Commercial Ice Machines Owner's Manual

Applicable Ice Machine Models: CS-89P, CS-129P, CS-219P, CS-289P, CS-350P, CS-500P

Please read the entire owner's manual before attempting to operate your machine.

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Installation

Congratulations on your new iBeeCool purchase! Please read the enclosed information to help you become familiar with your new machine.

Please ensure the machine has been transported in an upright position. If not, please let the unit stand one hour before energizing it.

Refrigeration equipment must be properly installed. It must be indoors on a level floor, have adequate air circulation, and be in a cool, dry environment. It cannot be in heat conditions that exceed 26° Celsius (80° F). Operating efficiency may decrease in high humidity. Locations must be away from heat and moisture generating equipment because ambient temperatures may cause the unit to malfunction and void the warranty.

The electrical components require proper grounding and a dedicated circuit. Any tampering will void the warranty.

Making Ice

Your ice machine automatically makes ice if it has the appropriate water and power connection. When the storage bin is filled, ice making will stop. What follows is a technical description of how your machine makes ice.

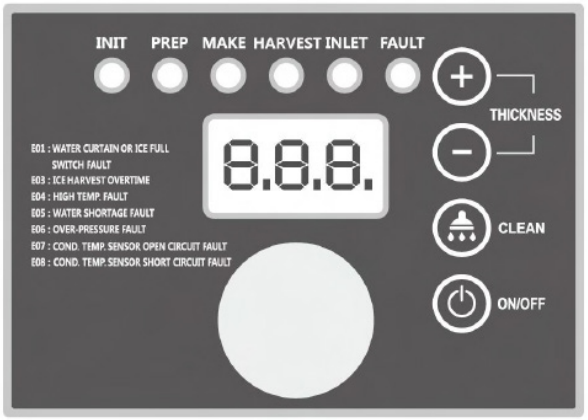
1. Your ice machine has two start-up sequences. The first is when your machine is powered up for the first time or for the first time since losing power. The second is when the machine is restarting after a full bin cycle, or after all the ice has been harvested. After this, the machine will enter a defrost cycle for 140 seconds before beginning a normal cycle.

2. Before making ice, the water must be chilled. This sequence begins with draining the water level until the sensor probe is uncovered, and then filling the water reservoir until the top probe is in contact with the water. Afterwards, the machine starts a pre-chill cycle by lowering the reservoir temperature to 0° Celsius (32° Fahrenheit). The display board starts a timer for 330 seconds, and the water pump stops for 30 seconds for an anti-slush period.

3. Ice is made by running chilled water over an internal plate that is also chilled. After the anti-slush period, your ice machine will lower the plate temperature by restarting the compressor and circulating refrigerant through the plate for 25 seconds. Next, the condenser fan motor and water pump power-up. The controls will display a negative countdown of 660 seconds, and then the machine begins making ice.

4. In order to harvest ice off the plate, your machine has to go through a defrost cycle. This begins when machine programming shuts off the fan motor and switches on a hot gas valve. The purge valve will open to let water drain from the reservoir and refill for the next cycle. The ice harvest continues as hot gas flows in the evaporator, heats the plate, and causes the ice to fall towards the curtain door and into the bin. If the door closes within 30 seconds, it signals the harvest cycle has been completed. If the door remains open, programming will enter standby mode, or a full bin sequence.

Control Panel Instructions



1. LED Display

• **Self check:** Displays "INI" code
• **Preparing:** Seconds count positively
• **Ice making:** Seconds count positively prior the water reaching 0° Celsius. Afterwards, seconds count down to 0.
• **Ice harvest:** Seconds count positively
• **Clean:** Display "CLE" during cleaning and descaling; display "STL" during sterilizing; displays "RIN" during rinsing
• **LED lamps:** Lights are on during this process
• **Ice cube thickness adjustment:** During the ice making process, if you are not satisfied with ice thickness, press the ice cub "--" button for 3 seconds, then click the button "+" or "-" on the panel to adjust the thickness of the ice cub.

Note: By clicking the "+" or "-" button one time, the ice making time is extended or shortend by 1.5 minutes.

4. **Cleaning**
During the normal operation, hold the cleaning button for 3 seconds to enter the cleaning process. During the cleaning process, cleaning agents and disinfecants need to be put in the water trough. When the cleaning process is finished, the ice maker will go to the ice making process.

5. Switch
When the device is powered, click the "Switch" button to switch OFF/ON the device.

6. Voice function (only for machines with voice function):

The machine with voice announcement prompts for related operations.

7. Bin door
Please open and close the ice bin door gently. Do not slam the door. After taking the ice cubes, please close the door.

8. Shutdown
• If the ice machine has not detected ice cubes falling off 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 abnormity in water supply, it will stop for safety protection.

Troubleshooting Your Ice Machine

The ice is too thin or the cubes are dropping prematurely.

If your sheet of ice is too thin, or incomplete, it will affect the ability to force open the curtain door and activate the magnetic reed switch, which is responsible for communicating that the harvest is completed, and to reset the sequence for ice-making. If the programming doesn't receive the reset, it will attempt two more ice-making cycles, and it will produce an Error Code. At this point, we recomment the technician to check the following items for adequate water circulation.

The water supply to the unit inlet valve is not working but the water pump is circulating sufficient water over the evaporator plate.

If all previous components are function correctly your next component to check is the refrigeration system.

The compressor is not running.

Check your circuit breaker.
Check to see if your power cord is unplugged.
Check if your thermostat is too high.
Check if your machine is in a defrost cycle.

The condensing unit has been running for a long period of time.

Check to see if the door is open or has been open for too long.
Check if the door gasket is not sealing properly.
Check if the condenser or evaporator coil is dirty.
Check if the coil is iced-up.
Check if the airflow is blocked.

Fault Codes

Code	Fault	Possible Cause	Inspection and Trouble
E00	Fault free	N/A	N/A
E01	Ice skating board or ice full switch fault	1. Ice skating board is deformed. 2. The ice full switch is faulty or falls off. 3. There are ice or foreign objects caught between the ice skating board and the evaporator. 4. There is a wiring error or falling off. 5. Ice skating board magnets fall off. 6. The ice skating board is not returned.	1. Replace the ice skating board or reinstall the ice full switch. Judgement method: visual inspection. 2. Replace the ice full switch. Judgement method: open the ice skating board, connect the power, the fault code E01 displays, turn off the power, reset the ice skating board, connect the power again and E01 should dissappear. If that's not the case, the ice full switch is faulty. 3. Remove ice or foreign objects. Judgement method: visual inspection. 4. Reset the ice skating board or reverse it. 5. Re-fix the magnet and replace the ice skating board. 6. Correct the wiring. Restart the machine after the above operations.
E02	Ice making overtime	1. Water temperature sensor failure. 2. PC board failure. 3. Condensation temperature sensor failure. 4. The inlet valve is not properly closed. 5. Refrigeration system failure: the compressor breaks down. 6. Refrigeration system failure: the cooling system is blocked. 7. Refrigeration system failure: refrigeration system leakage. 8. Refrigeration system failure: defrost valve closes improperly. 9. Refrigeration system failure: the condenser and filter are blocked. 10. Refrigeration system failure: high ambient temperature or poor ventilation.	Replace the water temperature sensor, the condensing temperature sensor, and the PC board in order. Restart the ice machine and test whether the ice is normal.
E03	Ice unload overtime	1. Ice full sensor failure. 2. Insufficient water supply during ice making. 3. Poor cooling effect (no ice or ice plate is not formed compressor failure). 4. Wiring error. 5. Pump is broken or blocked (sink water shortage). 9. The ice thickness is improperly set, the ambient temperature is too low, or the ice is too thick. 10. Drain valve failure. Water shortage in the sink, or the ice in the evaporator is too thin or doesn't exist. 11. The machine leaks water, water shortage in the sink, and/or the ice in the evaporator is too thin or doesn't exist.	1. Replace the ice full switch. Judgment method: open the ice shield and start the ice machine. If E01 is not displayed, ice full sensor cannot be released, the fault occurs. 2. Check if the inlet battery valve is working properly, or the water pressure is normal. Then replace the ineffective device, adjust the water pressure, or add booster pump: Judgment method: visual inspection. 3. Check if the compressor works during the ice making process, or if there is ice on the evaporator. If the compressor fails, replace the compressor. 4. Connect the wiring. 5. Clean the pump. 6. Clean or replace the spray pipe. 7. Replace the defrosting valve. 8. Clean or replace the water level sensor. 9. Adjust the ice thickness to the appropriate level. 10. Replace the drain valve. 11. Repair the leak. Restart the machine after the above operations.

Fault Codes - Continued

Code	Fault	Possible Cause	Inspection and Trouble
E04	High temp fault	1. (Air-cooled type) The fan does not turn. 2. Refrigeration system failure: there is no cooling water or little water flow. 3. Refrigeration system failure: the condenser and filter screen are blocked. It is not properly ventilating. It is too close to the heat source. 4. Refrigeration system failure: the condensing temperature sensor has failed. 5. Refrigeration system failure: improper setting of the condensing pressure regulating valve. 6. Refrigeration system failure: the refrigeration system pipe is blocked.	1. Check whether the fault comes from the fan or the PC board. Check if there is a voltage output on the fan terminal of the PC board with a multimeter. If not, the fault belongs to the PC board. 2. Visually check if the cooling water is normal. 3. Restart the ice machine after the above operations. 4. Replace the condenser temperature sensor. 5. Adjust the condensing pressure regulating valve. 6. Replace the capillary. 7. Replace the cooling water source with low water temperature.
E05	Water shortage fault	1. Inlet valve failure or PC board failure. 2. Insufficient water pressure. 3. Drain valve failure (normally open, all-in-one machine does not have the problem). 4. There is a leak in the sink. 5. The water level sensor is faulty or blocked. The water tank is without water. 6. Wiring error.	1. Check if there is voltage output at the output terminal of the inlet valve with a multimeter. If there is output without water, the inlet valve is faulty. If the output terminal has no output, the PC board is faulty. 2. Check the water inlet pressure, judgement method: visual. Solution: Adjust the water pressure, or add a booster pump. 3. Check the drain valve and visually check if the drain valve is draining regularly. 4. Visually inspect the sink for leaks. 5. Clean up and replace the water level sensor. 6. Correct the wiring. Restart the machine after the above operations.
E06	Over pressure fault	1. (Air-cooled model) Electrical failure: the fan does not turn. 2. Electrical failure: no cooling water or little water flow. 3. Electrical failure: wiring error. 4. Refrigeration system failure: the condenser is blocked or the ventilation is not smooth, or too close to the heat source. 5. Refrigeration system failure: condensation sensor failure. 6. Refrigeration system failure: improper setting of condensing pressure regulating valve. 7. Refrigeration system failure: refrigeration system pipe is blocked. 8. Refrigeration system failure: the cooling water temperature is too high. 9. Refrigeration system failure: too much refrigerant.	1. Check whether the fault comes from the fan or the PC board. Check whether there is voltage output on the fan terminal of the PC board with a multimeter. If there is no output, the PC board is faulty. If there is voltage output but the fan does not turn, the fan is faulty. Replace the failed device to solve the problem. 2. Visually check if the cooling water flow is normal. 3. Correct the wiring. 4. Clean the condenser and filter screen. Improve the ventilation conditions. Keep away from the heat source. 5. Replace the condensing temperature sensor. 6. Adjust the condensing pressure regulating valve. 7. Replace the capillary. 8. Change the cooling water temperature and replace the cooling water source. 9. Readjust the amount of refrigerant. Restart the machine after the above operations.
E07	Condenser sensor open circuit	1. Condensing temperature sensor failure. 2. The wiring is loose or broken. Wiring error.	1. Replace the condensing temperature sensor. 2. Replace the condensing temperature sensor. 3. Correct the wiring.
E08	Condenser sensor short circuit fault	1. Condensing temperature sensor failure. 2. Wiring error.	1. Replace the water temperature sensor. 2. Correct the wiring.

Fault Codes - Continued

Code	Fault	Possible Cause	Inspection and Trouble
E09	Evaporator sensor open circuit fault	1. Water temperature sensor failure. 2. The wiring is loose or broken. 3. Wiring error.	1. Replace the water temperature sensor. 2. Replace the water temperature sensor. 3. Correct the wiring.
E10	Evaporator sensor short circuit fault	1. Water temperature sensor failure. 2. Wiring error.	1. Replace the water temperature sensor. 2. Correct the wiring.
E11	Poor refrigeration effect	1. Inlet valve failure. 2. Refrigeration system failure: the compressor breaks down. 3. Refrigeration system failure: the cooling system is blocked. 4. Refrigeration system failure: the refrigeration system is leaking. 5. Refrigeration system failure: the defrost valve is not closed properly. 6. Refrigeration system failure: the condenser and filter screen are blocked.	1. Replace the inlet valve. 2. Replace the compressor. 3. Replace the capillary. 4. Look for leaks and refill the refrigerant after repair. 5. Replace the defrost valve. 6. Clean the condenser and filter.
E12	Water level control fault	1. Water level sensor failure. 2. Drain valve failure. 3. Water pump failure. 4. Draining system jam.	1. Check the water level sensor stick, or set it in the correct position, or replace it. 2. Check the drain valve and clean it or replace it. 3. Check the cable of the pump connected to the PC board well, or replace the water pump. 4. Clean or repipe the draining system.

Cleaning

When cleaning your cabinet or shelves, we recommend using warm water with a mild soap. Your evaporator and condenser will require an annual maintenance cleaning to be conducted by a refrigeration technician.

General Safety

It's important to stay safe. This appliance has been designed with your safety in mind. It has many features to keep you from being harmed. However, safe operation and maintenance are your responsibilities.

1. When using this unit, please move it carefully. If on casters, be sure the casters do NOT run over the power cord.

2. Lock the casters when in use.

3. Seek help when moving the machine. This machine is heavy. Be sure you have enough help to avoid tipping or dropping the cabinet.

4. Prevent children from playing in or on the cabinet.

5. Follow all instructions. There are many safety labels and directions on the unit. Heed them.

6. Watch your fingers. There may be pinch points near the door hinges.

Warranty

Limited Warranty: 2 Year Parts and Labour; 5 Year Parts-Only Warranty on the Compressor

CoolSteel refrigeration units have a 2-year warranty coverage on parts and labour, and 5 years, parts only, on compressors. This is a limited warranty starting from the date of purchase. For further information, do not hesitate to contact the undersigned.

Customer Service
166 Millennium Blvd
Moncton E1C 2G8
1.855.388.5999
support@ifoodequipment.ca

Terms and Conditions

This agreement constitutes the entire agreement between CoolSteel and the owner. All representations made by the service provider, which are not included in this written agreement, are not part of this agreement. This agreement will automatically be cancelled if the equipment is moved from the location indicated on the original invoice. All material and labour not covered by this agreement will be provided at the owner's expense. CoolSteel or the service provider will not be held liable for any loss of product, damage or injury resulting from a delay in repairs, or improper installation. Maximum 100 kilometers for travel for units residing at a remote location as stipulated in this agreement.

Limitation of Liability

Any liability on the part of CoolSteel will under no circumstances, exceed the amount of the costs of the unit incurred by CoolSteel to repair the equipment during Monday to Friday, between 8 am to 5 pm, and the reasonable costs related to the labour and parts replacement. CoolSteel reserves the right to charge a customer for non warranty claims and to request a method of payment before a claim is dispatched. Refrigeration that is being used in a mobile application, such as a Food Truck, will not be eligible for warranty coverage of any kind.

Owner's Responsibilities

The owner is entirely responsible for the following items: All services or repairs not covered by this agreement. Checking or replacing breakers and operating the equipment according to the manufacturer's instructions and performing routine maintenance or any special maintenance mentioned in the owner's manual. Routine maintenance includes cleaning the condenser and evaporator coil and drain tube. An annual preventive maintenance service is strongly recommended. Providing the service provider with free access to the equipment and its controls. Moving all materials, fixtures or partitions that may interfere with the service provider's work. Refrigeration equipment must be properly installed and requires an indoor level floor and adequate air circulation in a conditioned environment where the temperature does not exceed 26° Celsius (80° Fahrenheit). Electrical requires proper grounding and a dedicated circuit, any tempering will void the warranty. CoolSteel reserves the right to void any warranty if any of the terms or condition are not observed in accordance with conditions and limitations.

How to Obtain Service

Customers are required to register their purchases with customer service during hours of operation Monday to Friday, 8 am to 5 pm, Atlantic time. When repairs are required, call 1-855-388-5999 and include your model and serial number. If your service provider requires parts, have them reach us by email or give us a call to discuss part selection.