



HOSHIZAKI

Instruction Manual

Self-Contained Flaker

Models

F-300BAJ

F-500BAJ



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 appliance.

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

Phone: 1-800-233-1940; (770) 487-2331

Fax: 1-800-843-1056; (770) 487-3360

E-mail: techsupport@hoshizaki.com

HOSHIZAKI AMERICA, INC.

618 Highway 74 South

Peachtree City, GA 30269

Attn: Hoshizaki Technical Support Department

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 appliance is installed and operated. Read the warnings and guidelines contained in this manual carefully as they provide essential information for the continued safe use and maintenance of the appliance. Retain this manual 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, damage to the appliance, or damage to property.

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

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

IMPORTANT Indicates important information about the installation, use, and care of the appliance.

⚠ WARNING


The 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 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.
- The appliance 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 APPLIANCE MUST BE GROUNDED:** Failure to properly ground the appliance may result in death, electric shock, or fire.
- To reduce the risk of electric shock, do not touch the power switch, control switch, or plug (on corded models) with damp hands.

⚠ WARNING, continued

For Corded Models

- This appliance is equipped with a NEMA 5-15 three-prong grounding plug  to reduce the risk of potential shock hazards. Corded models must be plugged into a properly grounded, independent 3-prong wall outlet. If the outlet is a 2-prong outlet, it is your personal responsibility to have a qualified electrician replace it with a properly grounded, independent 3-prong wall outlet. Do not remove the ground prong from the plug and do not use an adapter plug. Failure to follow these instructions may result in death, electric shock, or fire.
- Before servicing, move the power switch to the "OFF" position. Unplug the appliance from the electrical outlet.
- Do not use an extension cord.
- Do not use an appliance with a damaged power cord. The power cord should not be altered, jerked, bundled, weighed down, pinched, or tangled. Such actions could result in electric shock or fire. To unplug the appliance, be sure to pull the plug, not the cord, and do not jerk the cord.
- The GREEN ground wire in the factory-installed power cord is connected to the appliance. If it becomes necessary to remove or replace the power cord, be sure to connect the power cord's ground wire.

For Hard-Wired Models

- Electrical connection must be hard-wired.
- Before servicing, move the power switch to the "OFF" position. Turn off the power supply. Lockout/Tagout to prevent the power supply from being turned back on inadvertently.

For All Models

- Do not splash, pour, or spray water directly onto or into the appliance. This might cause short circuit, electric shock, corrosion, or failure.
- Do not make any alterations to the appliance. Alterations could result in electric shock, injury, fire, or damage to the appliance.
- Do not place fingers or any other objects into the ice discharge opening.
- The 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 the appliance.
- Do not climb, stand, or hang on the appliance or appliance door or allow children or animals to do so. Serious injury could occur or the appliance could be damaged.
- Be careful not to pinch fingers when opening and closing the door. Be careful when opening and closing the door when children are in the area.

⚠ WARNING, continued

- 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.
- Do not place anything on top of the appliance. Foreign objects or moisture could enter the appliance and result in electric shock or fire.

NOTICE

- Protect the floor when moving the appliance to prevent damage to the floor.
- 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 appliance in a location that stays above freezing. Normal operating ambient temperature must be within 45°F to 100°F (7°C to 38°C).
- If water collects in the bin and will not drain, turn off the appliance and close the water supply line shut-off valve. Call for service.
- Do not leave the appliance on during extended periods of non-use, extended absences, or in sub-freezing temperatures. To properly prepare the appliance for these occasions, follow the instructions in "IV. Preparing the Appliance for Periods of Non-Use."
- Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
- Do not place objects on top of the appliance.
- The storage bin is for ice use only. Do not store anything else in the storage bin.

I. Specifications

A. Electrical and Refrigerant Data

The rating label and nameplate provide electrical and refrigerant data. The rating label can be seen by removing the front panel. The nameplate is located on the rear panel. For certification marks, see the nameplate.

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

1. F-300BAJ

Model Number	F-300BAJ
AC Supply Voltage	115/60/1
Amperes	7.8 AMPS
Design Pressure	HI-467PSI LO-250PSI
Refrigerant	404A 9.17 OZ.

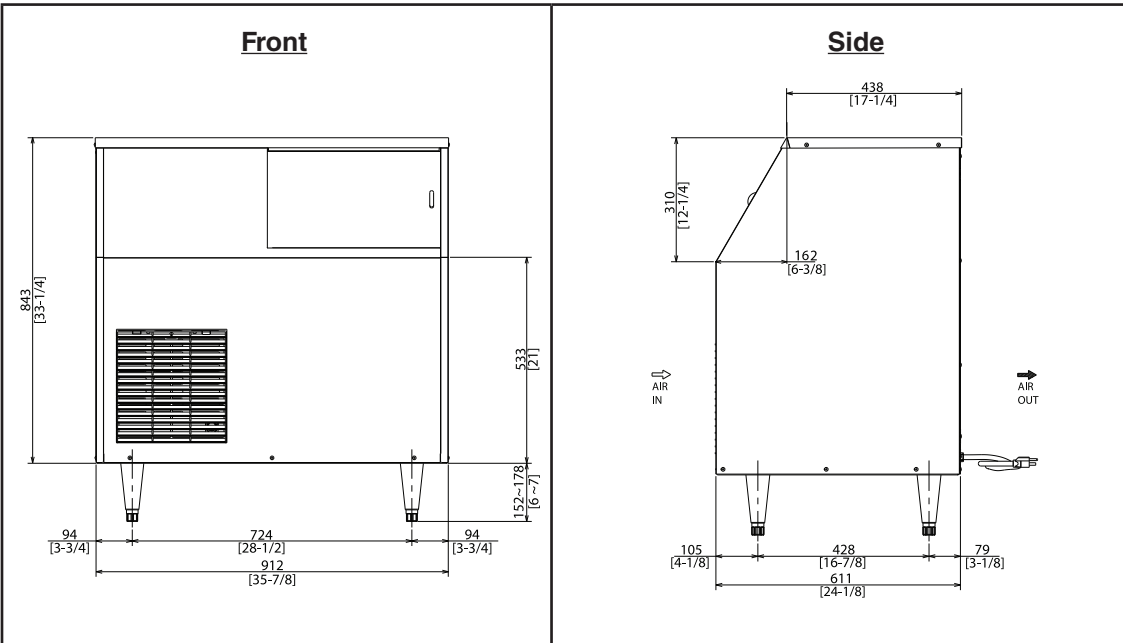
2. F-500BAJ

Model Number	F-500BAJ
AC Supply Voltage	115/60/1
Compressor	115V 10.5RLA 54.5LRA
Gear Motor	115V 2.4FLA 1/4 HP
Fan	115V 0.85A MAX
Other	115V 0.08A
Maximum Fuse Size	20 AMPS
Max. HACR Circuit Breaker (USA only)	20 AMPS
Max. Circuit Breaker (Canada only)	20 AMPS
Minimum Circuit Ampacity	20 AMPS
Design Pressure	HI-467PSI LO-250PSI
Refrigerant	404A 1 LB. 0.6 OZ.

B. Dimensions/Connections

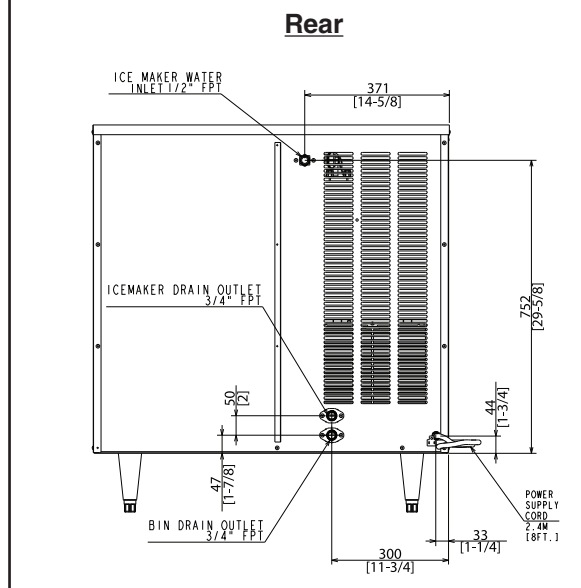
1. F-300BAJ

Unit: mm [in.]



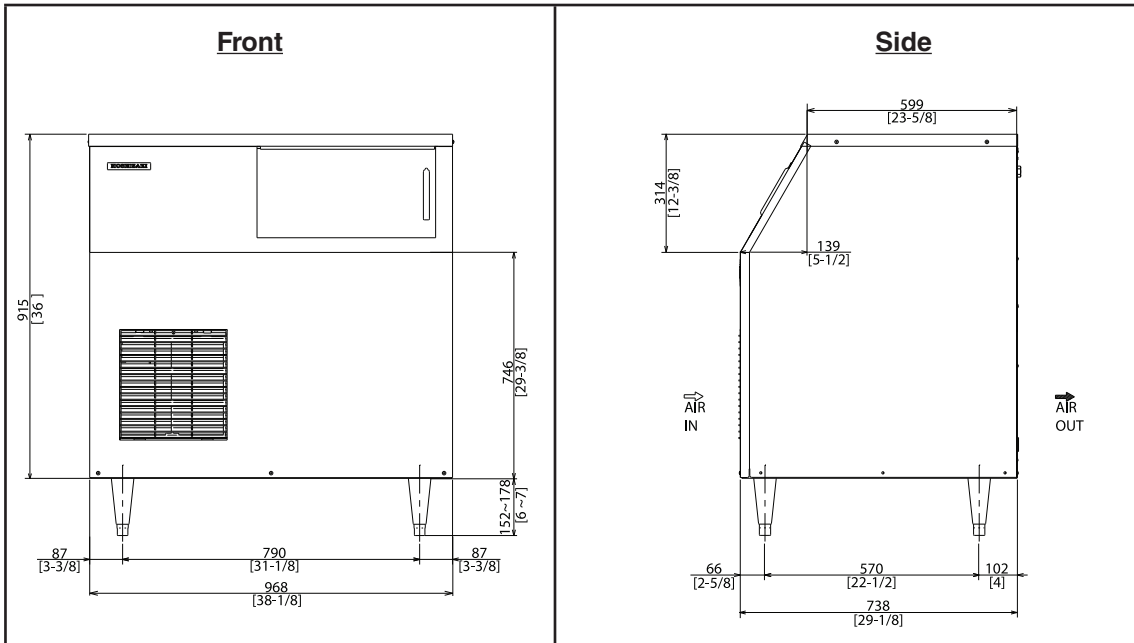
NOTICE

Allow 6" (15 cm) clearance at rear and sides for proper air circulation and ease of maintenance and/or service should they be required. Allow 24" (61 cm) clearance at top to allow for removal of the auger.



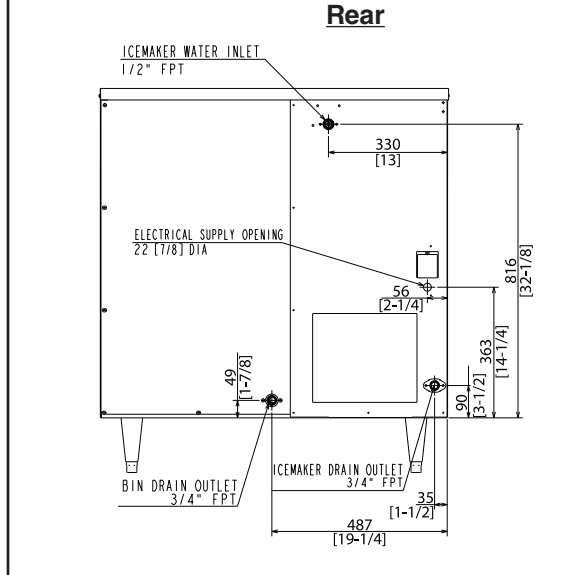
2. F-500BAJ

Unit: mm [in.]



NOTICE

Allow 6" (15 cm) clearance at rear and sides for proper air circulation and ease of maintenance and/or service should they be required. Allow 24" (61 cm) clearance at top to allow for removal of the auger.



II. Installation and Operating Instructions

⚠ WARNING

- The appliance must be installed in accordance with applicable national, state, and local codes and regulations.
- 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.
- **CHOKING HAZARD:** Ensure all components, fasteners, and thumbscrews are securely in place after installation. Make sure that none have fallen into the ice storage bin.

A. Location

NOTICE

- The appliance is not intended for outdoor use. Normal operating ambient temperature must be within 45°F to 100°F (7°C to 38°C); Normal operating water temperature must be within 45°F to 90°F (7°C to 32°C). Operation of the appliance, for extended periods, outside of these normal temperature ranges may affect appliance performance.
- The appliance will not work at sub-freezing temperatures. To prevent damage to the water supply line, drain the appliance if the air temperature is going to go below 32°F (0°C). See "IV. Preparing the Appliance for Periods of Non-Use."

- Appliance should not be located next to ovens, grills, or other high heat producing equipment.
- Allow 6" (15 cm) clearance at rear and sides for proper air circulation and ease of maintenance and /or service should they be required. Allow 24" (61 cm) clearance at top to allow for removal of the auger.
- The location should provide a firm and level foundation for the appliance.

B. Checks Before Installation

- 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 shipping carton, tape, and packing material. If any are left in the appliance, it will not work properly.
- See the nameplate on the rear panel, and check that your voltage supplied corresponds with the voltage specified on the nameplate.
- Remove the package containing the accessories.
- Remove the protective plastic film from the panels. If the appliance is exposed to the sun or to heat, remove the film after the appliance cools.

C. How to Remove Panels

See Fig. 1

- Top Panel: Remove the screws. Lift up at the front slightly, push rearward, and lift off.
- Front Panel: Remove the screws. Lift up and pull towards you.

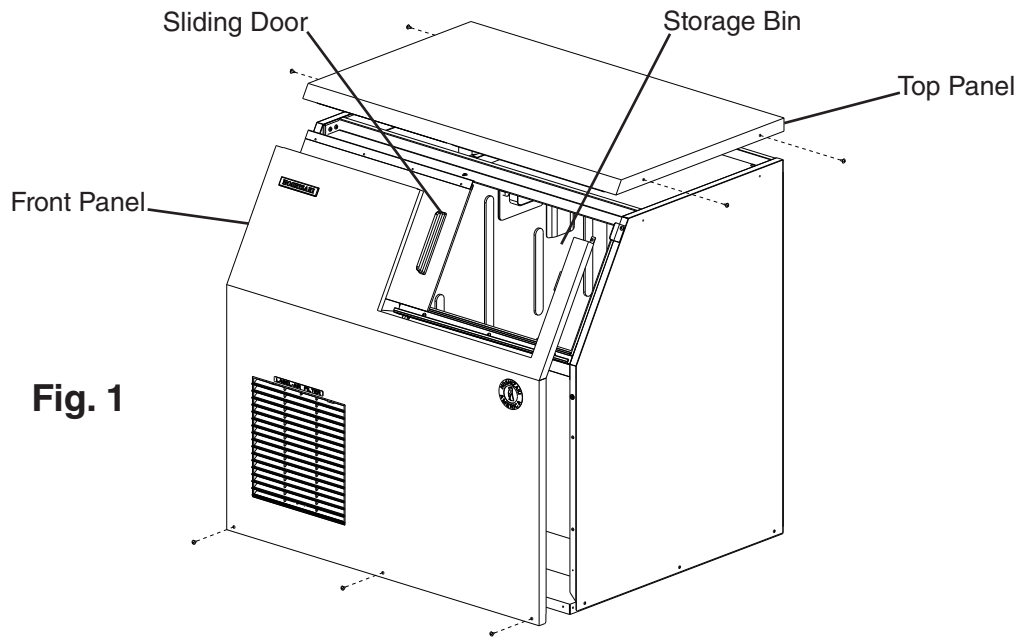


Fig. 1

Model Shown: F-500BAJ

D. Setup

- 1) See Fig. 2. Attach four 6" adjustable legs provided to the bottom of the appliance.
- 2) Position the appliance in the selected permanent location.
- 3) Level the appliance from side-to-side and front-to-rear by adjusting the legs.

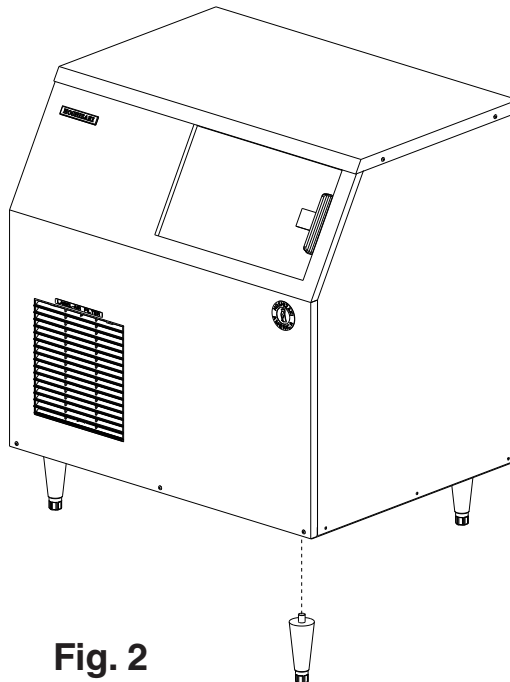



Fig. 2

Model Shown: F-500BAJ

E. Electrical Connection

WARNING

- Electrical connection 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.
 - The appliance 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 APPLIANCE MUST BE GROUNDED:** Failure to properly ground the appliance may result in death, electric shock, or fire.
 - To reduce the risk of electric shock, do not touch the power switch, control switch, or plug (on corded models) with damp hands.
 - **For Corded Models**
 - This appliance is equipped with a NEMA 5-15 three-prong grounding plug  to reduce the risk of potential shock hazards. Corded models must be plugged into a properly grounded, independent 3-prong wall outlet. If the outlet is a 2-prong outlet, it is your personal responsibility to have a qualified electrician replace it with a properly grounded, independent 3-prong wall outlet. Do not remove the ground prong from the plug and do not use an adapter plug. Failure to follow these instructions may result in death, electric shock, or fire.
 - Do not use an extension cord.
 - Make sure the power switch is in the "OFF" position before plugging in or unplugging the appliance to reduce the risk of electric shock.
 - Do not use an appliance with a damaged power cord. The power cord should not be altered, jerked, bundled, weighed down, pinched, or tangled. Such actions could result in electric shock or fire. To unplug the appliance, be sure to pull the plug, not the cord, and do not jerk the cord.
 - The GREEN ground wire in the factory-installed power cord is connected to the appliance. If it becomes necessary to remove or replace the power cord, be sure to connect the power cord's ground wire to this screw upon reattachment.
 - **For Hard-Wired Models**
 - Electrical connection must be hard-wired.
 - Electrical connections must be made in accordance with the instructions on the "WARNING" tag, provided with the pig tail leads on the junction box. See Fig. 3.
- Usually an electrical permit and services of a licensed electrician are required.
 - The maximum allowable voltage variation is ± 10 percent of the nameplate rating.

For Hard-Wired Models

- The opening for the power supply connection is 7/8" DIA to fit a 1/2" trade size conduit.
- The white lead must be connected to the neutral conductor of the power source.
NOTICE! Miswiring may result in damage to the icemaker.

F-500BAJ

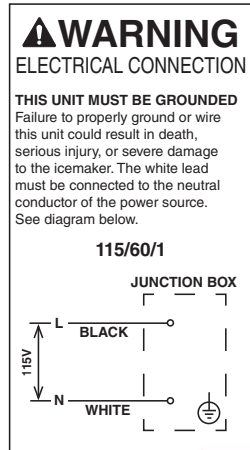


Fig. 3

F. Water Supply and Drain Connections

See Fig. 4 and Fig. 5

WARNING

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

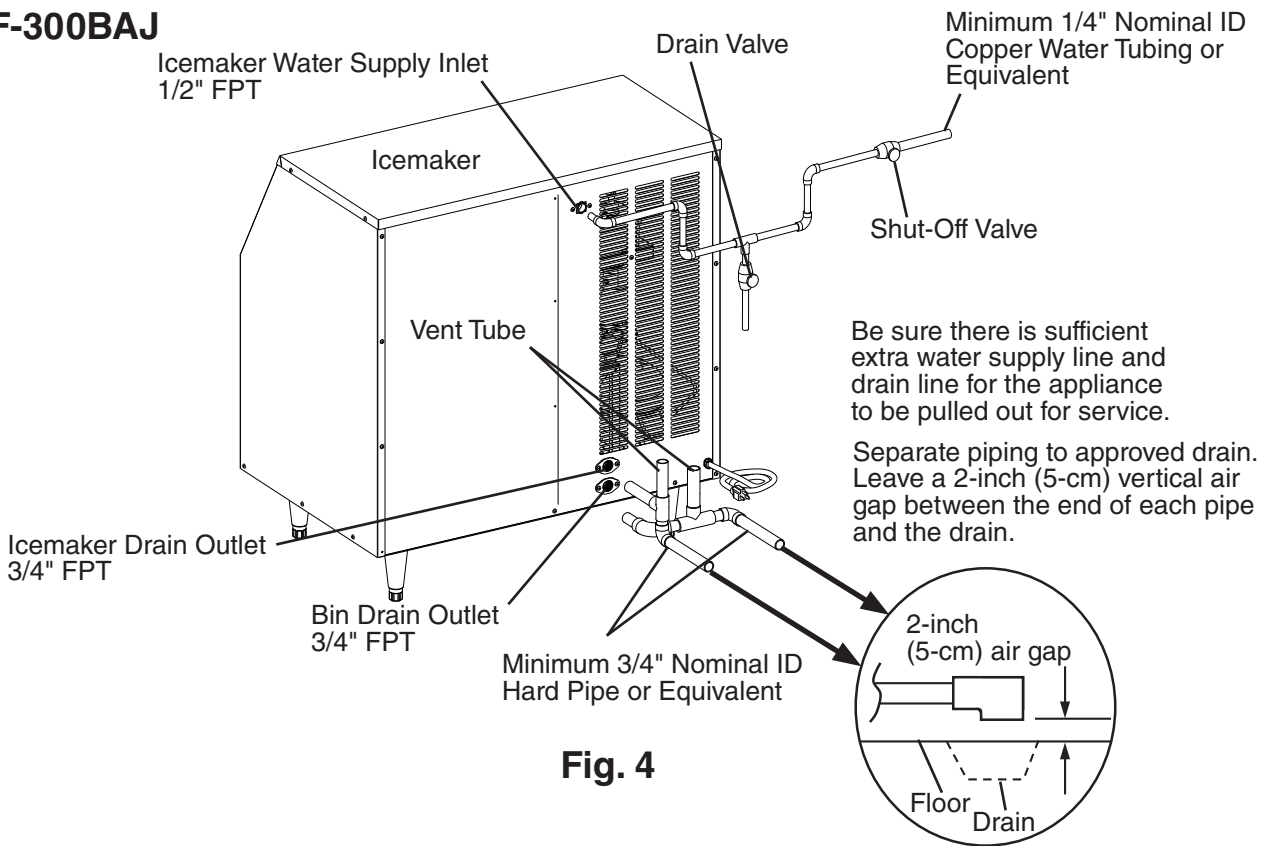
NOTICE

- Normal operating water temperature must be within 45°F to 90°F (7°C to 32°C). Operation of the appliance, for extended periods, outside of this normal temperature range may affect appliance performance.
- Water supply pressure must 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.
- External filters, strainers, or softeners may be required depending on water quality. Contact your local Hoshizaki Certified Service Representative or local Hoshizaki distributor for recommendations.

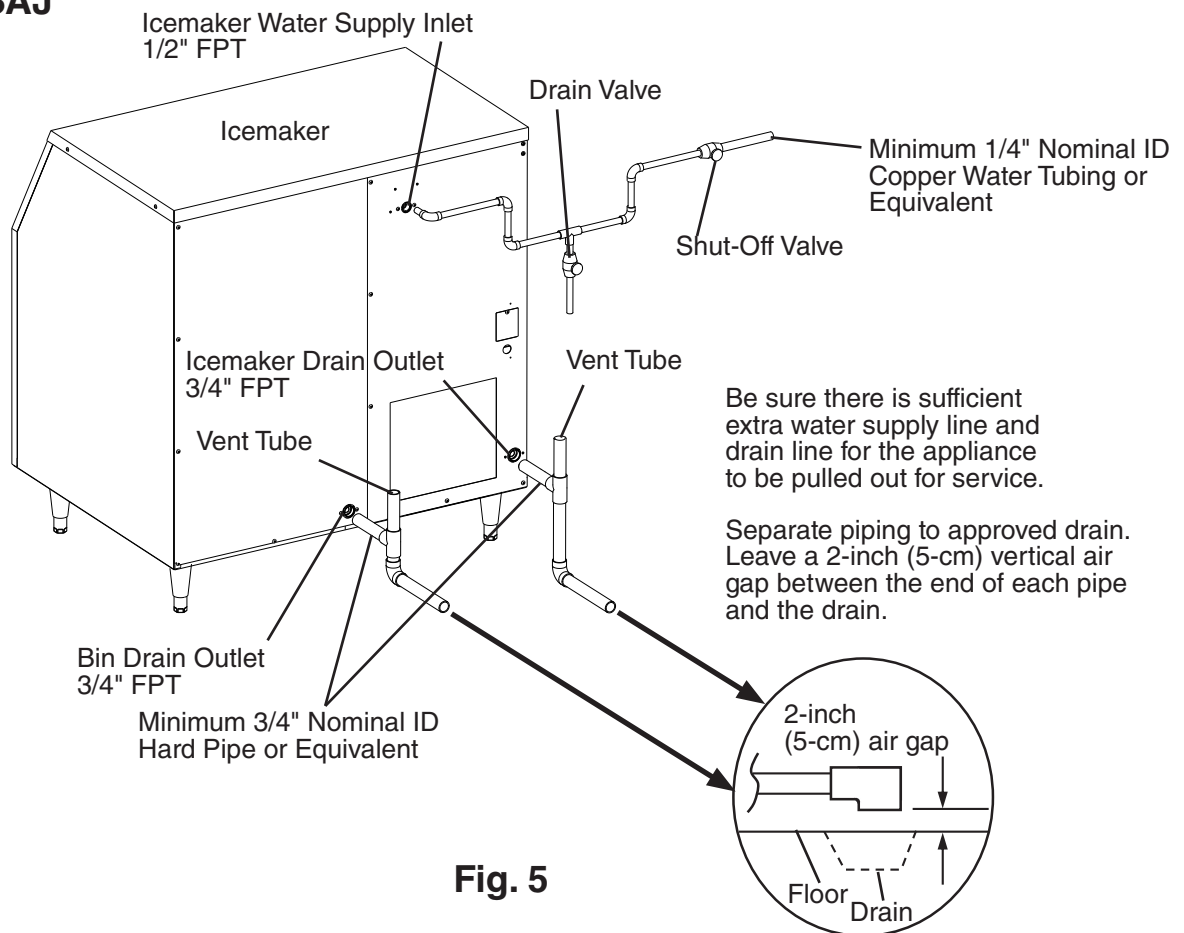
- A plumbing permit and services of a licensed plumber may be required in some areas.
- Drain lines must have 1/4" fall per foot (2 cm per 1 m) on horizontal runs to get a good flow. A vented tee connection is also required for proper flow.
- Drain lines should not be piped directly to the sewer system. An air gap of a minimum of 2 vertical inches (5 cm) must be between the end of the drain pipes from the icemaker and ice storage bin and the floor drain.

Water Supply Inlet	Minimum Water Supply Line Size	Icemaker and Bin Drain Outlets	Minimum Drain Line Size
1/2" Female Pipe Thread (FPT)	1/4" Nominal ID Copper Water Tubing or Equivalent	3/4" Female Pipe Thread (FPT)	3/4" Nominal ID Hard Pipe or Equivalent

F-300BAJ



F-500BAJ



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 ice storage bin.
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1. Pre-Startup

- 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 and sides and 24" (61-cm) at the top of the icemaker?
- 4) Is there at least 6" (15 cm) at the rear and sides and 24" (61 cm) at the top of the appliance for maintenance and service?
- 5) Have the shipping carton, tape, and packing material been removed from the appliance?
- 6) Have all electrical and water connections been made? Do electrical and water connections meet applicable national, state, and local code and regulation requirements?
- 7) Has the power supply voltage been checked or tested against the nameplate rating? Is the power supply a properly grounded, independent 3-prong wall outlet on corded models, or has a proper ground been installed to the icemaker on hard-wired models?
- 8) Are the water supply and drain lines sized as specified? Are the water supply line shut-off valve(s) and drain valve(s) installed? Has the water supply pressure been checked to ensure a minimum of 10 PSIG and a maximum of 113 PSIG?
- 9) Are all components, fasteners, and thumbscrews securely in place?
- 10) Has the end user been given the instruction manual, and instructed on how to operate the appliance and the importance of the recommended periodic maintenance?
- 11) Has the end user been given the contact information of an authorized service agent?
- 12) Has the warranty card been filled out and forwarded to the factory for warranty registration?
- 13) Continue to "II.J. Startup."

2. Post-Startup

- 1) Has the bin control operation been confirmed?
- 2) Are all components, fasteners, and thumbscrews securely in place?
- 3) Has the end user been given the instruction manual, and instructed on how to operate the appliance and the importance of the recommended periodic maintenance?
- 4) Has the end user been given the contact information of an authorized service agent?
- 5) Has the warranty registration been completed and submitted to the factory?

H. Startup

⚠ WARNING

- All parts are factory-adjusted. Improper adjustments may adversely affect safety, performance, component life, and warranty coverage.
- To reduce the risk of electric shock, do not touch the power switch, control switch, or plug (on corded models) with damp hands. If you have to slide the appliance back for a built-in installation, make sure you do not damage or pinch the water supply line, drain line, or power cord.

NOTICE

- If the appliance is turned off, wait for at least 3 min. before restarting the appliance to prevent damage to the compressor.
- At startup, confirm that all internal and external connections are free of leaks.

- 1) Open the water supply line shut-off valve.
- 2) Remove the top and front panels.
- 3) Make sure the power switch is in the "OFF" position.
- 4a) Corded Models: Plug the icemaker into the electrical outlet.
- 4b) Hard-Wired Models: Turn on the power supply.
- 5) Move the control switch to the "ICE" position, then move the power switch to the "ON" position to start the automatic icemaking process. Replace the front and top panels.
- 6) Once the unit starts to produce ice, allow it to run for another 30 min.
- 7) Remove the top and front panels.
- 8) Move the power switch to the "OFF" position, then move the control switch to the "DRAIN" position. Move the power switch to the "ON" position, then replace the front and top panels. Allow the water system to drain for 5 min.
- 9) Remove the top and front panels, then move the power switch to the "OFF" position.
- 10a) Corded Models: Unplug the icemaker from the electrical outlet.
- 10b) Hard-Wired Models: Turn off the power supply.
- 11) Pour warm water into the ice storage bin and melt any remaining ice. Clean the ice storage bin liner using a neutral cleaner. Rinse thoroughly after cleaning.
- 12) Confirm bin control operation. See "II.I. Bin Control Check."

I. Bin Control Check

A mechanical bin control controls the level of ice in the ice storage bin.

IMPORTANT

- Make sure the icemaker has been installed as outlined in this manual and that the water supply is on.
- Make sure S2 dip switch 7 is in the "OFF" position and dip switch 8 is in the "ON" position.

- 1) Remove the top and front panels and the control box cover.
- 2) Make sure the power switch is in the "OFF" position.
- 3a) Corded Models: Plug the icemaker into the electrical outlet.
- 3b) Hard-Wired Models: Turn on the power supply.
- 4) Move the control switch to the "ICE" position, then move the power switch to the "ON" position.
- 5) Make sure the "GM" LED on the control board is on. See Fig. 6. There is a delay of at least 30 seconds before the "GM" LED turns on after power-up. After the "GM" LED turns on, press the "SERVICE" button on the control board to bypass the 5-min. compressor delay. **WARNING! Risk of electric shock. Care should be taken not to touch live terminals.** Confirm the "COMP" LED turns on.
Note: If the "SERVICE" button is not pressed, the "COMP" LED turns on and compressor energizes 5 min. after gear motor starts.

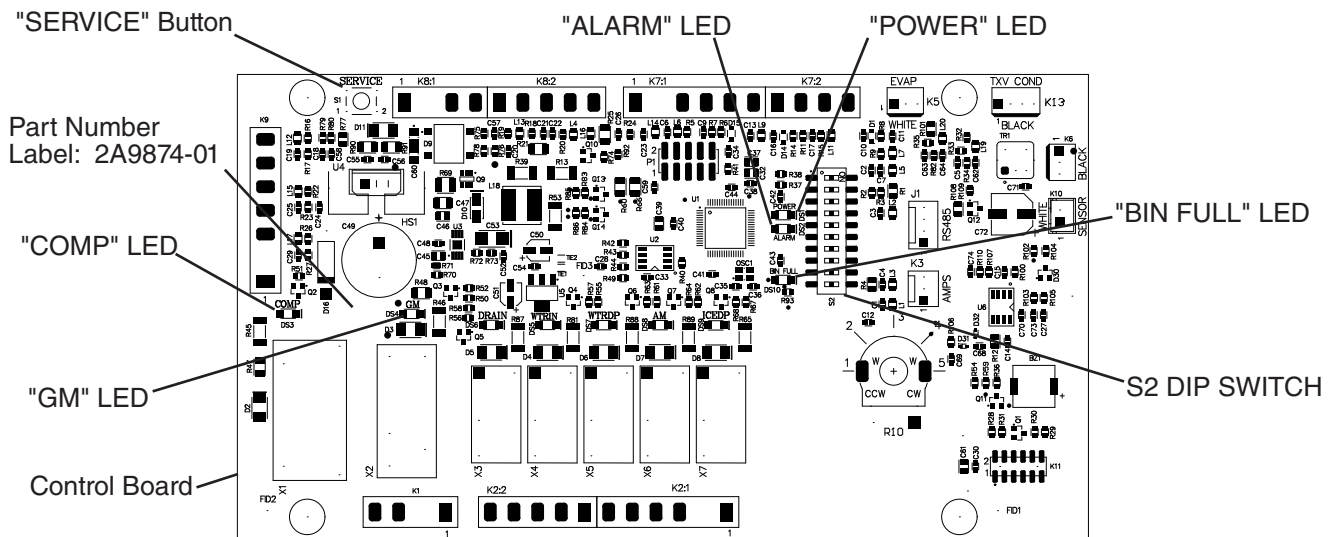
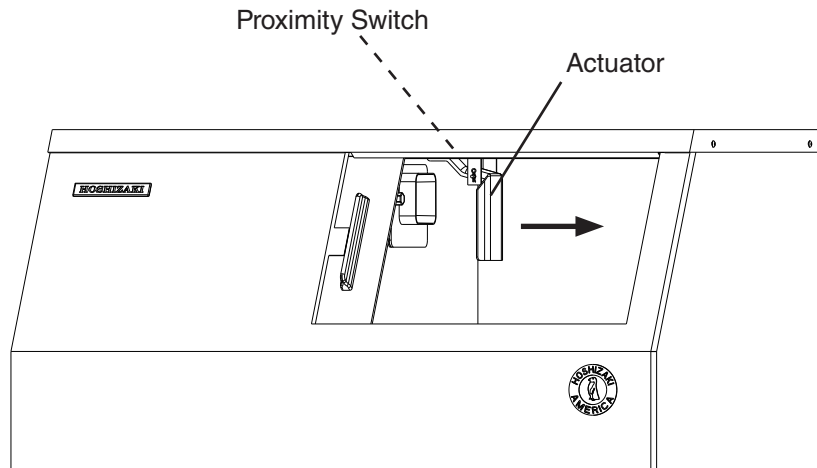


Fig. 6

- 6) Once the "COMP" LED is on and compressor is energized, press the actuator paddle located in the ice storage bin (actuator paddle engaged). See Fig. 7. The 90-sec. compressor shutdown timer starts. Once the 90-sec. compressor shutdown timer terminates, compressor and fan motor de-energize and the 60-sec. gear motor shutdown timer starts. Once the 60-sec. gear motor timer terminates, gear motor de-energizes. Release the actuator to start the automatic icemaking process.



Model Shown: F-500BAJ

Fig. 7

- 7) Move the power switch to the "OFF" position.
- 8a) Corded Models: Unplug the icemaker from the electrical outlet.
- 8b) Hard-Wired Models: Turn off the power supply.
- 9) Replace the control box cover in its correct position.
- 10a) Corded Models: Plug the icemaker into the electrical outlet.
- 10b) Hard-Wired Models: Turn on the power supply.
- 11) Move the control switch to the "ICE" position, then move the power switch to the "ON" position to start the automatic icemaking process.
- 12) Replace the front and top panels.
- 13) Return to "II.G.2. Post Startup."

J. Alarm Safeties

Should an alarm occur, follow the instructions in the table below to address the alarm. If an alarm continues to occur, contact an authorized service agent.

In case of alarm, the built-in safeties shut down the unit, the orange "ALARM" LED turns on, and audible alarms sound as listed below.

No. of Beeps (every 5 sec.)	Type of Alarm	Notes and Reset Options
1	Low-Water Safety UFS open > 90 sec. after WV energized.	Automatic reset once water supply is restored and UFS closes.
2	Control Switch In "DRAIN" position longer than 15 min.	Automatic reset once the control switch is moved to the "ICE" position.
3	High-Pressure Switch First and second activation in 1 hr.	Automatic reset once pressure drops below the high pressure threshold and the high-pressure switch closes.
4	High-Pressure Switch Third activation in 1 hr.	Turn power off. Call for service. To avoid possible catastrophic failure, it is recommended to leave the icemaker off until this alarm is resolved.
5	Freeze Timer WV off > 30 min. since last WV activation.	Call for service. Manual reset. Turn power off and on again. Check for FS stuck (up), WV leaking by, TXV defective, LLV not opening, low charge, HM not bypassing, or inefficient Comp.
6	Low Voltage 92VAC ± 5% or less.	Green "POWER" LED turns off if voltage protection operates.
7	High Voltage 147VAC ± 5% or more.	Control voltage safeties automatically reset when voltage is corrected.
8	a) Gear Motor Fuse or Protector Open CCR contacts fail to close. Used on all models.	Turn power off. Check for GM fuse or protector open. Replace fuse or let protector cool and reset. If persistent trips occur, call for service.
	b) Evaporator Thermistor At GM startup Evaporator thermistor < -4°F (-20°C). Used on cubelet (-C)(-SC)(-CB) models only.	Turn power off. Call for service. To avoid possible catastrophic failure, it is recommended to leave the icemaker off until this alarm is resolved. Manual reset. Turn power off and on again.
9	Bin Control 2 (Mechanical) Open Circuit Control Board K8 (#3 and #4) Not used on DCM or self-contained models.	Manual reset. Turn power off and on again. Modular Flaker and Cubelet (-C)(-SC)(-CB) Models: Control Board S2 Dip Switch #7 must be ON. DCM and Self-Contained Models: Control Board S2 Dip Switch #7 must be OFF.
10	Evaporator Thermistor Evaporator thermistor reaches -22°F (-30°C) for 3 consecutive cycles. Used on cubelet (-C)(-SC)(-CB) models only.	Turn power off. Call for service. To avoid possible catastrophic failure, it is recommended to leave the icemaker off until this alarm is resolved. Manual reset. Turn power off and on again.

Legend: **Comp**—compressor; **DV**—drain valve; **EH**—evaporator heater; **FM**—fan motor; **FMR**—fan motor-remote; **FS**—float switch; **GM**—gear motor; **HM**—headmaster (C.P.R.); **LLV**—liquid line valve; **SLV**—suction line valve; **TXV**—thermostatic expansion valve; **UFS**—upper float switch; **WV**—inlet water valve

Dip switches are factory set and must be adjusted per the unit's service manual or Hoshizaki Technical Support recommendation.

III. Maintenance

The appliance must be maintained in accordance with the instruction manual and labels provided. Consult with your local Hoshizaki Certified Service Representative about maintenance service. To obtain the name and phone number of your local Hoshizaki Certified Service Representative, visit www.hoshizaki.com.

⚠ WARNING

- Only qualified service technicians should service the appliance.
- To reduce the risk of electric shock, do not touch the power switch, control switch, or plug (on corded models) with damp hands. Make sure the power switch is in the "OFF" position before plugging in or unplugging the appliance on corded models.
- Before servicing, move the power switch to the "OFF" position.
Corded Models: Unplug the appliance from the electrical outlet.
Hard-Wired Models: Turn off the power supply. Lockout/Tagout to prevent the power supply from being turned back on inadvertently.
- **CHOKING HAZARD:** Ensure all components, fasteners, and thumbscrews are securely in place after any maintenance is done to the appliance. Make sure that none have fallen into the ice storage bin.
- Do not place fingers or any other objects into the ice discharge opening.
- After service, make sure that there are no wires pinched between the panels and appliance. Make sure you do not damage or pinch the water supply line, drain line, or power cord.

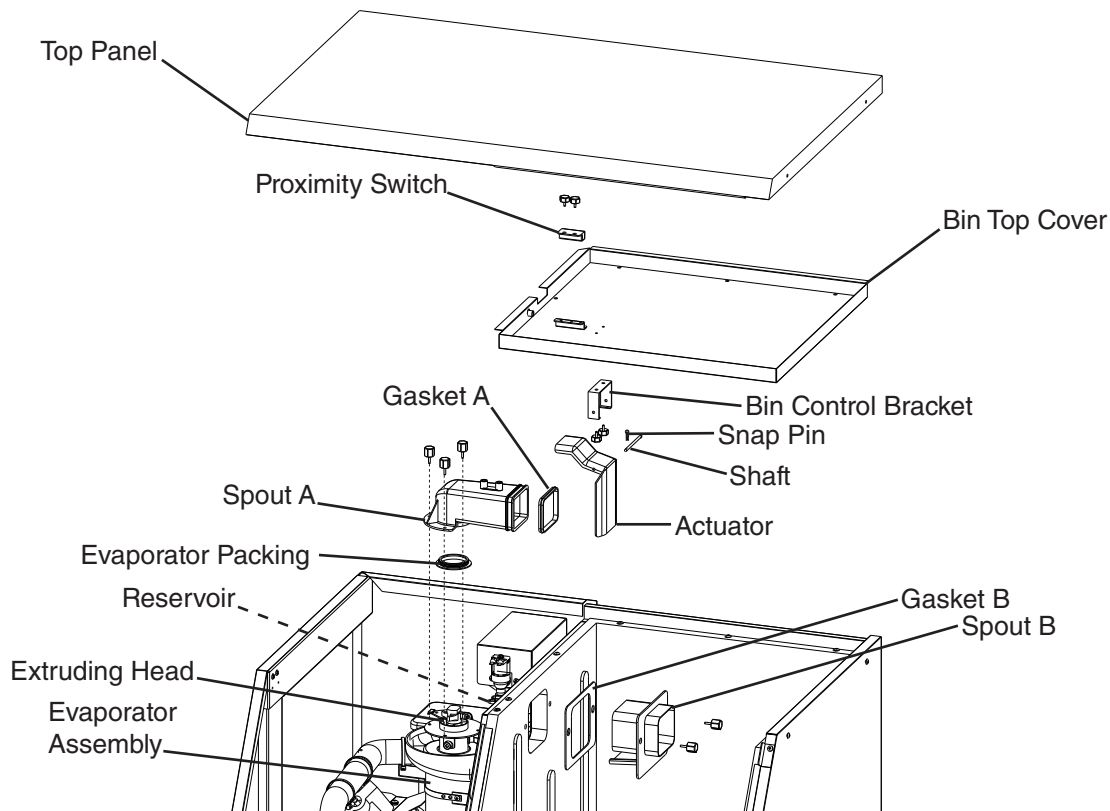


Fig. 8

Model Shown: F-500BAJ

A. Maintenance Schedule

The maintenance schedule below is a guideline. More frequent maintenance may be required depending on water quality, the appliance's environment, and local sanitation regulations.

Maintenance Schedule		
Frequency	Area	Task
Daily	Scoop	Clean the scoop using a neutral cleaner. Rinse thoroughly after cleaning.
Bi-Weekly	Air Filter	Inspect. Wash with warm water and neutral cleaner if dirty.
Monthly	External Water Filters	Check for proper pressure and change if necessary.
	Icemaker Exterior	Wipe down with a clean, soft cloth. Use a damp cloth containing a neutral cleaner to wipe off oil or dirt build up. Clean any chlorine staining (rust colored spots) using a non-abrasive cleanser.
Every 6 Months	Icemaker and Ice Storage Bin	Clean and sanitize per the cleaning and sanitizing instructions provided in this manual. See "III.B. Cleaning and Sanitizing Instructions."
	Evaporator Condensate Drain Pan and Gear Motor Drain Pan	Wipe down with a clean cloth and warm water. Slowly pour one cup of sanitizing solution (prepare as outlined in the sanitizing instructions in this manual) into the evaporator condensate drain pan (drains into gear motor drain pan). Be careful not to overflow the gear motor drain pan. Repeat with a cup of clean water to rinse.
	Icemaker and Ice Storage Bin Drains	Check to make sure they are clear.
	Extruding Head Seal Bolts	Inspect for leakage around seal bolts. Tighten (see torque value below) or replace as necessary. Seal bolts must be replaced once removed because seal material is one-time use only. If new seal bolts do not have preapplied threadlocker, apply Loctite 243 or equivalent threadlocker to seal bolt threads. • <i>Torque:</i> 11.1 ft-lb/15 N-m. Tighten 2 times. Allow at least 5 sec. in between each tightening.
Yearly	Inlet Water Valve and Drain Valve	Close the water supply line shut-off valve and drain the water system. Clean the inlet water valve screen and clean and inspect the drain valve.
	Water Hoses	Inspect the water hoses and clean/replace if necessary.
	Condenser	Inspect. Clean if necessary by using a brush or vacuum cleaner.
	Icemaker	Inspect for oil spots, loose components, fasteners, and wires.
	Upper Bearing (extruding head)	Check for wear using .02" round stock or pin gauge. Replace both upper bearing and lower bearing if wear exceeds factory recommendations. See the Service Manual for details.
After 3 Years, then Yearly	Upper Bearing (extruding head); Lower Bearing and O-ring (lower housing); Mechanical Seal; Evaporator Cylinder; Auger	Inspect. Replace both upper bearing and lower bearing if wear exceeds factory recommendations. Replace the mechanical seal if the seal's contact surfaces are worn, cracked, or scratched. See the Service Manual for details.

B. Cleaning and Sanitizing Instructions

The icemaker must be cleaned and sanitized at least twice a year. More frequent cleaning and sanitizing may be required in some conditions.

WARNING

- To prevent injury to individuals and damage to the appliance, do not use ammonia type cleaners.
- Carefully follow any instructions provided with the cleaning and sanitizing solutions.
- Always wear liquid-proof gloves and goggles to prevent the cleaning and sanitizing solutions from coming into contact with skin or eyes.
- After cleaning and sanitizing, do not use ice made from the cleaning and sanitizing solutions. Be careful not to leave any solution on the parts or in the ice storage bin.
- Do not place fingers or any other objects into the ice discharge opening.

1. Cleaning Solution

Dilute 4.8 fl. oz. (142 ml) of Hoshizaki "Scale Away" with 0.8 gal. (3 l) of warm water. This is a minimum amount. Make more solution if necessary. **IMPORTANT! For safety and maximum effectiveness, use the solution immediately after dilution.**

2. Cleaning Procedure

- 1) Close the water supply line shut-off valve.
- 2) Remove the top and front panels.
- 3) Move the power switch to the "OFF" position, then move the control switch to the "DRAIN" position. Next, move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Allow the water system to drain for 5 min.
Note: If the control switch is left in the "DRAIN" position for 10 min. or more, a 2-beep alarm sounds every 5 sec. Move the control switch out of the "DRAIN" position to clear the alarm.
- 4) Remove all ice from the ice storage bin.
- 5) After the water system has drained, remove the top and front panels, then move the power switch to the "OFF" position.
- 6) Remove spout B and gasket B, then remove spout A, and gasket A. See Fig. 8.
- 7) Pour the cleaning solution over the extruding head until the evaporator assembly and the reservoir are full and the solution starts to run through the overflow hose on the reservoir.
Note: If there is excess scale on the extruding head, fill the evaporator assembly and reservoir as described above, then use a clamp on the reservoir hose between the reservoir and evaporator assembly to block flow. Pour additional cleaning solution over the extruding head until the evaporator assembly is completely full.
- 8) Replace gasket A, spout A, gasket B, and spout B in their correct positions.

- 9) Allow the icemaker to sit for 10 min. before operation. If you placed a clamp on the reservoir hose in step 7, remove it before operation.
- 10) In bad or severe water conditions, clean the float switch assembly as described below. See Fig. 9. Otherwise, continue to step 11.
 - a. Remove the float switch assembly from the reservoir cover.
 - b. Wipe down the float switch assembly with the cleaning solution.
 - c. Rinse the float switch assembly thoroughly with clean water.
 - d. Replace the float switch assembly in its correct position.

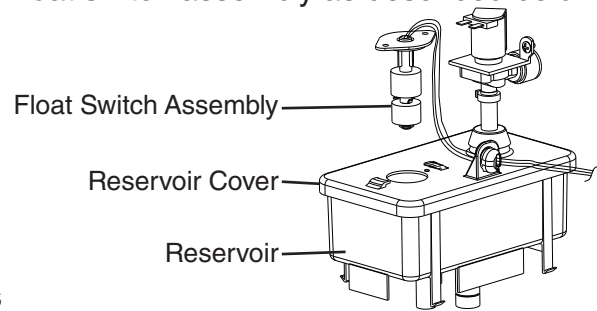


Fig. 9

- 11) Move the control switch to the "ICE" position, then move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Make ice using the solution until the icemaker stops making ice.
- 12) Remove the top and front panels.
- 13) Move the power switch to the "OFF" position, then move the control switch to the "DRAIN" position. Next, move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Allow the water system to drain for 5 min.
- 14) After the water system has drained, remove the top and front panels, then move the power switch to the "OFF" position.
- 15) Move the control switch to the "ICE" position.
- 16) Move the power switch to the "ON" position, then replace the front and top panels in their correct positions.
- 17) Open the water supply line shut-off valve to supply water to the reservoir.
- 18) After the gear motor starts, remove the top and front panels.
- 19) Move the power switch to the "OFF" position, then move the control switch to the "DRAIN" position. Next, move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Allow the water system to drain for 5 min.
- 20) After the water system has drained, remove the top and front panels, then move the power switch to the "OFF" position.

Note: If you do not sanitize the unit, go to step 16 in "III.B.5. Sanitizing Procedure - Final."
- 21) Close the icemaker water supply line shut-off valve.

3. Sanitizing Solution

Dilute 2.5 fl. oz. (74 ml or 5 tbs) of a 5.25% sodium hypochlorite solution (chlorine bleach) with 5 gal. (19 l) of warm water. This is a minimum amount. Make more solution if necessary. **IMPORTANT! For safety and maximum effectiveness, use the solution immediately after dilution.**

4. Sanitizing Procedure - Initial

- 1) Make sure the power switch is in the "OFF" position and the icemaker water supply line shut-off valve is closed.
- 2) Remove the top and front panels. Remove spout B and gasket B, then remove spout A, gasket A, and the evaporator packing.
- 3) Pour the sanitizing solution over the extruding head until the evaporator assembly and the reservoir are full and the solution starts to run through the overflow hose on the reservoir.
- 4) Remove the snap pin, shaft, actuator, and bin control bracket from the bin top cover.
- 5) Remove the sliding door.
- 6) Soak the sliding door, spouts, gaskets, evaporator packing, snap pin, shaft, actuator, and bin control bracket in .25 gal. (1 l) of sanitizing solution for 10 min., then wipe them down.
- 7) Rinse the parts thoroughly with clean water. **NOTICE! If the solution is left on these parts, they will rust.**
- 8) Replace all parts in their correct positions.
- 9) Move the control switch to the "ICE" position, then move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Make ice using the solution until the icemaker stops making ice.
- 10) Remove the top and front panels.
- 11) Move the power switch to the "OFF" position, then move the control switch to the "DRAIN" position. Next, move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Allow the water system to drain for 5 min.
- 12) After the water system has drained, remove the top and front panels, then move the power switch to the "OFF" position.

5. Sanitizing Procedure - Final

- 1) Mix a new batch of the sanitizing solution.
- 2) Remove spout B and gasket B, then remove spout A and gasket A.
- 3) Pour the sanitizing solution over the extruding head until the evaporator assembly and the reservoir are full and the solution starts to run through the overflow hose on the reservoir.
- 4) Allow the icemaker to sit for 10 min. before operation.
- 5) Replace gasket A, spout A, gasket B, and spout B in their correct positions.
- 6) Move the control switch to the "ICE" position, then move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Make ice using the solution until the icemaker stops making ice.
- 7) Remove the top and front panels.
- 8) Move the power switch to the "OFF" position, then move the control switch to the "DRAIN" position. Next, move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Allow the water system to drain for 5 min.
- 9) After the water system has drained, remove the top and front panels, then move the power switch to the "OFF" position.
- 10) Move the control switch to the "ICE" position.
- 11) Move the power switch to the "ON" position, then replace the top and front panels in their correct positions.
- 12) Open the water supply line shut-off valve to supply water to the reservoir.
- 13) After the gear motor starts, remove the top and front panels.
- 14) Move the power switch to the "OFF" position, then move the control switch to the "DRAIN" position. Next, move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Allow the water system to drain for 5 min.
- 15) After the water system has drained, remove the top and front panels, then move the power switch to the "OFF" position.
- 16) Move the control switch to the "ICE" position, then move the power switch to the "ON" position to start the automatic icemaking process, then replace the top and front panels in their correct positions. Allow the icemaker to run for 30 min.
- 17) After 30 min., remove the top and front panels and move the power switch to the "OFF" position.
- 18) Pour warm water into the ice storage bin to melt all of the ice. Clean the ice storage bin liner thoroughly using a neutral cleaner. Rinse thoroughly after cleaning.
- 19) Move the power switch to the "ON" position to start the automatic icemaking process.
- 20) Replace the top and front panels in their correct positions.

IV. Preparing the Appliance for Periods of Non-Use

NOTICE

When storing the appliance for an extended time or in sub-freezing temperatures, follow the instructions below to prevent damage.

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

- 1) Close the icemaker water supply line shut-off valve and open the icemaker water supply line drain valve.
- 2) Remove the top and front panels.
- 3) Move the power switch to the "OFF" position, then move the control switch to the "DRAIN" position. Next, move the power switch to the "ON" position. Replace the front and top panels in their correct positions. Allow the water system to drain for 5 min.
Note: If the control switch is left in the "DRAIN" position for 10 min. or more, a 2-beep alarm sounds every 5 sec. Move the control switch out of the "DRAIN" position to clear the alarm.
- 4) Attach a compressed air or carbon dioxide supply to the icemaker water supply line drain valve.
- 5) Move the control switch to the "ICE" position, to open the inlet water valve and briefly blow out the inlet water valve. After blowing out the inlet water valve, move the power switch to the "OFF" position.
- 6) Close the icemaker water supply line drain valve.
- 7) Remove all ice from the ice storage bin. Clean the ice storage bin liner and door using a neutral cleaner. Rinse thoroughly after cleaning.
- 8) Replace the top and front panels in their correct positions.

V. Disposal

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.

HOSHIZAKI AMERICA, INC.

618 Hwy. 74 South, Peachtree City, GA 30269 USA (P) 770.487.2331 (F) 770.487.3360 hoshizakiamerica.com 1A7255-010