



Commercial Undercounter Ice Maker

User Manual for Installation and Maintenance



Models: CIM-210 CIM-280




Thank you for purchasing a KoolMore product! If you are having trouble with your unit, for assembly assistance, missing or damaged parts. Please contact customer service Phone: 718-576-6342 Email: support@koolmore.com

We are here to help.

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Warranty	Error! Bookmark not defined.

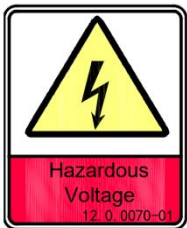
 Note: please keep this manual in a place accessible to users at any time..

Important Information

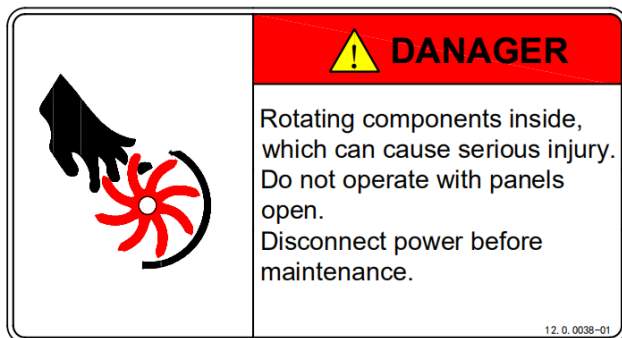
Please pay attention to the following warning labels on the ice maker



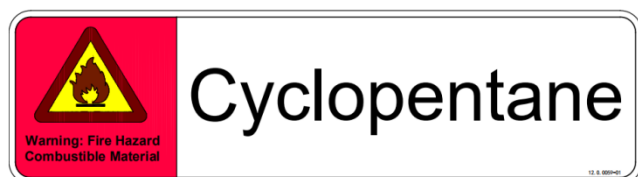
The label indicates a hazardous voltage. There is a risk of electric shock.



The label indicates a hazardous voltage. There is a risk of electric shock.



The label indicates rotating components inside. There is a risk of serious mechanical injury.



The label indicates a flammable foaming agent “Cyclopentane” used. There is a risk of fire.





R290

The label indicates a flammable refrigerant “R290” used. There is a risk of fire

Instruction of symbols in this Manual

[Type here]

 Warning sign, special attention is required.

 Warning sign, special attention is required
and operation is prohibite

Warning and safety instruction

⊘ This ice machine is not intended for use by children, and those with physical weakness, slow response, or mental disorders..

⚠ This ice machine is not intended for use by children.

⚠ The installation, repair or maintenance of this ice machine must be carried out by professional and qualified personnel, or electric shock, fire, personal injury may **result from incorrect operation.**

- ✦ After the ice machine is delivered, please keep the machine still upright for more than 24 hours, to have the lubricant be fully precipitated before startup, otherwise the compressor may be damaged.
- ✦ When handling, keep the cabinet upright, with the inclination not exceeding 45 degrees. Do not invert the machine or lay it horizontally.
- ✦ This ice machine should not be placed in wet or easily splashed area.
- ✦ The grounding of this ice machine cannot be connected to gas pipe, water pipe, telephone line or lightning rods, etc.
- ✦ There are rotating components in this ice machine. Do not insert slim objects into ventilation or exhaust ports, or serious mechanical injury may occur.
- ✦ Do not store volatile or flammable substances in this ice machine, or it may result in explosion or fire.
- ✦ Do not store any **sundries**, or freeze any food in the ice bin. Keep the ice scoop clean.

- ✦ The ice machine must be placed on the floor sufficient to supports its weight. Insufficient base may cause the equipment fall over and cause injury.
- ✦ There should be sufficient ventilation space around the ice machine. Keep good ventilation.
- ✦ Only the power supply specified on the machine nameplate can be used with this ice machine.
- ✦ This ice machine cannot be connected to hot water.
- ✦ Socket for this ice maker must be reliably grounded and with leakage protection.
- ✦ The ice machine must be disconnected from power before manual cleaning, repairing **or** maintenance.
- ✦ Before cleaning, repairing **or** maintenance, the remaining ice in the ice bin should be removed to avoid contamination to ice.
- ✦ Do not splash water directly onto the surface of the ice machine during the cleaning process; otherwise it may cause short circuit, leakage or other faults.
- ✦ Flammable foaming agent is used during the foaming process. The ice maker should be disposed of and recycled by qualified personnel and institutions.
- ✦ The ice machine should be properly managed to ensure that children will not play with the machine.
- ✦ When the ice machine malfunctions, turn off the power and contact professional personnel for repairing



For the ice maker with flammable refrigerant R290:

- DANGER – RISK OF FIRE OR
[Type here]

EXPLOSION. FLAMMABLE REFRIGERANT USED. DO NOT USE MECHANICAL DEVICES TO DEFROST REFRIGERATOR. DO NOT PUNCTURE REFRIGERANT TUBING.

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- DANGER – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. TO BE REPAIRED ONLY BY TRAINED SERVICE PERSONNEL. DO NOT PUNCTURE REFRIGERANT TUBING.
 - 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.
 - CAUTION – RISK OF FIRE OR EXPLOSION. DISPOSE OF PROPERLY IN ACCORDANCE WITH FEDERAL OR LOCAL REGULATIONS. FLAMMABLE REFRIGERANT USED.
 - CAUTION – RISK OF FIRE OR EXPLOSION DUE TO PUNCTURE OF REFRIGERANT TUBING; FOLLOW HANDLING INSTRUCTIONS CAREFULLY. FLAMMABLE REFRIGERANT USED.

General

The ice machine is fully automatic. With proper installation and connection to potable water and power source, the ice making will start properly. When the ice cubes fill up the ice bin, the machine will automatically stop. The ice machine is generally used in the following and similar occasions:

- The kitchen area of a store, office or other workplace;
- Farm, hotel, car hotel and restaurant;
- Catering and similar non-retail occasions;
- This ice machine is not intended for Residential use

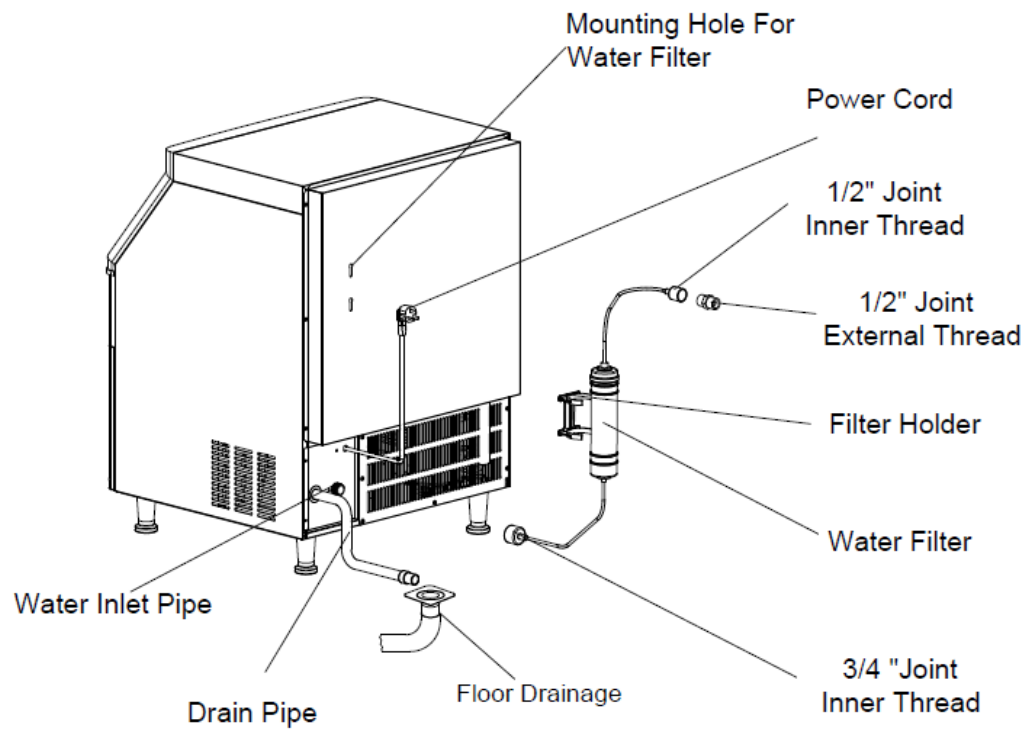
Installation

Location for Installation

The ice machine should be installed in a proper location meeting the following conditions:

- Indoor, not more than 2,000 meters above sea level;
- Ambient temperature: 40-90°F;
- Power supply: the rated voltage indicated on the machine nameplate $\pm 6\%$;
- Water source: potable water, with water pressure from 18.75 psi to 80 psi; water temperature: 40-90°F;
- The ice machine should be kept away from heat sources, and should be strictly forbidden to use at extremely high or low temperature environment, and should avoid direct sunlight.
- There should be sufficient ventilation space around the ice machine and keep good ventilation;
- The ice machine must be placed on a floor sufficient to support its weight;
- Socket for the ice maker must be reliably grounded and with leakage protection;
- Proper floor drainage must be provided near the installation location of the ice machine.

Schematic Diagram of Installation



NPT THREADS

Installation Steps

1. Check if the ice machine is in good condition and the accessories are complete; check the machine model and the machine nameplate.
2. Open the bin door and remove the packaging tape from the ice thickness sensor and the flap. They are used to avoid possible damage during transportation only.
3. Clean the ice bin and the food area inside with a sponge soaked in warm water and soap. Then wash and dry it with potable water.
4. Place the ice machine in the operation area; ensure that the machine is placed on a leveled floor. So as to ensure the water flows evenly on the evaporator.
5. The compressor chamber is located below the front of the ice bin. The compressor and condenser are installed inside of it. It requires good ventilation. Therefore, 12" for the front, 6" for the sides, and 8" for the rear.
6. The bottom of the ice machine is equipped with adjustable legs for level adjustment and floor cleaning.
7. Connect the machine's inlet water filter and water pipe referring to the schematic diagram of installation; if the installation site is already equipped with a drinking water system, the water filter may not be installed.

⚠ Note: the filter flow direction should be correctly installed as per the direction marker on the filter head cover or the filter

Startup and Operation

1. Before you start up the machine, please check and confirm:
 - That the packaging tape inside the ice machine has been removed;
 - The accessories or items in the ice bin have been taken out;
 - The ice machine has been adjusted to a leveled state;
 - The water pipe has been connected and the water valve is open;
 - The plug has been connected to the power supply and the power switch is off.

body.



⚠ Note: This machine is equipped with an inlet water filter. The filter will KEEP impurities from the water used as the machine is running. Generally, it needs to be replaced every month to every 3 months.

8. Connect the machine to the water supply using the 3/4" inlet pipe supplied with the machine. It is recommended to install a water valve (not supplied with this machine) on the water supply line.
9. Connect the drain pipe to the drain connection. In order to meet a good draining, it is recommended that the drain pipe should have a difference of level more than 1" per 3'; and confirm that the drain pipe is not blocked. It is recommended that the drain pipe be connected to an open drainage port.
10. Any joint in the drain pipe must not be higher than the machine drainage port; any joint in the drain pipe cannot be higher than the previous joint.
11. Confirm the power requirements stated in the machine nameplate; ensure that the power supply meets the requirements.
12. A circuit breaker or switch with leakage protector and reliably grounding is required.
13. Turn off the switch on the power line and connect the machine to the power source.

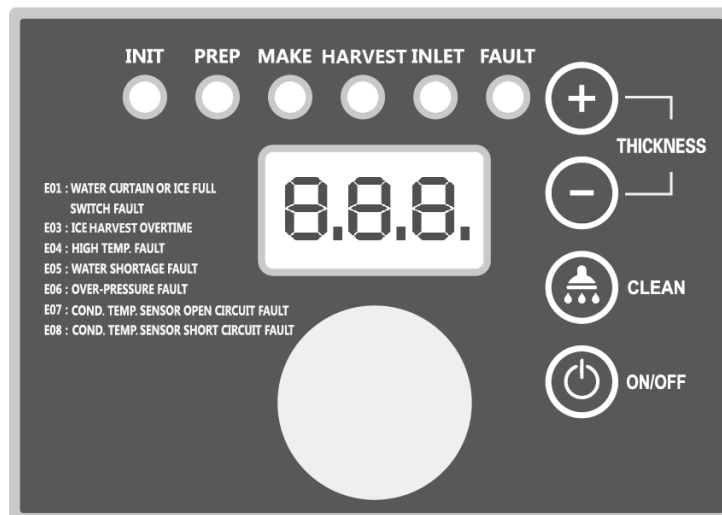
- The ambient temperature, water temperature, and pressure of the water supply meet the above requirements.
2. Start up: turn on the power switch. After power-on, the machine begins to make ice automatically.
 3. For normal operation, please confirm:
 - ✓ There is water in the water trough and no overflow occurs;
 - ✓ The pump is working properly and water is flowing evenly on the evaporator;
 - ✓ The compressor is running normally, the

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- temperature of the evaporator and the ice making water is gradually decreasing;
 - ✓ The fan is running normally, and there is stable air flow in the inlet and outlet of the ice machine;
 - ✓ The ice machine has no abnormal noise;
 - ✓ The ice machine has no abnormal vibration;
 - ✓ It takes about 10 to 20 minutes to make one batch ice, depending on the ambient temperature and the temperature of the water. The higher the temperature is, the longer the ice making will take;
 - ✓ Ice cube can be properly defrosted from the machine.

Operation Instruction

- **Startup:** after proper installation, connect the water source and turn on the power supply, the machine will start working. Please confirm that the machine is operating normally when you turn it on for the first time.
 - **Ice Harvest:** after the ice making process, the water pump is turned off, the defrosting valve is turned on, and after the hot gas enters into the evaporator for about 1-2 minutes, the ice cubes slides from the evaporator into the ice bin.
-  **Note:** In case of thunderstorm or not in use for a long time, please disconnect the power and water source!
- **Self-check:** with power on for the first time, the ice maker will do self-check and pump out remaining water.
 - **Preparing:** after the ice machine is energized, the inlet valve opens and the inlet water will flow in until it reaches the set level; then the ice maker will do defrosting one time.
 - **Ice making:** after pre-cooling for 30 seconds, the water pump starts, the water flows through the evaporator smoothly and evenly, the ice cubes are gradually formed in the ice cube tray.
-  **Warning:** Do not put your hand into the ice bin during the harvest process to prevent the ice from hitting your hand!
- **Shutdown:** The ice maker will stop working when you click the “on/off” button on the panel during running process.
 - **Bin full stop:** in the running state, with the ice bin filled to a certain height, the ice sliding board cannot or reset because of the block of the freshly produced ice cubes, the ice maker will stop in 30 seconds.
 - **Repeat ice-making:** when the ice cubes on the ice sliding board are taken away, the ice maker will back to ice making process in a few seconds.

Instruction of Control Panel



1. LED Display:

- Self-check : Display “ini” code.
- Preparing : Counts second upward
- Ice making: Counts seconds upwards prior the water reaching 32 degree F. Counts seconds downwards to 0 seconds afterwards.
- Ice Harvest: Counts seconds upwards.
- Clean: Displays “CLE” during cleaning and descaling; Displays “STL” during sterilizing; Displays “rin” during rinsing.

2. LED Turns lights on/off

3. Ice cube thickness adjustment: During the ice making process, if you would like to adjust the ice thickness, press the Ice cube “-” button for 3 seconds, then click the button “+” or “-” on the panel to adjust the thickness of ice cube.

⚠ Note: By clicking the “+” or “-” button one time, the ice making time is extended or shortened by 1.5 minutes.

4. Cleaning: During the normal operation, hold the cleaning button for 3 seconds to enter the cleaning process. During the entire cleaning process, cleaning agents and disinfectants need to be put into the water trough. When the clean process is finished, the ice maker will go to ice

making process.

Note: All cleaning and sanitizing chemicals used must be nickel safe

5. ON/OFF: Press this button to switch the machine OFF/ON.
6. Please open and close the ice bin door gently. Do not slam the door. After taken the ice cubes, please close the door.
7. If the ice maker is not in use for a long time, it should be turned on and run for 2 to 4 hours every 2 months.

Other special protection - shutdown

- If the ice machine has not d ice harvest in three cycles, it will shut down for safety protection. The ice maker needs to be checked.
- The ice machine detects that the ambient temperature is too high and will stop for safety protection.
- If the water-cooled ice machine detects an abnormality in water supply, it will stop for safety protection.
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The fault code and its comments Displayed as follows:

Code	Error	Machine Status
E01	Water Curtain failure or Ice Full Switch	Protective shutdown recover after the water curtain is reset
E03	Ice Harvest Overtime	Protective shutdown
E04	High Temperature	Protective shutdown
E05	Water Shortage Fault	Protective shutdown and retry every 30 mins
E06	High Pressure	Protective shutdown
E07	Contestation Sensor Open Circuit	Error light comes on every 5 seconds
E08	Condensation Sensor Short Circuit	Error light comes on every 5 seconds
E13	Water Level Control failure	Protective shutdown

Maintenance

⚠ Note: Maintenance must be done by a qualified professional personal.

⚠ Warning: Before maintenance or manual clean, be sure to cut off the water source and power supply.

Exterior cleaning

- Frequently clean the environment around the ice machine to keep it clean. Do not block the vents.
- The outer enclosure should be cleaned with a mild detergent and then wiped clean. If necessary, use commercial stainless steel cleaners and polishes.

⚠ Note: Stainless steel may rust without proper maintenance.

Inlet water filter

- The filter cartridge should be inspected regularly. It is recommended to replace filter element every 3 – 6 months

Interior cleaning

- The inside of the ice bin can be washed directly with water and a solution

⚠ Note: Check and confirm the water pressure lower than the maximum allowed pressure. Do not flush the part above the water pump or the evaporator directly for water protection.

Condenser

Clean Function

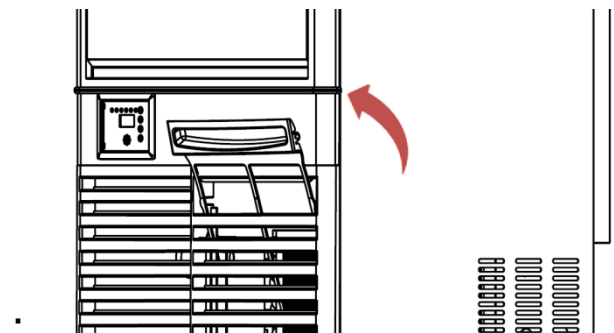
⚠ Note: Please empty the bin of ice in advance.

⚠ Note: Please clean and sterilize the bin and do complete rinsing.

⚠ Note: Please clean and sterilize the ice sliding board, water distribution pipe, water supply pipe, then do complete

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

- The condenser filter should be cleaned every 2 weeks.



⚠ Note: Be careful when doing the condenser cleaning as the edges of the fins are sharp.

Water pipe

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

Winterizing

- Turn off the water and power supply, drain the residual water from the water trough, inlet pipe and drain pipe.

⚠ The maintenance of the ice machine is not covered by the manufacturer's warranty!

rinsing.

- Turn on the ice maker; push the “clean” button for 3 seconds, the ice maker will begin the cleaning process. Wait until the water in process is finished the led display will flash “Clean” then slowly; drain the water from the water trough.
- Put in proper amount of clean solution

manually followed by the clean and sterilizing process instruction. Push the “clean” button again, the ice maker will do auto clean for about 15 minutes. Please spray clean the evaporator to insure a complete clean. When finished, the led display flash “Clean” slowly again.

- Drain the water from the water trough.
- Put in proper amount of sterilizing solution manually followed by the clean and sterilizing process instruction. Push the

“clean” button again, the ice maker will do auto sterilizing for about 15 minutes. Please do spray sterilizing to the evaporator at the mean time to insure a complete sterilizing. When finished, the ice maker will get into rinsing process; the process will take about 25 minutes.

- The ice maker will get back to do ice making as soon as the clean process end.
- Please throw away the next 5 batches ice in case of cleaner remained.

Service Call

If the ice machine works abnormally, please confirm below before making a service call:

1. Check the water supply

- ✓ whether there is water in the water trough;
- ✓ whether the water pressure for the ice machine is 18.75 psi to 80 psi; the water temperature is 40-90°F;
- ✓ whether the water valve is open;
- ✓ whether there is no water leakage;

2. Check the power

- ✓ whether the panel display does not display the OFF standby state;

- ✓ If the LED on the display panel is blank or "OFF", check whether the plug and socket are normal, and whether the power supply switch is ON.

3. Check nameplate and series number

- ✓ Check the nameplate located on the side or back of the ice machine and record the model and series number of the ice machine.

⚠ Note: If the machine fails due to the user's faults, such as no supply of water, electricity or environmental factors, rather than the fault of the ice maker, the door-to-door service will be charged.

Troubleshooting

Fault	Potential cause	Troubleshooting
Not working Indicator is "OFF"	Power switch not turned on Plug is loose	Turn on the power switch Check plug and socket
The display shows E04 high temperature The display shows E06 high pressure protection	The ambient temperature is too high Condenser is dirty and blocked High pressure switch wires fallen off Fan does not start	Normal working temperature range of 5-40 °C Clean the condenser Check and correct high pressure switch wires Check and correct the fan
Ice defrost abnormal	Ambient temperature too low Defrost valve does not start normally Ice thickness too thin or too thick	Normal working temperature range of 5-40 °C Check and correct the defrosting valve Check and correct ice thickness setting
Poor transparency of ice cubes; ice cubes too thin or incomplete	Ice thickness too thin Water pressure too low Water temperature too high Inlet water valve does not work Inlet water valve is dirty and blocked	Check and correct ice thickness setting Check that the water supply pressure is 1.3 Bar to 5.5 Bar Water temperature of 41-95°F Check and correct the inlet water valve Check whether water leaks and correct

	<p>Water leaking</p> <p>Inlet water filter has not been replaced for a long time</p>	Check and correct the inlet water filter
Too slow in ice making	<p>The condenser or air filter is dirty</p> <p>High ambient temperature</p> <p>Poor ventilation</p> <p>Water temperature is too high</p>	<p>Clean the condenser and filter screen</p> <p>Normal working temperature range of 41-95°F</p> <p>Check the environment around the ice machine</p> <p>Check the water supply temperature of 41-95°F</p>
Too much noise	The ice machine is not placed in a leveled foundation or the ice maker is not leveled.	Level the ice machine



If you are experiencing any issue with your unit, please contact us right away. Phone: 718-576-6342
Email support@koolmore.com

Limited Service Warranty

Valid only in the Continental United States

1 Year Parts and Labor Warranty

Unless otherwise stated, Koolmore Supply Inc warrants to the original purchaser of new Koolmore Ice machines, that such equipment will be free from defects in material and workmanship for a period of 1 year from the date of delivery. Valid only in the Continental United States.

5 Year Compressor Warranty

In addition to the 1 year parts and labor warranty above, Koolmore Supply Inc warrants the compressor on select units to be free of defects in material and workmanship for a period of 5 years from the date of delivery.

On products without the 5 year compressor warranty, the compressor is covered for 1 year under the standard parts and labor warranty.

Coverage Limitations

The 1 year parts and labor warranty and 5 year compressor warranty do not cover:

- Failure to install and/or use equipment within proper operating conditions specified by Koolmore. This includes but is not limited to residential, outdoor, or mobile applications.
- Any adjustments necessitated by improper operating conditions.
- Improper water pressure or temperature, or failure to use and maintain a water filter, and any adjustments necessitated by these conditions. Failure to meet these conditions will void all future warranty coverage.
- Damage caused by improper electrical connection, power failure, or generators.
- Failure to properly maintain the unit including all preventative maintenance and cleaning.
- Equipment sold or used outside of the contiguous United States, equipment purchased second-hand, equipment sold by an unauthorized reseller, and equipment expressly sold without warranty coverage.
- Equipment without a valid serial number and proof of purchase, or other way to verify warranty coverage.
- Equipment that has not been used appropriately or was subject to misuse, neglect, abuse, accident, alteration, negligence, damage during transit, delivery or installation, fire, flood, or an act of God.
- Equipment that has been altered, modified, or repaired by anyone other than an authorized service agency outside of preventative maintenance and cleaning.
- Parts deemed by Koolmore to be normal wear and tear parts, including hoses and select plastic or rubber Components.

For Warranty Inquiries or Service:

This warranty is only valid on equipment purchased from an authorized dealer.

Locate the model number on the rating label

Next, call 1-718-576-6342. You must have the model number when contacting service technicians.

