Household Ice Machine

User's Manual

Be sure the unit is standing upright for 24 hours prior to plug-in

Model # IM70

Made in China

c UL us LISTED

Parts Connect®

Indianapolis, Indiana, USA
www.parts-connect.com

Table of Contents

We reserve the right to make changes in specifications and design without prior notice.

ICE MACHINE SAFETY

Your safety and the safety of others is very important.

In this manual and on your appliance we have provided many important safety messages. Always read and obey all safety messages.

This is the Safety Alert Symbol. This symbol alerts you to potential hazards that can injure or kill you and others. All safety messages will follow the Safety Alert Symbol and either the words **"DANGER", "WARNING"** or **"CAUTION".**

⚠ DANGER ⚠

DANGER means that failure to heed this safety statement may result in severe personal injury or death.

⚠ WARNING

WARNING means that failure to heed this safety statement may result in extensive product damage, serious personal injury or death.

CAUTION

CAUTION means that failure to heed this safety statement may result in minor or moderate personal injury, or property or equipment damage.

All safety messages alert you to the potential hazard, tell you how to reduce the chance of injury, and let you know what can happen if the instructions are not followed.

IMPORTANT SAFETY INSTRUCTIONS
WARNING: To reduce the risk of fire, electric shock or injury when using your ice machine, follow these basic precautions:

- Plug into grounded 3-prong outlet.
- Do not remove grounding prong.
- Do not use an adapter.
- Do not use an extension cord.
- Disconnect power before cleaning.
- Disconnect power before servicing.
- Replace all panels before operating.
- Use 2 or more people to move & install ice machine

SAVE THESE INSTRUCTIONS

IMPORTANT SAFEGUARDS

Before the ice machine is used, it must be properly positioned and installed as described in this manual. Read the manual carefully. We strongly recommend that you have a professional install your new machine. The warranty may be affected or voided by an incorrect installation. To reduce the risk of fire, electrical shock or injury when using the ice machine, follow basic precautions, including the following:

⚠ DANGER ⚠

- Plug into a grounded 3-prong outlet. Do not remove grounding prong, do not use an adapter, and do not use an extension cord.
- It is recommended that a separate circuit, serving only your ice machine, be provided. Use receptacles that cannot be turned off by a switch or pull chain.
- Do not connect or disconnect the electric plug when your hands are wet.
- Never unplug the ice machine by pulling on the power cord. Always grip the plug firmly and pull straight out from the outlet.
- Never clean ice machine parts with flammable fluids. Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. The fumes can create a fire hazard or explosion.
- Before proceeding with cleaning and maintenance operations, make sure the power line of the unit is disconnected and the water line is shut off. (EXCEPTION: When cleaning the machine's ice making and water systems - See pages 21-24)
- Before operating, put all panels back into place.
- Never allow children to operate, play with or crawl inside the ice machine.
- Do not touch the evaporator by hand when the machine is operating.
- Unplug the ice machine or disconnect power before cleaning or servicing. Failure to do so can result in electrical shock or death.
- Do not attempt to repair or replace any part of your ice machine unless it is specifically recommended in this manual. All other servicing should be referred to a qualified technician.

⚠ WARNING

- Use two or more people to move and install ice machine. Failure to do so can result in back or other injury.
- Never install or operate the unit in an enclosed area, such as a closed cabinet. To ensure proper ventilation for your ice machine, the front of the unit must be completely un obstructed. Choose a well-ventilated area with temperatures above 45ºF (7ºC) and below 110º F (43ºC).
- The ice machine should not be located next to ovens, grills or other sources of high heat.
- The ice machine must be installed with all electrical and water connections in accordance with state and local codes. A standard electrical supply (115VAC, 60Hz, 15A), properly grounded in accordance with the National Electrical Code and local code and ordinances is required.
- Do not kink or pinch the power supply cord between the ice machine and cabinet.
- The fuse (or circuit breaker) size should be 15 amperes.
- It is important for the ice machine to be leveled in order to work properly. You may need to make several adjustments to level.
- All installations must be in accordance with local plumbing code requirements.
- Make certain that the hoses are not pinched or kinked or damaged during installation.
- Check for leaks after connection.
- Although the unit has been tested at the factory, due to long-term transit and storage, the first batch of cubes must be discarded.
- Remove the packing materials and clean the ice machine before using.
- Turn on the water supply tap before switching on the ice machine. Never turn the water supply tap off when the ice machine is working.
- Except to take ice from the unit, keep the door closed in order to reduce ice melting and to promote proper ice formation.
- If the ice machine will not be used for a long time, before the next use, it must be thoroughly cleaned. Follow carefully the instructions provided for cleaning and use of sanitizing solution. Do not leave any solution inside the ice machine after cleaning.
- DO NOT touch the condenser fins. The condenser fins are sharp and can be easily damaged.
- DO NOT use solvent-based cleaning agents or abrasives on the interior. These cleaners may transmit taste to the ice cubes, or damage or discolor the interior.
- Ice machine cleaner contains acids. DO NOT use or mix with any other solvent-based cleaner products. Use rubber gloves to protect hand. Carefully read the material safety instructions on the container of the ice machine cleaner.
- Do not use this apparatus for other than its intended purpose.

ELECTRICAL CONNECTION

Do not, under any circumstances, cut or remove the third (ground) prong from the power cord. For personal safety, this appliance must be properly grounded. The power cord of this appliance is equipped with a 3-prong grounding plug that mates with a standard 3-prong grounding wall outlet to minimize the possibility of electric shock hazard from the appliance. Have the wall outlet and circuit checked by a qualified electrician to make sure the outlet is properly grounded. When a standard 2-prong wall outlet is encountered, it is your responsibility and obligation to have it replaced with a properly grounded 3-prong wall outlet. The ice machine should always be plugged into its own individual electrical outlet which has a voltage rating that matches the rating label on the appliance. This provides the best performance and also prevents overloading house wiring circuits which could cause a fire hazard from overheated wires. Never unplug your ice machine by pulling on the power cord. Always grip the plug firmly and pull straight out from the outlet. Repair or replace immediately all power cords that have become frayed or otherwise damaged. Do not use a cord that shows cracks or abrasion damage along its length or at either end. When moving the ice machine, be careful not to damage the power cord.

Extension Cord

Because of potential safety hazards under certain conditions, it is strongly recommended that you do not use an extension cord with this ice machine.

TECHNICAL INFORMATION

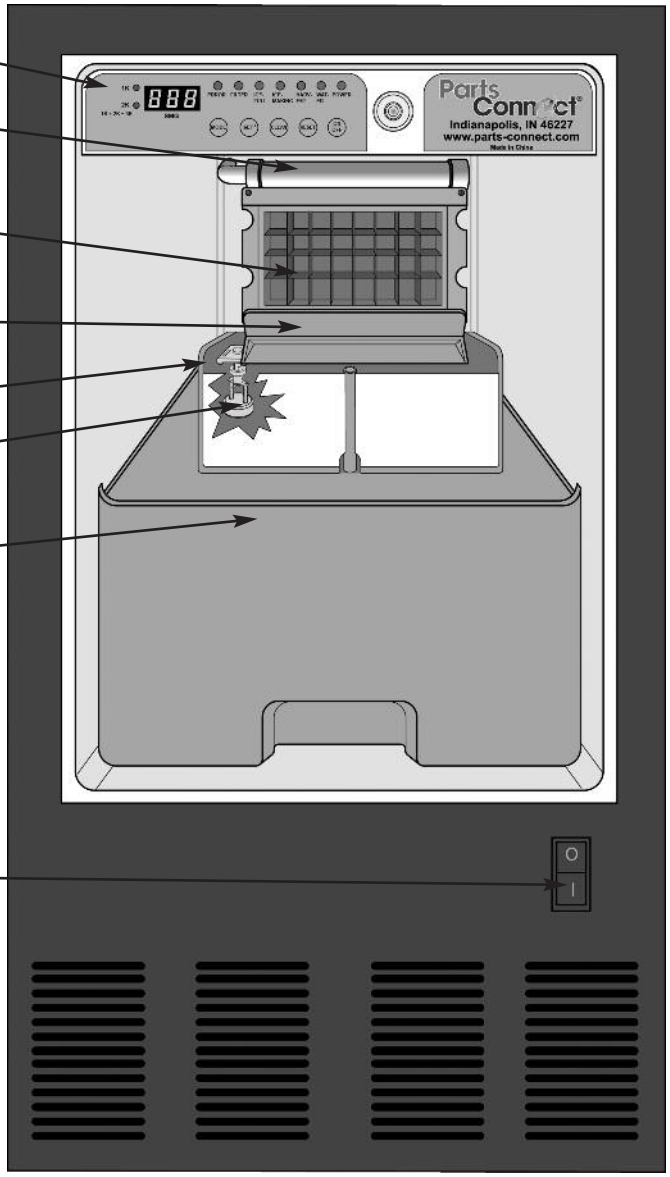
Model:	IM70
Electrical power:	115VAC ~ 60Hz
Power consumption:	13.2kWh/100 lbs of ice
Ice-making/Ice-harvest rated current:	3.0A/3.6A
Refrigerant:	R134a, 3.17 oz.
High/Low Side Pressure:	350psig/130psig
Width × Depth × Height:	14.6″×24″×33.2″
Unit weight:	88 lbs
Ice-making capacity:	70 lbs/day*
Max. ice storage:	27 lbs
Ice shape:	Cube
Ice cube dimensions:	¾″ × ¾″ × 1″

The technical data and performance index listed above should be used for reference only. They are subject to change.

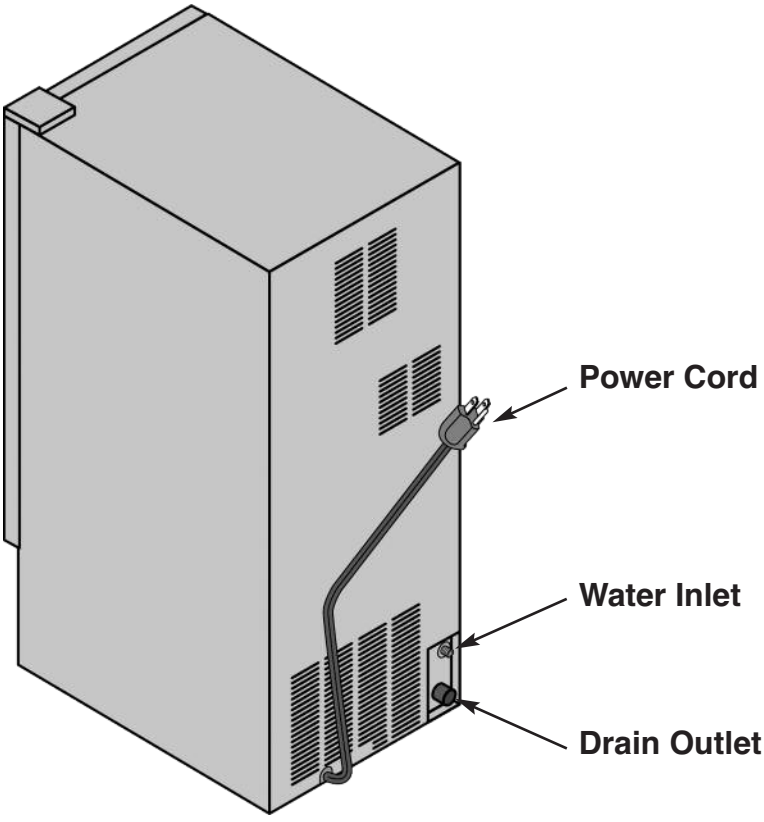
* The actual quantity of ice produced per day can vary with room and water conditions.

SAVE THESE INSTRUCTIONS

COMPONENT LOCATIONS



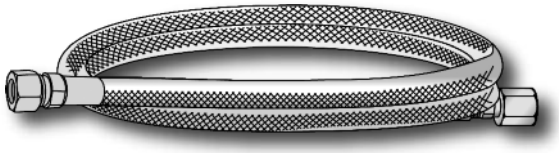
FRONT VIEW

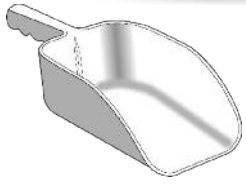


REAR VIEW

6' Drain Hose

6' Fill Hose





Ice Scoop

ICE MACHINE INSTALLATION

WARNING

Excessive Weight Hazard

Use two or more people to move and install ice machine.
Failure to do so can result in back or other injury.

Remove packaging materials

IMPORTANT: Do not remove any permanent instruction labels or the data label on your ice machine.

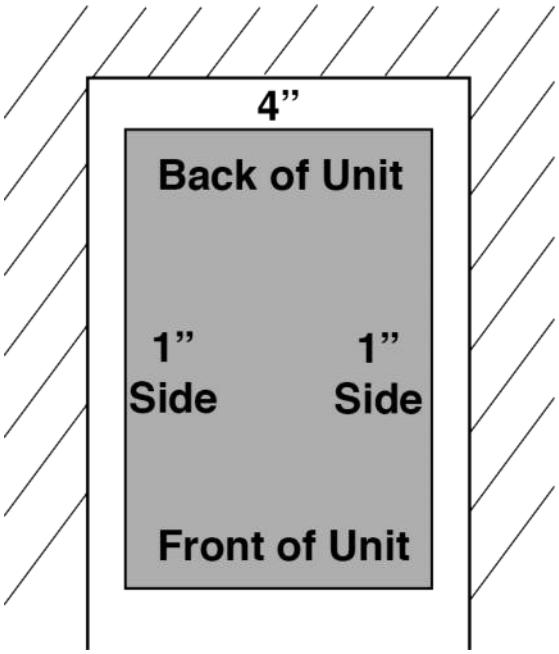
Remove tape and glue from your ice machine before using.

- To remove any remaining tape or glue, rub the area briskly with your thumb. Tape or glue residue can also be easily removed by rubbing a small amount of liquid dish soap over the adhesive with your fingers. Wipe with warm water and dry.
- Do not use sharp instruments, rubbing alcohol, flammable fluids, or abrasive cleaners to remove tape or glue. These products can damage the surface of your ice machine.

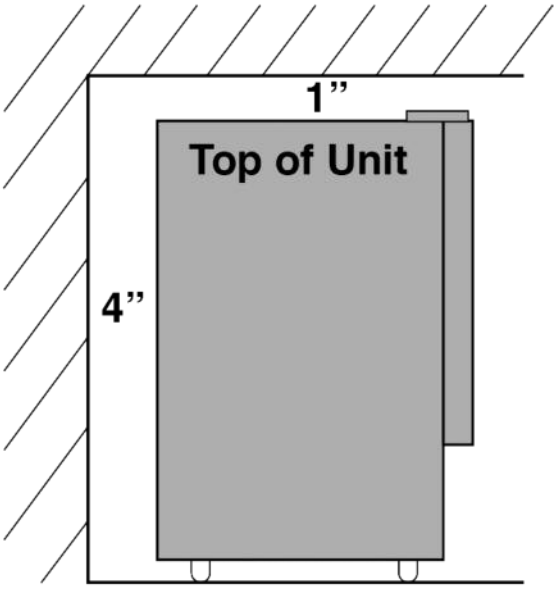
Cleaning before use

After removing all packaging materials, clean the inside of your ice machine before use. See "Interior Cleaning" in the *Cleaning and Maintenance section.*

Installation Clearances



View from TOP



View from SIDE

- This ice machine should be installed by qualified personnel.
- To ensure proper ventilation for your ice machine, the front of the unit must be completely unobstructed.
- When installing the ice machine under a counter, follow the recommended spacing dimensions shown on the previous page. Allow 4" (102mm) or more clearance at rear, 1" (25.4mm) at the top and sides for proper air circulation. The installation should allow the ice machine to be pulled forward for servicing if necessary.
- Choose a well-ventilated area with temperatures above 45º F (7º C) and below 110º F (43º C).
- The unit should not be located next to ovens, grills or other sources of high heat.
- Installation of the ice machine requires a cold water supply inlet of 1/4” (6.35mm) soft copper tubing with a shut-off valve.
- The ice machine requires a continuous water supply with a minimum pressure of 15 psig and a static pressure not to exceed 80 psig. The temperature of the water feeding into the ice machine should be between 41º F (5º C) and 90º F (32º C) for proper operation.

WARNING

Normal operating ambient temperature should be between 45º F (7º C) to 110º F (43º C). Normal operating water temperature should be between 41º F (5º C) and 90º F (32º C). Operation of the ice machine for extended periods outside of these normal temperature ranges may affect production capacity.

- Some water is very hard; softened water may result in white, mushy cubes that stick together. Deionized water is not recommended.
- The ice machine must be installed with all electrical and water connections in accordance with all state and local codes.
- The unit should be located on a firm and level surface. It is important for the ice machine to be leveled in order to work properly.
- A standard electrical supply (115V AC only, 60Hz, 15A), properly grounded in accordance with the National Electrical Code and local codes and ordinances, is required.
- IMPORTANT: Do not kink or pinch the power supply cord between the ice machine and wall or cabinet.

Normal operating ambient temperature should be between 45º F (7º C) to 110º F (43º C). Normal operating water temperature should be between 41º F (5º C) and 90º F (32º C). Operation of the ice machine for extended periods outside of these normal temperature ranges may affect production capacity

Electrical Requirements

DANGER

Electrical Shock Hazard

Plug into a grounded 3- prong outlet.
Never remove the ground prong from the plug.
Never use an 3-prong adapter.
Never use an extension cord.
Failure to follow these instructions can result in fire, electrical shock or death.

Before you move your ice machine into its final location, be sure you have the proper electrical connection:

A standard electrical supply (115V AC only, 60Hz, 15A), properly grounded in accordance with the National Electrical Code and local codes and ordinances, is required. The ice machine should always be plugged into its own individual electrical outlet.

It is recommended that a separate circuit, serving only your ice machine, be provided. Use receptacles that cannot be turned off by a switch or pull chain.

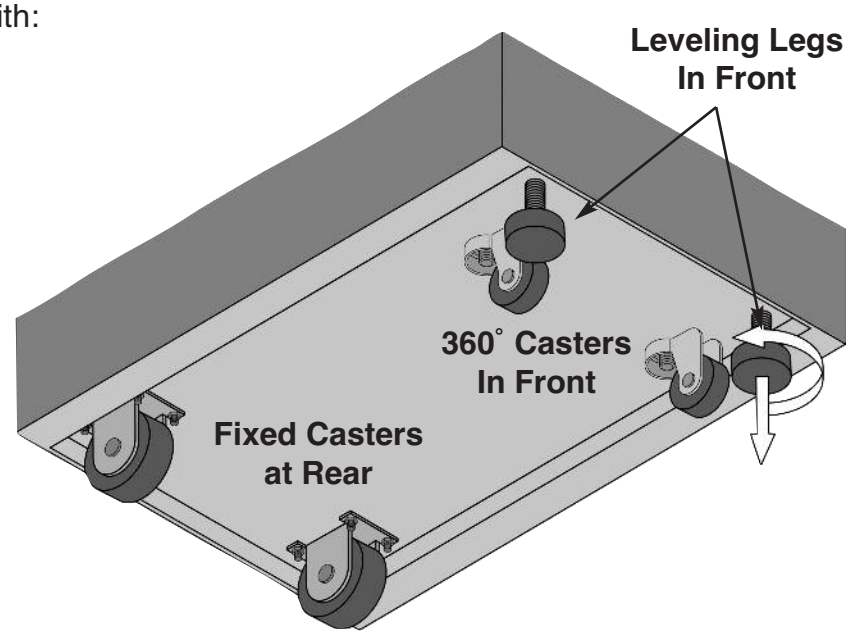
The fuse (or circuit breaker) size should be 15 amperes.

Recommended grounding method

For your personal safety, this appliance must be grounded. It is equipped with a power supply cord having a 3-prong grounding plug. To minimize a possible shock hazard, the cord must be plugged into a mating 3-pronged and grounding-type wall receptacle, grounded in accordance with the National Electrical Code and local codes and ordinances. If a mating wall receptacle is not available, it is the personal responsibility of the customer to have a properly grounded, 3-prong wall receptacle installed by a qualified electrician.

Casters and Leveling Legs

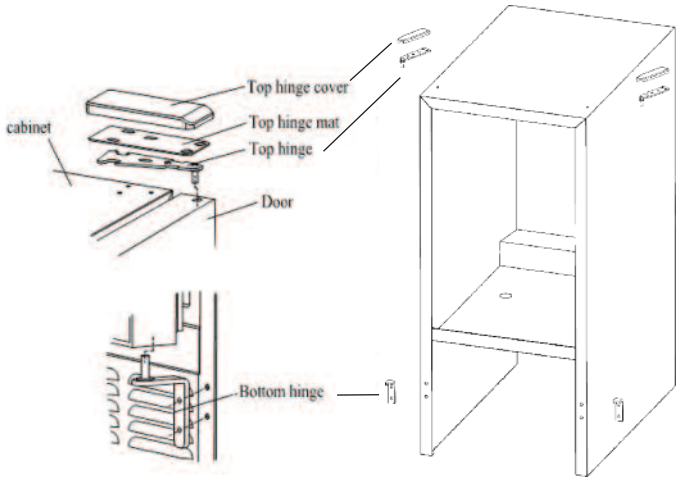
The ice machine has been pre-installed with:
- Fixed casters at rear
- 360˚ casters in front
- Leveling legs in front.



The ice machine can easily moved by rolling it to a desired location on the pre-installed casters. The leveling legs must be screwed clockwise until the front casters touch the ground. When the desired location is reached, screw the leveling legs counter-clockwise lifting the front casters off the ground.

Proper operation of the unit requires that is level. To level the unit adjust the feet by turning the required foot counter clockwise to increase the height and clockwise to reduce the height.

Reversing the Door Swing



TOOLS NEEDED: Flat screwdriver, Phillips screwdriver

IMPORTANT: Before you begin, unplug the ice machine or disconnect power.

To remove door from hinges:
1. Remove the top hinge cover.
2. Using a Phillips screwdriver, remove the screws, and then remove top hinge. Keep the parts together and set them aside.
3. Lift the door off of the bottom hinge. Set the door aside.

To replace door on hinges:
1. Using a flat screwdriver, remove the plug buttons from the screw holes opposite the door hinges, top and bottom. Set aside.
2. Remove the bottom hinge and place it on the opposite side at the bottom of the door.
3. Position the door on the bottom hinge.
4. Align the door on the bottom hinge and replace the top hinge.
5. Replace top hinge cover.
6. Push the plug buttons into the original screw holes.

Onboard Water Filter

The ice machine requires the use of an internal water filter. The water filter is provided, but not installed. *After installation of a new filter, please discard the first two ice harvests to insure that the filter is purged of any impurities*.

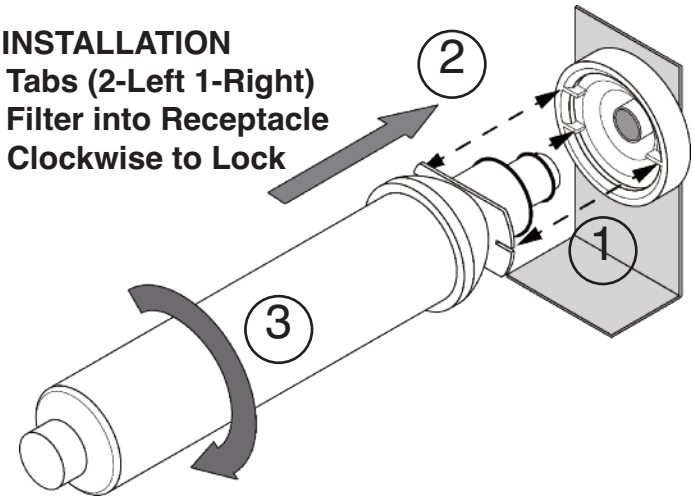
To install the water filter follow the steps outlined below.

1. Unplug the ice machine or disconnect power.
2. Loosen the two lower screws and remove the two upper screws on the front cover.
3. Gently remove the cover by lifting up and then out.
4. Place the filter with the filter tabs facing inward on the filter support.
5. Align the tabs, 2 left and 1 right, with the filter tab openings.
6. Gently push the filter forward into the receptacle so the tabs go into the tab openings.
7. Twist one quarter turn clockwise to lock the filter in place.
8. Make sure the filter is in place by gently pulling on it, it should not move.
9. Slide the front cover behind the two lower screws.
10. Replace the two upper screws and tighten the two lower screws on the front cover.
11. Plug the ice machine back in or reconnect power.

To remove the filter for replacement:

1. Unplug the ice machine or disconnect power.
2. Loosen the two lower screws and remove the two upper screws on the front cover.
3. Gently remove the cover by lifting up and then out.
4. Unlock the installed filter by turning the filter counter clockwise about one quarter of a turn. You will feel the filter not turn any more.
5. Gently pull the filter out of the receptacle. After a filter has been attached to the receptacle for a long time, it may need steady pressure to pull the filter off the receptacle. Slightly lifting the filter off the filter support may also help.

FILTER INSTALLATION
1. Align Tabs (2-Left 1-Right)
2. Push Filter into Receptacle
3. Twist Clockwise to Lock



REPLACEMENT FILTER
 # PAL5641P

Only Available From

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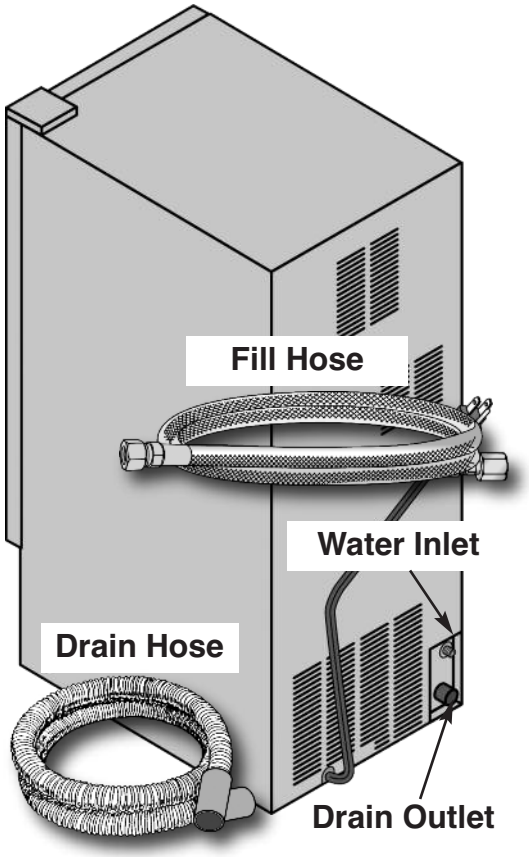
Water Supply

The water supply should be ready at the point of installation. The water supply pressure should be a minimum of 15 psig with a static pressure not more than 80 psig. (An outlet directly behind the ice machine will make installation easier.)

IMPORTANT:

- All installations must be in accordance with local plumbing code requirements. Professional installation is recommended.
- Make certain that the hoses are not pinched or kinked or damaged during installation.
- Check for leaks after connection.

Connect the water inlet to an appropriate water supply. Use of a professional plumber is recommended.



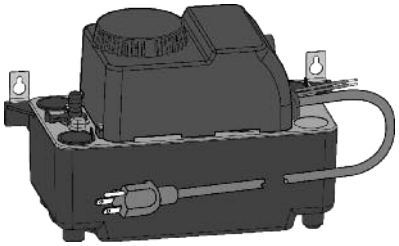
Drain

You must connect the drain line before using the ice machine. Follow the steps outlined below.

Connecting the drain line:

NOTE: If there is a drain line near the ice machine or it will be used as an outdoor unit, the best choice is to drain water to the drain line through the drain hose provided with the ice machine.

1. Locate the floor drain near the ice machine. The distance should be less than 6 feet since the drain hose provided with the ice machine is about 6 feet long. Find the drain outlet on the back of ice machine. Push the drain hose onto the drain outlet and insert the other side of the hose into the drain line. NOTE: The drain hose should never be allowed to hang or loop higher than the bottom of the ice storage bin.
2. All horizontal runs of drain lines must have a fall of 1/4" per foot. An air gap will likely be required between the ice machine drain hose and the drain/waste receptacle. A stand pipe with a trap below it would be desireable for the drain/waste receptacle. A floor drain is also acceptable.
3. If a floor drain or another drain is not available, a pump will be needed. We recommend PCP115.



Parts Connect®

PUMP
#PC115

4. Pour 1 gallon of water into the ice storage bin to check for leaks at all drain connections and at the nut of the drain water hole. Tighten any connections or nuts that leak.

IMPORTANT: <u>This ice machine is not a freezer.</u> Infrequent drainage will cause a high rate of melting in the ice storage bin.

Installation Types

This ice machine has been designed for Mobile (free-standing), Enclosed (as under a cabinet) or Built-in (sealed) installation, indoor or outdoor. In any case, there must be adequate air space around the unit for proper ventilation. (See diagrams on page 8 or below.)

Mobile installation:

A mobile installation will allow you to install the ice machine free-standing in any place you desire provided you have access to a water supply. You must follow the stated instructions for:

a. Electrical requirements
b. Water supply
c. Drainage
d. Leveling the ice machine

Enclosed Installation:

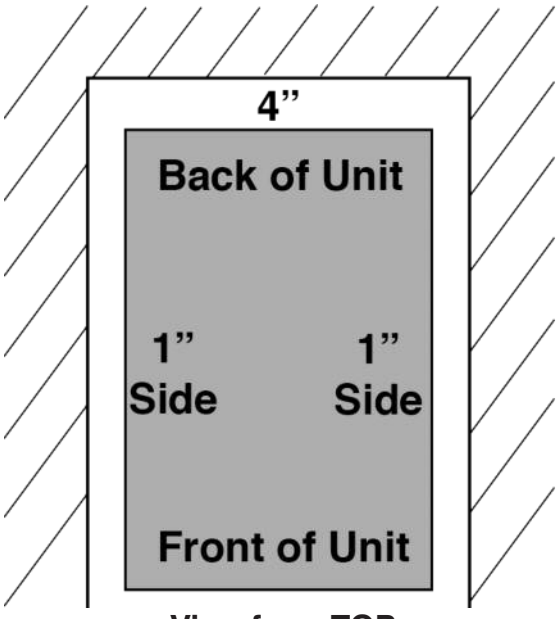
An enclosed installation will allow you to install the ice machine under a cabinet or inside a kitchen cabinet provided the required clearance space around the ice machine is respected. This installation has the same requirements as a mobile installation.

Built-in Installation:

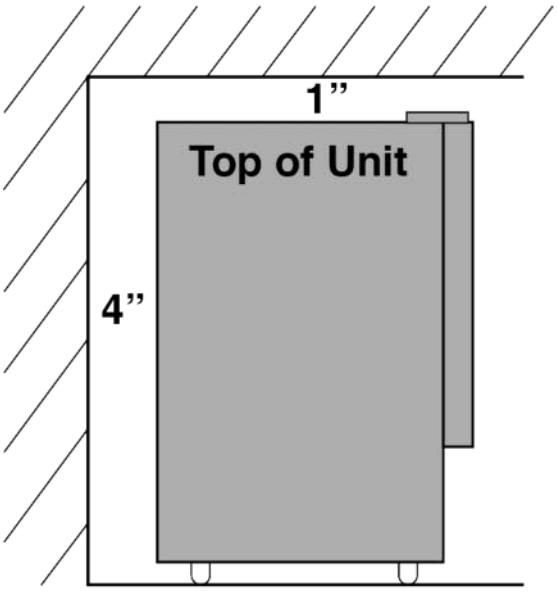
If this method of installation is chosen, it will still be necessary to allow adequate ventilation space around the unit. The following additional items must be observed.

1. Place ice machine in front of installation location. Place the unit flat on the floor or on a platform depending on your installation requirements.
2. The water supply line must be plumbed before connecting to the ice machine.
3. Connect the drain hose.
4. Turn on main water supply and tap. Check for water supply connection leaks. Tighten every connection (including connections at the water inlet).
5. If the electrical outlet for the ice machine is behind the cabinet, plug in the ice machine.
6. Push the ice machine into position.
7. Lower the front feet/stand-offs to level the ice machine.
8. Seal all around the cabinet to the floor with an approved caulking compound.

Installation Clearances



View from TOP



View from SIDE

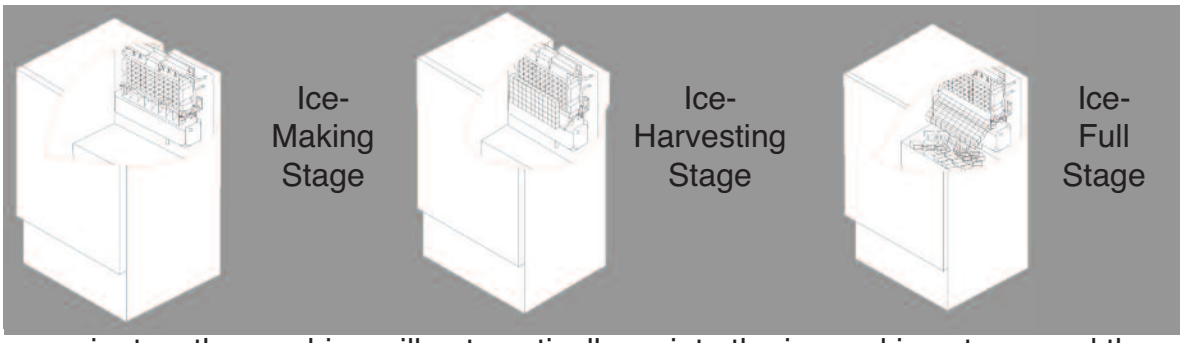
OPERATION

Final Check List before Operation

1. Have all packing materials and tape been removed from the interior and exterior of the ice machine?
2. Did you clean the ice storage bin? Initialize the cleaning proceedure, this proceedure will last 6 min. and then enter into the icemaking proceedure.
3. Have the installation instructions been followed, including connecting the machine to water and electricity?
4. Has the machine been leveled?
5. Is the ice maker in a site where the ambient temperature is between 45º (7ºC) and 110ºF (43ºC) and the water temperature within 41ºF (5ºC) and 90ºF (32ºC) all year round?
6. Has the water supply pressure been checked to ensure a minimum of 15 psig with a static pressure not to exceed 80 psig?
7. Is there a clearance of at least 4″ at the rear, and 1” at the top and sides for proper air circulation?
8. Has the power supply voltage been checked or tested against the nameplate rating? And has proper grounding been installed for the ice machine?
9. Has the water filter been installed?
10. Is the ice machine plugged in?
11. Have you turned on the main water supply and the tap?
12. Have you checked for leaks at all water supply connections?
13. Is the drain properly installed?

Operating Method

1. Turn on the water tap. Set the Power switch on the front panel to the I/ON position and the Water trough will fill. The ice machine will start working automatically.



2. After three minutes, the machine will automatically go into the ice-making stage, and the sound of flowing water will be heard.
3. When the batch of ice has been fully formed , the ice will automatically be harvested to the ice storage bin.
4. When the ice storage bin is full, the sheet of cubes does not fall completely and holds the ice-full flap down. The machine stops making ice automatically.
5. The unit will start making ice again after the ice cubes are removed and the ice-full flap swings back to operating position.

IMPORTANT:

- Although the unit has been tested and cleaned at the factory, due to long-term transit and storage, the first batch of cubes must be discarded.
- Never turn the water supply tap off when the ice machine is working.
- Never touch the evaporator when the machine is running!
- Except to take ice from the unit, keep the door closed to reduce ice melting and insure proper ice formation.

How the Machine Makes Ice

Turn the Power switch to the I/ON position. The Power indicator light will light and the machine will automatically go into the ice-making stage.

There are two distinct cycles: freeze and harvest.

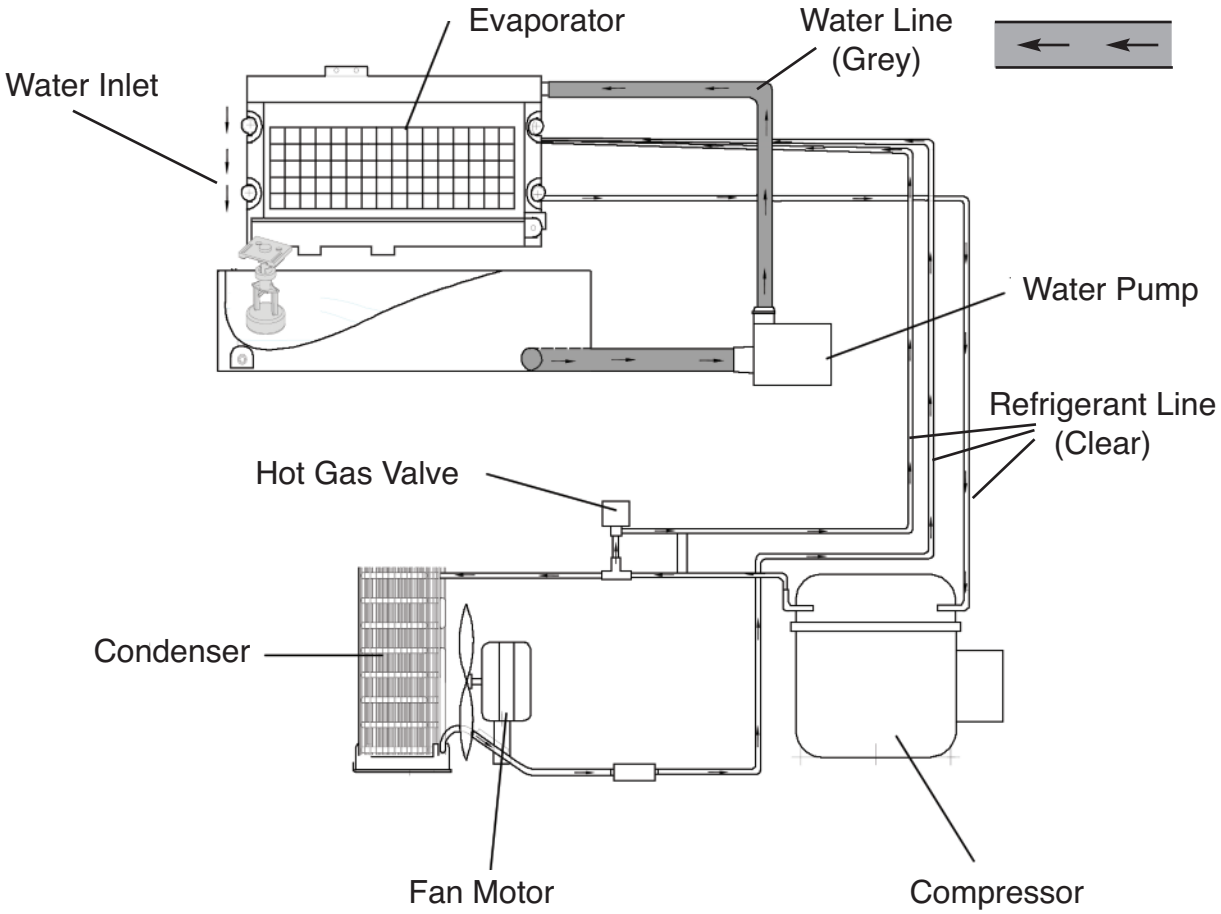
During the freeze cycle, water flows to the evaporator surface. In the harvest cycle, the ice is released. A complete cycle can take 15 to 40 minutes, depending on temperature and operating conditions.

Freeze: During the freeze cycle the compressor is pumping refrigerant, the fan motor is blowing air, and the water pump is circulating water. When the batch of ice has been fully formed, the ice maker stops the freeze cycle and begins the harvest cycle.

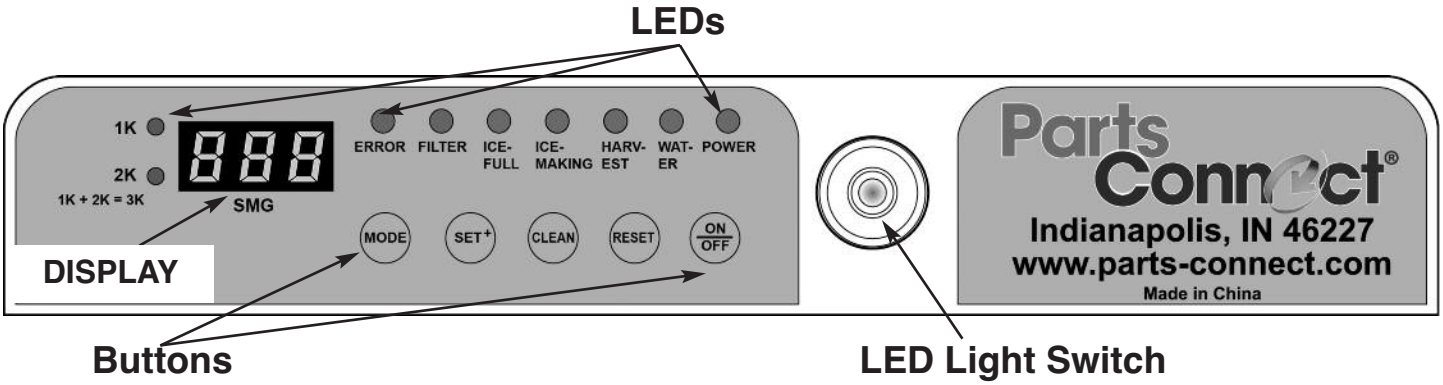
Harvest: During the harvest cycle the compressor is still operating, but the water pump has stopped. The hot gas valve opens, diverting hot refrigerant gas into the evaporator. The hot refrigerant gas warms the evaporator, causing the cubes to slide, as a unit, off the evaporator and into the storage bin. The freeze cycle will restart when all the cubes have been harvested.

How the Machine Uses the Water

The ice machine begins with a fixed charge of water that is contained in the water trough. As the water flows to the freezing evaporator surface, the portion of water that does not contain mineral impurities will freeze and stick to the ice cube molds. The water containing impurities falls back into the water trough. During the ice-making process, fresh water enters the water trough continuously as the water from the trough freezes continuously on the evaporator.



Control Panel



LED/Button	Name	Color	Function
ERROR	error light	red	With error light on, SMG shows error code (E01 to E11), check error code list for details
FILTER	filter light	red	When filter light is on filter has worked more than 180 days, need to change the filter and reset dates.
ICE-FULL	ice-full	green	When ice-full light is on the ice bin is full. After removing ice cubes the machine will go back to ice making automatically
ICE-MAKING	icemaking light	green	When ice making light is on the ice machine is in ice making mode
HARVEST	harvest light	green	When harvest light is on the ice machine is in harvest mode
WATER	water light	green	While water light is on inlet valve is open and water is flowing into the water tank
POWER	power light	green	When power light is on the ice machine is plugged in and main power switch is on.
1K	1K light	green	1K and 2K lights used for counting of seconds of current procedure. 1K = 1000 seconds, 2K = 2000 seconds, 1K + 2K = 3000 seconds.
2K	2K light	green	2k = 2000 seconds.
MODE	mode button		Short press can change the ice machine working procedure between ice making and harvesting.
SET*	set button		Short press can change the set value
CLEAN	clean button		Short press can enter self-clean procedure
RESET	reset button		Press and hold reset button, then short press of ON/OFF. The SMG will display “PPP”. The ice machine has been reset to default
ON/OFF	on/off button		Short press can turn on or turn off the ice machine

Note:

1. Short press means press the button more than 1 second, less than 3 seconds and then release. Medium press means press the button more than 3 seconds, less than 10 seconds and then release. Long press means press the button more than 10 seconds and then release
2. SMG means the 3 digital LCD number display
3. Light on means the light is continually on. Light flash means the light is blinking.
4. Lights and buttons have more functions, see: Working Procedure, Button Operation & Parameter Setting .

Working Procedures

Procedure	SMG	Indicator Light	Starting Point/ Detail
Startup	888	All lights ON for 1 second, then OFF	Machine is plugged in, short press of ON/OFF (I/O) button. Machine program initialized.
Water Fillup	COO-> Count Seconds	Water Light ON	Machine program initialized. ***Water tank must be filled before pump runs, otherwise dry run damage will occur.***
Clean	CLE	Ice-making & harvest lights flash, water light on if more water is needed	Water tank is filled. Clean water tank before making ice, startup-clean procedure will last 6 minutes
System pressure balance	C10-> Count Seconds	Ice-making light on	Water tank clean. Refrigerate systems reversing valve opens for 15 seconds, compressor runs for 5 seconds, reversing valve then closes, refrigerate system pressure is balanced.
Pre-Chill	C20-> Count Seconds	Ice-making light on	System pressure is balanced.. Compressor runs 30 seconds, condenser fan on, water pump off, to pre-chill the evaporator, the procedure lasts about 30 seconds.
Ice-Making	C30-> Count Seconds	ice-making light on	Evaporator pre-chilled. Compressor on, condenser fan on, water pump on, the procedure lasts about 8-12 minutes, ends when evaporator temperature drops below presets or time is exceeded.
Ice-Making Time Lapse	Continues Count in Seconds	Ice-making light flashing	Evaporator temperature is below presets. Time lapse continues the ice making procedure for thicker ice cubes, even if the preset temperature is reached, default time lapse is 5 minutes.
Water Discharge	C31-> Count Seconds	Ice-making light flashing	Ice-making time lapse finished. The water discharge procedure is to prevent the water tank from getting too cold and causing ice in the water tank to jam the pump system. Default water discharge time is 20 seconds
Harvest	C40-> Count Seconds	Harvest light on	Ice-making time lapse finished. Reversing valve open & evaporator heated up, then ice cubes are released. If ice cubes not released in 5 minutes, the pump turns on for 1 minute, watering the ice cubes to help them release from the evaporator.

Working Procedures (continued)

Procedure	SMG	Indicator Light	Starting Point/ Detail
Ice-Full Checking	Continue Count Seconds	Harvest light on	Ice cubes harvested from the evaporator. If after the harvest procedure the swivel returns to its initial position within 40 seconds, the system runs the pre-chill procedure and starts a new ice making cycle.
Ice-Full Status	FU1	Ice-full light on	Swivel has not returned to original position after ice-full checking. If after the harvest procedure the swivel does not return to its initial position within 40 seconds the system pauses, SMG shows FU1 (ice-full)
Ice-Full Status Ends	FU0	Ice-full light flashing	If during FU1 status the swivel returns to its initial position within 3 minutes the system will change to FU0 status, wait for 3 minutes then enter into new ice making cycle, if swivel returns to its initial position after 3 minutes the system will directly enter into a new ice making cycle.

Note:

1. Startup clean procedure will last 6 minutes, detail as below:
   Pump runs 2 minutes -> water inlet and discharge for 1 minute -> pump runs 2 minutes -> water inlet and discharge for 1 minute.
2. During ice making cycle, if short press the clean button will enter standard clean procedure (30 minutes), detail as below:
   Pump runs 12 minutes -> water inlet and discharge 3 minutes -> pump runs 12 minutes -> water inlet and discharge 3 minutes.
3. Startup clean procedure is available while the machine is set to CL1.
4. Water discharge procedure is not available while the machine is set to P00.

Button Operation

1. **Main power off**, means you unplug the ice machine or turn the main power switch off.
2. **SMG off**, means the ice machine is plugged in and main power switch is on, but SMG shows OFF.

1. **Short press** means press the button more than 1 second, less than 3 seconds then release.
2. **Medium press** means press the button more than 3 seconds, less than 10 seconds, then release
3. **Long press** means press the button more than 10 seconds then release

Status	Operation	Light & SMG	Details
Main Power Off	Turn on the main power switch at front lower right side of ice machine	Power light：ON SMG：OFF	Main switch controls the general power of the whole ice machine. Please turn it off if the ice machine will not be used for a long time.
SMG OFF	Long press SET button	SMG: shows number between 001 and 180 Filter Light: Flashing	The number shows the days since the filter was installed. If the number is larger than 180 days, the filter light will stay on, change the filter. After the filter has been changed, medium press the reset button to reset the days to zero.
SMG OFF	Press and hold the RESET button, before release, short press ON/OFF button	SMG: shows 888 for 1 second, then PPP for 3 seconds all other lights: on for 1 second and then off	This operation is to reset all the settings to “factory default".
SMG OFF	Short press ON/OFF button	SMG: shows 888 for 1 second, then shows COO all other lights: on for 1 second and then off	This operation is to turn on the ice making process.
All other status except SMG showing OFF	Short press CLEAN button	SMG: CLE Ice Making Light Flashing Harvest Lights Flashing	This operation will force the ice machine to enter into a clean cycle, this cycle is 30 minutes. Short press clean or mode button, can terminate the clean process, and enter into new ice making cycle.

Parameter Setting

Status	Operation	Light & SMG	Details
Ice Making Cycle	Short press MODE button	SMG: shows current number for 2 seconds and then shows 1xx Ice making light: on	The parameter 1xx means set the thickness of the ice cube, xx will flash during setting. Short press set button can change the 1xx, between 100 to 119, 100 is thinner, 119 is thicker. After setting leave it no-operation for 10 seconds, system will automatically remember the setting and go back to the ice making cycle. Default number is 111. See note 1.

Note 1: XX is the ice cube thickness and actually refers to the evaporator temperature. The colder you set, the thicker you get. 00 = 0 degrees Celsius, 01-19 = -1 to -19 degrees Celsius.

Normal Sounds

Your new ice machine may make sounds that are unfamiliar to you. Most of the new sounds are normal. Hard surfaces like the floor and walls can amplify the sounds. The following describes the kinds of sounds that might be new to you and what may be causing them.

- Rattling noises may come from the flow of the refrigerant or the water line. Items stored on top of the ice machine can also make noises.
- The high-efficiency compressor may make a pulsating or high-pitched sound.
- Running water may make a splashing sound.
- You may hear air being forced over the condenser by the condenser fan.
- During the harvest cycle, you may hear the sound of ice cubes falling into the ice storage bin.

Preparing the Ice Machine for Long Storage

If the ice machine will not be used for a long time, or is to be moved to another place, it will be necessary to drain the system of water.

1. Shut off the water supply at the main water source.
2. Disconnect the water supply line from the water inlet.
3. Shut off the electric supply at main electrical power source.
4. Take out the ice storage bin to remove remaining ice and water. Dry it.
5. Connect the drain hose to drain out water completely, then plug up the drain outlet after finishing.
6. Pull off the drainage tube of the water trough to drain off all water.
7. Leave the door open to allow for circulation and to prevent mold and mildew.
8. Leave water supply line and power cord disconnected until ready to reuse.

IMPORTANT:

- *Do not touch the power plug when your hands are wet.*
- *Never unplug the unit by pulling on the plug.*

CLEANING AND MAINTENANCE

CAUTION

If the ice machine is left unused for a long time, it must be thoroughly cleaned before the next use. Follow carefully any instructions provided for cleaning by use of sanitizing solution. Do not leave any solution inside the ice machine after cleaning.

Periodic cleaning and proper maintenance will ensure efficiency, top performance, and long life. The maintenance intervals listed are based on normal conditions. You may want to shorten the intervals if you have pets, or there are other special considerations.

What should not be done

Never keep anything in the ice storage bin other than ice: objects like wine and beer bottles are not only unsanitary, but the labels may slip off and plug up the drain.

What parts should be kept clean

There are 5 things to keep clean:

1. The exterior
2. The interior
3. The condenser
4. Water distribution tube
5. The ice-making system

⚠ WARNING

Before proceeding with cleaning and maintenance operations, make sure the unit's power line is disconnected and the water line is shut off. (EXCEPTION: Cleaning of ice making system)

Exterior Cleaning

The door and cabinet may be cleaned with a mild detergent and warm water solution such as 1 oz of dishwashing liquid mixed with 2 gallons of warm water. Do not use solvent-based or abrasive cleaners. Use a soft sponge and rinse with clean water. Wipe with a soft clean towel to prevent water spotting. Stainless steel can discolor when exposed to chlorine gas and moisture. Clean stainless steel with a mild detergent and warm water solution and a damp cloth. Never use an abrasive cleaning agent.

Interior Cleaning

The ice storage bin should be sanitized regularly. Clean the trough before the ice machine is used for the first time and restarted after stopping for an extended period of time. It is usually convenient to sanitize the trough after the ice-making system has been cleaned and the storage bin is empty.

1. Disconnect the power to the unit.
2. Open the door and take out the removable ice storage bin. With a clean cloth, wipe down the interior of the unit with a sanitizing solution made of 1 ounce of household bleach and 2 gallons of hot water (95ºF to 115ºF).
3. Rinse thoroughly with clear water.
4. Connect a hose to the drain outlet at the rear of the unit to drain water completely.
5. Put the ice storage bin inside the unit.
6. Reconnect power to the unit.

The ice scoop should be washed regularly. Wash it just like any other food container.

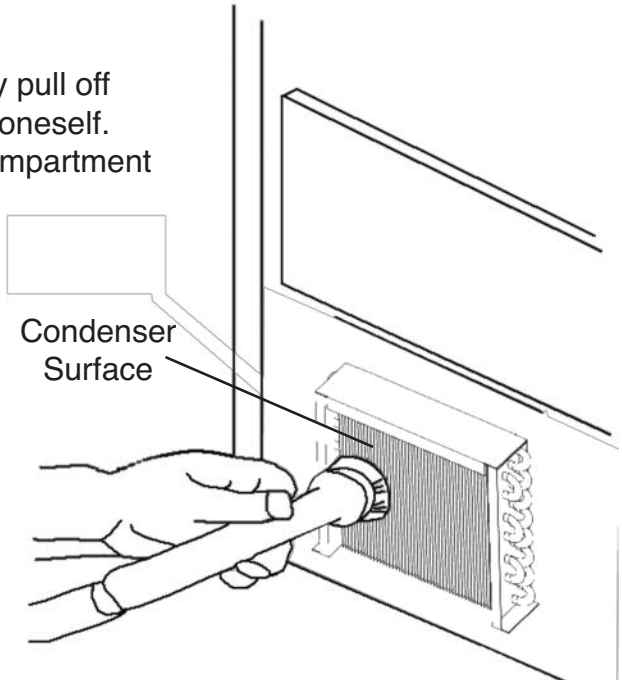
⚠ WARNING

DO NOT use solvent-based cleaning agents or abrasives on the interior. These cleaners may transmit taste to the ice cubes and damage or discolor the interior.

Condenser Cleaning

A dirty or clogged condenser prevents proper airflow, reduces ice making capacity, and causes higher-than-recommended operating temperatures that may lead to component failure. Have the condenser cleaned at least once every six months.

1. Unplug the ice machine or disconnect power.
2. Remove the 13 screws on the back cover and gently pull off the cover being careful to not cut the power cord or oneself.
3. Remove dirt and lint from condenser and the unit compartment with a brush attachment on a vacuum cleaner.
4. Reassemble the back cover.
5. Plug in the ice machine or reconnect power.



Water Distribution Tube Cleaning

When you find that the ice cubes are incompletely formed or the output of ice cubes is low, the water distribution tube may be blocked. Set the Power switch to O/OFF, gently take out the water distribution tube, and locate the holes in the distribution tube. Using a toothpick or similar tool, dredge the holes, then put the water distribution tube back to its original position. If the tube is badly blocked, clean it as follows:

1. Shut off the water supply.
2. Disconnect the water hose from the distribution tube.
3. Gently take out the distribution tube.
4. With a brush, clean the tube with a dilute solution of warm water and a mild detergent such as dishwashing liquid. After removing the dirt and lint from the surface, rinse the tube with clean water.
5. Replace the distribution tube.
6. Reconnect the water hose to the distribution tube.

Ice-Making System Cleaning

Minerals that are removed from water during the freezing cycle will eventually form a hard, scaly deposit in the water system. Cleaning the system regularly helps remove the mineral scale buildup. How often you need to clean the system depends upon how hard your water is or how effective your filtration may be. With hard water of 15 to 20 grains/gal. (4 to 5 grains/liter), you may need to clean the system as often as once every 6 months.

1. Make sure that all the ice is off the evaporator. If ice is being made, wait until the cycle is completed, then turn the machine OFF at the Power switch.
2. Remove all ice from the storage bin.
3. Keep the ice maker connected to the water supply. Pour 8 oz. of Nickel-Safe Ice Maker Cleaner Solution into the water trough. After about 5 minutes press and hold the Clean button on the control pad. Set the Power switch to I/ON. Hold the Clean button until the LCD display shows CLE. This will run the Automatic Clean Mode. The display will show CLE and the ICE-MAKING and HARVEST LEDs will blink.

   NOTE: The unit will automatically shut down the Cleaning program after 30 minutes, or you can stop it by pressing the Clean switch again, and the machine will automatically progress to the ice-making stage.

4. Allow 30 minutes for proper cleaning. After cleaning, turn the machine off at the Power switch. Drain off the waste water to a container by means of the drain hose at the front of the water trough.

NOTE: Do not drain off the waste water to the inside of the cabinet.

5. Repeat steps 3 and 4 (without Ice Machine Cleaning Solution) 3 times to rinse the ice making system.

NOTE: The use of the Ice Machine Cleaner Solution in the water bin during the rinse is not needed.

Ice-Making System Cleaning (Continued)

⚠ WARNING

- Ice Machine Cleaner contains acids.
- DO NOT use or mix with any other solvent-based cleaner products.
- Use rubber gloves to protect hands. Carefully read the material safety instructions on the container of the ice machine cleaner.
- DISCARD the first batch of ice produced after cleaning.

6. Prepare a sanitizing solution made of 1 ounce of household bleach and 2 gallons of hot water (95º to 115ºF). Wipe the entire bin, inside and outside, covering the entire surface of the walls.
7. Fill a spray bottle with the sanitizing solution and spray all corners and edges making sure to cover all surfaces with the solution.
8. Allow the solution to be in contact for at least 3 minutes, then dry.
9. Repeat step 5 to rinse the ice-making system one more time.
10. Set the Power switch to the I/ON position. The machine will return to the regular ice-making mode. Discard the first batch of ice.

MAJOR FUNCTIONS

1. Completely automatic operation.
2. When the ice storage bin is full of ice, the machine stops making ice automatically. It starts making ice again once the cubes are removed.
3. The different colors of the LED display indicate various work modes.
4. A sensitive probe and accurate timer enhance the performance of the ice machine.
5. Built-in compressor protection system.

ERROR CODES

Error Code	Error Status	Lights	Reason	Treatment
E01	1. Ice full swivel is not functioning correctly 2. Ice full switch is not functioning properly	Error Light ON	1. Ice full swivel is jammed 2. Ice full switch needs to be replaced	1. Free swivel of jam. 2. Replace ice full switch
E02	Ice making shall continue for 10 cycles, maximum time of 40 minutes has been exceeded.	Error Light ON	1. Ambient temperature is too high. 2. Condenser is too hot. 3. Refrigerant is leaking. 4. Lack of water.	1. Check if condenser is too hot. Clean it (Page 22) & make sure the fan is operating properly. 2. Repair refrigerant leak. 3. Check water inlet..
E03	Maximum harvest time of 3 minutes has been exceeded.	Error Light ON	1. Reversing valve problems. 2. Ice cube thickness setting is too thin. 3. Lack of water. 4. Condenser is too cold.	1. Fix the reversing valve. 2. Set ice cube to normal thickness. 3. Check water inlet valve.
E04	High temperature error for condenser.	Error Light ON	1. Ambient temperature too high. 2. Fan is not functioning. 3. Dust on the condenser.	1. Fix the fan. 2. Clean the condenser.
E05	Lack of water.	Error Light ON	1. Water supply pressure low. 2. Water valve broken, or water tank leaking. 3. Water sensor is not working.	1. Fix water supply system. 2. Fix the valve or tank. 3. Change the sensor.
E07	Condenser temperature sensor open.		Sensor broken or terminal is not connected.	Check and fix sensor.
E08	Condenser temperature sensor shorted.		Sensor broken or terminal shorted	Check and fix sensor.
E09	Evaporator temperature sensor open.		Sensor broken or terminal is not connected.	Check and fix sensor.
E10	Evaporator temperature sensor shorted.		Sensor broken or terminal shorted.	Check and fix sensor.
E11	After 30 minutes of the icemaking procedure, the evaporator temperature still higher than 0ºC.	Error Light ON	1. Compressor problem. 2. Refrigerant leaking. 3. Condenser is too hot.	1. Repair the compressor. 2. Repair refrigerant leak. 3. Repair the condenser fan or clean the condenser.

Note: After correcting the problem, short press the Mode button. The ice machine will run properly.

TROUBLESHOOTING

Before Calling for Service

If the unit appears to be malfunctioning, read through the OPERATION section of this manual first. If the problem persists, check the Troubleshooting Guide below and on the following page. The problem could be something very simple that can be solved without a service call.

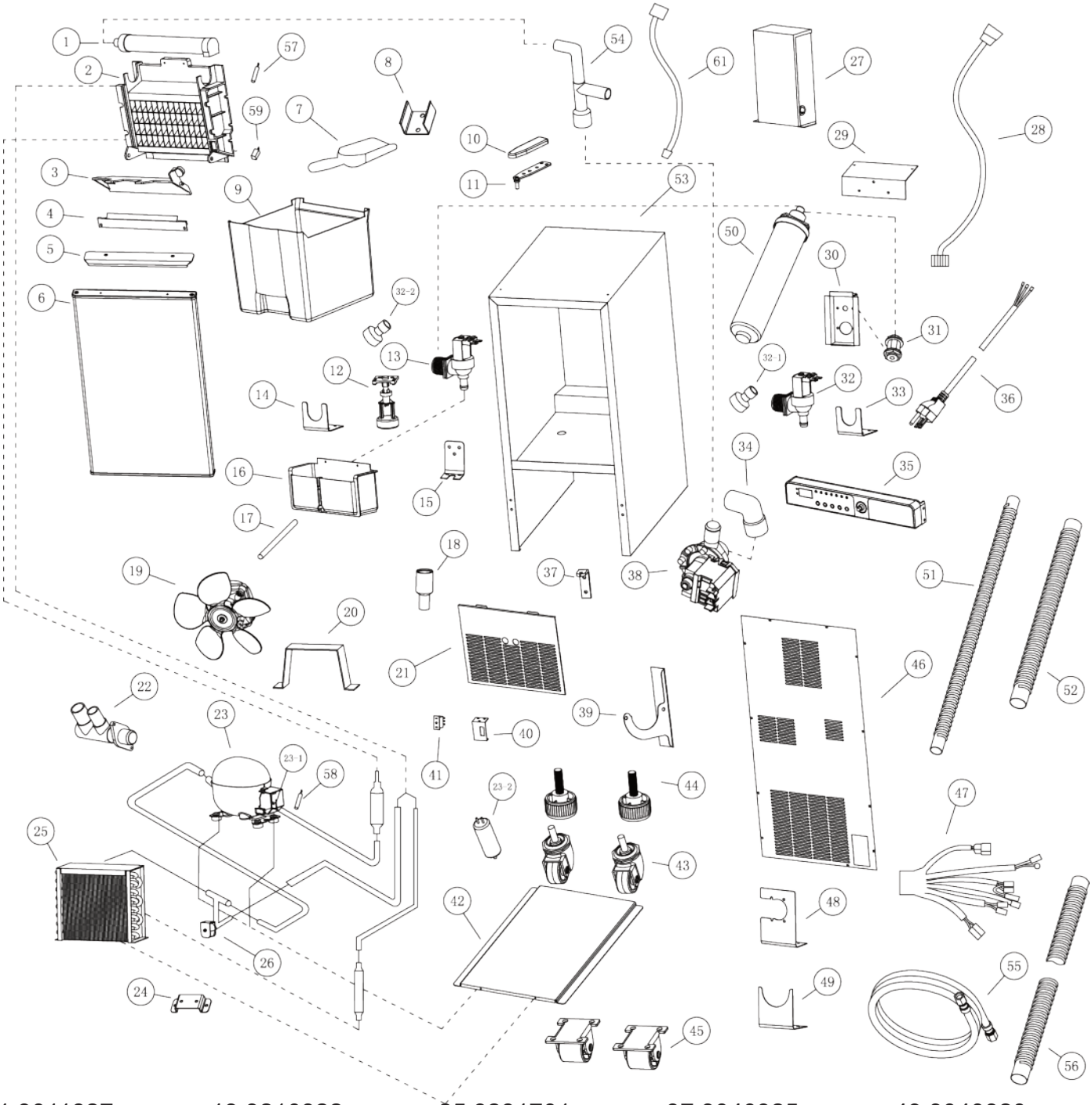
Troubleshooting Guide

Problem	Possible Cause	Probable Correction
The machine doesn't operate.	The ice machine is unplugged.	Plug the ice machine in.
	The circuit breaker or fuse is blown.	Replace fuse – if this happens again, call for service to check for a short circuit in the ice machine.
	The Power switch is set at O/OFF.	Turn the Power switch to I/ON.
	The ice storage bin is full of ice.	Remove some ice, making sure the ice-full flap is free of ice.
The water doesn't feed in after the machine starts.	The water supply tap is turned off.	Turn on the water supply tap.
	The water supply line is not properly connected.	Reconnect the water supply line.
Machine makes ice, but ice storage bin does not fill up with ice.	Condenser may be dirty.	Clean the condenser.
	The air flow to the ice machine may be obstructed.	Check the installation.
	The ambient temperature and water temperature are high, or machine is near some heat source.	Check the installation.
Water is leaking from the unit.	A few water drops fall to the floor when you open the door to take out ice from storage bin.	Normal condensation on the door or some water together with ice. Be careful when you take out ice.
	Water supply connection is leaking.	Tighten fitting. See "Connecting the Water Line".
Cubes are partially formed or are white at the bottom.	Not enough water in the water tough.	Check if the water supply pressure is below 15 psig.
		Check water supply; filter may be restricted.
		Check for a water leak at the water trough.

Troubleshooting Guide (Continued)

Problem	Possible Cause	Probable Correction
Noise during operation	Certain sounds are normal.	See “Normal Sounds”.
The ice machine stops suddenly while making ice.	The electricity is off.	Reconnect the power supply line.
	The room temperature is out of the acceptable range.	Cut off the electricity; allow the ice machine to stop functioning until the temperature returns within the acceptable range.
	The ice storage bin is full of ice.	Remove some ice; be sure the ICE-FULL PROBE is free of ice.
The body of the ice machine is electrified.	The ground line isn't in the socket.	A socket meeting the required electrical standard must be used.
Scaling occurs frequently inside the machine.	The water is too hard.	Use a water-softening device installed in the line prior of the ice machine’s water inlet.
Water leaks from the ice storage bin.	The drain hole below the ice storage bin is blocked.	Pull out the ice storage bin and clean the drain hole.
	The drain hose is kinked or improperly placed higher than the floor of the ice storage bin.	Check the drain hose to make sure the water can drain out unhindered.

PARTS BREAKDOWN IM70 ICE MACHINE



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