Original instructions

E SERIES COMMERCIAL ICE MAKER

User 's manual

Please read this manual carefully before installing the equipment

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1. IMPORTANT SAFETY INSTRUCTION

WARNING	
DANGER	◆ **The appliance contains flammable refrigerant, there is risk of fire, only trained service personnel should carry out maintenance, and do not puncture the refrigerant pipeline.**
CAUTION	◆ **Please refer to the maintenance manual / user's Guide before repairing this product, and all safety precautions must be observed.**
CAUTION	◆ **Refrigerant pipe perforation has fire or explosion hazard; Maintenance personnel should carefully follow the operating instructions and use flammable refrigerant.**
CAUTION	◆ **The use of flammable refrigerants may lead to fire or explosion; in accordance with the local government regulations, carefully follow the operation instructions, and this product cannot be used in outdoor environment.**

This appliance can be used by children aged 8 and over and by people with reduced physical, sensory or mental abilities or with a lack of experience and knowledge only if they have been adequately instructed and supervised in the safe use of the appliance and have learned the possible dangers derived from its use. Children must be supervised to make sure they do not play with the appliance.

- To reduce the risk of fire, electric shock, or injury to persons when using this product, basic safety precautions should be followed, including the following.
- This appliance must be properly installed and located in accordance with the Installation Instruction before it is used.
- Before the appliance is plugged in, ensure that the rated voltage corresponds to the voltage of the electrical system in your working environment. The power plug should have its own independent socket. Using adapters may cause overheating or burning.
- Cleaning and user maintenance shall not be made by children without supervision.
- If the power cable is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person to avoid a hazard.
- The installation, repair or maintenance of the ice maker must be carried out by professional personnel. Improper operation may cause electric shock, fire, and other personal injuries.
- After the delivery of the ice maker, please keep the machine upright for at least 24 hours to make the refrigerant fully precipitate before starting, otherwise the compressor may be damaged.
- During handling, keep the cabinet upright and tilt no more than 45 degrees. Do not invert the machine or place it horizontally.
- The ice maker should not be placed in a wet or water splashing place.

- The grounding of the ice maker cannot be connected with the air pipe, water pipe, telephone line, lightning rod, etc.
- The ice maker has rotating parts. Do not insert slender objects into the vent or exhaust port, otherwise serious mechanical damage and personal injury will be caused.
- Please do not store volatile or flammable substances in the ice maker, or it may cause explosion or fire.
- Do not store any sundries or freeze any food in ice maker, and keep the ice shovel clean.
- The ice maker must be placed on the floor that can support its weight. Insufficient support may cause the equipment to fall and cause injury.
- There should be enough ventilation space around the ice maker.
- The ice maker can only use the power supply specified on the machine name plate.
- The ice maker can't connect to hot water.
- The ice maker must be reliably grounded and have leakage protection.
- The power supply of the ice maker must be disconnected before manual cleaning, repair and maintenance.
- Before cleaning, repair and maintenance, remove the remaining ice from the refrigerator to avoid contamination of the ice.
- During the cleaning process, do not directly splash water on the surface of the ice maker, or it will cause short circuit, leakage or other damage.
- The flammable foaming agent is used in the foaming process, and the ice maker shall be treated and recycled by qualified personnel and institutions.
- When the ice maker fails, the power supply should be turned off and professional personnel should be contacted for maintenance.
- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- The A-weighted emission sound pressure level does not exceed 70 dB(A).

The ice maker is fully automatic. After the drinking water and power supply are properly installed and connected, the ice making will start automatically. When the ice fills the refrigerator, the machine will stop automatically. Ice makers are generally used for the following and similar purposes.

- Indoor environment only.
- Kitchen areas in shops, offices or other workplaces.
- Hotel and restaurant.
- Catering and similar nonretail occasions.
- The ice maker is not for residential use.

The accessory of ice maker does not contain water filter. Please purchase it by yourself and

install the water filter correctly to ensure that the water in the ice maker is clean and hygienic. Failure to use and maintain water filters is not covered by the ice maker's warranty.

- WARNING: Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in.
- WARNING: Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- WARNING: Do not damage the refrigerant circuit.
- WARNING: Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.
- WARNING: When positioning the appliance, ensure the power cable is not trapped or damaged.
- WARNING: Do not locate multiple portable socket-outlets or portable power supplies at the rear of the appliance.
- WARNING: Connect to potable water supply only.

Warning: Risk of fire / flammable materials

2. SUMMARY

The following data are for reference only

2.1. Model

Model	E-20	E-40
Cooling style	Air	Air
Power supply	220-240V/50Hz	220-240V/50Hz
Power(W)	350	270
Max Ice production(kg/24hr)	20	40
Dimension(mm)	W350×D482×H600	W467×D540×H840
Weight(kg)	33	42
Refrigerant	R290/75g	R290/70g
Operating temp. range	10～43℃	10～43℃
Water temp. range	3～32℃	3～32℃
Water pressure range	0.1～0.5MPa	0.1～0.5MPa
Power range	+10%/-15%	+10%/-15%

2.2. Ice production

E-20 Ice production:

Ambient Temp. / Water Temp.	Ice production(kg/24hr)	
	21℃	32℃
10℃	22.3kg	
21℃		14.5kg

E-40 Ice production:

Ambient Temp. / Water Temp.	Ice production(kg/24hr)	
	21℃	32℃
10℃	40kg	
21℃		32kg

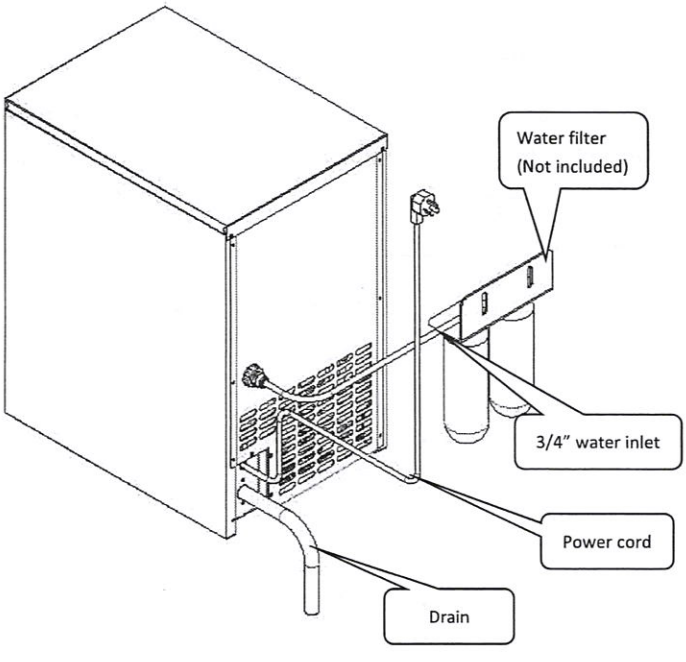
3. INSTALLATION

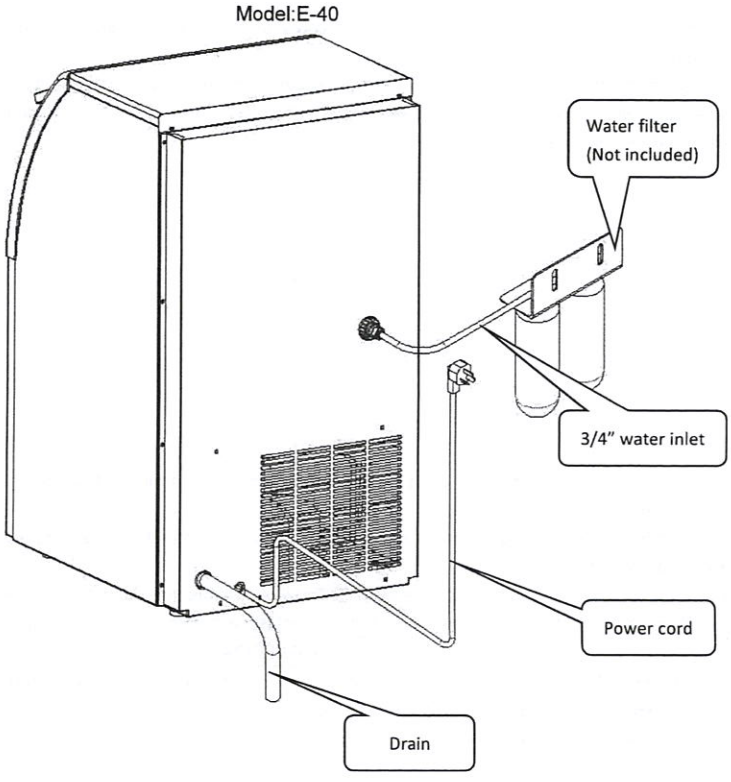
The ice maker shall be installed in a suitable position meeting the following conditions:

- Indoor, ambient temperature: 10～43℃(50～110℉);
- Power supply: Rated voltage on machine name plate;
- Water source: drinking water, with water pressure of 2～5bar (30～70Psi), water temperature of 5～32℃(40～90℉);
- The ice maker should be far away from heat sources. It is strictly prohibited to use it in extremely high temperature or low temperature environment, and should avoid direct sunlight.
- There should be enough ventilation space around the ice maker with good ventilation; the distance between the ice maker and the wall should be no less than 500mm in the front, not less than 150mm in the side, and not less than 200mm in the rear.
- The floor must be strong enough to support the weight of the ice maker;
- The ice maker socket must be reliably grounded with leakage protection;
- A proper ground drainage system must be provided near the ice maker installation location.

Schematic Diagram:

Model:E-20



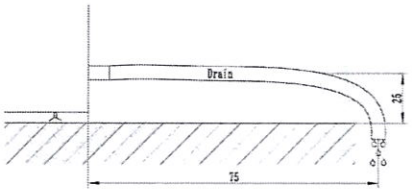


3.1. Installation steps

- Check whether the ice maker is in good condition and whether the accessories are complete; check the machine model and the machine name plate.
- Clean the refrigerator and the food area with a sponge dipped in warm water and soap, then rinse with drinking water and wipe dry.
- Place the ice maker in the operating area; ensure that the machine is placed on a level ground to ensure that water flows evenly into the evaporator.
- The ventilation space of the ice maker must be more than 200 mm in the rear, 150 mm in the side and 500 mm in the front.
- The bottom of the ice maker is equipped with adjustable legs for horizontal adjustment and floor cleaning.
- Connect the inlet filter and water pipe of the ice maker according to the installation instructions of your water filter brand. If the drinking water system has been installed for the water supply, then no need to install a water filter for the ice maker.
- Connect the machine to the water supply pipe using the 3/4"water inlet connector provided with the

machine. It is recommended to install a ball valve on the water supply line (not supplied with the machine).

➢ Connect the drain pipe to the drain joint. In order to achieve good drainage, it is suggested that the water level difference of the drainage pipe should be greater than every 75mm / 25mm, and make sure that the drainage pipe is not blocked.



➢ Any joint in the drain shall not be higher than the machine drain, and no joint in the drain shall be higher than the previous joint.

➢ Confirm the power requirements on the name plate of the machine to ensure that the power supply meets the requirements.

➢ Leakage protector and circuit breaker or switch with reliable grounding are required.

➢ Turn off the switch on the power line and connect the machine to the power supply.

CAUTION
◆ **The flow direction of the filter should be correctly installed according to the direction mark on the top cover or body of the filter. The filter element should be replaced in time according to the maintenance instructions of the filter.**

4. Start up and operation

4.1. Before starting the machine, please check and confirm that:

- The packaging tape inside the ice maker has been removed;
- The accessories or articles in the ice maker have been taken out;
- The ice maker has been leveled;
- The water pipe has been connected and the tap is on

4.2. Start up

- The ice maker will automatically run once the ice maker has been turned on.

4.3. For normal operation, please confirm:

- There is water in the water tank and there is no overflow;
- The water pump works normally and the water flows evenly in the evaporator;
- The compressor operates normally, and the temperature of evaporator and ice making water gradually decreases;
- For air-cooled machines, ensure the normal operation of the fan and stable air flow at the inlet and outlet of the ice maker;
- The ice maker has no abnormal noise;
- The ice maker has no abnormal vibration;

- It takes about 10 to 30 minutes to make a batch of ice, which depends on the ambient temperature and water temperature. The higher the temperature is, the longer the ice making time will be;
- Ice can be harvested normally from the machine.

4.4. Operating instructions

- Start up: after installation, connect the water source, turn on the power supply, and the machine starts to work. Please make sure that the machine is turned on when it runs normally for the first time.
- Self-inspection: after the first power on, the ice maker will carry out self-inspection and extract the remaining water.
- Preparation: after the ice maker is powered on, the inlet valve is opened, and the inflow water flows in until the set water level is reached, and the ice maker defrosts once.
- Ice making: after 30 seconds of precooling, the water pump starts, and the water flows smoothly and evenly through the evaporator, and the ice gradually forms in the ice tray.
- Ice harvest: after the ice making process is finished, the water pump stops and the defrosting valve opens automatically. Then, hot gas enters the evaporator and after 1-4 minutes, ice fall into cabinet automatically.

WARNING
◆ **In the process of ice falling, do not put your hand into the refrigerator to avoid the ice falling on your hand.**

- Shut down: during operation, press the "  " button on the control panel or pull out the power plug after the current ice maker process has finished harvest the ice, and the ice maker will stop working.
- Full ice shutdown:

E-20:In the operating state, when the ice is full of a certain height, the box temperature probe senses that the box temperature is lower than the set shutdown temperature. At this time, the ice maker will shut down after the end of the ice making cycle.

E-40: During ice making process, when the ice inside the bin reach certain level, the ice will trigger bin full probe and the ice maker will stop making ice automatically.

- Ice reproduction:

E-20:When the ice in the ice bin bucket is removed, the box temperature rises slowly until it is higher than the shutdown temperature, and the ice maker will automatically start ice making.

E-40:when the ice on bin full probe is removed, the ice maker will return to the ice making process in a few seconds.

5. CONTROL PANEL

5.1. LED display screen：

- Standby: When the ice maker is in standby, the display shows flickering "pp".
- Ice producing: the ice producing time of the current batch of ice is displayed on the screen, and the dot at the bottom right represents ice producing phase.
- Ice Shedding: the screen displays the collection time of the current plate of ice (unit: m).
- Full ice: Pu is displayed on the screen, and the machine stops working.
- Failure: screen display E1-E4.

5.2. Ice thickness adjustment：

During the ice making process, if you are not satisfied with the ice thickness, press the "+" or "-" button on the panel, to adjust the ice thickness.

- E-20：Commissioning range "15 ~ 60"；
- E-40：Commissioning range "15 ~ 50"；
- Note: press the "+" or "-" key once, the ice making time can be extended or shortened by 1 minute.

5.3. Cleaning: during standby, press and hold the cleaning button for 3 seconds to enter the cleaning process. Detergent and disinfectant need to be put into the water tank. After the cleaning process, the ice maker will enter the ice making process.

CAUTION
◆ **All cleaning and disinfection chemicals used must be nickel safe.**

5.4. On / off:Press and hold this button  to turn off / on the machine.

5.5. Please gently open or close the door, and keep the door closed after collecting ice.

5.6. The ice maker should be operated at least 2-4 hours every 2 months, disuse for long term can lead to malfunction.

6. Other special protection - shutdown

- If the ice maker does not detect ice harvest in three cycles, it will stop for safety protection. The ice maker needs to be checked.
- If the ice maker detects that the condenser temperature is too high, it will stop operation for safety protection.
- The fault code and its notes are shown as follows：

Fault code	Description	Machine Action
E001	Faulty condensation probe	When the machine stops, the screen display E1 flashes.
E002	The harvest time is abnormally long.	When the machine stops, the screen display E2 flashes.
E003	Condenser overheated and temp. protection activated	When the machine stops, the screen display E3 flashes.
E004	Door magnetic switch is broken	When the machine stops, the screen display E4 flashes.

7. Cleaning and disinfection

It is your responsibility to maintain the ice maker in accordance with the instructions in this manual. Maintenance procedures are not covered by warranty. Clean and disinfect the ice machine every three months to ensure efficient operation. If ice makers require more frequent cleaning and disinfection, consult a qualified service company to test water quality and recommend appropriate water treatment methods. The extremely dirty ice maker must be disassembled for cleaning and disinfection.

CAUTION
◆ **When handling ice machine cleaner or disinfectant, please wear rubber gloves and goggles (and / or mask)**

7.1. Cleaning

- This procedure must be performed manually, at least every three months.
- The ice maker and ice bin must be disassembled, cleaned and disinfected. See step 7.2 for details.
- All ice produced during cleaning and disinfection must be discarded.
- Clean up mineral residue in areas or surfaces directly in contact with water.
- The procedure cleans all components in the flow path and cleans the ice maker between the cleaning / disinfection procedures.

7.1.1. External cleaning

If necessary, always clean the area around the ice maker to keep it clean and efficient. Wipe the surface with a wet cloth washed with water to remove dust and dirt from the outside of the ice maker. If there is still oily residue, rinse with a damp cloth in mild soap and water solution. Dry with a clean soft cloth.

- It is not allowed to use steel wire wool or abrasive pad for cleaning.
- It is forbidden to use chlorination, citrus or abrasive cleaner on external panels and plastic decorative parts.

CAUTION
◆ **Unless properly maintained, stainless steel may rust.**

7.1.2. Water inlet filter

- The water filter shall be inspected regularly. It is recommended that the filter element be replaced every 3 to 6 months.

7.1.3. Internal cleaning

- It is possible to clean the ice storage tank with water and detergent solution, and wash it thoroughly with water. Repeat the process with water and disinfectant solution.

Note: check and confirm that the water pressure is lower than the maximum allowable pressure. Do not flush the parts above the water pump or evaporator directly

7.1.4. Condenser

- For air-cooled ice maker, the condenser should be cleaned every three weeks. Brush with a soft brush or a vacuum cleaner with brush up and down along the fin direction to avoid damaging the fins and further affect the cooling effect.

CAUTION
◆ **The condenser should be cleaned carefully because the edge of the radiator is very sharp.**

7.1.5. Water pipe

- In order to ensure food safety, the water pipe of ice maker shall be cleaned regularly.

7.1.6. long term shutdown

- Turn off water and power supply, and discharge the residual water from the water inlet pipe and drainage pipe of the water tank.

CAUTION
◆ **The maintenance of ice maker is not covered by the manufacturer's warranty!**

7.1.7. cleaning function

CAUTION
◆ **Please clear the ice in the ice storage tank in advance.** ◆ **Please clean and disinfect the ice storage bucket and thoroughly wash it.** ◆ **Bin full probe, Spray pipe and Drenching pipe, water supply pipe and water pump shall be cleaned and sterilized, and then thoroughly washed.**

CLEANNING		DISINFECT	
Model	Amount of sanitizer	Model	Amount of cleaner
E-20	0.5 pack	E-20	1 pack
E-40	0.5 pack	E-40	1 pack

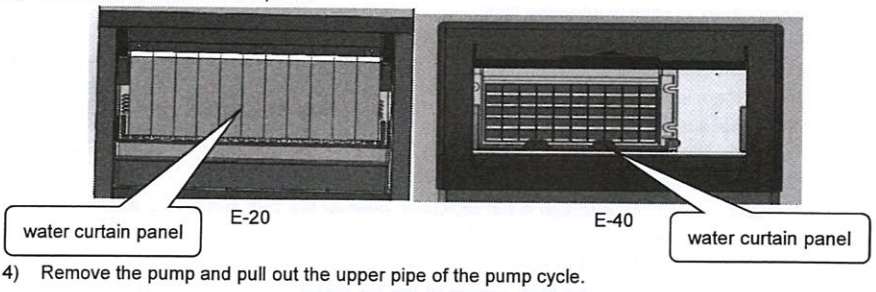
- Turn on the ice maker, press the "  " button for 3 seconds, and the ice maker starts the cleaning process. According to the instructions, put proper amount of cleaning solution into the water tank manually.
- Press the "  "button. Ice maker runs the cleaning program for 15 minutes. At the same time, please spray the evaporator to ensure that it is thoroughly cleaned. When finished, the LED display flashes "PP" slowly again.
- Put an appropriate amount of disinfectant into the water tank by hand and operate according to the instructions. Press the "  " button again, and the ice machine will automatically disinfect for about 15 minutes. At the same time, manually spray disinfectant on the evaporator to ensure complete disinfection. After completion, the ice machine will enter the cleaning process, which will take about 5 minutes and perform 5 cleaning cycles. For proper instructions on mixing detergent and disinfectant, please refer to your manual.
- The ice maker will return to ice making immediately once the cleaning process is finished.
- Please throw away the next 5 batches of ice to make sure there is no residual detergent.

7.2. Manual cleaning and disinfection

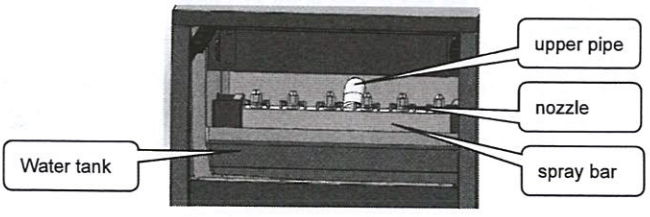
Cleaning instructions

CAUTION
◆ **Cut off the power supply**

1) Remove all ice from the freezer to avoid contamination.
2) Pour the water out of the tank.
3) Remove the water curtain panel.



4) Remove the pump and pull out the upper pipe of the pump cycle.



5) Remove the screws that secure the spray bar. Remove the spray pipe and upper pipe.
6) Remove the fixing screws in the nozzle. Remove the spray pipe.
7) Mix the solution of detergent and water according to the instructions of ice machine cleaner. Make sure that the cleaner is completely dissolved. Immerse the water pipe, inlet and outer nozzle, nozzle, nozzle fixed seat and screw into the cleaning solution for 5 minutes (soak the parts with serious scaling for 15 minutes). Rinse all parts thoroughly with clean water.
8) After soaking, scrub the spray pipe, water curtain and pump base bracket with cleaning solution, and rinse thoroughly with clean water.
9) Spray the cleaning solution into the evaporator and wipe it clean. Repeatedly wipe the water tank, ice plate and its plastic parts, side plate, ice bucket and other sanitary areas with cleaning solution. Rinse all areas thoroughly with clean water.

1. Disinfection instructions

1) Mix the solution of the disinfectant and water according to the instructions for the ice machine disinfectant. Make sure the disinfectant is completely dissolved. Immerse the water pipe, inner and outer nozzle, fixing seat of head nozzle and screw into solution for 5 minutes. If a non-rinse disinfectant is used, no flushing is required.
2) Spray disinfectant solution on spray pipe, water curtain and pump base bracket. If a non-rinse disinfectant is used, no flushing is required.
3) Spray the disinfectant solution into the ice evaporator with a spray bottle. Spray disinfectant solution

on water tank, ice plate and its plastic parts, side plate and freezer. If a non-rinse disinfectant is used, no flushing is required.

4) It is allowed to remove the spray pipe, water pump, water pipe and water curtain. Then put it back in place.

7.3. Service Call

If the ice maker is not working properly, please confirm the following before calling the service call:

1) Check water supply
   - Whether there is water in the water tank;
   - Whether the water pressure is 0.1-0.5MPa; whether the water temperature is 3-32 ℃;
   - Whether the water valve is open;
   - Whether there is water leakage;
2) Check the power supply
   - Whether the indicator light on the display panel is on;
   - Whether the panel display does not display "PP" standby state;
   - If the LED on the display screen is not on, check whether the plug and socket are normal and whether the power switch is on.
3) Check the name plate and serial number
   - Check the name plate on the side or back of the ice maker, and record the model and serial number of the ice maker.

CAUTION
◆ In cases of user failure e.g. failure to use and maintain the water filter, no water or electricity supply, or other environmental factors, the service or maintain will be charged for the on-site service call. These errors are not manufacturing defects or part of the warranty of the Ice Maker.

7.3.1. Troubleshooting

Fault	Potential Cause	Troubleshooting
The ice maker doesn't work	There is no power supply to the ice maker and / or condensing unit	Replace the fuse / reset the circuit breaker / turn on the main switch.
	High voltage protector disconnected	Cleaning condenser
	Water curtain closed or stuck open	Ensure that the water curtain is correctly installed and not stuck
	Ice maker not on	Press the button "  "
The ice maker stops and can be restarted with a switch	Stop the safety protection function of ice maker	See "safety protection" in Chapter 6
The ice maker is not making ice or making ice slowly.	The ice maker is dirty	Clean and disinfect ice maker
	The ice maker is not level	Leveling ice maker
	Low air temperature at inlet and outlet of ice maker unit	The air temperature must be at least 5 ℃
The ice maker cannot cycle into harvest mode	The six minute freeze time lock has not expired	Wait for the freeze lock to expire
	Ice thickness probe dirty	Clean and disinfect ice maker
	Ice thickness probe short circuit to ground	Disconnect the probe from the ground
	Ice thickness probe misalignment	Adjust ice thickness probe
	The thickness of the ice is uneven, the ice in the middle of the evaporator is thinner	Make sure there is enough water level in the water tank. Contact a qualified service company to check the refrigeration system

CORRECT DISPOSAL OF THIS PRODUCT

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

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