Installation Guide and Owner’s Manual

GEM, MFI and HEM Series (R290) Installation and Owner's Manual

1. English Version
   Modified by Gulf Ice Systems, Inc. (2026)

Installation Guide and Owner's Manual

Original Instructions

⚠WARNING

BEFORE PROCEEDING, VERIFY YOUR PRODUCT'S REFRIGERANT TYPE

YOUR PRODUCT MAY CONTAIN FLAMMABLE REFRIGERANT. IT IS IMPORTANT TO VERIFY THE TYPE OF REFRIGERANT YOUR PRODUCT CONTAINS IN ORDER TO TAKE APPROPRIATE SAFETY PRECAUTIONS.

- Refrigerant type is designated on the product's Serial Nameplate
- Refrigerant type is designated on the product's Specification Sheet
- Refrigerant type can be determined from the model number. The last two digits indicate the refrigerant type. For example, model GEM0450A90 contains refrigerant R-290 (propane) as indicated by the "90" at the end of the model name. Model numbers containing "49" at the end contain refrigerant R-449A.

TABLE OF CONTENTS

ICE MAKER SAFETY

Your safety and the safety of others are very important.

Many important safety messages have been provided in this manual and on the appliance. Always read and obey all safety messages.

This is the safety alert symbol.
This symbol alerts you to potential hazards that can kill or hurt you and others.
Safety messages will follow the safety alert symbol and either the word “DANGER” OR “WARNING”. These words mean:

DANGER Indicates death or serious injury will result if proper precautions are not taken.

WARNING Indicates death, serious injury, or property damage can result if proper precautions are not taken.

This is the Risk of Fire / Flammable Materials symbol.
This symbol alerts you to the presence of flammable materials.
When this symbol appears in this manual or on the ice maker, care should be taken to avoid causing a fire by igniting flammable material.

This is the Potable Water symbol.
This symbol indicates that connection to potable drinking water supply is required.

DANGER

Please read these instructions completely before starting the installation or performing any service. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death. Manufacturer assumes no responsibility for improperly installed equipment.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: To reduce the risk of fire, electric shock, or injury to persons when using the ice maker, follow basic precautions, including the following:

- Children should be supervised to ensure that they do not play with the appliance.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.
- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- This appliance is not to be used at altitudes exceeding 14,000 ft [4,267 m].
- WARNING: Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- WARNING: Do not use electrical appliances inside of the ice storage compartment unless they are recommended by the manufacturer.
- WARNING: The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance, or an operating electric heater).
- WARNING: Do not pierce or burn.
- WARNING: Be aware that refrigerants may not contain an odor.
- NOTICE: Servicing shall be performed only as recommended by the manufacturer.

SAVE THESE INSTRUCTIONS

FREIGHT CLAIMS

INSPECT PROMPTLY: This merchandise has been carefully inspected an packed in accordance with the carrier’s packing specifications. Responsibility for safe delivery has been assumed by the carrier. If loss or damage occurs, you as the consignee must file a claim with the carrier and hold the container for carrier’s inspection.

VISIBLE LOSS OR DAMAGE: Any external evidence of loss or damage must be fully described and noted on the freight bill or express receipt and signed by the carrier’s agent. The claim should be filed on a form available from the carrier.

CONCEALED LOSS OR DAMAGE: If loss or damage does not appear until merchandise has been unpacked, make a written request for inspection by the carrier within five days of delivery date, then file a claim on a form from the carrier.

FILE CLAIMS WITHOUT DELAY—DO NOT RETURN DAMAGED GOODS TO MANUFACTURER

MODEL NOMENCLATURE

GEM 045 0 A 90

Model Series
GEM = Modular Pearl Ice
MFI = Modular Flake Ice
HEM = Modular Hard Ice

Nominal Production Capacity
lbs/24hr x 10
@ 70°F [21°C] Air / 50°F [10°C] Water

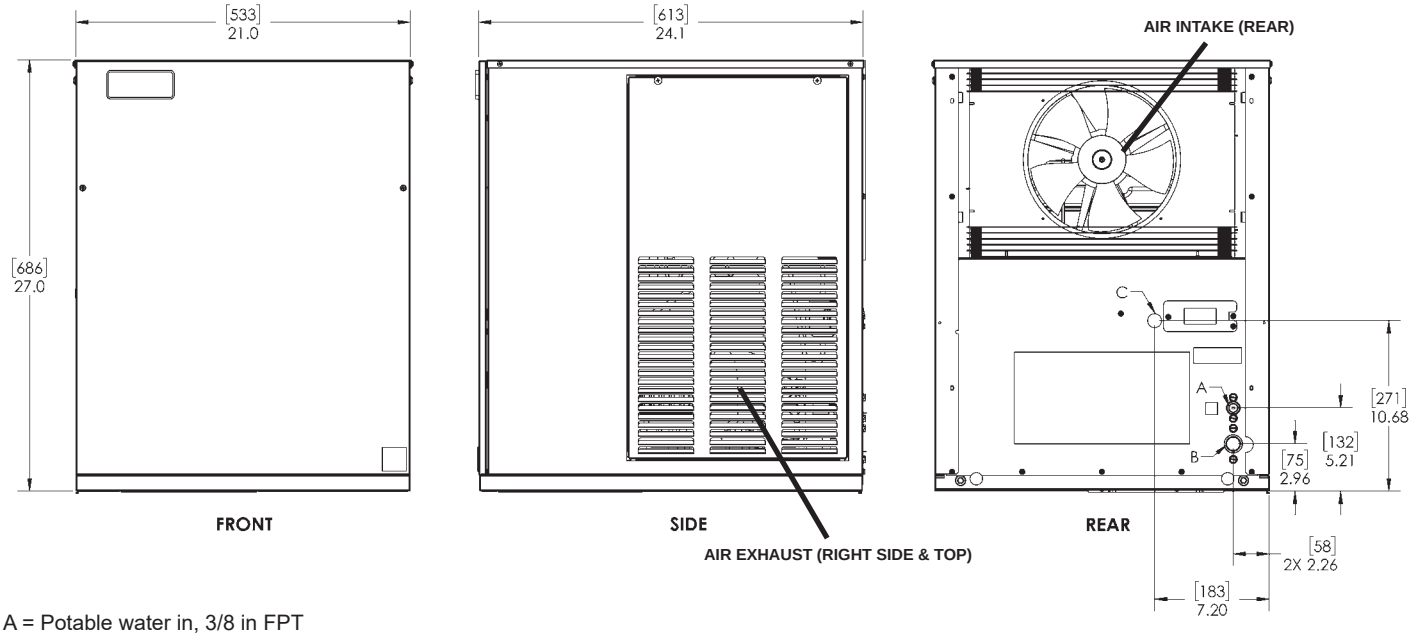
Electrical Designator
0 = 115V / 60Hz
5 = 230V / 50Hz
6 = 208-230V / 60Hz

Cooling Type
A = Air
W = Water
R = Remote

Refrigerant Designator
Blank = R404A
49 = R449A
90 = R290

450 TO 1500LBS DAILY CAPACITY MODELS, AIR COOLED

Important: See clearance requirements for air-cooled units

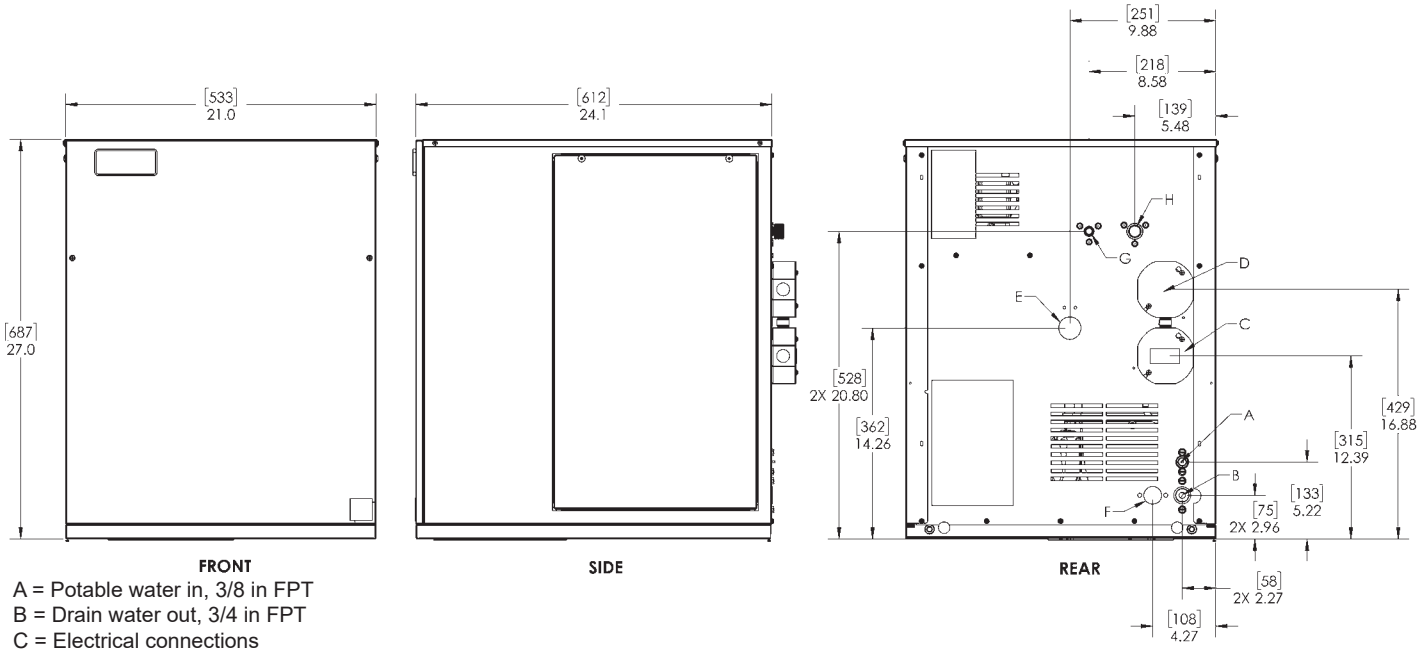


A = Potable water in, 3/8 in FPT
B = Drain water out, 3/4 in FPT
C = Electrical connections, 7/8 in [22.2 mm]

Model Example: GEM0450A90
See model nomenclature on Page 2 for more information.

Dimensions in inches [mm]

450 TO 1500LBS DAILY CAPACITY MODELS, REMOTE COOLED

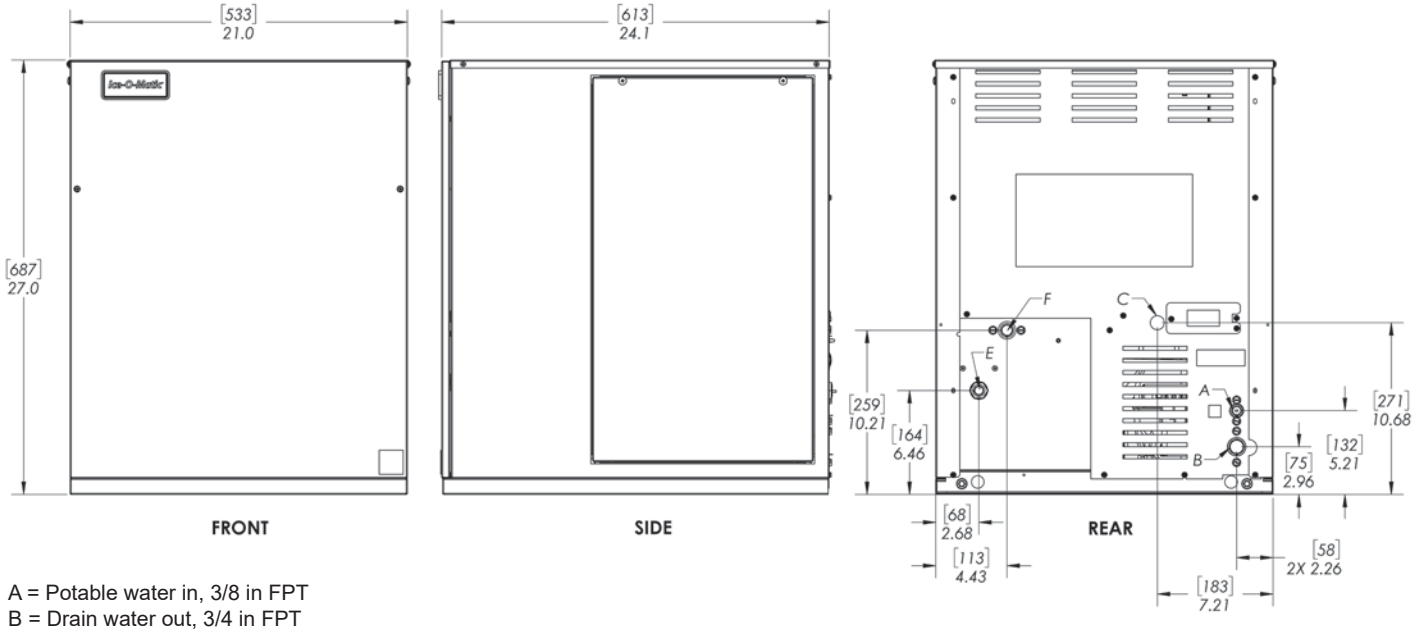


A = Potable water in, 3/8 in FPT
B = Drain water out, 3/4 in FPT
C = Electrical connections
D = Remote condenser electrical connections
G = Refrigerant liquid line, 3/8 in tube w/ quick connect coupling (remote cooled models only)
H = Refrigerant discharge, 1/2 in tube w/ quick connect coupling (remote cooled models only)

Model Example: MFI1256R49
See model nomenclature on Page 2 for more information.

Dimensions in inches [mm]

450 TO 1500LBS DAILY CAPACITY MODELS, WATER COOLED

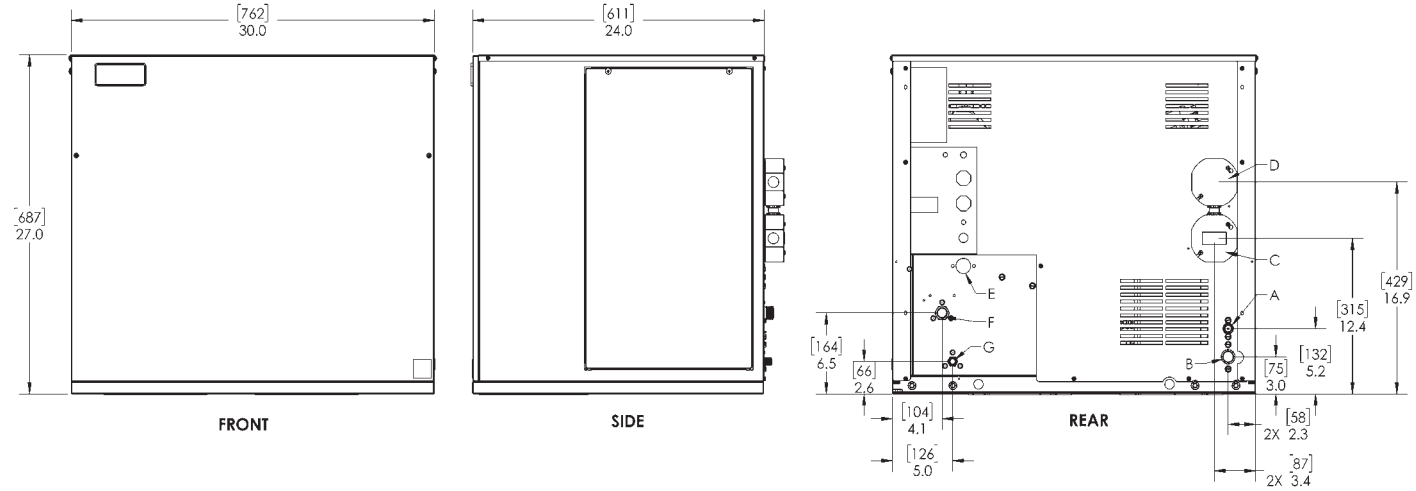


A = Potable water in, 3/8 in FPT
B = Drain water out, 3/4 in FPT
C = Electrical connections
E = Condenser water inlet, 3/8 in FPT (water cooled models only)
F = Condenser water outlet, 1/2 in FPT (water cooled models only)

Model Example: MFI1256W90
See model nomenclature on Page 2 for more information.

Dimensions in inches [mm]

2000 TO 2300LBS DAILY CAPACITY MODELS, REMOTE & WATER COOLED



A = Potable water in, 3/8 in FPT
B = Drain water out, 3/4 in FPT
C = Electrical connections, 7/8 in [22.2 mm]
D = Remote condenser electrical connections, 7/8 in [22.2 mm]
E = Condenser water inlet, 3/8 in FPT (water cooled models only), or
Refrigerant discharge, 1/2 in tube w/ quick connect coupling (remote cooled models only)
F = Condenser water outlet, 1/2 in FPT (water cooled models only)
G = Refrigerant liquid line, 3/8 in tube w/ quick connect coupling (remote cooled models only)

Model Example: GEM2006W49
See model nomenclature on Page 2 for more information.

Dimensions in inches [mm]

EQUIPMENT RATINGS

- Ambient Air Temperature: 50-100 °F [10-37.7 °C]
- Remote Condenser Ambient Air Temperature: -20-120 °F [-29-49 °C]
- Supply Water Temperature: 40-100 °F [4.5-38 °C]
- Supply Water Pressure: 20-80 psi [0.14-0.55 MPa]
- Maximum Altitude: 14,000 ft [4,267 m]
- Water Inlet: 3/8 inch FPT Fitting
- Drain Water Outlet: 3/4 inch FPT Fitting
- R290 GWP: < 3
- R449A GWP (AR5): 1282

INSTALLATION INSTRUCTIONS

Unpack the Ice Maker

⚠ WARNING

Excessive Weight Hazard

Use two or more people to move and install or uninstall the appliance.

Failure to do so can result in back or other injury.

Remove the Packaging

- Remove the cardboard box from the ice maker
- Remove the manual pack from the top of the ice maker
- Remove the hose kit from inside the ice maker (50Hz models)

Place Ice Maker on Bin

- Place the ice maker on the bin using two or more people. If using lifting equipment, support the ice maker from the bottom.
- Ensure ice maker front and bin front are flush. Ensure ice maker sides and bin sides are flush.
- Secure ice maker to bin using (2) bin straps on the back of the ice maker.
- Level the machine within 1/8” in all directions.
- Check the bin control for proper operation

Location Requirements

⚠ WARNING

Fire Hazard

Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in.

Failure to do so can result in death, explosion, or fire.

IMPORTANT: Appliance is intended for indoor commercial use only. Appliances containing refrigerant R290 with charge exceeding 114 grams must not be installed in public corridors or lobbies. Appliance must be installed in accordance with ANSI/ASHRAE 15.

Ensure that the floor area is sufficient for the refrigerant charge or that the ventilation duct is assembled in a correct manner.

Check safety equipment before putting into service.

Installer must provide adequate clearance for proper ventilation to ensure optimum performance. There are (3) difference clearance options: Standard Exhaust, Top Exhaust Bias, and Side Exhaust Bias.

Standard Exhaust Clearances:

Rear: 6 in [152 mm]	Top: 6 in [152 mm]
Left: 6 in [152 mm]	Right: 6 in [152 mm]

Top Exhaust Bias Clearances:

Rear: 6 in [152 mm]	Top: 6 in [152 mm]
Left: 6 in [152 mm]	Right: 0 in [0 mm]

Side Exhaust Bias Clearances:

Rear: 6 in [152 mm]	Top: 3 in [76 mm]
Left: 6 in [152 mm]	Right: 6 in [152 mm]

Make Electrical Connections

⚠ WARNING

Electrical Shock Hazard

Electrical connection must be made by qualified service personnel.

Failure to do so can result in death, fire, or electrical shock.

Ensure you have the proper electrical connections:

- Refer to the serial nameplate on the left side of the machine for the required supply voltage and circuit breaker size.
- Appliance is to be installed on a dedicated circuit.
- A means for disconnection from the supply mains must be incorporated in the fixed wiring in accordance with the wiring rules.
- The use of Ground Fault Circuit Interrupter (GFCI) protection is not recommended for this ice maker. If local electrical code requires GFCI protection, a GFCI circuit breaker installed at the electrical panel must be used. GFCI receptacles (outlets) shall not be used to supply the ice maker.

Make Water Supply Connections

IMPORTANT: Water supply connections are to be performed by authorized personnel only and must be in compliance with applicable plumbing codes. Connect to potable water supply only. A water filtration and treatment system should be installed with the ice machine. Refer to water filter specification sheet.

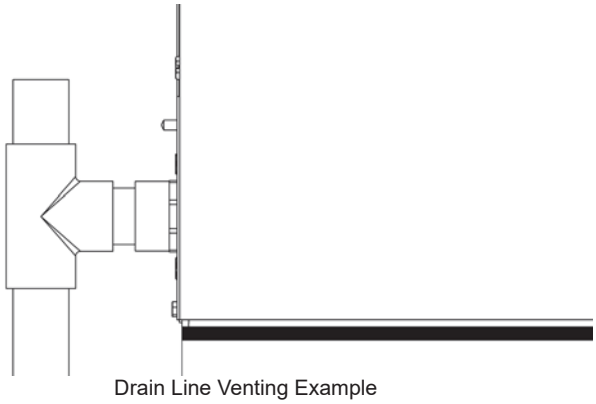
If Reverse Osmosis water is used, water conductivity must be no less than 35µS. Verify the pH is a neutral 7.0. Failure to do so may void your warranty.

- Provide two coils of extra tubing behind the machine so machine can be pulled away from the wall if service is needed.
- Connect water supply tubing (minimum 3/8 inch outer diameter) to machine using 3/8 inch MPT Fitting and PTFE plumbers pipe tape.
- Turn on water supply pressure. Check all connections for leaks.
- Check the water level in the reservoir for proper adjustment.
- Check the water regulating valve adjustment if water cooled.

Make Drain Line Connections

IMPORTANT: Water drain line connections are to be performed by authorized personnel only and must be in compliance with applicable plumbing codes.

- Connect drain line tubing (minimum 3/4 inch outer diameter) to machine using a 3/4 inch MPT Fitting and PTFE plumber’s pipe tape. Insulate drain line to prevent condensation from forming. **NOTE:** Flexible tubing is not recommended. Vent drain line to prevent backup into machine.
- Route drain line to a floor drain. **NOTE:** The use of condensate pumps is not recommended.



Drain Line Venting Example

Dispenser Applications

All dispensers have automatic agitation to keep the ice from clumping. If agitation is too frequent, the Pearl Ice will be damaged and will become difficult to dispense. The Ice-O-Matic® and Cornelius® dispensers need to be set to 2 seconds on every 3 hours and the Lancer needs to be set to 4 seconds on every 150 minutes.

The Ice-O-Matic® and most Cornelius® dispensers also have a restrictor plate at the outlet of the hopper. When used, that plate should be adjusted to be 1.5 inch [38.1 mm] open to limit the speed of the Pearl Ice flows out during dispensing.

REMOTE CONDENSER INSTALLATION

IMPORTANT: For proper operation of the ice maker, the following guidelines must be followed. Failure to do so may result in the loss of production capacity, premature part failure, and may void all warranties.

Ambient Temperature Limits

- Ambient Air Temperature: -20 to 120 °F [-28.9 to 48.9 °C]

Location Limits

Use the following information for planning the placement of the remote condenser relative to the ice machine.

The remote condenser location must not exceed **ANY** of the following. Configurations that do not meet these requirements must receive written authorization from the manufacturer.

- Maximum rise from the ice machine to the remote condenser: 35 physical feet [10.67 physical meters]
- Maximum drop from the ice machine to the remote condenser: 10 physical feet [3.05 physical meters]
- Maximum line set length: 75 physical feet [22.86 physical meters]
- Maximum calculated line set length: 100 feet [30.48 m]

Determine the calculated line set length using the formulas below:

Calculated line set length = Drop + Rise + Horizontal Run
Drop = dd x 6.6 where dd = drop distance in ft or m
Rise = rd x 1.7 where rd = rise distance in ft or m
Horizontal Run = horizontal distance in ft or m

IMPORTANT: Do not route a line set that rises, then falls, then rises. Do not route a line set that falls, then rises, then falls.

Remote Condenser Location

Pre-charged line sets and line set kits are available in 25 ft [7.62 m], 40 ft [12.19 m] or 75 ft [22.86 m] lengths to connect the ice machine and the remote condenser. Select the best available location, protecting the remote condenser from extremes of dirt, dust, and sun. Installation must meet all applicable building codes. The services of a licensed electrician may be required.

Roof Attachment

Install and attach the remote condenser to the roof of the building using the methods and practices of construction that conform to the local building codes, including having a roofing contractor secure the remote condenser to the roof.

Electrical Connection

Have an electrician connect the remote condenser fan motor wires to the ice machine using the junction box at the back of the machine.

Refrigerant Line Set Routing

IMPORTANT: Do not connect pre-charged tubing until all routing and forming of the tubing as been completed. Do not kink or crimp refrigerant tubing. See the coupling instructions included with remote condenser for connecting information.

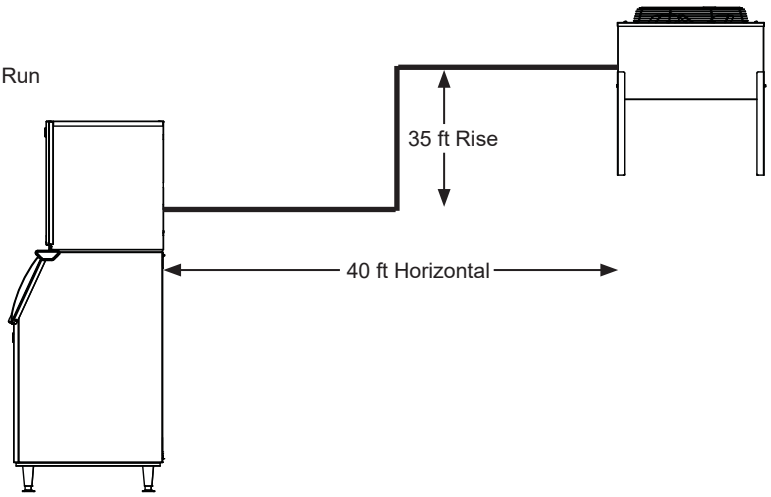
Refrigerant line sets consist of (2) tubes: a 3/8 inch [9.52 mm] diameter liquid line, and a 1/2 inch [12.7 mm] diameter discharge line. Have a roofing contractor cut a 2.50 inch [63.5 mm] hole for refrigerant lines. Verify that penetrations are in conformance with local codes. A separate hole may be required for electrical power.

Route refrigerant lines through the roof opening. Follow straight line routing whenever possible. Any excess tubing must remain within the building. Spiral the excess length of tubing inside the building. Use a horizontal spiral to avoid creating oil traps in the lines. Have the roofing contractor seal the holes in the roof per local codes.

Equivalent Run Calculation Example: Rise

Calculated line set length = (Rise x 1.7) + (Drop x 6.6) + Horizontal Run
Calculated line set length = (35 x 1.7) + (0 x 6.6) + 40
Calculated line set length = 99.5 ft

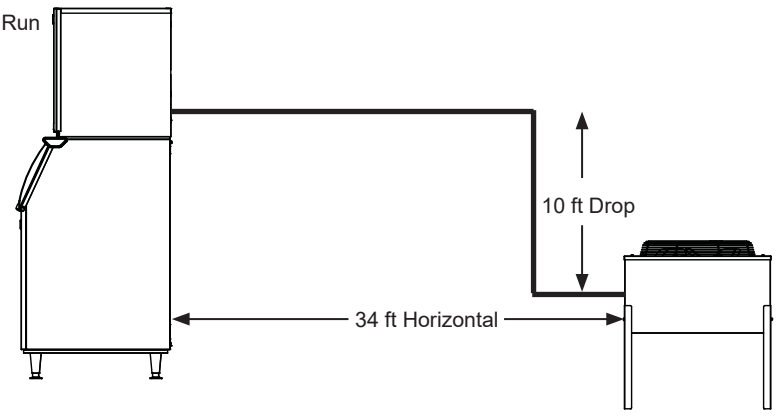
Calculated line set length must not exceed 100 ft



Equivalent Run Calculation Example: Drop

Calculated line set length = (Rise x 1.7) + (Drop x 6.6) + Horizontal Run
Calculated line set length = (0 x 1.7) + (10 x 6.6) + 34
Calculated line set length = 100 ft

Calculated line set length must not exceed 100 ft



OPERATION

Pre-Start Inspection: Air and Water Cooled

1. Remove the front and side service panels.
2. Check that any shipping materials have been removed.
3. Inspect the interior of the ice machine for loose screws or wires.
4. Check that no refrigerant lines are rubbing each other.
5. Check that the fan blades turn freely (Air & Remote Cooled).
6. Check that the refrigerant lines are properly installed (Remote).
7. Check that the unit is installed correctly per install instructions.

Startup

1. Go through the pre-start inspection.
2. Open water to the ice maker, observe that water enters the water reservoir, fills the tube from the water reservoir to the evaporator and then shuts off. (Water cooled only, Turn the water supply ON to the water cooled condenser). Check for leaks.
3. Switch the master (mode) switch ON. The electrical start up sequence in automatic.
   a. There should be a short (15 second) delay before the gear motor starts and the liquid line opens (remotes).
   b. After the gear motor starts the liquid line solenoid opens, closing the low pressure control (remotes). Then the compressor will start.
4. On air and remote cooled models, the condenser will begin to discharge warm air, on water cooled models, the water regulating valve will open and warm water will be discharged into the drain.
5. The unit should soon be making ice.
6. Adjust the reservoir water level if on a dispenser per the dispenser kit instructions. Replace the panels.
7. Clean and/or sanitize the storage bin interior, wipe off the exterior with a clean, damp cloth.
8. Give the owner/user the service manual, instruct him/her in the operation of the unit, and make sure they know who to call for service.
9. To view the warranty details, register products, or check your warranty status, visit the “Warranty Registration” page at www.iceomatic.com/warranty

Shutdown

1. Switch the master (mode) switch OFF. The electrical shut down sequence in automatic.
2. The compressor will continue running to pump down the system until the low pressure switch opens (remotes).
3. The auger continues running for 1 minute to clear the evaporator.

SERVICE

⚠ WARNING

Electrical Shock Hazard

Disconnect electrical supply from machine prior to performing any adjustments or repairs.

Failure to do so can result in death, fire, or electrical shock.

IMPORTANT: For proper and safe servicing, please read these instructions completely. All service work must be performed by authorized service personnel. Failure to perform the required maintenance at the specified frequency will void warranty coverage in the event of a related failure.

General Maintenance Procedure

To ensure economical, trouble-free operation of your machine it is recommended that the following maintenance items be performed every six months.

1. Clean the food-zone following the “Service: Cleaning Procedure” section. Cleaning should be performed a minimum of every six months. Local water conditions may require that cleaning be performed more frequently.
2. Clean the condenser and condenser filter (when applicable) to ensure unobstructed airflow.
3. Check for leaks of any kind, such as water or refrigerant.
4. Check all electrical connections.
5. Check the water filter (if applicable) and replace if dirty or restricted.

Cleaning Overview

⚠ WARNING

Skin Corrosion/Irritation Hazard

Always wear protective gloves, protective clothing, and eye protection while handling descaling and sanitizing solutions.

Failure to do so can result in skin irritation or eye damage.

Proper cleaning of an ice machine requires two parts: Descaling and Sanitizing.

Descaling should be scheduled at a minimum of twice per year, but no more than once per month. Descaling dissolves the mineral deposits on the evaporator and on other surfaces. It removes scale, calcium, lime, and other mineral buildup. Ice-O-Matic requires a “nickel-safe” cleaner such as Nu-Calgon Nickel-Safe Ice Machine Cleaner diluted per manufacturer’s instructions. At dilution, the chemical composition is citric acid 5-10%. Refer to manufacturer’s website for approved chemical formulations and proper pH balance.

Sanitizing should be performed after each descaling, but no more than once per month. Sanitizing disinfects the machine and removes microbial growth including mold and slime. Ice-O-Matic requires a “nickel-safe” sanitizer such as Nu-Calgon IMS-III. Refer to manufacturer’s website for approved chemical formulations and proper pH balance.

IMPORTANT: Do not mix descaler and sanitizer solutions together. Electrical power must be ON to complete the cleaning cycle. Take precautions while working inside the machine.

IMPORTANT: Never use cleaning or sanitizing solutions that contain nitric acid, sulfuric acid, hydrochloric acid, carbolic acid, acetic acid, diluted acetic acid, non-food-grade vinegar (concentration of acetic acid greater than 6% and does not contain enzymes created in processing), bleach, chlorine dioxide, or salts such as potassium chloride (potassium salts) or sodium chloride. Check the label or the manufacturers safety data sheets (SDS) to be sure. Use of these chemicals can attack the surface of the evaporator and other metals causing corrosion and flaking, and will void the warranty.

Cleaning Procedure

Prior to Cleaning the ice machine and/or Bin/Dispenser, perform the following:

1. Remove the ice machine front panel.
2. Turn the machine “OFF” at the ON/OFF selector switch.
3. Remove all ice in the storage bin. (Required for cleaning and/or sanitizing).

Cleaning Instructions:

1. Remove the cover from the water reservoir and block up the float.
2. Drain the water reservoir and freezer assembly using the drain tube attached to the freezer water inlet. Return the drain tube to its normal position and replace the end cap.
3. Add recommended amount of ice machine cleaner (diluted per manufacturer’s instructions) to the water reservoir. (Reference cleaner Manufacturer’s instructions on the package)
4. Slowly pour the cleaning solution into the water reservoir until full. Wait 15 minutes, then switch the ON/OFF switch to the ON position.
5. As the ice machine begins to use water from the reservoir, continue to add more cleaning solution to maintain a full reservoir.
6. After all of the cleaning solution has been added to the reservoir, and the reservoir is nearly empty, switch the ON/OFF switch to the OFF position.
7. Drain the water reservoir and freezing assembly using the drain tube attached to the to the freezer water inlet. Return the drain tube to its normal position and replace the drain plug end cap. Wash and rinse the water reservoir.
8. **Sanitizing the Ice Machine is required after cleaning.**

Sanitizing Procedure

Prior to Sanitizing the ice machine and/or Bin/Dispenser, perform the following:

1. Remove the ice machine front panel.
2. Turn the machine “OFF” at the ON/OFF selector switch.
3. Remove all ice in the storage bin. (Required for cleaning and/or sanitizing).

Sanitizing Instructions:

1. Use an EPA approved food equipment sanitizer at the solution mix recommended by the sanitizer manufacturer.
2. Slowly pour the sanitizer solution into the water reservoir until full. Wait 15 minutes, then switch the ON/OFF switch to the ON position.
3. As the ice machine begins to use water from the reservoir, continue to add more sanitizing solution to maintain a full reservoir.
4. After all of the sanitizing solution has been added to the reservoir, and the reservoir is nearly empty, switch the ON/OFF switch to the “OFF” position.
5. Drain the water reservoir and freezing assembly using the drain tube attached to the to the freezer water inlet. Return the drain tube to its normal position and replace the drain plug end cap. Wash and rinse the water reservoir. During this time, wipe down all other ice machine splash areas. Inspect to insure that water transport system components are in the correct position.
6. Place the ON/OFF switch to the “ON” position and replace the front panel.
7. Continue ice making for at least 15 minutes to flush out any cleaning or sanitizing solution.
8. **Remove and discard all ice in the storage bin. DO NOT USE any ice produced from the cleaning solution.**

Cleaning Stainless Steel and Aluminum

Commercial grades of stainless steel and aluminum are susceptible to rusting or corrosion if not properly maintained. It is important that you properly care for the stainless steel and aluminum surfaces of your ice machine to avoid the possibility of rust and corrosion. It’s recommended that you clean stainless steel and aluminum surfaces once per week to avoid the build-up of hard, stubborn stains. Use the following guidelines to keep your machine looking like new.

IMPORTANT: Do not use abrasive tools to clean the metal surface. Do not use steel wool, abrasive sponge pads, wire brushes, or scrapers to clean the metal. Do not use cleaners that use chlorine or chlorides. Do not use bleach products to clean the metal surfaces.

1. Using a non-abrasive cloth or sponge and an appropriate cleaning agent (see table below), thoroughly wash stainless steel and aluminum surfaces, wiping in the same direction as the grain.
2. Rinse with clean water and immediately wipe dry.

For Routine Cleaning: Use a mild dish soap, ammonia, glass cleaner, mild detergent with water, or other household kitchen cleaning chemicals approved for metal surfaces. Apply with a clean cloth or sponge. Rinse with clean water and wipe dry.

For Removing Grease or Fatty Acids: Use oven cleaners. Apply generously; allow to stand for 15-20 minutes. Rinse with clean water. Repeat as required.

For Removing Hard Water: Use vinegar. Swab or wipe with a clean cloth. Rinse with water and wipe dry.

REPAIR

⚠ WARNING

Fire or Explosion Hazard

Flammable refrigerant may be used.

Follow handling instructions carefully in compliance with Federal or Local regulations.

Ensure proper ventilation in the repair location.

Be aware that malfunction of the equipment can be caused by refrigerant loss and a refrigerant leak is possible.

Discharge capacitors in a way that won’t generate any spark.

Failure to do so can result in death, explosion, or fire.

- Maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.
- The area will be checked with an appropriate refrigerant detector prior to an during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed, or intrinsically safe.
- Use of dyes to detect refrigerant leaks is prohibited and will void any warranties.
- If any hot work is to be conducted on the refrigerant equipment or any associated parts, appropriate fire extinguishing equipment shall be available on hand. A dry chemical or CO_2 fire extinguisher should be adjacent to the charging area.
- No person carrying out work in relation to a refrigerating system which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing, and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment shall be surveyed to make sure that there are no flammable hazards or ignition risks. “No Smoking” signs shall be displayed.
- Ensure the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.
- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times, the manufacturer’s maintenance and service guidelines shall be followed. If in doubt contact the manufacturer’s technical service department for assistance.
- The following checks shall be applied to installations using flammable refrigerants:
  - The actual refrigerant charge is in accordance with the room size within which the refrigerant containing parts are installed.
  - Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected.
  - Repair and maintenance of electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised. Initial safety checks include:
  - That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking.
  - That no live electrical components and wiring are exposed while charging, recovering, or purging the system.
  - That there is continuity of earth bonding.
- During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting glands, etc. Ensure the apparatus is mounted securely. Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer’s specifications.
- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current for the equipment in use.
- Intrinsically safe components are the only types that can be worked

on while live in the presence of a flammable atmosphere. Any testing or measurement devices will be calibrated and set correctly for the application.

- Replace components only with parts specified by the manufacturer. Other parts can result in the ignition of refrigerant in the atmosphere of from a leak.
- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges, or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.
- Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.
- The following leak detection methods are deemed acceptable for all refrigerant systems:
    - Electronic leak detectors may be used to detect refrigerant leaks but, in the case of flammable refrigerants, the sensitivity might not be adequate, or might need re-calibration. Detection equipment shall be calibrated in a refrigerant free area. Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25% maximum) is confirmed.
    - Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine can react with the refrigerant and corrode the copper pipe-work. Examples of leak detection with fluids are the bubble method and fluorescent agents.
- If a leak is suspected, all naked flames shall be removed/ extinguished.
- If a leakage of refrigerants is found which requires brazing, all of the refrigerant shall be recovered from the system or vented outside (if allowed by local and national codes).
- When Brazing is required, the following procedures shall be carried out in the following order:
    1. Safely remove the refrigerant following local and national regulations. If recovery is not required by national regulations, drain the refrigerant to the outside. Take care that the drained refrigerant will not float back into the building.
    2. Purge the refrigerant circuit with oxygen free nitrogen for 5 minutes.
    3. Evacuate again.
    4. Remove parts to be replaced by cutting and brazing.
    5. Purge the braze joint with nitrogen during the brazing procedure required for repair.
    6. Carry out a leak test before charging with refrigerant.
- Check safety equipment before putting into service.

Winterizing/Decomissioning Procedure

IMPORTANT: Whenever the ice machine is taken out of operation for the winter months, the procedure below must be performed. Failure to do so may cause serious damage and will void all warranties.

1. Turn off water to the machine.
2. Drain the water reservoir and freezing assembly using the drain tube attached to the to the freezer water inlet. Return the drain tube to its normal position and replace the drain plug end cap.
3. Disconnect the tubing between the water pump discharge and the water distribution tube. Drain any water.
4. Remove and discard all of the ice in the ice bin.

DISPOSAL

⚠ WARNING

Fire or Explosion Hazard

Flammable refrigerant may be used.

Follow handling instructions carefully in compliance with Federal or Local regulations.

Do not puncture refrigerant tubing.

Dispose of properly in accordance with Federal or Local regulations.

MPORTANT: This appliance contains refrigerant and must be disposed of in accordance with applicable national, state, and local codes and regulations. Refrigerant must be recovered by properly certified service personnel.

- Ensure sufficient ventilation at the working place
- Remove the refrigerant. If recovery is not required by national regulations, drain the refrigerant to the outside. Take care that the drained refrigerant will not cause any danger. In doubt, one person should guard the outlet. Take special care that drained refrigerant will not float back into the building.
- When flammable refrigerants are used:
    1. Evacuate the refrigerant circuit.
    2. Purge the refrigerant with oxygen free nitrogen.
    3. Evacuate again.
    4. Cut the compressor and drain the oil.

ICE-O-MATIC WARRANTY

Every Ice-O-Matic ice maker is backed by a warranty that provides both parts and labor coverage. To view the warranty details, register products, or check your warranty status visit www.iceomatic.com/warranty.

FINDING A SERVICE PROVIDER

To find a service provider, please visit www.iceomatic.com.

CONTACT US

For warranty service, call 1-855-832-4466, or visit our website at www.iceomatic.com.

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