

MERMAID MARINE ICE MAKER MODELS I-3 AND I-3i



INSTALLATION & OPERATIONS GUIDE

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SECTION 1 (OVERVIEW)

A. Introduction:

Congratulations!! You have just purchased one the most dependable Marine Ice Makers on the market today, a MERMAID.

Mermaid supplies pleasure boat owners, custom boat builders, yacht brokers, boat dealers and marinas around the world with their ice making needs.

Mermaid icemakers are manufactured to the highest of quality standards using only top of the line components and materials assembled by long-term qualified technicians. All of our icemakers are modularized, self contained, prewired, precharged and manufactured out of 304 and 430 -18 gauge stainless steel. All of our icemaker components, such as the evaporator, compressor and condensing coil, are manufactured in the USA.

In short, you're never out on a limb with a Mermaid. Mermaid factory warranty covers all issues with your machine for a one-year period. After 1 year, any certified technician, marine, household or commercial, can service any Mermaid Ice Maker.

IMPORTANT

PLEASE READ ALL INSTRUCTIONS COMPLETELY BEFORE ATTEMPTING TO INSTALL OR OPERATE THE UNIT. ALL ICE MAKERS REQUIRE A CONNECTION TO THE WATER SUPPLY AND IMPROPER HOOK-UP CAN RESULT IN SUBSTANTIAL PROPERTY DAMAGE! IF YOU ARE UNSURE OF YOUR ABILITY TO SAFELY CONNECT THE WATER SUPPLY TO THE UNIT, CONSULT A LICENSED PLUMBER OR TECHNICIAN FOR ASSISTANCE.

SECTION 2
(SAFETY PRECAUTIONS)

WARNING!

- **NEVER ATTEMPT TO INSTALL, REPAIR OR PERFORM MAINTENANCE ON THE UNIT UNTIL THE ELECTRICITY HAS BEEN DISCONNECTED.**
- **ALTERING, CUTTING OF POWER CORD, REMOVAL OF CORD, REMOVAL OF POWER PLUG, OR DIRECT WIRING CAN CASE SERIOUS INJURY/DEATH OR SEVERE PROPERTY DAMAGE/LOSS AND WILL VOID THE WARRANTY.**

CAUTION!

- **DO NOT LIFT UNIT BY DOOR HANDLE ALONE. THE DOOR LATCH IS NOT DESIGNED TO WITHSTAND THE WEIGHT OF THE UNIT.**
- **NEVER USE AN ICE PICK OR ANY OTHER SHARP OBJECT TO AID THE DEFROSTING TIME. USAGE OF SUCH TOOLS CAN AND WILL CAUSE DAMAGE TO THE COOLING PORTION OF THE MACHINE AND WILL VOID THE WARRANTY.**
- **FAILURE TO MAINTAIN THE AIR GRILL (CONDENSER) LOCATED BEHIND THE FRONT PANEL CAN AND WILL CAUSE CONDENSER FAILURE. THIS IS NOT A WARRANTY REPAIR.**
- **NEVER INSTALL THE UNIT BEHIND NON-VENTED CLOSED DOORS. OBSTRUCTING FREE AIR FLOW CAN AND WILL CAUSE THE UNIT TO MALFUNCTION AND VOID THE WARRANTY.**

SECTION 3 (INSTALLATION)

SITE PREPARATION:

The icemaker needs to be mounted in an area where it will physically fit, as well as accommodate an unblocked intake vent. In addition, you need to insure there is enough space for the water hose to be connected.

A. INSTALLING THE ICE MAKER:

1. Position the unit on a flat, level surface, capable of supporting the entire weight of the unit. Remember, when the unit has produced its ice, the weight will be substantially higher. A fiberglass shelf may be necessary for a proper installation.
2. Ensure that there is room behind the unit for your water hose connection and power supply. It is advisable to leave extra water line to prevent kinking (described later).
3. Your Mermaid product has been designed for either free standing (I-3 model) or built-in installation (I-3i model). When built-in, your Mermaid product does not require additional air space for top, sides, or rear. However, the front grill **MUST NOT** be obstructed. It is advisable to have at least a 1/8" to a 1/4" size over the standard unit size. This will aid in the installation and removal of the unit.

DIMENSIONS:

| WIDTH | HEIGHT | DEPTH |
|--------------|---------------|--------------|
| 14.0" | 24.0" | 16.0" |

4. If your unit was ordered with a mounting flange, the unit should have arrived with it pre-attached. If you would later like to build the icemaker in, we are able to provide you with the mounting flange for a later installation. Simply contact the factory and we would be happy to assist.

B. CONNECTING THE WATER SUPPLY:

1. Locate the ¼” copper water line with the white quick disconnect exiting the rear of the machine. For your convenience, the water valve connection has been previously established in the underside of the machine. No additional connections are necessary behind the front or rear grills of the ice makers.
2. The copper tubing, exiting the rear of the machine, will have a quick disconnect ¼” fitting ready to accept either a ¼” plastic (PVC) line or copper line. This will depend on the water line established for your vessel. Either line is acceptable.
3. Simply insert the plastic or copper line in the quick disconnect fitting until tight. No tooling is required for this connection.
4. During built-in installations, ensure that the plastic or copper line does not kink during your mounting of the unit. It is recommended to leave a few feet of slack coiled behind the machine (in either the plastic or copper line) for ease of removal in the event the unit needs to be serviced.
5. To remove the water line from the Mermaid Ice Maker, depress the white or grey ring on the very end of the coupling fitting at the end with your water line and pull gently on the plastic or copper line. Ensure that if you disconnect both, that you re-establish a secure connection on both ends to avoid any water leaks. Improper connection or removal resulting in water damage is NOT covered by warranty. Ensure you follow all necessary precautions.

NOTE

AFTER COMPLETING THE WATER CONNECTIONS, TURN ON THE WATER SUPPLY AND RECHECK THE WATER CONNECTIONS BEFORE PERMANENTLY INSTALLING THE UNIT. DO NOT USE TAPES OR SEALANTS ON CONNECTIONS. THERE NEEDS TO BE A MINIMUM OF 20PSI AND A MAXIMUM OF 120PSI TO OPERATE THIS UNIT.

C. MOUNTING THE UNIT:

1. The power cord is strapped to the rear of the machine. Plug 6 ft. power cord into receptacle. DO NOT use an extension cord to connect the power to the unit. Electrical grounding is required. This unit is specifically designed with a 6ft. three-prong grounding plug. Be sure that the receptacle it is to be plugged into is the same. If it is not, consult with an electrician about changing the receptacle to a proper mate or properly installing one near the machine.
2. Gently push the unit into position ensuring NO kinks have occurred in the water line.
3. Ensure there is at least 1-1.5 inch clearance behind the unit for electrical connections. DO NOT push the unit directly into the plug assembly. It is imperative that the plug assembly is free from contact of the back of the unit.

SECTION 4 (START-UP)

A. INITIAL START-UP:

Once installation is complete, the unit is ready for initial start-up and operation.

1. Ensure the unit is plugged into a proper three-prong 115v polarized grounding outlet.
2. Move the ON-OFF switch to the ON position.
3. As soon as the icemaker mold reaches the proper temperature, the ice mechanism will fill the mold with water. It is not uncommon for the first few rounds of cubes to be smaller than desired. This is due to air in the water inlet line. Subsequent cubes will be of standard size. Approximate time for first cycle is 45-60 minutes. Allow a full 24 hours for a full bin of ice.
4. The unit will operate under 3.29-4.0 115 Volt Amps.

NOTE

IT IS POSSIBLE THAT DIRT OR SCALE WILL DISLODGE IN THE WATER LINE. IT IS ADVISABLE TO DISCARD THE FIRST FULL ROUND OF ICE CUBES. SHOULD THIS PROBLEM PERSIST, AN OPTIONAL WATER FILTER MAY WANT TO BE ADDED ON THE INCOMING WATER LINE TO THE ICE MAKER.

SECTION 5

(OPERATION)

A. NORMAL OPERATION:

The icemaker is designed to create between 20-25lbs of ice within a 24-hour time frame. It is not uncommon for the machine to make less ice if the door is open frequently during this time. The core temperature needs to stay within 14-16 degrees Fahrenheit to create the maximum quantity of cubes. Frequent door opening occurrences will inhibit this temperature from being reached.

The production may also be interrupted by raising the bin arm into an upright and locked position (the unit will still maintain temperature for ice storage). By raising the bar you are simply deactivating the ice production module.

NOTE

IT IS ADVISABLE WHEN ICE PRODUCTION IS NOT DESIRED TO RAISE THIS ARM. WHEN THE MACHINE IS ON AND POWER IS SUPPLIED, THE UNIT WILL MAKE CONSTANT ICE. DO NOT SIMPLY TURN THE MACHINE TO THE OFF POSITION WITH ICE IN THE TRAY. THE UNIT WILL COME TO ROOM TEMPERATURE – MELTING THE ICE – AND MAY CAUSE SEVERE WATER DAMAGE TO YOUR BOAT.

It is normal for certain sounds to be heard. At times, you may hear the compressor turn on/off, the fan turn on/off, the water solenoid valve activating, and most common, the ice falling into the ice bucket.

CAUTION

DURING PERIODS OF LIMITED USE OR HIGH AMBIENT TEMPERATURES, IT IS COMMON FOR CUBES TO FUSE TOGETHER. NEVER USE AN ICE PICK, KNIFE, OR OTHER SHARP INSTRUMENT TO SEPARATE THE CUBES. DAMAGE TO THE CORE OF THE UNIT CAN OCCUR. SIMPLY SHAKE THE ICE BUCKET TO LOOSEN THE CUBES.

If the icemaker is not used regularly, the ice bucket should be emptied periodically to ensure fresh cubes.

It is normal for cubes to appear cloudy. This is caused by air being trapped in the water due to fast freezing. It has nothing to do with health, taste or chemical make-up of the water. It is the same air that is in every glass of water you drink

To provide for higher ice rate (production of more cubes), adjust the temperature control to a **warmer** setting. If hollow cubes result, adjust temperature somewhat **colder**. For less cube production, adjust to a **colder** setting.

While the machine is operating, it is necessary to keep the ice bucket fully inserted as much as possible to avoid cubes falling in the core of the unit. Should this occur, simply remove the ice cubes carefully. **DO NOT** use a pick or a sharp object should they be stuck. If necessary, thaw the ice machine.

B. ADJUSTING THE TEMPERATURE CONTROL:

Model I-3 has an adjustable temperature dial located behind the louvered air intake vent on the front of the machine.

1. Remove the air intake vent.
2. Locate the black or grey dial mounted next to the condensing unit.
3. To create more cubes, turn the dial to the left (counterclockwise) one or two digits. All the way to the warmest setting will not drastically aid the ice production time.
4. To create less cubes, turn the dial to the right (clockwise) one or two digits. All the way to the coldest setting will not drastically aid in the ice production time.

C. ADJUSTING ICE CUBE SIZE:

On the Mermaid I-3 and I-3i models, the size of the cubes may need to be adjusted based on personal preference and water pressure coming to the unit.

1. Open the front of the icemaker.
2. Locate the icemaker mechanism in the upper left corner of the unit.
3. Carefully remove the white mechanism cover. No tools are necessary to accomplish this.
4. Locate the adjusting screw on the icemaker assembly control box. The adjusting screw is just below the minus (-) and plus (+) signs on the control box.

5. Turn the adjusting screw toward the minus (-) sign (clockwise) for smaller cubes or toward the plus (+) sign (counterclockwise) for larger cubes.
6. Install the white mechanism cover.

SECTION 6 (MAINTENANCE)

A. CARE AND CLEANING:

Periodic cleaning and proper maintenance will ensure efficiency, top performance, and a longer operating life of the Mermaid I-3 Icemaker. We would recommend the following:

1. Periodically clean the interior with mild soap and warm water.
2. Avoid use of solvent cleaners or abrasives on the interior. These chemicals could transmit to the ice cubes.
3. The exterior may be cleaned with “Sheila Shine” or WD-40. Use a small amount of each as overuse of these products will create a film on the exterior of the machine. This will not hurt the machine but will create a greasy feeling to you.
4. The intake grill needs to be clear of all debris. Free air needs to be able to flow through the louvered vents. The condensing coil located behind the vent should be cleaned three to four times a year by using a small brush or vacuum. Be sure not to damage the coils in the process.

**CAUTION
THE CONDENSOR FINS ARE SHARP!! DO NOT RUN HANDS OVER THE
CONDENSOR FINS.**

B. DEFROSTING:

**CAUTION
DO NOT USE ANY ELECTRICAL HEATING DEVICE, ICE PICK, KNIFE, OR
ANY OTHER SHARP OBJECT TO ATTEMPT TO AID IN THE DEFROSTING
PROCESS. THIS WILL DAMAGE THE CORE OF THE MACHINE AND WILL
VOID THE WARRANTY.**

Manual machines should be defrosted every eight weeks. However, this may not be practical in areas of high heat/humidity and heavy usage. In these circumstances, it will be necessary to defrost your unit whenever the frost thickness exceeds ¼”. To

defrost, turn the unit to the OFF position, remove the remaining cubes and prop door open. It would be advisable to use a towel to absorb the melting frost to ensure it does not escape the unit and create water damage.

C. STORAGE:

If the unit is to be stored or not used for a prolonged period of time, it is advisable to drain the water system. Please follow these steps:

1. Shut the water supply off to the machine.
2. Disconnect the water supply from the water connection at the back of the machine. Or, you may simply disconnect the water supply line behind the front grill. The water valve has a 1/4" copper tube with a compression fitting located on top of the valve. Carefully disconnect this line. This is only advisable if you are not willing to remove the installed icemaker. I3 models are not built-in and disconnecting the quick disconnect fitting is advised.
3. Allow the unit to operate for approximately one hour or so until the unit has discharged all the ice in the mechanism.
4. Dry out any remaining water left in the icemaker mechanism.
5. Prop the door open.
6. Disconnect the unit from the 115v power supply.

**SECTION 7
(TROUBLESHOOTING)**

A. WHAT TO CHECK FOR?

Before calling for service, please review the troubleshooting checklist below. Should you still need attention, please don't hesitate to contact us.

| <i>PROBLEM</i> | <i>POSSIBLE CAUSE</i> | <i>REMEDY</i> |
|--------------------------------|---------------------------------|---|
| 1) The unit is not cold enough | Door gasket not sealed properly | Inspect the latch and gasket on door for proper seal |
| | Dirty condensing coil | Clean condensing coil. Refer back to " Care and Cleaning " section |

| | | |
|--|---|---|
| | Airflow to front grill is obstructed | Remove item(s) blocking intake |
| | Temperature not set cold enough | Turn dial to colder setting. Refer back to “ Adjusting The Temperature Control. ” |
| 2) The unit frosts up | Unit is a manual defrost product | Refer back to “ Defrosting ” |
| 3) Water is leaking out the back of the unit | Water supply connection is leaking | Inspect all water connections and tighten fittings. |
| 4) Ice cubes are sticking together | Door gasket not properly sealed Or infrequent use of cubes | Adjust door gasket/latch or break apart cubes by shaking the bucket. DO NOT use sharp objects. |
| 5) Noise during operation | Tubing lines are touching or rubbing | Inspect plumbing connections under machine to ensure they are not touching any other components. |
| 6) No ice | Bin arm is locked in the upright position | Manually lower bin arm |
| 7) Not enough ice | Control setting too cold or ice cube size too large | Adjust temperature control. Refer to “ Adjusting The Temperature Control ” or Refer to “ Adjusting Ice Cube Size. ” |
| 8) Water leaks into ice bucket | Water level set too high | Set cube size smaller. Refer to “ Adjusting Ice Cube Size. ” |

Should the above information not be sufficient, please contact CMI at 904-260-9756 or you may contact Mermaid for direct factory support during normal business hours of 8:00AM to 5:00PM EST Monday through Friday at 800-330-3553.

We hope you enjoy your Mermaid I-3 or I-3i Product and we thank you for your business!

