# Hoshizaki America, Inc.

## Cubelet Icemaker/Dispenser

Models
DCM-751BAH(-OS)
DCM-751BWH(-OS)



### INSTRUCTION MANUAL

www.hoshizaki.com



Issued: 3-23-2011

#### - IMPORTANT -

Only qualified service technicians should install, service, and maintain the icemaker. No installation, service, or maintenance should be undertaken until the technician has thoroughly read this Instruction Manual. Likewise, the owner/manager should not proceed to operate the icemaker until the installer has instructed them on its proper operation. Failure to install, operate, and maintain the equipment in accordance with this manual may adversely affect safety, performance, component life, and warranty coverage.

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

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.

HOSHIZAKI AMERICA, INC. 618 Highway 74 South Peachtree City, GA 30269

Attn: Hoshizaki Technical Support Department

Phone: 1-800-233-1940 Technical Support

(770) 487-2331

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

E-mail: techsupport@hoshizaki.com

Web Site: www.hoshizaki.com

**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 icemaker is installed and operated. Only qualified service technicians should install, service, and maintain the icemaker. 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.

**CAUTION** Indicates a situation which could result in damage to the unit.

IMPORTANT Indicates important information about the use and care of the

unit.

#### **A** WARNING -

This icemaker 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.

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

- Only qualified service technicians should install, service, and maintain the icemaker.
- 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.
- 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.
- THIS UNIT MUST BE GROUNDED. Failure to properly ground this unit could result in death or serious injury.
- Move the control switch and the power 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.
- Do not make any alterations to the unit. Alterations could result in electric shock, injury, fire, or damage to the unit.

#### I. Specifications

#### A. Electrical Data

1. DCM-751BAH (air-cooled)

### **HOSHIZAKI ICE MAKER**

MODEL NUMBER DCM-751BAH SERIAL NUMBER AC SUPPLY VOLTAGE 115-120/60/1 115V 77LRA 14.6RLA COMPRESSOR GEAR MOTOR 120V 3.0FLA 1/4HP 120V 1.0FLA 50W FAN MOTOR 120V 1.8FLA(TOTAL) 110W AGITATING MOTOR DISPENSING MOTOR 120V 0.9FLA 55W 120V 0.6A OTHER 20 AMPS MAXIMUM FUSE SIZE MAX. HACR BREAKER (USA ONLY) 20 AMPS MAX. CIRC. BREAKER (CANADA ONLY) 20 AMPS MINIMUM CIRCUIT AMPACITY 20 AMPS DESIGN PRESSURE HI-460PSI LO-290PSI 404A 1 LB. 10 OZ. REFRIGERANT

## MOTOR-COMPRESSOR THERMALLY PROTECTED NOT INTENDED FOR OUTDOOR USE!

Hoshizaki America, Inc. Peachtree City, GA www.hoshizaki.com

For certification marks, see the nameplate on the rear panel.

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.

#### 2. DCM-751BAH-OS (air-cooled)

#### **HOSHIZAKI ICE MAKER**

MODEL NUMBER DCM-751BAH-OS SERIAL NUMBER AC SUPPLY VOLTAGE 115-120/60/1 115V 77LRA 14.6RLA COMPRESSOR GEAR MOTOR 120V 3.0FLA 1/4 HP 120V 1.0FLA 50W FAN MOTOR 120V 1.8FLA(TOTAL) 110W AGITATING MOTOR DISPENSING MOTOR 120V 0.9FLA 55W 120V 0.6A OTHER 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-460PSI LO-290PSI 404A 1 LB. 10 OZ. REFRIGERANT

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#### 3. DCM-751BWH (water-cooled)

#### **HOSHIZAKI ICE MAKER**

MODEL NUMBER DCM-751BWH SERIAL NUMBER AC SUPPLY VOLTAGE 115-120/60/1 115V 77LRA 14.6RLA COMPRESSOR 120V 3.0FLA 1/4HP GEAR MOTOR ---- ----FAN MOTOR AGITATING MOTOR 120V 1.8FLA(TOTAL) 110W 120V 0.9FLA 55W DISPENSING MOTOR 120V 0.6A OTHER 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-460PSI LO-290PSI REFRIGERANT 404A 1 LB. 6 OZ.

## MOTOR-COMPRESSOR THERMALLY PROTECTED NOT INTENDED FOR OUTDOOR USE! Hoshizaki America, Inc. Peachtree City, GA www.hoshizaki.com

For certification marks, see the nameplate on the rear panel.

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.

#### 4. DCM-751BWH-OS (water-cooled)

#### HOSHIZAKI ICE MAKER

MODEL NUMBER DCM-751BWH-OS SERIAL NUMBER AC SUPPLY VOLTAGE 115-120/60/1 115V 77LRA 14.6RLA COMPRESSOR GEAR MOTOR 120V 3.0FLA 1/4HP \_\_\_\_ FAN MOTOR 120V 1.8FLA(TOTAL) 110W AGITATING MOTOR 120V 0.9FLA 55W DISPENSING MOTOR 120V 0.6A OTHER 20 AMPS MAXIMUM FUSE SIZE MAX. HACR BREAKER (USA ONLY) 20 AMPS MAX. CIRC. BREAKER (CANADA ONLY) 20 AMPS MINIMUM CIRCUIT AMPACITY 20 AMPS DESIGN PRESSURE HI-460PSI LO-290PSI REFRIGERANT 404A 1 LB. 6 OZ.

## MOTOR-COMPRESSOR THERMALLY PROTECTED NOT INTENDED FOR OUTDOOR USE! Hoshizaki America, Inc.

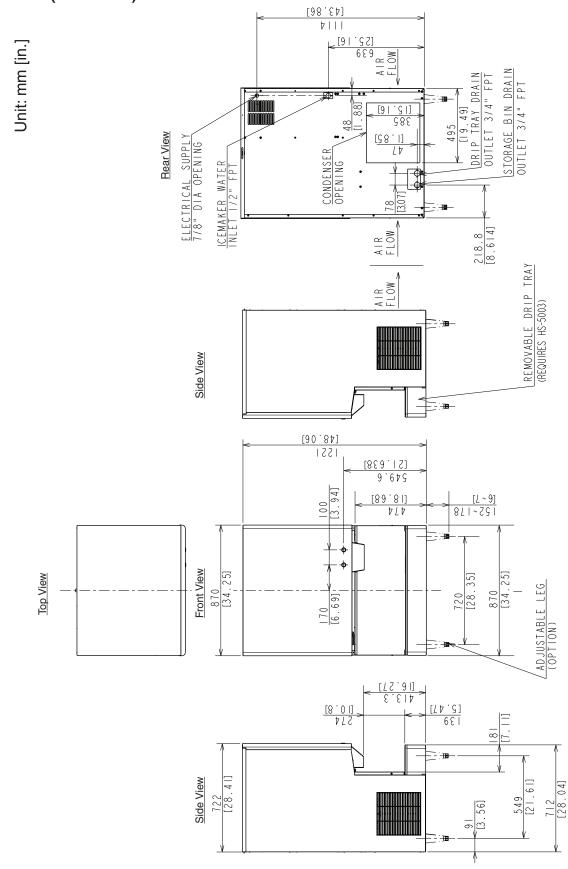
Peachtree City, GA www.hoshizaki.com

For certification marks, see the nameplate on the rear panel.

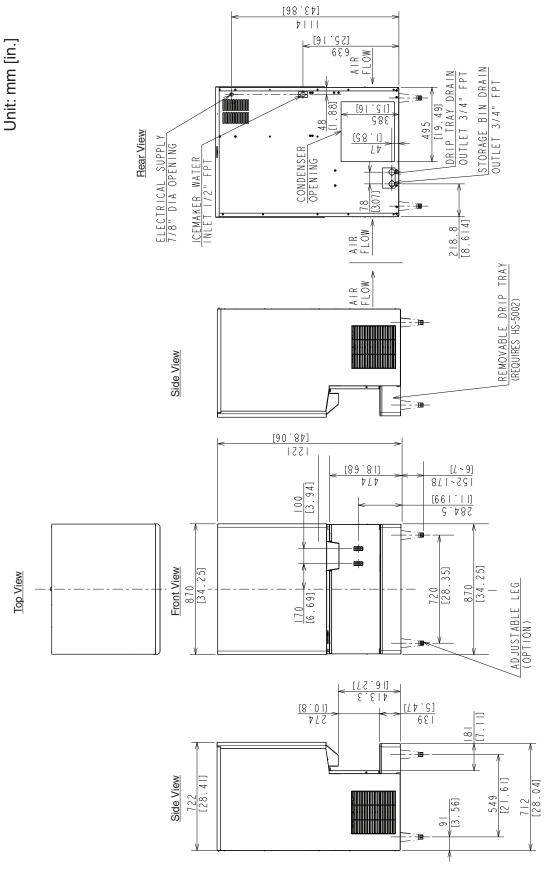
The rating label and nameplate provide electrical and refrigerant data. The rating label can be seen by removing the front panel. The nameplate is located on the rear panel.

#### **B. Dimensions/Connections**

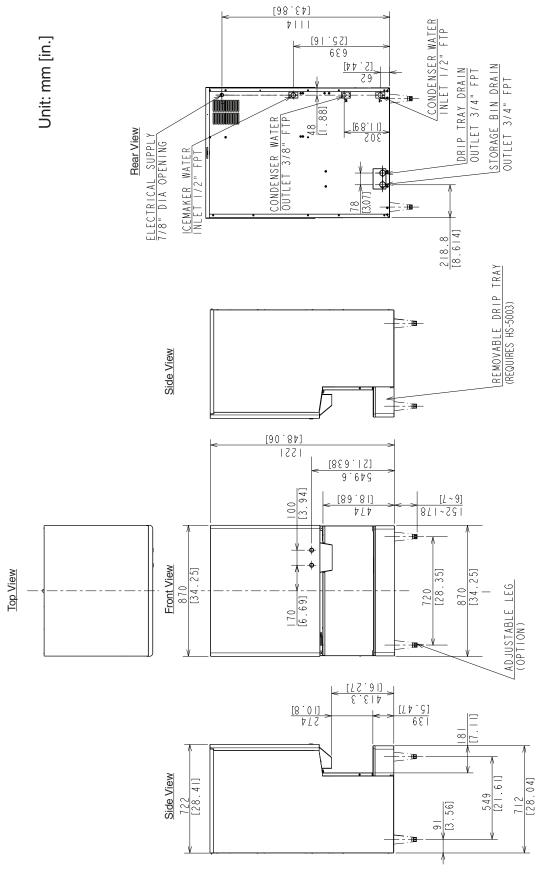
#### 1. DCM-751BAH (air-cooled)



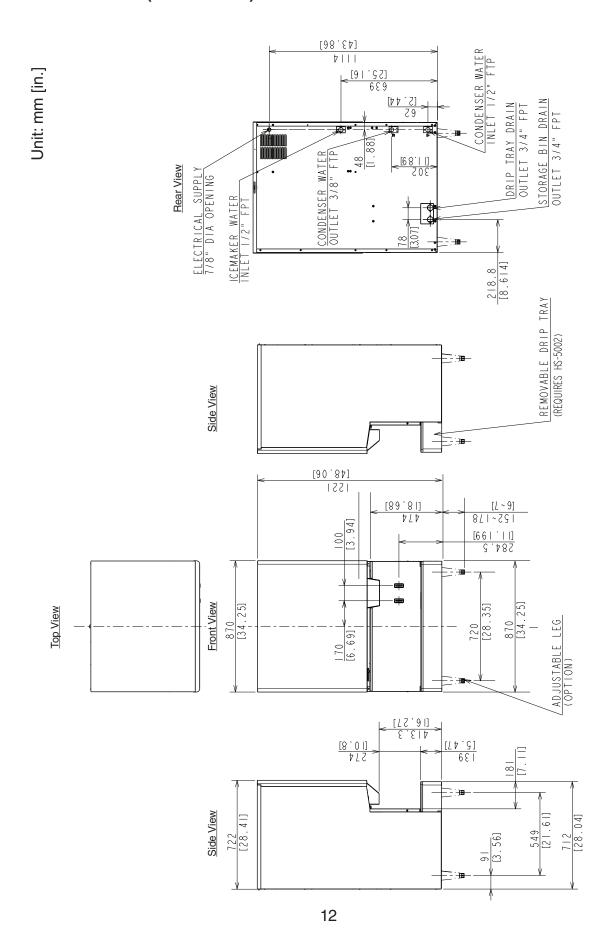
#### 2. DCM-751BAH-OS (air-cooled)



#### 3. DCM-751BWH (water-cooled)



#### 4. DCM-751BWH-OS (water-cooled)



#### **II. Installation and Operating Instructions**

#### · A WARNING -

- 1. This icemaker must be installed in accordance with applicable national, state, and local codes and regulations.
- 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

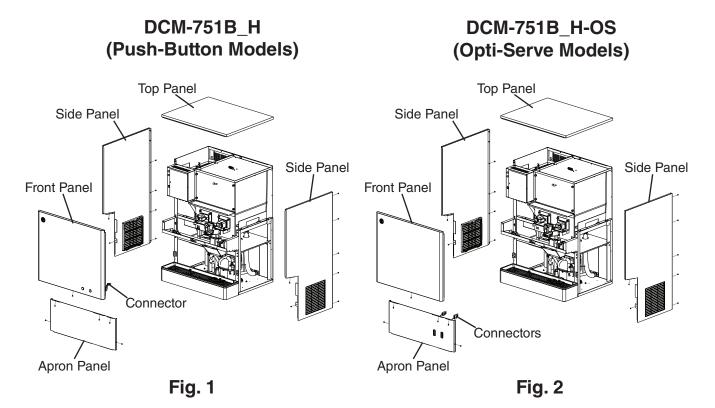
- Visually inspect the exterior of the shipping container and immediately report any damage to the carrier. Upon opening the container, any concealed damage should also be immediately reported to the carrier.
- Remove the shipping carton, tape, and packing material. If any are left in the icemaker, it will not work properly.
- Remove the panels to prevent damage when installing the icemaker. See "II.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 the refrigerant lines do not rub or touch lines or other surfaces, and that the fan blade (if applicable) turns freely.
- Check that the compressor is snug on all mounting pads.
- See the nameplate on the rear panel, and check that your voltage supplied corresponds with the voltage specified on the nameplate.
- This icemaker can be installed on a countertop or on an optional stand. If using an optional stand, Hoshizaki Stand SD-700 or SD-750 is recommended. For further options, contact your local Hoshizaki distributor.
- The drip tray on the front of the icemaker is removable for installations using an in-counter drain. Drip tray removal requires HS-5003 for DCM-751 B\_H or HS-5002 for DCM-751B H-OS.

DCM-751 on DCM-751B\_H with Hoshizaki Stand SD-750 Drip Tray Removal Kit HS-5003 HS-5002

#### **B.** How to Remove Panels

#### See Fig. 1 or Fig. 2

- Front Panel: Remove the screw. Lift up and towards you. Disconnect the connector on push-button models.
- Top Panel: Lift up at front slightly, push rearward and lift off.
- Apron Panel: Remove the screws and pull towards you. Disconnect the connectors on Opti-Serve models.
- Side Panels: Remove the screws and pull towards you.



#### C. Location

#### CAUTION -

- 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 if the air temperature is going to go below 32°F (0°C). See "III.C. Preparing the Icemaker for Long Storage."

#### - IMPORTANT -

Opti-Serve Models (-OS): Sunlight, direct and indirect, can have an effect on the operation of the dispense sensors. If a problem is noticed, the icemaker should be moved out of direct sunlight and/or farther away from any outside windows.

#### For best operating results:

- The icemaker should not be located next to ovens, grills, or other high heat producing equipment.
- The location should provide a firm and level foundation for the 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.

#### D. Setup

- 1) Position the icemaker in the selected permanent location. If applicable, attach optional 6" legs or attach to an optional stand. If attaching to a stand, refer to the instructions included with the stand. If removing the drip tray, refer to the instructions included with the HS kit (HS-5003 for DCM-751 B H or HS-5002 for DCM-751B H-OS).
- 2) Level the icemaker in both the left-to-right and front-to-rear directions. If using optional 6" legs or an optional stand, adjust the legs to make the icemaker level.
- 3) If mounting flat to a counter, seal the perimeter where the icemaker contacts the counter with approved caulk compound in a smooth and easily cleanable manner.
- 4) Replace the panels in their correct positions.

#### E. Electrical Connection

#### **A** WARNING -

- 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 extensive damage to equipment.
- 2. 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 fuses, or damage to existing wiring. This could lead to heat generation or fire.
- 3. **THIS UNIT MUST BE GROUNDED.** Failure to properly ground this unit could result in death or serious injury.
- 4. Electrical connection must be made in accordance with the instructions on the "WARNING" tag, provided with the pig tail leads in 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.
- The white lead must be connected to the neutral conductor of the power source. **CAUTION!** 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.

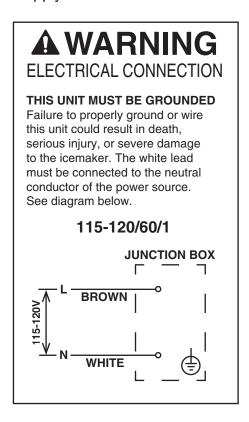


Fig. 3

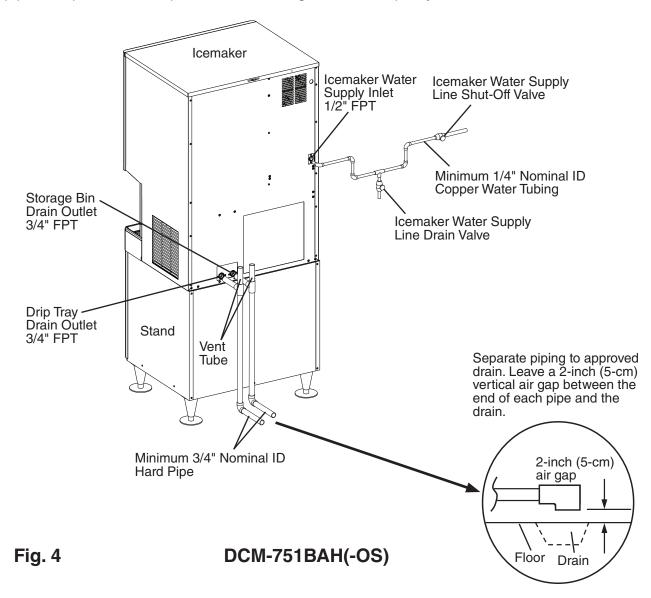
#### F. Water Supply and Drain Connections See Fig. 4, 5, or 6

#### **A** WARNING -

- 1. Water supply and drain connections must be installed in accordance with applicable national, state, and local codes and regulations.
- 2. 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.
- 3. 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 distributor for recommendations.
- 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.
- The storage bin drain line, drip tray drain line, and water-cooled condenser drain line (if applicable) must be run separately.
- 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 storage bin, drip tray, and water-cooled condenser (if applicable) and the floor drain.

#### 1. Icemaker

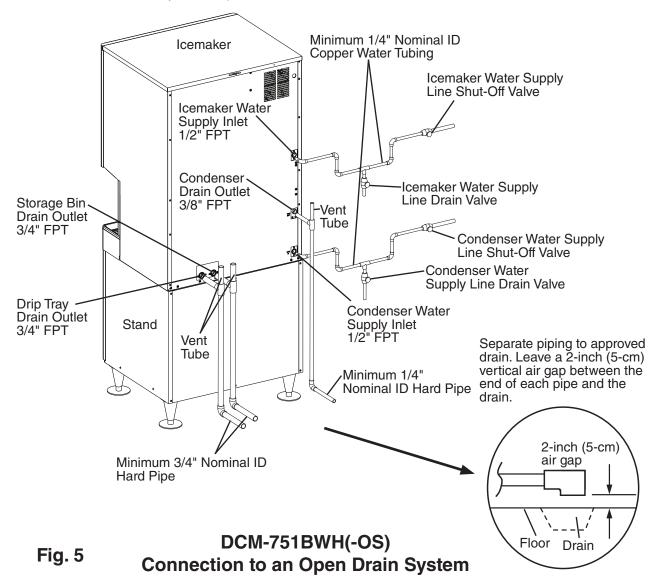
- Icemaker water supply inlet is 1/2" female pipe thread (FPT). A minimum of 1/4" nominal ID copper water tubing or equivalent is required for the icemaker water supply line.
- An icemaker water supply line shut-off valve and drain valve should be installed.
- Storage bin and drip tray drain outlets are 3/4" FPT. A minimum of 3/4" nominal ID hard pipe or equivalent is required for the storage bin and drip tray drain lines.



#### 2. Water-Cooled Condenser

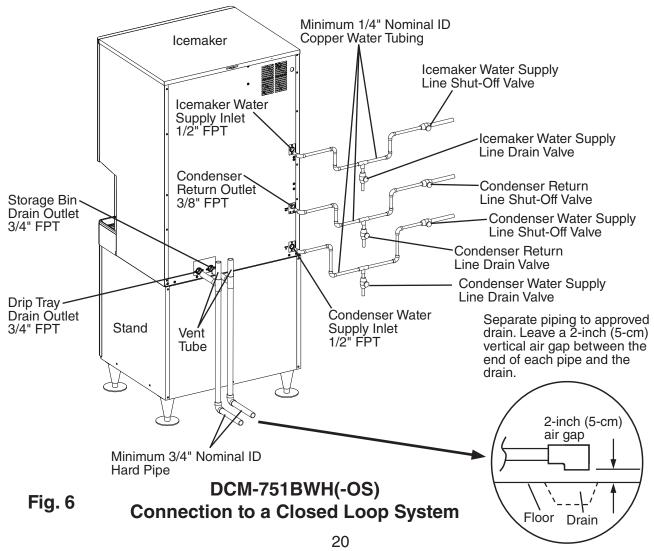
#### a) Connection to an Open Drain System

- Condenser 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 condenser water supply line.
- A condenser water supply line shut-off valve and drain valve should be installed.
- Condenser drain outlet is 3/8" FPT. A minimum of 1/4" nominal ID hard pipe or equivalent is required for the condenser drain line.
- In some areas, a back flow preventer may be required in the condenser water supply line.
- In order to maintain the proper high side pressure, the condenser water supply inlet temperature should not drop below 45°F (7°C) and the condenser drain outlet temperature must be in the 104°F to 115°F (40°C to 46°C) range. Once the icemaker installation is complete, confirm the condenser drain outlet temperature 5 minutes after a freeze cycle starts. If the condenser drain outlet temperature is not in the proper range, use a flat blade screwdriver to rotate the adjustment screw on the water-regulating valve until the temperature is in the proper range (rotate counterclockwise to raise temperature or clockwise to lower temperature).



#### b) Connection to a Closed Loop System

- Condenser 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 condenser water supply line.
- Condenser return outlet is 3/8" FPT. A minimum of 1/4" nominal ID copper water tubing or equivalent is required for the condenser return line.
- Shut-off valves and drain valves should be installed at both the condenser water supply inlet and condenser return outlet.
- The water supply to the condenser should not drop below 4 GPM.
- The pressure differential between the condenser water supply inlet and condenser return outlet must be no less than 10 PSIG.
- When using a glycol blend, the solution mixture should be less than 30% glycol.
- In order to maintain the proper high side pressure, the condenser water supply inlet temperature should not drop below 45°F (7°C) and the condenser drain outlet temperature must be in the 104°F to 115°F (40°C to 46°C) range. Once the icemaker installation is complete, confirm the condenser drain outlet temperature 5 minutes after a freeze cycle starts. If the condenser drain outlet temperature is not in the proper range, use a flat blade screwdriver to rotate the adjustment screw on the water-regulating valve until the temperature is in the proper range (rotate counterclockwise to raise temperature or clockwise to lower temperature).



#### 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 and sides and 24" (61 cm) at top for proper air circulation and ease of maintenance and service?
- 4) Have the shipping carton, tape, and packing material been removed from the icemaker?
- 5) If the icemaker is mounted flat to a counter, has the perimeter where the icemaker contacts the counter been sealed with approved caulk compound? If the icemaker is on a stand, has it been secured to the stand as outlined in the stand's instructions? If the drip tray has been removed, has the icemaker been secured to the counter as outlined in the HS kit's instructions (HS-5003 for DCM-751B\_H or HS-5002 for DCM-751B\_H-OS)?
- 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(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?
  - Note: The icemaker may stop running when the water supply is off, or if the pressure is below 10 PSIG. When the proper water pressure is reached, the icemaker automatically starts running again.
- 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? Has the fan blade (if applicable) been checked to make sure it turns freely?
- 10) Are all components, fasteners, and thumbscrews securely in place?
- 11) 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?
- 12) Has the end user been given the name and telephone number of an authorized service agent?
- 13) Has the warranty card been filled out and forwarded to the factory for warranty registration?

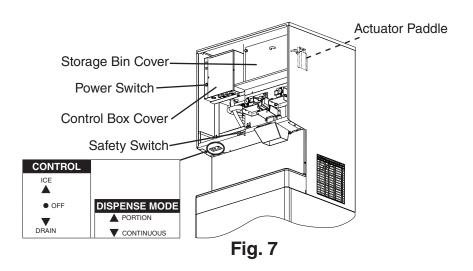
#### H. Startup

#### **A** WARNING -

- 1. All parts are factory-adjusted. Improper adjustments may adversely affect safety, performance, component life, and warranty coverage.
- 2. If the icemaker is turned off, wait for at least 3 minutes before restarting the icemaker to prevent damage to the compressor.
- 3. At startup, confirm that all internal and external connections are free of leaks.
- 1) Open the water supply line shut-off valve(s).
- 2) Move the control switch to the "OFF" position. See Fig. 7.
- 3) Remove the front panel, then move the power switch to the "ON" position. Replace the front panel in its correct position, then turn on the power supply.

  Note: This unit will not run if the safety switch is not engaged.
- 4) Move the control switch to the "ICE" position to start the automatic icemaking process.
- 5) Once the unit starts to produce ice, allow it to run for another 30 minutes.
- 6) Move the control switch to the "OFF" position, pause momentarily, then move to the "DRAIN" position. Allow the water system to drain for 5 minutes.
  - Note: a) A momentary pause in the "OFF" position is necessary to de-energize the control board when moving the control switch between "ICE" and "DRAIN."

    Otherwise there is a delay of several minutes before the new selection takes effect.
    - b) If the control switch is left in the "DRAIN" position for 10 minutes or more, a 2-beep alarm sounds every 5 seconds. Move the control switch out of the "DRAIN" position to clear the alarm.
- 7) Move the dispense mode switch to the "CONTINUOUS" position, then dispense all of the ice from the storage bin.
  - Note: Ice dispenses continuously for a maximum of 60 seconds per activation.

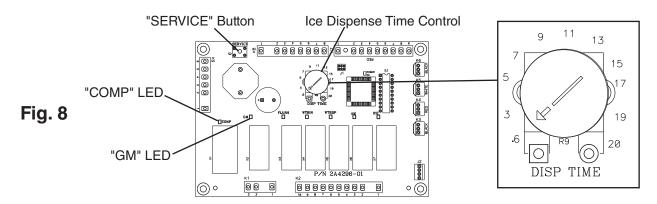


- 8) Remove the front panel, then remove the storage bin cover.
- 9) Move the control switch to the "ICE" position.
- 10) Confirm bin control operation: Remove the control box cover, then engage the safety switch on the front frame. See Fig. 7. After the "GM" LED on the control board turns on, bypass the 5-minute compressor startup delay by pressing the "SERVICE" button. See Fig. 8. WARNING! Risk of electric shock. Care should be taken not to touch live terminals. After the compressor starts, press and hold the actuator paddle located inside the storage bin. WARNING! Keep hands, hair, and loose clothing clear of the agitators inside the storage bin. The icemaker should shut down within 10 seconds.
- 11) Disengage the safety switch. Move the control switch to the "OFF" position, then move the power switch to the "OFF" position. Turn off the power supply. Replace the control box cover in its correct position.
- 12) Clean the storage bin liner, cover, and components using a neutral cleaner. Rinse thoroughly after cleaning. Replace the storage bin cover in its correct position. WARNING! CHOKING HAZARD: Ensure all components, fasteners, and thumbscrews are securely in place. Make sure that none have fallen into the storage bin.
- 13) Move the power switch to the "ON" position, then replace the front panel in its correct position. Turn on the power supply, then move the control switch to the "ICE" position to start the automatic icemaking process.

#### I. Dispense Mode Switch

The dispense mode switch has "CONTINUOUS" and "PORTION" positions. When the dispense mode switch is in the "CONTINUOUS" position, ice dispenses continuously for a maximum of 60 seconds per activation.

When the dispense mode switch is in the "PORTION" position, ice dispenses for the amount of time determined by the ice dispense time setting. The ice dispense time control is located on the control board. The dial indicates dispense time in seconds and is adjustable between 0.6 and 20 seconds. See Fig. 8. When shipped, the ice dispense time control is set to the minimum dispense time of 0.6 sec. At this setting, approximately 0.72 oz. of ice is dispensed. The DCM-751BAH(-OS) and DCM-751BWH(-OS) dispense approximately 1.2 oz. of ice per second.

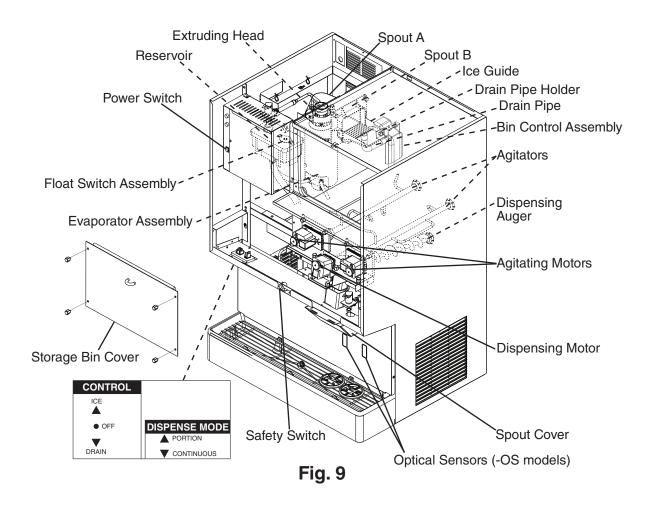


#### **III. Cleaning and Maintenance**

This icemaker must be cleaned and maintained in accordance with the instruction manual and labels provided with the icemaker. Consult with your local distributor about cleaning and maintenance service. To obtain the name and phone number of your local distributor, visit www.hoshizaki.com or call Hoshizaki Technical Support at 1-800-233-1940 in the USA.

#### **A** WARNING -

- 1. Only qualified service technicians should service this icemaker.
- 2. **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.
- 3. The storage bin is for ice use only. Do not store anything else in the storage bin.



#### A. Cleaning and Sanitizing Instructions

Hoshizaki recommends cleaning and sanitizing this unit at least twice a year. More frequent cleaning and sanitizing, however, may be required in some existing water conditions.

#### - A 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.
- 4. Do not use ice made from the cleaning and sanitizing solutions. After cleaning and sanitizing, be careful not to leave any solution on the parts or in the storage bin.

#### 1. Water System

#### a) Cleaning Solution

Dilute 9.6 fl. oz. (0.29 l) of Hoshizaki "Scale Away" with 1.6 gal. (6.0 l) of warm water.

#### b) Cleaning Procedure

- 1) Close the icemaker water supply line shut-off valve.
- 2) Move the control switch to the "OFF" position, pause momentarily, then move to the "DRAIN" position. See Fig. 9. Allow the water system to drain for 5 minutes.
  - Note: a) A momentary pause in the "OFF" position is necessary to de-energize the control board when moving the control switch between "ICE" and "DRAIN."

    Otherwise there is a delay of several minutes before the new selection takes effect.
    - b) If the control switch is left in the "DRAIN" position for 10 minutes or more, a 2-beep alarm sounds every 5 seconds. Move the control switch out of the "DRAIN" position to clear the alarm.
- 3) Move the dispense mode switch to the "CONTINUOUS" position, then dispense all of the ice from the storage bin.
  - Note: Ice dispenses continuously for a maximum of 60 seconds per activation.
- 4) Move the control switch to the "OFF" position, then turn off the power supply. Remove the front and top panels, then move the power switch to the "OFF" position.
- 5) Remove the storage bin cover. Remove spout B, then remove spout A.
- 6) Pour the cleaning solution over the extruding head until the evaporator assembly and the reservoir are full and the solution starts to overflow into the drain pan.
  - 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.
- 7) Replace spout A, spout B, and the storage bin cover in their correct positions.

- 8) Allow the icemaker to sit for 10 minutes before operation. If you placed a clamp on the reservoir hose in step 6, remove it before operation.
- 9) In bad or severe water conditions, clean the float switch assembly as described below. Otherwise, continue to step 10.
  - 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.
- 10) Move the power switch to the "ON" position and replace the panels in their correct positions. Turn on the power supply, then move the control switch to the "ICE" position. Make ice using the solution until the icemaker stops making ice. Note: This unit will not run if the safety switch is not engaged.
- 11) Move the control switch to the "OFF" position, pause momentarily, then move to the "DRAIN" position. Allow the water system to drain for 5 minutes.
- 12) Move the control switch to the "OFF" position, pause momentarily, then move to the "ICE" position. Open the icemaker water supply line shut-off valve to supply water to the reservoir.
- 13) After the gear motor starts, move the control switch to the "OFF" position, pause momentarily, then move to the "DRAIN" position. Allow the water system to drain for 5 minutes.
  - Note: If you do not sanitize the unit, move the control switch to the "OFF" position, pause momentarily, then move to the "ICE" position after the water system drains. Allow the icemaker to run for 30 minutes, then move the control switch to the "OFF" position. Turn off the power supply, then remove the front panel and storage bin cover. Move the power switch to the "OFF" position. Go to step 12 in "III.A.2.c) Cleaning and Sanitizing Procedure" under "Dispensing Components."
- 14) Move the control switch to the "OFF" position, then turn off the power supply.
- 15) Close the icemaker water supply line shut-off valve.

#### c) Sanitizing Solution

Dilute 0.82 fl. oz. (25 ml) of a 5.25% sodium hypochlorite solution (chlorine bleach) with 1.6 gal. (6.0 l) of warm water.

#### d) Sanitizing Procedure - Following Cleaning Procedure

- 1) Make sure the control switch is in the "OFF" position, the power supply is off, and the icemaker water supply line shut-off valve is closed.
- 2) Remove the front and top panels, then move the power switch to the "OFF" position.
- 3) Remove the storage bin cover. Remove spout B, then remove spout A.
- 4) Pour the sanitizing solution over the extruding head until the evaporator assembly and the reservoir are full and the solution starts to overflow into the drain pan.
- 5) Replace spout A, spout B, and the storage bin cover in their correct positions.
- 6) Allow the icemaker to sit for 10 minutes before operation.
- 7) Move the power switch to the "ON" position and replace the panels in their correct positions. Turn on the power supply, then move the control switch to the "ICE" position. Make ice using the solution until the icemaker stops making ice.
- 8) Move the control switch to the "OFF" position, pause momentarily, then move to the "DRAIN" position. Allow the water system to drain for 5 minutes.
- 9) Move the control switch to the "OFF" position, pause momentarily, then move to the "ICE" position. Open the icemaker water supply line shut-off valve to supply water to the reservoir.
- 10) After the gear motor starts, move the control switch to the "OFF" position, pause momentarily, then move to the "DRAIN" position. Allow the water system to drain for 5 minutes.
- 11) Move the control switch to the "OFF" position, pause momentarily, then move to the "ICE" position. Allow the icemaker to run for 30 minutes, then clean and sanitize the dispensing components as outlined below.

#### 2. Dispensing Components

Perform after cleaning and sanitizing the water system as outlined above.

#### a) Cleaning Solution

Dilute 9.6 fl. oz. (0.29 l) of Hoshizaki "Scale Away" with 1.6 gal. (6.0 l) of warm water.

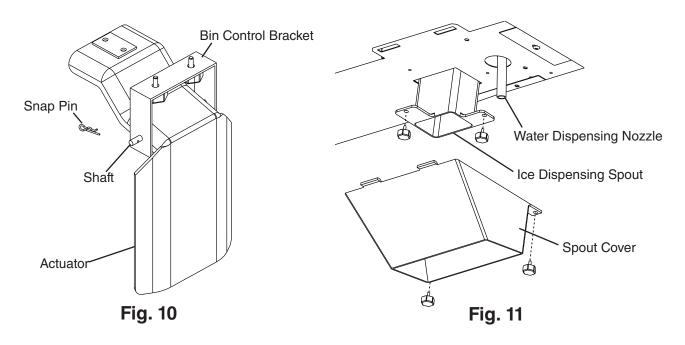
#### b) Sanitizing Solution

Dilute 0.82 fl. oz. (25 ml) of a 5.25% sodium hypochlorite solution (chlorine bleach) with 1.6 gal. (6.0 l) of warm water.

#### c) Cleaning and Sanitizing Procedure

- 1) Move the control switch to the "OFF" position, then turn off the power supply.
- 2) Remove the front and top panels, then move the power switch to the "OFF" position.
- 3) Remove the storage bin cover.

- 4) Remove the motor bracket thumbscrews, first from the vertical plane and then from the horizontal plane. While holding on to the corresponding agitator or auger, move the agitating motor or the dispensing motor towards you. Remove the agitators and the dispensing auger from the storage bin. See Fig. 9.
- 5) Remove the bin control assembly. See Fig. 10.
- 6) Remove the snap pin, shaft, and actuator.
- 7) Remove spout B, spout A, and their gaskets.
- 8) Remove the spout cover, ice dispensing spout, and water dispensing nozzle. See Fig. 11. Also remove the ice guide, drain pipe holder, and drain pipe from the storage bin. See Fig. 9.
- 9) Immerse the agitators, dispensing auger, and parts removed in steps 5 through 8 in the cleaning solution and then in the sanitizing solution for 15 minutes each. Rinse the parts thoroughly with clean water. On Opti-Serve models (-OS), wipe the optical sensors with cleaning solution and then with a clean, damp cloth.
- 10) Wipe the shutter located above the ice dispensing spout thoroughly with a clean cloth.
- 11) Reassemble the bin control assembly and replace all parts in the reverse order of which they were removed.
- 12) Pour warm water into the storage bin and melt any remaining ice. Clean the storage bin liner and the storage bin cover using a neutral cleaner. Rinse thoroughly after cleaning. Replace the storage bin cover in its correct position.
- 13) Move the power switch to the "ON" position, then replace the panels in their correct positions. Turn on the power supply, then move the control switch to the "ICE" position to start the automatic icemaking process.



#### **B.** Maintenance

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

#### - A WARNING —

- 1. Only qualified service technicians should service this icemaker.
- 2. Move the control switch and the power 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.

Maintenance Schedule			
Frequency	Area	Task	
Every 2 Weeks	Air Filters	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 cleaner like Zud or Bon Ami.	
Every 6 Months	Icemaker and Storage Bin	Clean and sanitize per the cleaning and sanitizing instructions provided in this manual.	
	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. Be careful not to overflow the pan. This solution will flow down to the gear motor drain pan and out the drain line to sanitize these areas. Repeat with a cup of clean water to rinse.	
	Icemaker, Storage Bin, and Drip Tray Drains	Check to make sure they are clear.	
Yearly	Inlet Water Valve and Drain Valve	Close the icemaker 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.	

#### C. Preparing the Icemaker for Long Storage

#### - CAUTION -

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

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 extended time or in sub-freezing temperatures, follow the instructions below.

- 1. Remove the ice from the storage bin, drain the water system, and remove the water from the icemaker water supply line:
- 1) Close the icemaker water supply line shut-off valve and open the icemaker water supply line drain valve.
- 2) Move the control switch to the "OFF" position, pause momentarily, then move to the "DRAIN" position. Allow the water system to drain for 5 minutes.
  - Note: a) A momentary pause in the "OFF" position is necessary to de-energize the control board when moving the control switch between "ICE" and "DRAIN."

    Otherwise there is a delay of several minutes before the new selection takes effect.
    - b) If the control switch is left in the "DRAIN" position for 10 minutes or more, a
       2-beep alarm sounds every 5 seconds. Move the control switch out of the
       "DRAIN" position to clear the alarm.
- Move the dispense mode switch to the "CONTINUOUS" position, then dispense all of the ice from the storage bin.
  - Note: Ice dispenses continuously for a maximum of 60 seconds per activation.
- 4) Attach a compressed air or carbon dioxide supply to the icemaker water supply line drain valve.
- 5) While engaging the water dispense switch, blow out the water dispense valve using the compressed air or carbon dioxide supply. After blowing out the water dispense valve, leave the compressed air or carbon dioxide supply flowing. Move the control switch to the "OFF" position, pause momentarily, then move 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 control switch to the "OFF" position.
- 6) Close the icemaker water supply line drain valve.
- 7) Turn off the power supply, then remove the front panel and move the power switch to the "OFF" position.
- 8) Remove the storage bin cover. Clean the storage bin liner and the storage bin cover using a neutral cleaner. Rinse thoroughly after cleaning. Replace the storage bin cover and the front panel in their correct positions.
  - Note: If your unit has a water-cooled condenser, leave the front panel off and go to the next section.

#### 2. On water-cooled model only, remove the water from the water-cooled condenser:

- 1) Make sure the control switch and the power switch are in the "OFF" position and that the power supply is off. Remove the top, apron, and left side panels.
- 2) Close the condenser water supply line shut-off valve. If connected to a closed loop system, also close the condenser return line shut-off valve.
- 3) Open the condenser water supply line drain valve. If connected to a closed loop system, also open the condenser return line drain valve.
- 4) Attach a compressed air or carbon dioxide supply to the condenser water supply line drain valve.
- 5) Open the water regulating valve by using a screwdriver to pry up on the spring retainer underneath the spring. While holding the valve open, blow out the condenser using the compressed air or carbon dioxide supply until water stops coming out.
- 6) Close the drain valve(s).
- 7) Replace the panels in their correct positions.

