning

- **Wear protective equipment such as rubber gloves, masks and protective glasses before cleaning and disinfection operations.**
- **Removal and installation of cleaned parts must be carried out in case of power failure.**

In order to make the operation of the ice making machine stable and efficient, the user has the responsibility to operate according to the requirements of cleaning and disinfection (the operation of cleaning and disinfection is not included in the warranty clause). If the ice maker needs frequent cleaning and disinfection, please check whether the water source is suitable, whether the use environment is clean or the inappropriate water filter device is used.

Attention

- Do not mix the disinfectant with the cleaning solution.
- Do not clean the evaporator surface with sharp object.
- It is recommended that this process be implemented at least once within 3 months.

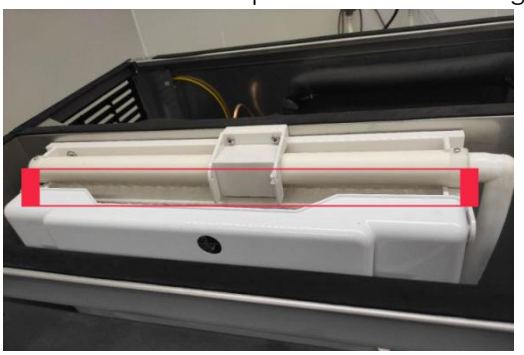
15.1Cleaning and disinfection

1. Open the front panel of the ice maker to check if the ice maker evaporator is making ice. If ice is being made, a forced deicing program can be performed (see operation instruction "11.4 forced deicing "above) to stop the deicing machine, press the [switch] key in standby state, the screen shows" OFF";

2. Remove all ice cubes stored in the refrigerator with an ice shovel;;

3. Click the "Clean / Set" button, the ice maker enters the cleaning phase, the inlet valve opens, and the screen display starts timing,

4. When the evaporator starts running water,



Operation

Add 2 packs of cleaning agent (KAY DELIMER,56.7g/ pack) or mixed detergent to the ice maker sink,

The water between the tank and the evaporator is cleaned by circulation for about 15 minutes. The cleaning stops and drains,

After 30 s, the is completed;

entering the automatic rinsing stage, first cleaning for 3 minutes, then draining for 30 s, after the rinsing process rec recirculation for 5 times, the whole cleaning process is over, and the screen shows "OFF", into standby state, the whole process takes about 37 minutes.

5. Unplug the power.
6. Remove water pipe fixed support, water pipe, water retaining plate, take out water pump, float ball, ice shovel (removal mode refer to parts removal / installation process).
7. mix with 8 liters of warm water (45~50℃) and 4 packs of cleaning agents (KAY DELIMER ,56.7g/ packs) to form a cleaning solution (the amount of cleaning fluid needs to be properly adjusted for the amount of cleaning parts).
8. Soak the parts in the cleaning solution for more than 5 minutes (it is recommended to soak for 。 Wear rubber gloves after soaking and clean parts carefully with soft nylon brush, sponge or soft cloth.

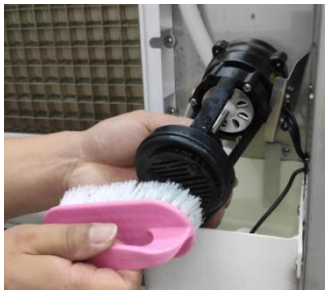
9. While soaking the parts, dip the cleaning liquid with nylon brush or soft cloth to wipe the surface of the parts in contact with water and ice cubes, such as hanging the inner surface of the ice plate, the inner surface of the front plate, the evaporator ice grid, ice blocking plate, ice storage bucket, etc .(the dead corner can be covered with a wet rag dipped in cleaning agent to wrap disposable chopsticks cleaning)。

Scrub the ice shield

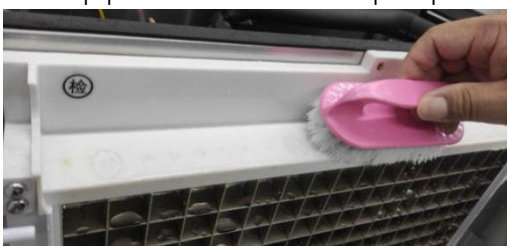
Scrub the inner wall of the ice sheet

Scrubbing ice drums

Brush pipe mandrel

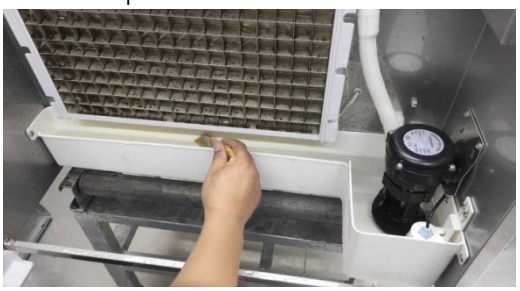


Brush pump bottom



Plastic parts around brush steam

Brush evaporator



Brush sink

Flush evaporator

Flush hose and mandrel

10. Remove soaked parts and rinse with clean water (rinse 5 times)。

15.2 Disinfection process

1. Mix 8 liters of warm water (45~50℃) and 2 packs of disinfectants (KAY5,28.4/ packs) into disinfectant solution (the amount of disinfectant is adjusted according to the amount of cleaning parts needed)。

2. Soak the cleaned parts in a mix of disinfectant。

While soaking the parts, spray the disinfectant evenly and completely on the surface of the parts in contact with the ice, such as the inner surface of the hanging ice board, the inner surface of the front panel, the ice grid of the evaporator, the ice baffle, the ice storage bucket on the outer surface of the sink, etc .(the dead corner can be cleaned with disposable chopsticks wrapped in a wet rag dipped in disinfectant)。

After 20 minutes, remove the soaked parts and rinse them with clean water. Install the removed parts back into place (the installation method refers to the 15.3 parts removal / installation process) strictly follow the requirements。

3. 1 liter of water and 1/2 package of disinfectant (KAY5,28.4/ package), combined with disinfectant。

4. plug in the power plug, then press [switch] key to make the ice maker in standby state, the screen shows "OFF"; press "[clean/set]" key, the ice maker enters the cleaning stage, the inlet valve opens, the screen display starts to time, when the evaporator starts flowing water, add the equipped disinfectant solution to the ice maker tank, at the same time, clean the water from the outside surface tank to the evaporator with disinfectant spray kettle, after about 15 minutes, the cleaning stops and begins to drain,

When 30 s is finished, after entering the automatic rinsing stage, after cleaning for 3 minutes, then draining for 30 s, the tap water rinsing process for 2 times, then using pure water rinsing cycle 3 times, the whole cleaning process is over, The screen shows "OFF", into standby state and unplug" after 37 minutes of cleaning。

Note: after cleaning and disinfection, start making ice, the first 5 plates of ice discarded, do not eat。

15.3 Parts removal/installation process

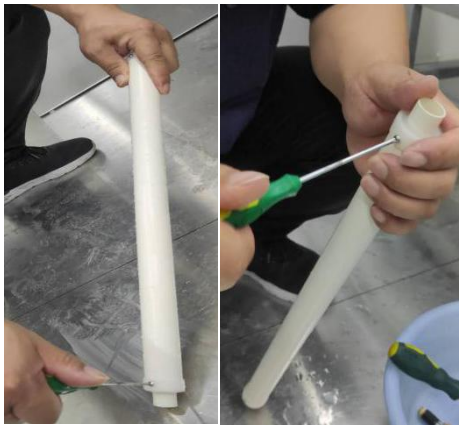
a . When removing the pipe, remove the "pipe fixing support" and "clamps "(as shown):

Removing Water Pipe Fixed Support

Unplug the water pipe

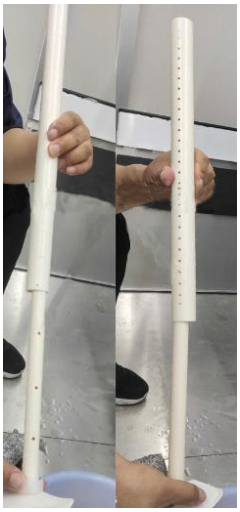
Unplug pipe

b . Remove two screws



- Spin out the plastic cover and remove the plastic mandrel

Note: when the pipe is assembled, the hole position of the pipe should be opposite to that of the mandrel, and must not be in the same direction. The correct diagram is as follows:



■ **Disassembly of water retaining plates:**

Both hands hold the rotating shaft at the same end of the baffle, and pull the side of the baffle out of the pin hole by pulling it to the other end.

Warning

To clean the condenser, disconnect the ice maker power supply, The edge of the condenser is sharp.

16. Regular cleaning

- Clean environment: clean the area around the ice maker regularly to keep the environment clean to support ice maker running efficiently。
- Shell cleaning: Use sponge or soft cloth with neutral cleaning agent to clean, and wipe it up with a clean soft cloth. Stainless steel cleaner can be used when necessary。
- Air filter clean: filter can arrest dirt or dust in the air enter condenser. It can postpone condenser from blocking. If the filter is blocked, the ice production will decrease. We recommended to clean the air filter once or twice a month：
  - Remove the air filter;
  - Please clean the air filter with a vacuum cleaner or a soft brush. If the air filter is severely clogged, clean it with warm water and a neutralcleaner;
  - Put it back after the filter iscompletely dry

Note

- **Do not flush this ice maker with water sprayer. Do not use any alcohol containing liquid to clean or disinfect the ice maker, or it may cause cracks in the plastic parts；**
- **Do not remove the top plate and back plate, and demolition should be provide with the corresponding knowledge of the maintenance personnel；**
- **Do not put the plastic parts into the water with the temperature exceeding 40°C or the dishwashing machine to clean, so as to avoid damaging the parts。**

17.Condenser cleaning

Important

Condenser dirty will block the flow of air, cause the ice maker operating temperature too high, reduce ice production, shorten the service life of parts.

- It is recommended to clean thecondenser every six months by following steps:
  - Use a soft brush or vacuum cleaner to clean the outside of the condenser, the act direction should be from top to bottom (it will break condenser fins act from one side to another) ;
  - Use commercial coil (air conditioning) cleaner. Follow the instructions and precautions for coil cleaning agent when using. The damaged fins should be straightened with a fin comb.

18.Removal from service / Winterization

Note

If water is left in the machine in an environment below 0°C, it may cause serious damage to the machine parts. This fault is not covered by warranty.

Special protection measures are required if the ice maker is out of service for a long period of time or exposed to an environment of 0°C or less. Follow these steps below

- Disconnect the power to the ice maker.
- Disconnect the water supply to the ice maker.
- Empty the sink.
- Remove water inlet hose and drain it from the water inlet.
- Ensure that there is no water residue in the inlet, drain and distribution pipes.

19.Maintenance

Warning

Component parts shall be replaced with like components and that servicing shall be done by factory authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service.

Warning

DANGER – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. DO NOT USE MECHANICAL DEVICES TO DEFROST REFRIGERATOR. DO NOT PUNCTURE REFRIGERANT TUBING.

Warning

DANGER – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. TO BE REPAIRED ONLY BY TRAINED SERVICE PERSONNEL. DO NOT PUNCTURE REFRIGERANT TUBING.

Warning

CAUTION – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. CONSULT REPAIR MANUAL/OWNER'S GUIDE BEFORE ATTEMPTING TO SERVICE THIS PRODUCT. ALL SAFETY PRECAUTIONS MUST BE FOLLOWED.

Warning

CAUTION – RISK OF FIRE OR EXPLOSION. DISPOSE OF PROPERLY IN ACCORDANCE WITH FEDERAL OR LOCAL REGULATIONS. FLAMMABLE REFRIGERANT USED.

Warning

CAUTION – RISK OF FIRE OR EXPLOSION DUE TO PUNCTURE OF REFRIGERANT TUBING; FOLLOWHANDLING INSTRUCTIONS CAREFULLY. FLAMMABLE REFRIGERANT USED.

Before applying for repair, please consider the following aspects in order to quickly identify and improve the efficiency of machine recovery.

a). Whether the water supply is normally, including faucets open, inlet valve not blocked, and water pressure is in 1bar~5bar.

b). Whether the power supply is normal, including voltage is in ±10% of rated voltage, power switch is connected, the fuse is not burnt out and whether the plug is fixed well.

c). Whether the ambient temperature is too high or too low (the operating temperature range of the ice maker is 10°C～38°C), whether the water temperature is too high or too low (the water temperature range is 5°C～32°C).

d). Whether the ice bin is full of ice and can work after ice take away.

e). The ice maker is to be installed in accordance with the Safety Standard for Refrigeration Systems,ASHREA 15,the icemaker shall not be installed in corridors or hallways of public buildings.

Write down the number of the machine and call the toll-free phone number labeled with the service label or your service provider.