



HOSHIZAKI

Instruction Manual

Modular Cuber

Model
IM-500SAA



hoshizakiamerica.com

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⚠ WARNING

Only qualified service technicians should install and service the appliance. To obtain the name and phone number of your local Hoshizaki Certified Service Representative, visit www.hoshizaki.com. No installation or service should be undertaken until the technician has thoroughly read this Instruction Manual. Likewise, the owner/manager should not proceed to operate the appliance until the installer has instructed them on its proper operation. Failure to install, operate, and maintain the appliance in accordance with this manual will adversely affect safety, performance, component life, and warranty coverage and may result in costly water damage. Proper installation is the responsibility of the installer. Product failure or property damage due to improper installation is not covered under warranty.

Hoshizaki provides this manual primarily to assist qualified service technicians in the installation, maintenance, and service of the product.

Should the reader have any questions or concerns which have not been satisfactorily addressed, please call, write, or send an e-mail message to the Hoshizaki Technical Support Department for assistance.

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618 Highway 74 South
Peachtree City, GA 30269

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NOTE: To expedite assistance, all correspondence/communication MUST include the following information:

- Model Number _____
- Serial Number _____
- Complete and detailed explanation of the problem.

IMPORTANT

This manual should be read carefully before the product is installed and operated. Only qualified service technicians should install, service, and maintain the product. Read the warnings contained in this booklet carefully as they give important information regarding safety. Please retain this booklet for any further reference that may be necessary.

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Important Safety Information

Throughout this manual, notices appear to bring your attention to situations which could result in death, serious injury, or damage to the unit.

⚠ WARNING Indicates a hazardous situation which could result in death or serious injury.

NOTICE Indicates a situation which could result in damage to the unit or property.

IMPORTANT Indicates important information about the use and care of the unit.

⚠ WARNING

This appliance should be destined only to the use for which it has been expressly conceived. Any other use should be considered improper and therefore dangerous. The manufacturer cannot be held responsible for injury or damage resulting from improper, incorrect, and unreasonable use. Failure to install, operate, and maintain the appliance in accordance with this manual will adversely affect safety, performance, component life, and warranty coverage and may result in costly water damage.

To reduce the risk of death, electric shock, serious injury, or fire, follow basic precautions including the following:

- Only qualified service technicians should install and service the appliance.
- The appliance must be installed in accordance with applicable national, state, and local codes and regulations.
- Electrical connection must be hard-wired and must meet national, state, and local electrical code requirements. Failure to meet these code requirements could result in death, electric shock, serious injury, fire, or damage to equipment.
- The icemaker requires an independent power supply of proper capacity. See the nameplate for electrical specifications. Failure to use an independent power supply of proper capacity can result in a tripped breaker, blown fuse, damage to existing wiring, or component failure. This could lead to heat generation or fire.
- **THE ICEMAKER MUST BE GROUNDED.** Failure to properly ground the icemaker could result in death, serious injury, or damage to equipment.
- Move the control switch to the "OFF" position and turn off the power supply before servicing. Lockout/Tagout to prevent the power supply from being turned back on inadvertently.
- To reduce the risk of electric shock, do not touch the control switch with damp hands.
- Do not make any alterations to the appliance. Alterations could result in electric shock, injury, fire, or damage to 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 use of the appliance by a person responsible for their safety.
- Children should be properly supervised around this appliance.
- Do not climb, stand, or hang on the appliance or allow children or animals to do so. Serious injury could occur or the appliance could be damaged.
- Do not use combustible spray or place volatile or flammable substances near the appliance. They might catch fire.
- Keep the area around the appliance clean. Dirt, dust, or insects in the appliance could cause harm to individuals or damage to the appliance.

NOTICE

- Follow the water supply, drain connection, and maintenance instructions carefully to reduce the risk of costly water damage.
- In areas where water damage is a concern, install in a contained area with a floor drain.
- Install the icemaker in a location that stays above freezing. Normal operating ambient temperature must be within 45°F to 100°F (7°C to 38°C).
- Do not leave the icemaker on during extended periods of non-use, extended absences, or in sub-freezing temperatures. To properly prepare the icemaker for these occasions, follow the instructions in "III.C. Preparing the Icemaker for Long Storage."
- Do not place objects on top of the appliance.
- The ice storage bin is for ice use only. Do not store anything else in the ice storage bin.

I. Specifications

A. Electrical Data

HOSHIZAKI ICE MAKER	
MODEL NUMBER	IM-500SAA
SERIAL NUMBER	
AC SUPPLY VOLTAGE	115/60/1
COMPRESSOR	115V 10.2RLA 70.0LRA
PUMP	120V 0.55FLA 62W
FAN	120V 0.50FLA 60W
ACTUATOR	115V 0.04FLA 8W
OTHER	115V-120V 0.16A
MAXIMUM FUSE SIZE	20 AMPS
MAX. HACR BREAKER (USA ONLY)	20 AMPS
MAX. CIRC. BREAKER (CANADA ONLY)	20 AMPS
MINIMUM CIRCUIT AMPACITY	20 AMPS
DESIGN PRESSURE	HI-350PSIG LO-220PSIG
REFRIGERANT	R404A 26.5oz.
MOTOR-COMPRESSOR THERMALLY PROTECTED, NOT INTENDED FOR OUTDOOR USE!	
HOSHIZAKI EUROPE LIMITED	
Made in EU	
<i>For certification marks, see the nameplate on the right side panel.</i>	

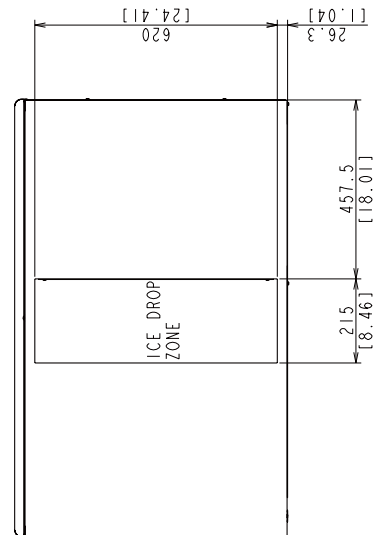
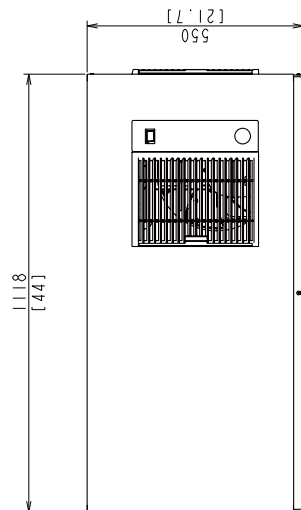
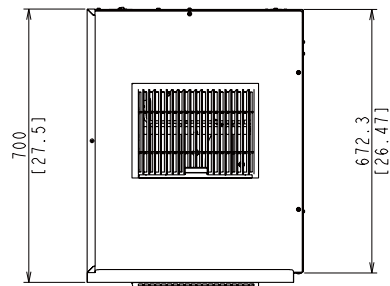
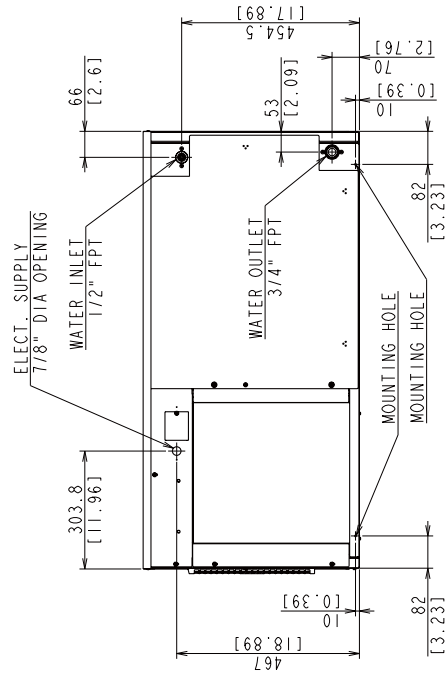
See the nameplate for electrical and refrigerant specifications. This nameplate is located on the right side panel.

Since this nameplate is located on the right side panel of the icemaker, it cannot be read when the side of the icemaker is against a wall or against another piece of kitchen equipment. Therefore, the necessary electrical and refrigeration information is also on the rating label, which can be easily seen by removing only the front panel of the icemaker.

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

B. Dimensions/Connections

Unit: mm [inches]



The storage bin opening must match the bottom opening as in the illustration.

II. Installation and Operating Instructions

WARNING

1. Install in accordance with all applicable national, state, and local codes and regulations.
2. **CHOKING HAZARD:** Ensure all components, fasteners, and thumbscrews are securely in place after installation. Make sure that none have fallen into the storage bin.

A. Checks Before Installation

NOTICE

Remove all shipping cartons, tape, and packing material. If any are left in the icemaker, it will not work properly.

- Visually inspect the exterior of the shipping container and immediately report any damage to the carrier. Upon opening the container, any concealed damage should also be immediately reported to the carrier.
- Remove the panels to prevent damage when installing the icemaker. See “B. How to Remove Panels.”
- Remove the package containing the accessories.
- Remove the protective plastic film from the panels. If the icemaker is exposed to the sun or to heat, remove the film after the icemaker cools.
- Check that refrigerant lines do not rub or touch lines or other surfaces, and that the fan blade turns freely.
- Check that the compressor is snug on all mounting pads.
- See the nameplate on the right side panel, and check that your voltage supplied corresponds with the voltage specified on the nameplate.
- This icemaker can be installed on a storage bin 44” wide or wider. The recommended storage bin is HOSHIZAKI STORAGE BIN, Model B-700 series.

B. How to Remove Panels - See Fig. 1

- Front Panel: Loosen the screw. Lift up and pull towards you.
- Top Panel: Remove the screws and lift up.
- Left Side Panel: Slide forward slightly, and then lift off.
- Right Side Panel: Remove the screws and pull towards you.

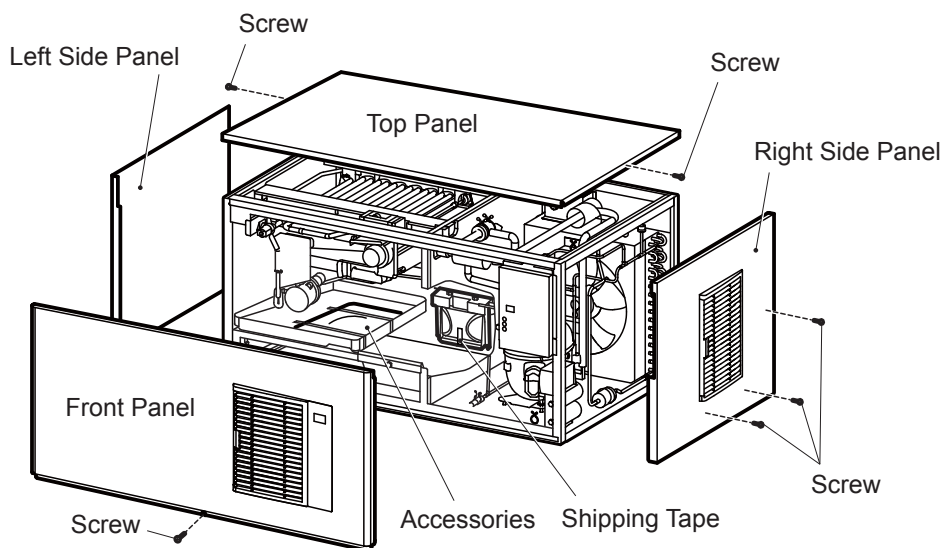


Fig. 1

C. Location

NOTICE

1. This icemaker is not intended for outdoor use. Normal operating ambient temperature should be within 45°F to 100°F (7°C to 38°C); Normal operating water temperature should be within 45°F to 90°F (7°C to 32°C). Operation of the icemaker, for extended periods, outside of these normal temperature ranges may affect icemaker performance.
2. This icemaker will not work at sub-freezing temperatures. To prevent damage to the water supply line, drain the icemaker when the air temperature is below 32°F (0°C). See "III. C. Preparing the Icemaker for Long Storage."

For best operating results:

- Ice maker should not be located next to ovens, grills, or other high heat producing equipment.
- Avoid choosing a site where no dripping is allowed.
- Allow 6" (15 cm) clearance at rear, left side, and top and 12" (30 cm) clearance at right side for proper air circulation and ease of maintenance and/or service should they be required.
- Location should provide a firm and level foundation for the equipment.

D. Setup

NOTICE

Do not use the frame to lift the icemaker. Lift the icemaker from the base.

- 1) Unpack the storage bin, and attach the four adjustable legs provided (bin accessory) to the bottom of the storage bin.
- 2) Position the storage bin in the selected permanent location.
- 3) Unpack the icemaker and remove all shipping cartons, tape and packing material.
- 4) Remove the panels to prevent damage when installing the icemaker. See "II. B. How to Remove Panels."
- 5) Remove the protective plastic film from the panels. If the unit is exposed to the sun or to heat, remove the film after the unit cools.
- 6) Remove the package containing the accessories from the icemaker. See Fig. 1.
- 7) Remove the shipping tape holding the bin control switch. See Fig. 1.
- 8) Place the icemaker on top of storage bin.
- 9) Secure the icemaker to the storage bin using the two mounting brackets and the bolts provided. See Fig. 2.

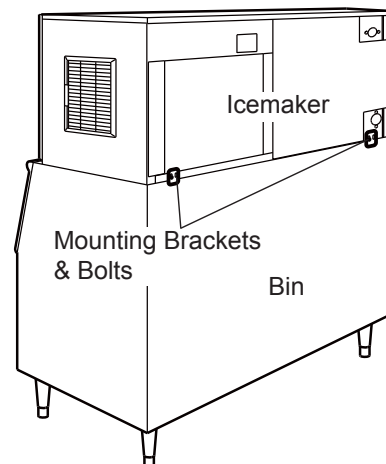


Fig. 2

- 10) Level the icemaker and storage bin in both the left-to-right and front-to-rear directions. Adjust the storage bin legs to make the icemaker level.
- 11) Replace the panels in their correct positions.

E. Electrical Connection

⚠ WARNING

1. Electrical connection must be made in accordance with the instructions on the "WARNING" tag, provided with the pig tail leads in the junction box.
2. Electrical connection must be hard-wired and must meet national, state, and local electrical code requirements. Failure to meet these code requirements could result in death, electric shock, serious injury, fire, or severe damage to equipment.
3. This unit requires an independent power supply. See the nameplate for proper voltage and breaker/fuse size. Failure to use a proper breaker or fuse can result in a tripped breaker, blown fuse, or damage to existing wiring. This could lead to heat generation or fire.
4. **THE ICEMAKER MUST BE GROUNDED.** Failure to properly ground the icemaker could result in death or serious injury.

- Use copper supply wires. The smallest conductor that the installer may use for branch circuit wiring is 14 AWG (2.1 mm²) wire.
- The maximum allowable voltage variation is ± 10 percent of the nameplate rating.
- The white lead must be connected to the neutral conductor of the power source. **NOTICE! Miswiring may result in severe damage to the icemaker.** See Fig. 3.
- The opening for the power supply connection is 7/8" DIA to fit a 1/2" trade size conduit.
- Usually an electrical permit and services of a licensed electrician are required.

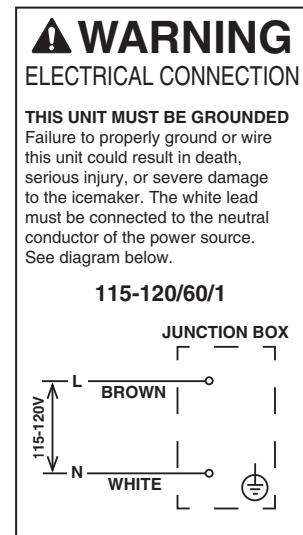


Fig. 3

F. Water Supply and Drain Connections - See Fig. 4

WARNING

Water supply and drain connections must be installed in accordance with applicable national, state, and local regulations.

NOTICE

1. Normal operating water temperature should be within 45°F to 90°F (7°C to 32°C). Operation of the icemaker, for extended periods, outside of this normal temperature range may affect icemaker performance.
2. To prevent damage to equipment, do not operate the icemaker when the water supply is off, or if the pressure is below 10 PSIG. Do not run the icemaker until the proper water pressure is reached.

- A plumbing permit and services of a licensed plumber may be required in some areas.
- External filters, strainers, or softeners may be required depending on water quality. Contact your local Hoshizaki Certified Service Representative for recommendations.
- Water supply inlet is 1/2" female pipe thread (FPT).
- A minimum of 1/4" nominal ID copper water tubing or equivalent is required for the icemaker water supply line. An icemaker water supply line shut-off valve and drain valve must be installed. Be sure there is sufficient extra water supply line for the unit to be pulled out for service.
- Water supply pressure should be a minimum of 10 PSIG and a maximum of 113 PSIG. If the pressure exceeds 113 PSIG, the use of a pressure reducing valve is required.
- Icemaker drain outlet is 3/4" FPT. A minimum of 3/4" nominal ID hard pipe or equivalent is required for the icemaker drain line. Be sure there is sufficient extra drain line for the unit to be pulled out for service.
- Drain lines must have 1/4" fall per foot (2 cm per 1 m) on horizontal runs to get a good flow. A vented tee connection is also required for proper flow.
- Drain lines should not be piped directly to the sewer system. An air gap of a minimum of 2 vertical inches (5 cm) should be between the end of the drain pipes from the icemaker and storage bin, and the floor drain.

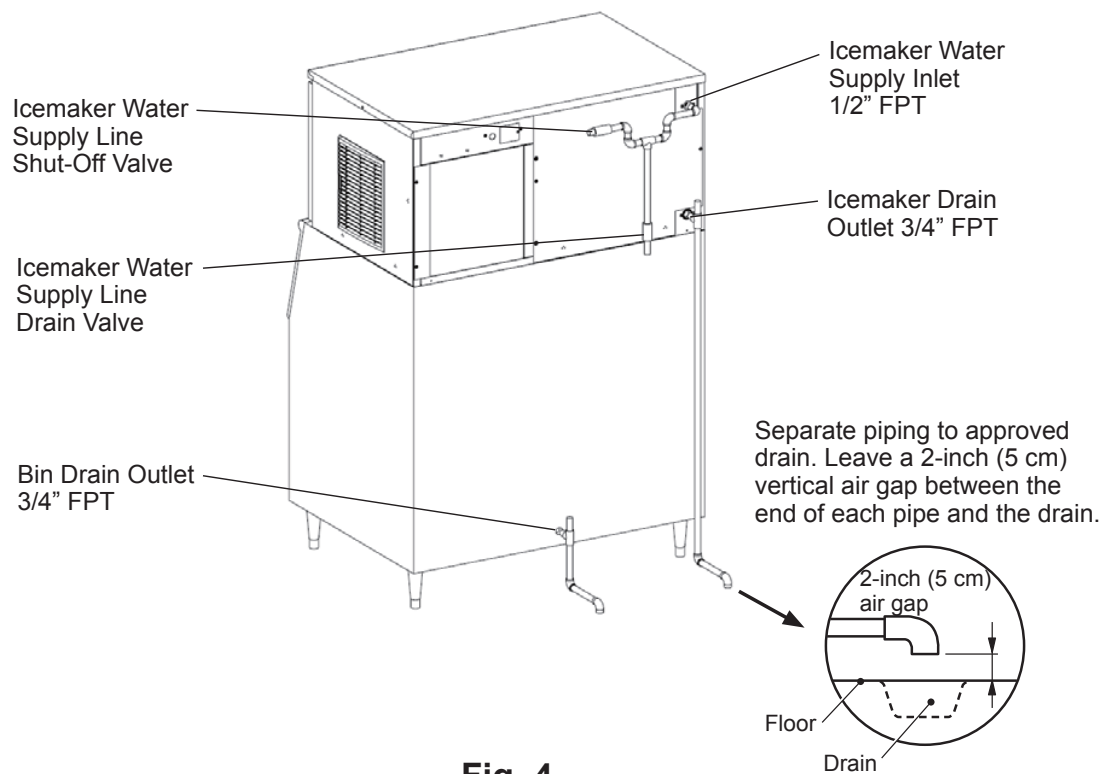


Fig. 4

G. Final Checklist

⚠ WARNING

CHOKING HAZARD: Ensure all components, fasteners, and thumbscrews are securely in place after installation. Make sure that none have fallen into the storage bin.

- 1) Is the icemaker level?
- 2) Is the icemaker in a site where the ambient temperature is within 45°F to 100°F (7°C to 38°C) and the water temperature within 45°F to 90°F (7°C to 32°C) all year around?
- 3) Is there at least 6" (15 cm) clearance at rear, left side, and top and 12" (30 cm) clearance at right side for proper air circulation and maintenance or service?
- 4) Have all shipping cartons, tape, and packing material been removed from the icemaker?
- 5) Are all components, fasteners and thumbscrews securely in place?
- 6) Have all electrical and water connections been made? Do electrical and water connections meet all national, state, and local code and regulation requirements?

- 7) Has the power supply voltage been checked or tested against the nameplate rating?
Has a proper ground been installed to the icemaker?
- 8) Are the water supply line shut-off valve and drain valve installed? Has the water supply pressure been checked to ensure a minimum of 10 PSIG and a maximum of 113 PSIG?
- 9) Are the compressor hold-down bolts snug? Have the refrigerant lines been checked to make sure they do not rub or touch other lines or surfaces?
- 10) Has the end user been given the instruction manual, and instructed on how to operate the icemaker and the importance of the recommended periodic maintenance?
- 11) Has the end user been given the name and telephone number of an authorized service agent?
- 12) Has the warranty card been filled out and forwarded to the factory for warranty registration?

H. Startup

WARNING

1. All parts are factory-adjusted. Improper adjustments may adversely affect safety, performance, component life, and warranty coverage.
2. Do not put your hands into the back of the storage bin or the baffle on top of the storage bin. Ice may drop off the icemaker, a hard block of ice may suddenly break down, or the icemaking mechanism may suddenly move, resulting in injury.

NOTICE

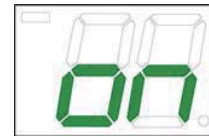
1. If the unit is turned off, wait for at least 3 minutes before restarting the icemaker to prevent damage to the compressor.
2. To prevent damage to the water pump, do not leave the control switch in the "WASH" position for extended periods of time when the water tank is empty.
3. At startup, confirm that all internal and external connections are free of leaks.

- 1) Clean the storage bin liner using a neutral cleaner. Rinse thoroughly after cleaning.
- 2) Open the water supply line shut-off valve.
- 3) Remove the front panel.
- 4) Move the control switch on the control box to the “ICE” position.
- 5) Replace the front panel in its correct position.
- 6) Turn on the power supply to start the automatic icemaking process.

I. DISPLAY

1. Normal Operation

Display for normal operation is “on”. See the figure on the right.



2. Error Code

The unit will show an error code and safely stop if the unit is operating outside of acceptable parameters. See the figure below. If an error code appears, please contact your local Hoshizaki Certified Service Representative for assistance.



E1: Abnormal freeze cycle
E2: Abnormal harvest cycle
EE: Other

III. Cleaning and Maintenance Instructions

⚠ WARNING

CHOKING HAZARD: Ensure all components, fasteners, and thumbscrews are securely in place after any cleaning or maintenance is done to the unit. Make sure that none have fallen into the storage bin.

A. Cleaning

HOSHIZAKI recommends cleaning this unit at least once a year. More frequent cleaning, however, may be required in some existing water conditions.

⚠ WARNING

1. To prevent injury to individuals and damage to the icemaker, do not use ammonia type cleaners.
2. Carefully follow any instructions provided with the bottles of cleaning and sanitizing solution.
3. Always wear liquid-proof gloves and goggles to prevent the cleaning and sanitizing solutions from coming into contact with skin or eyes.

NOTICE

To prevent damage to the water pump, do not leave the control switch in the "WASH" position for extended periods of time when the water tank is empty.

1. Cleaning Procedure

- 1) Dilute approximately 7.2 fl. oz. (214 ml) of recommended cleaner Hoshizaki "Scale Away" with 0.8 gal. (3.0 lit.) of water.
- 2) Turn off the power supply.
- 3) Remove all ice from the storage bin.
- 4) Remove the front panel.
- 5) Remove the screw, then move the water tank drain pipe to the drain position. See Fig. 5. Use the screw to secure the water tank drain pipe in the drain position.
- 6) Make sure the control switch is in the "ICE" position, then replace the front panel.
- 7) Close the icemaker water supply line shut-off valve. See Fig. 4.
- 8) Turn on the power supply for 3 minutes. The water tank drains and cubes are removed from the evaporator.
- 9) Turn off the power supply.
- 10) Remove the front panel and top panel.

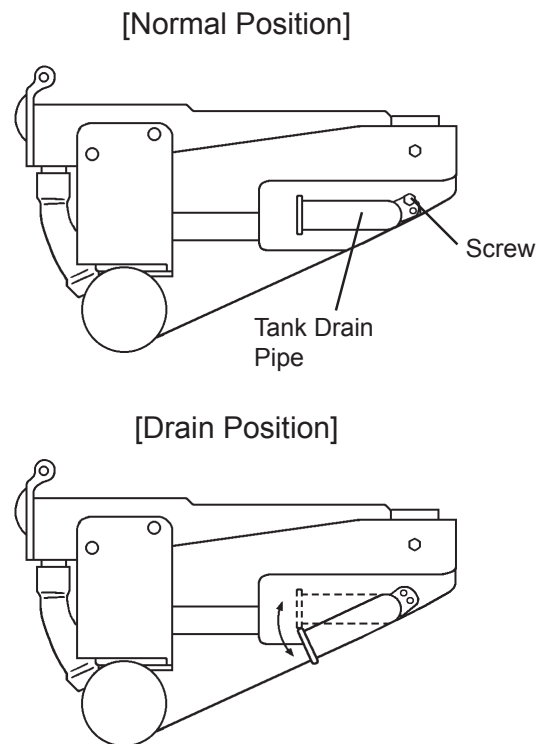


Fig. 5

- 11) Move the control switch to the "WASH" position.
- 12) Slowly pour the cleaning solution over the top of the evaporator and into the water tank. Do not splash or spill the solution onto other parts.
- 13) Replace the front panel and top panel in their correct positions.
- 14) Turn on the power supply to start the washing process.
- 15) Turn off the power supply after 30 minutes.
- 16) Open the icemaker water supply line shut-off valve. See Fig. 4.
- 17) Remove the front panel.
- 18) Move the control switch to the "ICE" position.
- 19) Replace the front panel.
- 20) Turn on the power supply for 3 minutes. The water tank drains.
- 21) Turn off the power supply.
- 22) Repeat steps 20 and 21 three more times to rinse thoroughly.

Note: If not sanitizing the icemaker, go to step 19 in "III. A. 2. Sanitizing Procedure."

2. Sanitizing Procedure - Following Cleaning Procedure

- 1) Dilute a 5.25% sodium hypochlorite solution (chlorine bleach) with water (add approximately 0.4 fl. oz. (12 ml) to 0.8 gal. (3.0 lit.) of water).
- 2) Close the icemaker water supply line shut-off valve. See Fig. 4.
- 3) Turn on the power supply for 3 minutes. The water tank drains.
- 4) Turn off the power supply.
- 5) Remove the front panel and top panel.
- 6) Move the control switch to the "WASH" position.
- 7) Slowly pour the sanitizing solution over the top of the evaporator and into the water tank. Do not splash or spill the solution onto other parts.
- 8) Replace the front panel and top panel in their correct positions.

- 9) Turn on the power supply to start the sanitizing process.
- 10) Turn off the power supply after 15 minutes.
- 11) Open the icemaker water supply line shut-off valve. See Fig. 4.
- 12) Remove the front panel.
- 13) Move the control switch to the “ICE” position.
- 14) Replace the front panel.
- 15) Turn on the power supply for 3 minutes. The water tank drains.
- 16) Turn off the power supply.
- 17) Repeat steps 15 and 16 three more times to rinse thoroughly.
- 18) Repeat steps 1 through 17 one more time.
- 19) Remove the front panel.
- 20) Remove the screw, then move the water tank drain pipe to the normal position. See Fig. 5. Use the screw to secure the water tank drain pipe in the normal position.
- 21) Replace the front panel.
- 22) Clean the storage bin liner using a neutral cleaner. Rinse thoroughly after cleaning.
- 23) Turn on the power supply to start the automatic icemaking process.

B. Maintenance

This icemaker must be maintained individually, referring to the instruction manual and labels provided with the icemaker.

WARNING

1. Only qualified service technicians should service this icemaker.
2. Move the control switch to the “OFF” position and turn off the power supply before servicing. Lockout/Tagout to prevent the power supply from being turned back on inadvertently.

1. Stainless Steel Exterior

To prevent corrosion, wipe the exterior occasionally with a clean, soft cloth. Use a damp cloth containing a neutral cleaner to wipe off oil or dirt build up.

2. Storage Bin and Scoop

- Wash your hands before removing ice. Use the plastic scoop provided (bin accessory).
- The storage bin is for ice use only. Do not store anything else in the storage bin.
- Clean the scoop and the storage bin liner using a neutral cleaner. Rinse thoroughly after cleaning.

3. Air Filters

Plastic mesh air filters remove dirt and dust from the air, and keep the condenser from getting clogged. As the filters get clogged, the icemaker's performance will be reduced. Check the filters at least twice a month. When clogged, use warm water and a neutral cleaner to wash the filters.

- 1) Slide the air filter out of the louver.
- 2) Clean the air filter by using a vacuum cleaner. When severely clogged, use warm water and a neutral cleaner to wash the air filter.
- 3) Rinse and dry the air filter thoroughly, and place it in position.

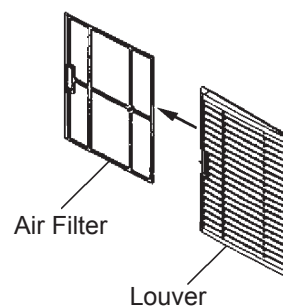


Fig. 6

NOTICE

Do not use hot water, thinner, petroleum-based products, or any strong cleaner to clean the air filter.

4. Condenser

Check the condenser once a year, and clean if required by using a brush or vacuum cleaner. More frequent cleaning may be required depending on the location.

C. Preparing the Icemaker for Long Storage

NOTICE

1. When shutting off the icemaker for an extended time, drain out all water from the water line and remove the ice from the storage bin. The storage bin should be cleaned and dried. Drain the icemaker to prevent damage to the water supply line at sub-freezing temperatures, using air or carbon dioxide. Shut off the icemaker until the proper ambient temperature is resumed.
2. To prevent damage to the water pump, do not leave the control switch in the "WASH" position for extended periods of time when the water tank is empty.

When the icemaker is not used for two or three days under normal conditions, it is sufficient to only move the control switch to the "OFF" position. When storing the icemaker for an extended time or in sub-freezing temperatures, follow the instructions below.

1. Remove the water from the icemaker water supply line:

- 1) Turn off the power supply.
- 2) Move the control switch to the "OFF" position.
- 3) Close the icemaker water supply line shut-off valve and open the icemaker water supply line drain valve. See Fig. 4.
- 4) Allow the icemaker water supply line to drain by gravity.
- 5) Attach compressed air or carbon dioxide supply to the icemaker water supply line drain valve.
- 6) Move the control switch to the "ICE" position and turn on the power supply.
- 7) Blow the icemaker water supply line out using compressed air or carbon dioxide.

2. Drain the water tank:

- 1) Turn off the power supply.
- 2) Remove the front panel.
- 3) Remove the screw, and move the tank drain pipe to the drain position. See Fig. 5.

4) Close the icemaker water supply line.

5) Turn on the power supply.

6) Press the reset button. See Fig. 7. The water tank will start to open.

Note: This procedure is necessary to protect the icemaker from freezing up at sub-freezing temperatures.

7) Turn off the power supply when the water tank has fully opened.

8) Move the tank drain pipe to the normal position, and secure it with the screw. See Fig. 5.

9) Replace the front panel.

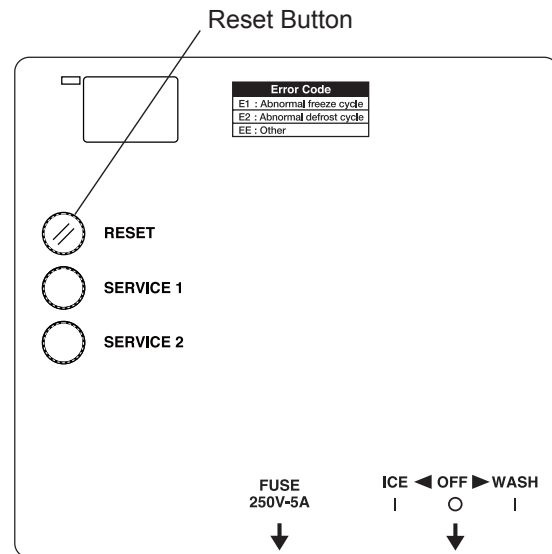


Fig. 7

HOSHIZAKI AMERICA, INC.

618 Hwy. 74 South, Peachtree City, GA 30269 USA (P) 770.487.2331 (F) 770.487.3360 hoshizakiamerica.com L1M029102