Labotronics


# CUBE ICE MAKER

# LB-11CUM

www.labotronics.com | info@labotronics.com

# Index

## 1. Safety Measures

Basic safety precautions should be followed when using electrical appliances to reduce therisk of fire, electric shock, and injury to persons or property. Read all instructions before operating the machine for the first time.

**CAUTION:** Ice can't be stored in the ice bin during night-time, it's not the fridge, icewill be melted into water and flow out of the machine.

- If connected with the water supply, must connect the potable water supply.
- The machine is intended to be used in household and similar applications such as:
  - Staff kitchen areas in shops, offices, and other working environments.
  - Farm houses.
  - By clients in hotels, motels, and other residential-type environments.
  - Catering industry and similar industries.
- The machine should be used indoors and without obstacles surrounded by good ventilation place.
- There must be 15cm at least between the four sides of the machine with the wall.
- When using electrical appliances, basic safety precautions should be followed to reduce the risk of fire, electric shock, and injury to persons or property.
- Read all instructions before using any appliance.
- Don't operate this or any other appliance with a damaged cord.
- Connect to properly polarized outlets only.
- No other appliance should be pluggedinto the same outlet.
- Be sure that the plug is fully inserted into the socket.
- Don't place the machine and power cord near flammable material.
- Do not cover thecord. Do not submerge it in water.
- We do not recommend the use of an extension cord, as it may overheat and becomea risk of fire.
- Unplug the ice maker before cleaning or making any repairs or servicing.
- Exercise caution and supervision when the appliance is used near children.
- Don't use your ice maker outdoors.
- Avoid direct sunlight and ensure there isat least 5 inches of space between the back and sides of your unit and the wall.
- Don't use liquid other than water in the unit to make the ice.
- Do not clean your ice maker with flammable detergents.
- The fumes can create a firehazard or explosion.
- Do not tip the machine over.
- If the ice maker is brought indoors from outdoors during winter, give it a few hours to warm up to room temperature before plugging into the power source.

- This unit should be properly grounded for your safety. The power cord is equipped with a three-prong plug mated with standard three-prong wall outlets to minimize the possibility of electric shock.
- Plug your appliance into a dedicated, properly installed, and grounded wall outlet. Do not, under any circumstance, power and grounding should be directed toward a certified electrician.
- The foaming materials inside are combustible which must be kept away from fire.
- It's forbidden to pull the cable to unplug the plug, pulling the plug is a must.

  **Notice:**

  To avoid hazards due to instability, the unit must be placed on an even and flat surface.

  **WARNING**: This appliance must be grounded.

  - The fuse on the PCB is 15A, if changed, must be operated by a technician.
  - Voltage fluctuation can't exceed ±10% of the rated voltage, or a Voltage stabilizer isneeded.

  **Notice:** To avoid hazards due to instability, the unit must be placed on an even and flat surface.

## 2. Introduction

**Cube ice maker LB-11CUM** is a microprocessor controlled ice machine with automated detection and protection in case of water deficiency or system malfunctioning. Highly efficient fluoride-free compressor saves energy. Features a large bin type structure with large ice bin and ice storage capacity.

## 3. Features

1. Fully automated computer controlled
2. Automatic detection and protection against system malfunctioning
3. Fluoride-free compressor
4. Split-type structure (large ice bin and large ice storage capacity)

## 4. Specifications

| **Model No.** | **LB-11CUM** |
|---|---|
| **Ice making capacity** | 60 kg / 24 hr |
| **Ice storage** | 21 kgs |
| **Power** | 380 W / 220 V |
| **Ice shape** | Cube ice |
| **Refrigerant** | R134a / R404a |
| **Machine size** | 450 x 550 x 738 mm |
| **Net weight** | 38 kgs |
| **Gross weight** | 45 kgs |

## 5. Applications

Used in supermarkets and sea food markets, chicken processing, sea food and fishing industry, butcher shops, science experiments, biological pharmaceuticals, bakery, winery, chemical, construction, food, vegetables, deep-sea fishing, ice plant, medical, laboratory, mining, artificial ski field, catering etc.

## 6. Installation

**1)** Remove all exterior and interior packaging materials.
**2)** Clean the interior with lukewarm water and a soft cloth or clean the unit using the self-clean function.
**3)** Find a location for your ice maker where it's protected from direct sunlight and other sources of heat (i.e. stove, furnace, and radiator).
**4)** Place the ice maker on a level surface.
**5)** Make sure there is at least 5 inches of space between the back and sides of yourice maker and the wall.
**6)** Allow for an hour to settle before plugging the unit for initial use.
**7)** The appliance must be positioned where the plug is accessible.

## 7. Operations

**7.1 Connect the ice maker with other parts by referring to the diagram below.**

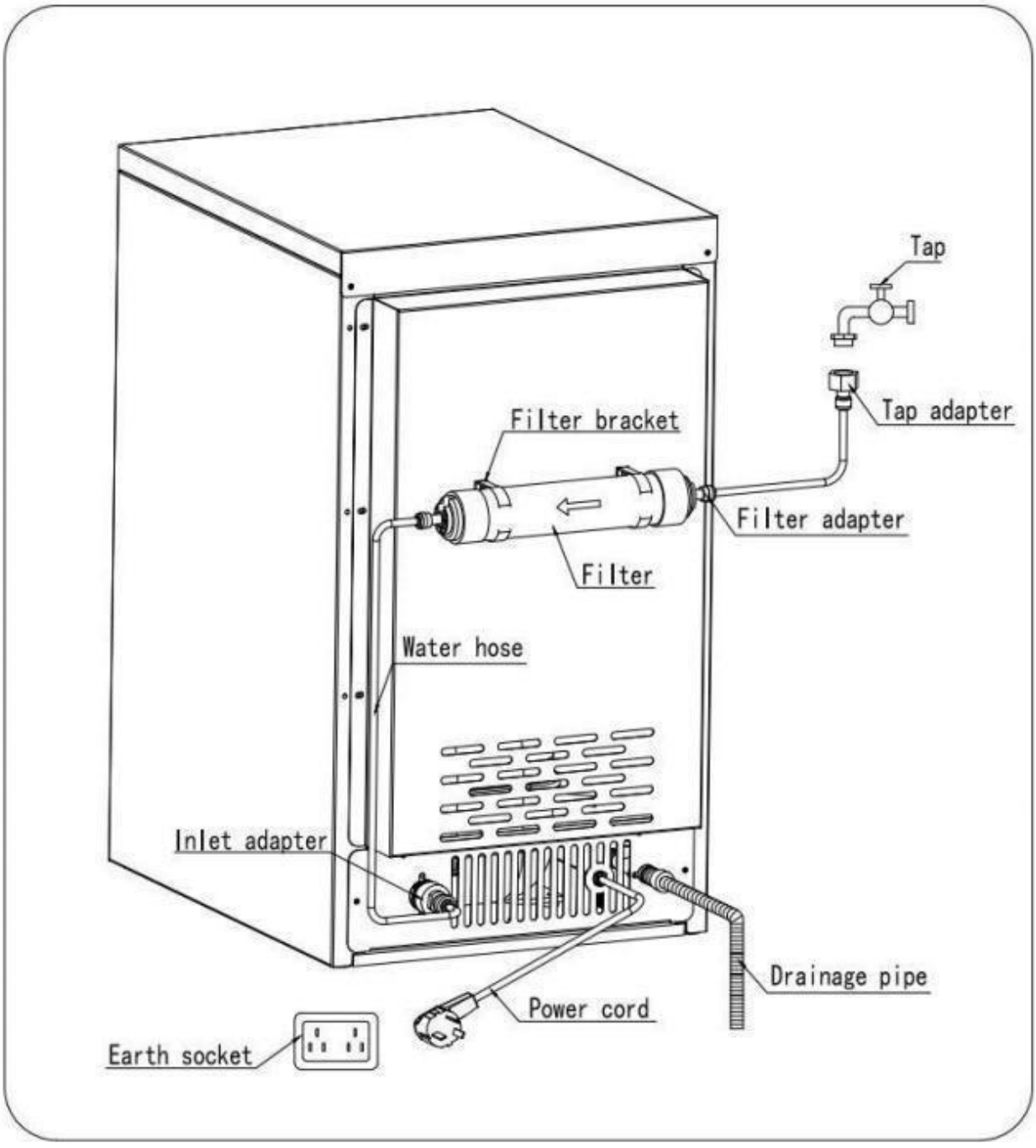


**Figure-1**

### 7.2 Connect drainage pipe and water intake pipe

**Warning:**

- The machine can only connect with drinking water sources.
- **Drainage:** The outlet of the drainage pipe must be lower than the outlet on the machine.

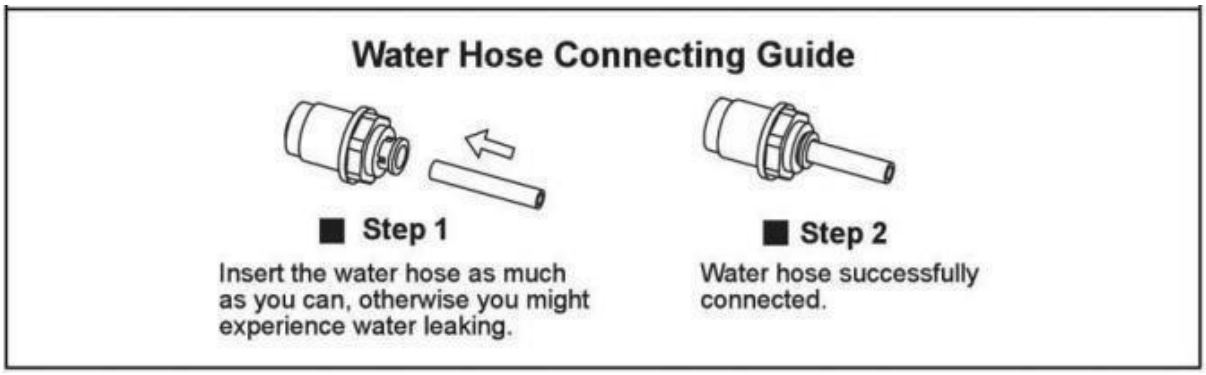


**Figure-2**

### 7.3 Drain

**Warning:** Because the ice in the inner tank will melt, the drainpipe must be connected before use, and the drainpipe into a container or the sewer.

**Note:** Connect one end of the drainpipe to the machine, and the other end to a container or sewer. The other part of the drainpipe must be lower than the drain port of the machine.

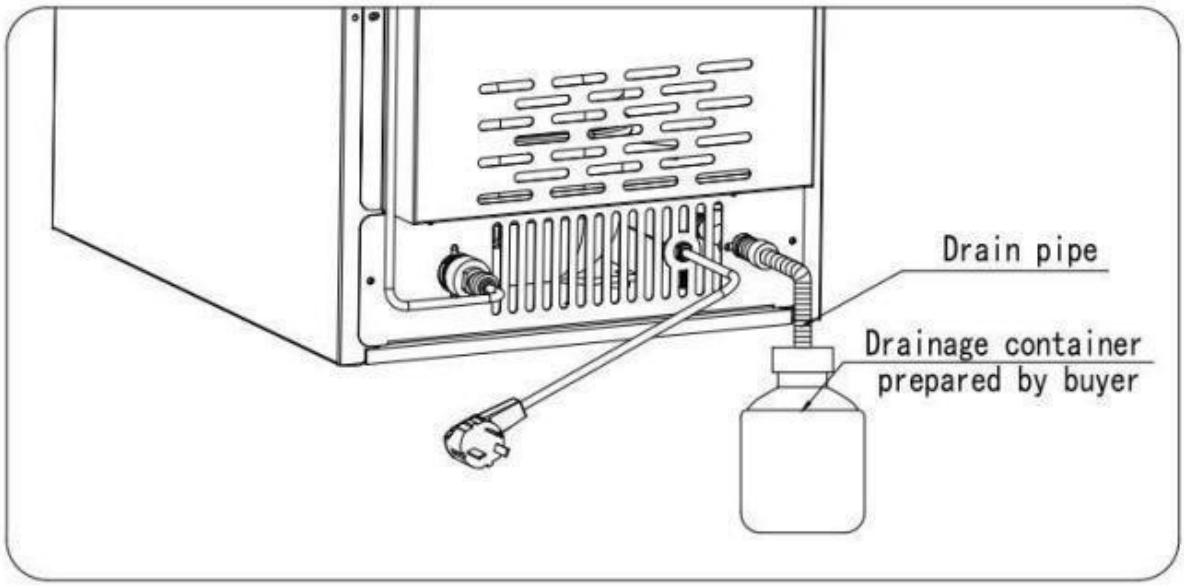


**Figure-3**

### 7.4 Operation for display panel

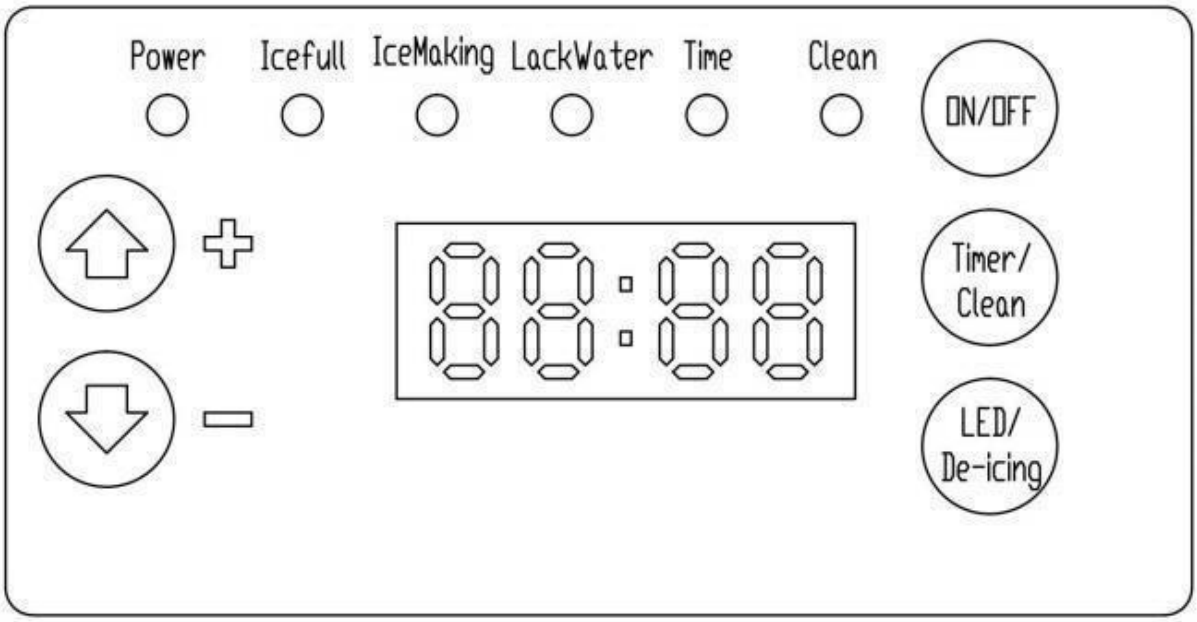


**Figure-4**

**1) ON/OFF :**

Pressing the “ON/OFF” in standby mode, the machine goes into ice-making mode. Pressing the “ON/OFF” while the machine is running, the machine stops running and goes into standby mode.

**2) "+” AND “-”:**

Adjust the ice-making time and the appointment on/off time, they are both shownon the digital display.

**Note:** During the ice-making process the digital tube is always on to show the ambient temperature, the digital tube flashes to show the ice-making time (minutes), and the appointment switch on is to show the appointment time (hours).

**3) Timer/Clean:**

In standby mode, press the “Timer/Clean” key and press the "+" "-" to adjust the startuptime of the reservation machine; in the startup state, press the “Timer/Clean” and press the "+" "-" button to adjust the shutdown time of the reservation machine.

In standby mode, press and hold the “Timer/Clean” key for 3 seconds, the machine will start the cleaning process, 8 minutes on and 3 minutes off within 30 minutes, cycle 3 times, press the “ON/OFF” or the “Timer/Clean” to exit at any time. (Individual customers do not have the appointment timing function)

**4) LED/De-Icing:**

If users press the button quickly, the light goes on, if you press it 3 seconds longer while the machine is making ice, the De-Icing process starts.

## 7.5 Introduction of the main control board functions

### 1) Ice-making function

Machine power on, machine off (standby), power light flashing, digital tube display room temperature; individual models add a secondary water refill function during ice-making

**NOTE:** replenish the tank when on standby; when the water level is too low (level switch off), the valve will open to replenish the water; until the level switch is on, closethe water inlet solenoid valve. The maximum replenishment time is 6 minutes.

### 2) Switching on the machine

- Press the "ON/OFF" on the operation display panel, and the "**Power**" indicator light (steady green light).
- Check the water level and replenish the water.
- If lack of water, open the replenishment solenoid valve, the "**Lack of Water**" indicator (red light) will be always on if the water level is not filled within three minutes, the replenishment solenoid valve will be off, and the **"Power**" indicator light will be on; every 30 minutes the valve is opened for 3 minutes; if the water is full then the machine will work and the "**Lack of Water**" indicator light will be off.
- The "**Ice full**" indicator light will be on when the ice is full, the machine will make icewhen the ice is not full, and the water is full.
- **Ambient temperature sensor sampling temperature:** The ice-making time is determined according to the ambient temperature and adjusted.
- The ice-making time every time. Magnetic switch detection, if disconnected thenthe ice is full, the " **Ice full"** indicator light will be on, and if open then the ice-making process can start.
- **Detection conditions:** The machine will start de-icing when the ice-making process ends, the magnetic switch is continuously disconnected for 5S, judged to be disconnected and ice full.

### 3) Remarks:

- The ice-making process starting requires.
  - Magnetic switch turning on.
  - Level switch in the water tank turning on.
  - Determine the ice-making time according to the ambient temperature sensor.
- Prerequisites for the pump to start working are water full, the compressor on, and entry into ice-making.
- Replenished the water tank during the De-icing time, and the water can be replenished at any time, during that time when the water is not enough; the fan will stop and the "Ice Making" light will flash when the De-icing process starts.

## 8. Maintenance

**1) CLEANING**

Thoroughly clean your ice maker before initial use.

**2) Exterior:** the outside of the ice maker should be cleaned regularly with a mild detergentand warm water. Always use a soft cloth to avoid scratching or damaging the housing.

**3) INTERIOR:** Use the following Self-Clean function:

- Add water and vinegar or lemon juice mix (1:1ratio)
- Plug in the unit, press, and hold the **CLEAN button** for approximately 3 seconds, then release.
- The unit will automatically enter the Self-clean program.
- This process takes about 5-6 minutes. When the Self-Clean program is finished, the unit will automatically power off.
- The fan blade will be rotating. This process rinses the inside parts several times.
- After completing the Self-Clean program, unplug the power cord and drain out the water by unplugging the drain cap on the side. Replace the drain cap.
- Add fresh water to the water reservoir, up to the water level mark.
- Plug the unit and repeat the Self-Clean process by repeating steps 3 to 5.
- This will rinseout the vinegar/lemon residue.
- After draining the water, replace and tighten the drain cap.
- Dry the interior and exterior with a clean, soft cloth.

  **NOTE**: It is strongly recommended to clean the unit before initial use or after the unit has not been in use for a long period.

- **Changing filter**: Remove the filter cylinder from the filter bracket, disconnect the tube shown following positions A and B, connect the new filter then fix on the bracket of the backside of the ice maker.

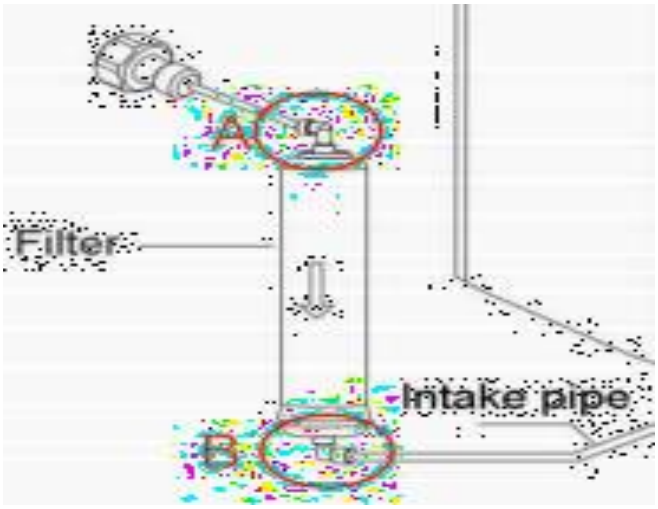


**Figure-5**

## 4) Note

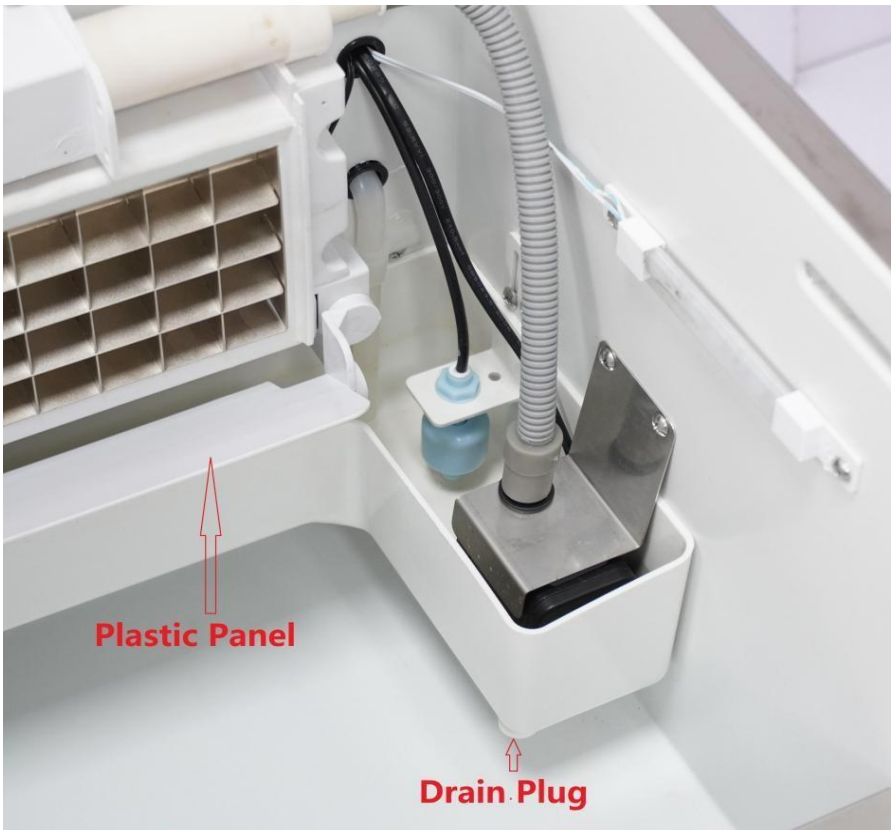


**Figure-6**

1. **Plastic Panel:** As the production of ice cubes increases, the plastic panel inside the machine (shown above) might be pressed down by the ice cubes. When the plastic panel is pressed down, the machine will stop producing ice cubes automatically and the "stoppage" indicator will light on. Please clean out the ice cubes regularly for the continuation of icemaking.
2. **Drain Plug:** There is a drain plug (shown above), Pulling out the drain plug can drain water.

## 9. Troubleshooting

**Fault display function**

- Water replenished timeout - Float ball stuck, faucet no water or water inlet valvebroken, or circuit board output no power.
- Ice full - Ice full or magnetic control broken.
- F3: sensor failure - Sensor short circuit or broken circuit.
- F4: 3 times de-icing fault - Ice too thick or lack of water (limited to mechanical floatball).

## 10. Circuit Diagram