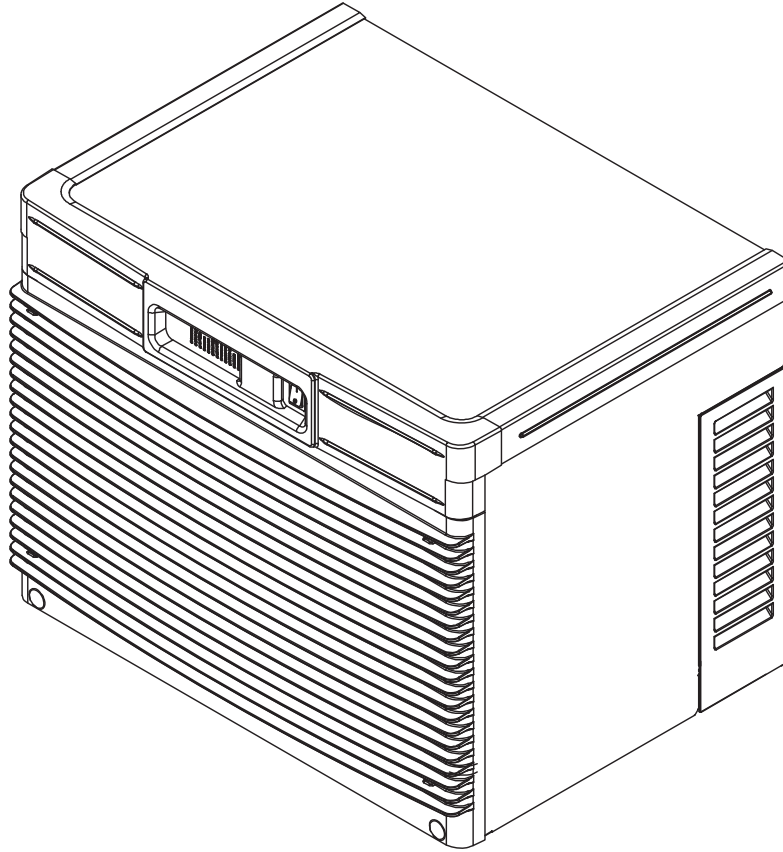


HCD710A, HMD710A Horizon Elite™ Ice Machines (Self-contained)

User Guide

Please visit www.follettice.com/technicaldocuments
for the Operation and Service manual for your unit.



Welcome to Follett

Follett equipment enjoys a well-deserved reputation for excellent performance, long-term reliability and outstanding after-the-sale support. To ensure that this equipment delivers that same degree of service, review this guide carefully before you begin your installation.

Should you need technical help, please call our Technical Service group at (877) 612-5086 or (610) 252-7301.

Please have your model number, serial number and complete and detailed explanation of the problem when contacting Technical Service.

Getting Started

After uncrating and removing all packing material, inspect the equipment for concealed shipping damage. All freight is to be inspected upon delivery. If visible signs of damage exist, please refuse delivery or sign your delivery receipt "damaged." Follett Customer Service must be notified within 48 hours. Wherever possible, please include detailed photos of the damage with the original packaging so that we may start the freight claim process.



CAUTION

- Warranty does not cover exterior or outside installations.
- Moving parts. Do not operate with front cover removed.
- Hot parts. Do not operate with cover removed.
- To reduce risk of shock, disconnect power before servicing.
- Drain line must not be vented.
- Water supply must have particle filtration.
- Most ice machine cleaners contain citric or phosphoric acid, which can cause skin irritation. Read caution label on product and follow instructions carefully.
- Ice is slippery. Maintain counters and floors around dispenser in a clean and ice-free condition.
- Ice is food. Follow recommended cleaning instructions to maintain cleanliness of delivered ice.

Chewblet® Ice Machine Model Number Configurations

<div><div>HC</div><div>D</div><div>1810</div><div>A</div><div>V</div><div>S</div></div>						
Icemaker	Voltage	Series	Condenser	Application	Configuration	
MC Maestro Plus™ Chewblet® (425 Series)	C 208-230/60/1 (icemaking head) <i>Self-contained only.</i>	425 up to 425 lbs (193 kg)	A Air-cooled, self-contained W Water-cooled, self-contained	V Vision™ H Harmony™	S RIDE® <i>(RIDE remote ice delivery equipment)</i>	
HC Horizon Elite™ Chewblet (710, 1010, 1410, 1810, 2110 Series)	D 115/60/1 (icemaking head) <i>Self-contained and remote. If remote unit, high side is 208-230/60/1.</i>	710 up to 675 lbs (306 kg)	R Air-cooled, remote condensing unit N Air-cooled, no condensing unit for connection to parallel rack system	B Ice storage bin J Drop-in M Ice Manager™ diverter valve system	T Top-mount	
HM Horizon Elite Micro Chewblet™	E 230/50/1 (icemaking head) <i>Self-contained only.</i> F 115/60/1 (icemaking head) <i>Remote only. High side is 208-230/60/3.</i>	1010 up to 1061 lbs (482 kg) 1410 up to 1466 lbs (665 kg) 1810 up to 1790 lbs (812 kg) 2110 up to 2039 lbs (925 kg)		P Cornelius Profile PR150		

Specifications

Electrical

Each ice machine requires its own separate circuit with electrical disconnect within 10 ft (6m).
Equipment ground required.

Standard electrical:

- 115 V/60/1 (6 ft (2m) NEMA 5-15 cord and plug provided)
- Amperage: 11.3A, dedicated 15A circuit required

Plumbing



WARNING

This equipment to be installed with adequate backflow protection to comply with applicable federal, state, and local codes.

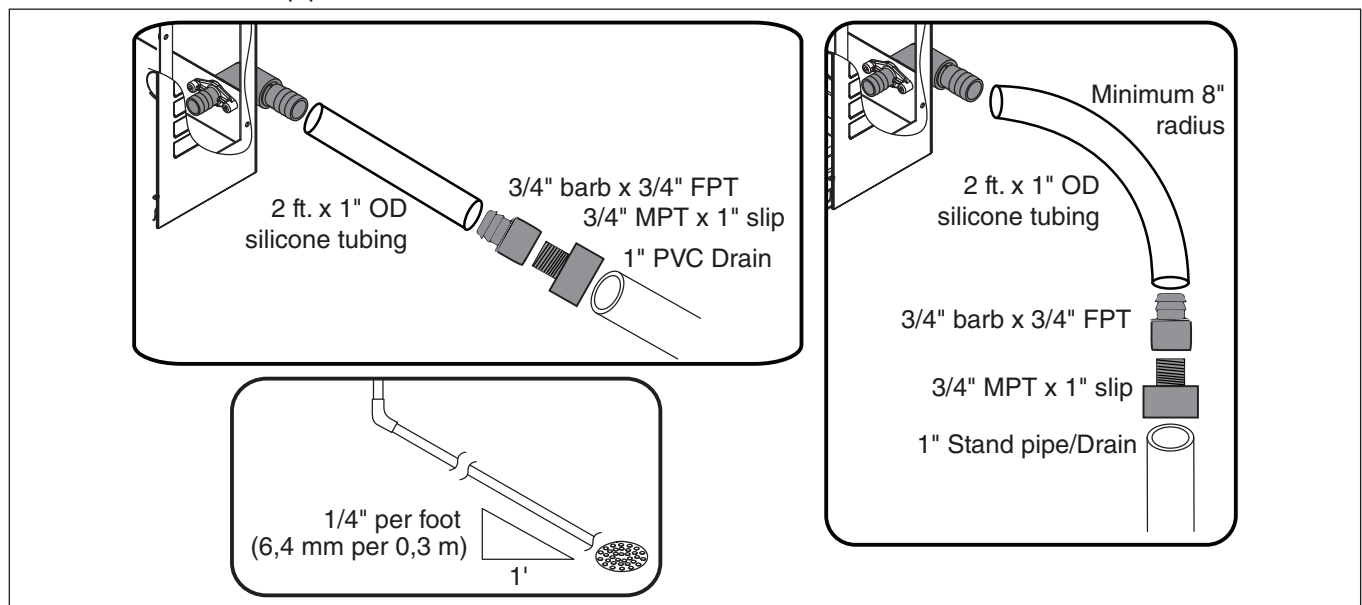
- 3/8" OD push-in water inlet (connection inside machine) - 3/8" OD tubing required
- 3/4" MPT drain

Notes:

- Water shut-off recommended within 10 feet (3m).
- Water supply must have particle filtration. Follett recommends the filter system that has integral scale inhibitors. (Follett item# 00130286).
- Follett does not recommend the use of water softeners or bowl scale inhibitors.

Drain plumbing

- 3/4" MPT drain connection at the rear of the machine.
- Drain must slope 1/4" inch per foot (6 mm per 30.4 cm).
- Drain line should not be shared with any other piece of equipment.
- Drain line cannot be reduced to a size smaller than 1 inch.
- Drain should be piped without a vent.



Ambient

Air temperature	100 F/38 C max.	50 F/10 C min.
Water temperature	90 F/32 C max.	45 F/7 C min.
Water pressure – potable	70 psi max. (483 kPa)	10 psi min. (89 kPa)

Heat rejection

	710
Air-cooled	8,500 BTU/hr

Ice production

710 Air-cooled ice machine capacity/24 hrs.

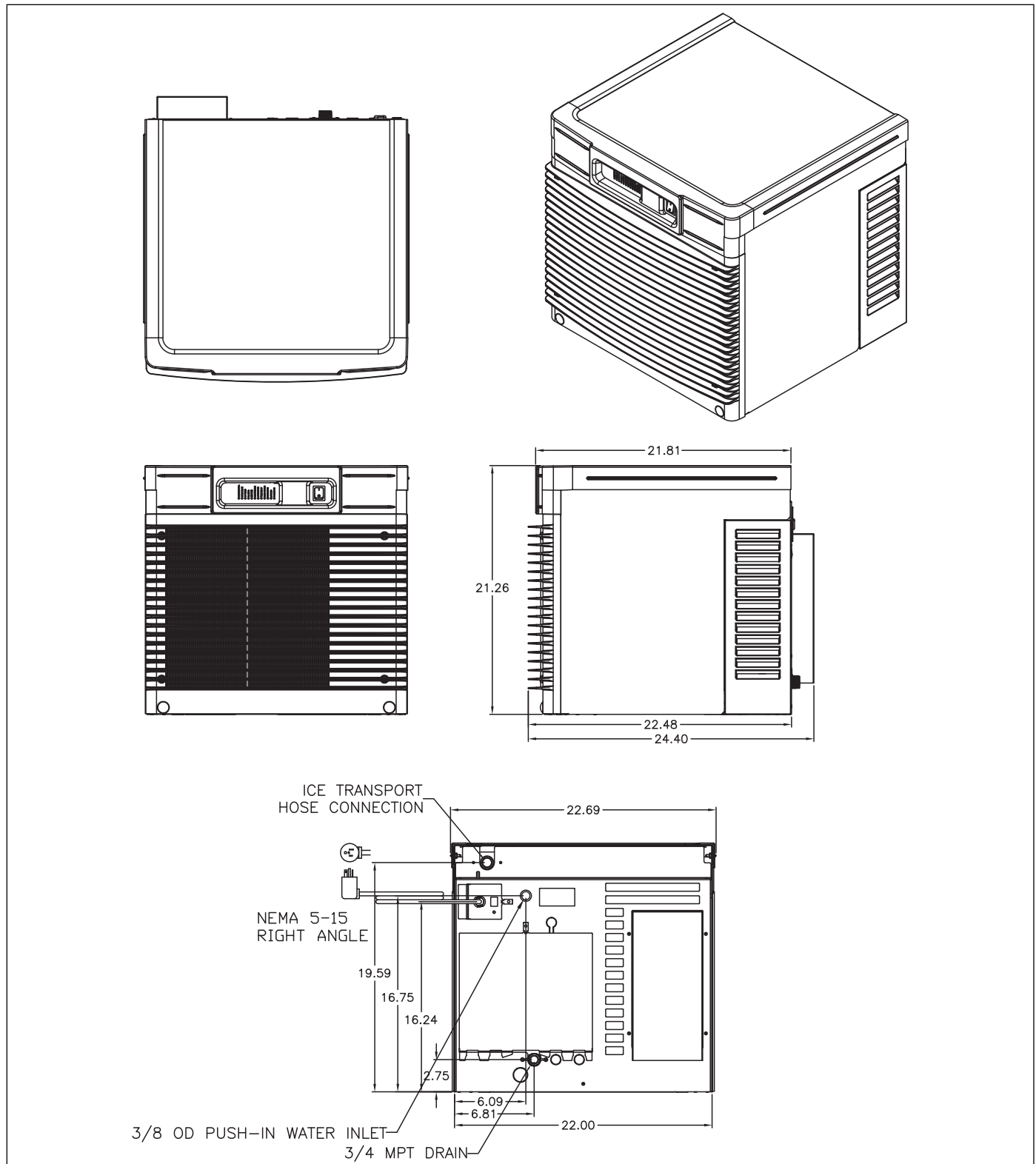
Ambient Air Temperature F/C							
Evap Potable Water Temperature F/C	F	60	70	80	90	100	
	C	16	21	27	32	38	
	50	787	759	705	639	603	lbs
	10	357	344	320	290	274	kg
	60	750	702	666	624	570	lbs
	16	340	318	302	283	259	kg
	70	707	681	636	586	542	lbs
	21	321	309	288	266	246	kg
	80	677	629	611	559	518	lbs
	27	307	285	277	254	235	kg
	90	642	600	580	539	497	lbs
	32	291	272	263	244	225	kg

Weight

Shipping	190 lb (86.2 kg)
Net	170 lb (77.2 kg)

Dimensions and clearances

- Entire front of ice machine must be clear of obstructions/connections to allow removal.
- 1" (26 mm) clearance above ice machine for service.
- 1" (26 mm) minimum clearance on sides.
- The intake and exhaust air grilles must provide at least 250 sq in (1615 sq cm) of open area.
- Air-cooled ice machines – 18" (458 mm) minimum clearance between discharge and air intake-grilles.



Operation

Cleaning/sanitizing and preventive maintenance (all models)

Note: Do not use bleach to sanitize or clean the icemaker.

Preventive maintenance

Periodic cleaning of Follett's icemaker system is required to ensure peak performance and delivery of clean, sanitary ice. The recommended cleaning procedures that follow should be performed at least as frequently as recommended, and more often if environmental conditions dictate.

Cleaning of the condenser can usually be performed by facility personnel. Cleaning of the icemaker system, in most cases, should be performed by your facility's maintenance staff or a Follett authorized service agent. Regardless of who performs the cleaning, it is the operator's responsibility to see that this cleaning is performed according to the schedule below. Service problems resulting from lack of preventive maintenance will not be covered under the Follett warranty.

Weekly exterior care

The exterior may be cleaned with a stainless cleaner such as 3M Stainless Steel Cleaner & Polish or equivalent.

Monthly condenser cleaning (air-cooled icemaker only)

1. Use a vacuum cleaner or stiff brush to carefully clean condenser coils of air-cooled icemakers to ensure optimal performance.
2. When reinstalling counter panels in front of remote icemakers, be sure that ventilation louvers line up with condenser air duct.

Semi-annual evaporator cleaning (every 6 months)



WARNING

- Wear rubber gloves and safety goggles (and/or face shield) when handling ice machine cleaner or sanitizer.



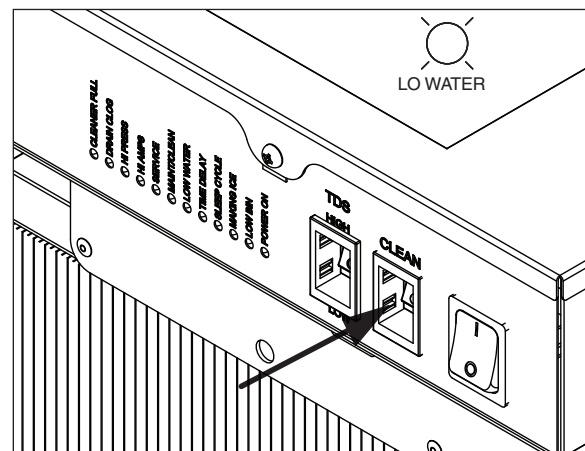
CAUTION

- Use only Follett approved SafeCLEAN Plus™ cleaning solution.
- DO NOT USE BLEACH.
- It is a violation of federal law to use these solutions in a manner inconsistent with their labeling.
- Read and understand all labels printed on packaging before use.

Note: Complete procedure for cleaning and sanitizing MUST be followed. Ice must be collected for 10 minutes before putting ice machine back into service.

1. Press the CLEAN button. The machine will drain. The auger will run for a short time and then stop. Wait for the LOW WATER light to come on.

Fig. 1



- Note:** Do not use bleach to sanitize or clean the icemaker.

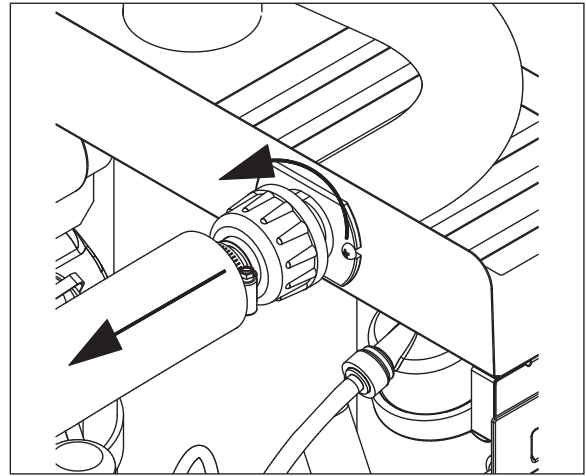
Diagram illustrating the correct way to add cleaner to the machine. A bucket of cleaner is being poured into a container labeled "CLEANER FULL".

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- [illegible]

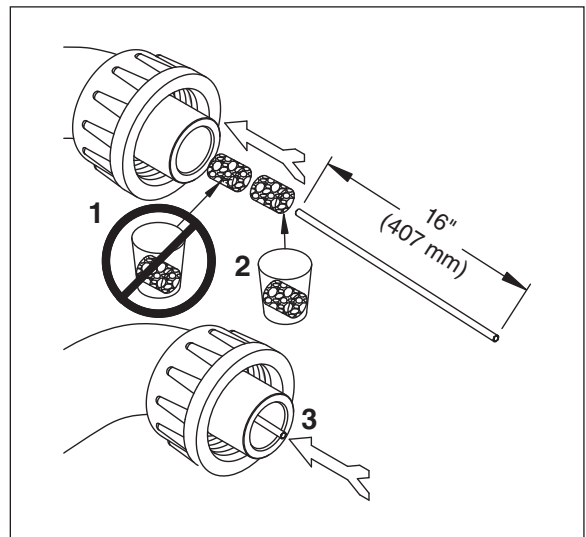
7. Disconnect coupling as shown.

Fig. 5



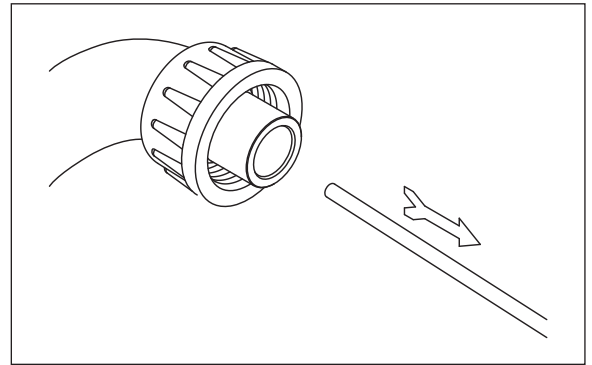
8. Using disposable foodservice grade gloves, insert dry SaniSponge cleaning sponge.
9. Insert SaniSponge cleaning sponge soaked in SafeClean Plus (from Step 4).
10. Push both SaniSponge cleaning sponges down ice transport tube with supplied pusher tube.

Fig. 6



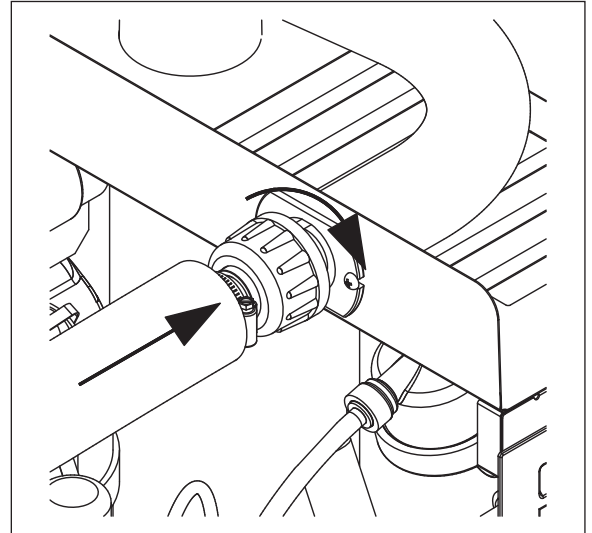
11. Remove and discard 16 inch (407 mm) pusher tube.

Fig. 7



12. Reconnect coupling. Press power switch ON. Ice pushes SaniSponge cleaning sponges through ice transport tube.

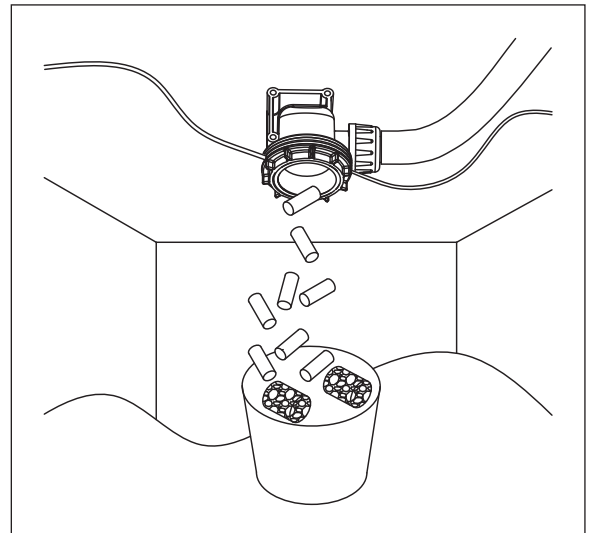
Fig. 8



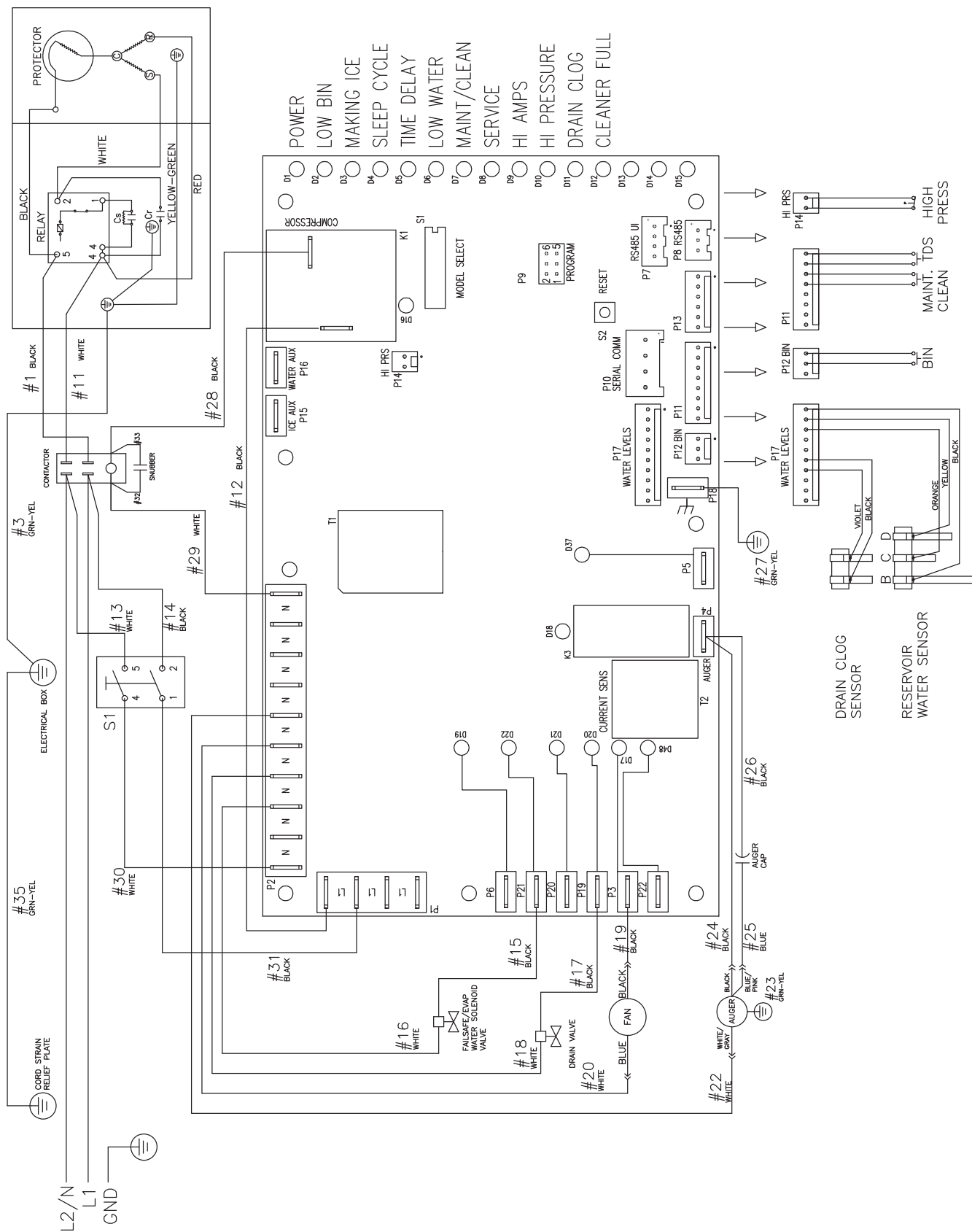
13. Place a sanitary (2 gal. or larger) container in bin or dispenser to collect SaniSponge cleaning sponges and ice for 10 minutes.

14. Collect 5.5 lbs (3 kg) of ice from unit. Discard ice and SaniSponge cleaning sponges.

Fig. 9



Wiring diagram



Compressor data

	710
Compressor current draw at 120 V VAC, 90 F/32.2 C	7.8A
Locked rotor amps @ 120 V	93.0A
Compressor start winding 120 V	2.23Ω
Compressor run winding 120 V	0.32Ω

Gearmotor data

Gearmotor current 1.2A @ 120 V

Gearmotor torque-out (high amp) trip point: 1.8A @ 120 V

Resistance of windings

115 vac gearmotor (Brother):

Gray to black: 15.5Ω

Blue to gray: 15.5Ω

Blue to black: 31Ω

Fan motor data

Fan motor current 0.2A @ 120 V

Fan motor resistance 100Ω

Refrigeration system

Refrigerant pressure data

Air-cooled condensers (air)	60 F/16 C	70 F/21 C	80 F/27 C	90 F/32 C	100 F/38 C
Pressure (psig) discharge/suction	190/32	225/34	258/36	292/39	325/41

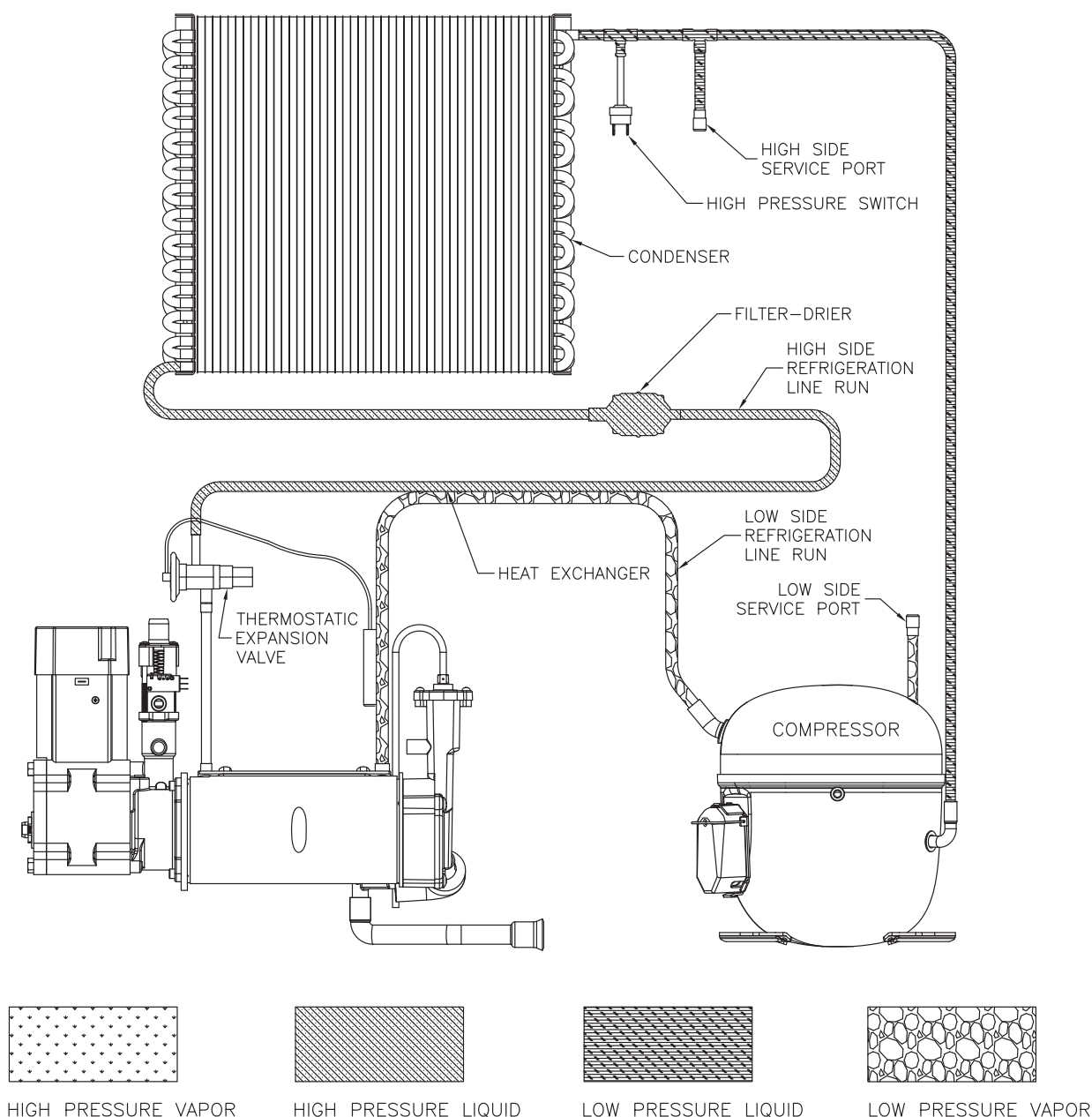
Refrigeration charge

All service on refrigeration systems must be performed in accordance with all federal, state and local laws. It is the responsibility of the technician to ensure that these requirements are met. Recharging ice machine to other than factory specifications will void the warranty.

R404A ice machine charge specifications

Model	Charge	Refrigerant type
710A (air-cooled)	21 oz (595 g)	R404A

Refrigeration system diagram



Evacuation

Evacuate the system to a level of 500 microns. When the 500 micron level is reached, close all valves. Allow the system to sit for approximately 20 minutes. During this period the system pressure should not rise. If the system pressure rises and stabilizes there is moisture in the system and further evacuation is needed. If the pressure continues to rise check the system for leaks.

Ambients	Minimum	Maximum
Air temperature ¹	50 F/10 C	100 F/37.8 C
Water temperature ²	45 F/7 C	90 F/32.2 C

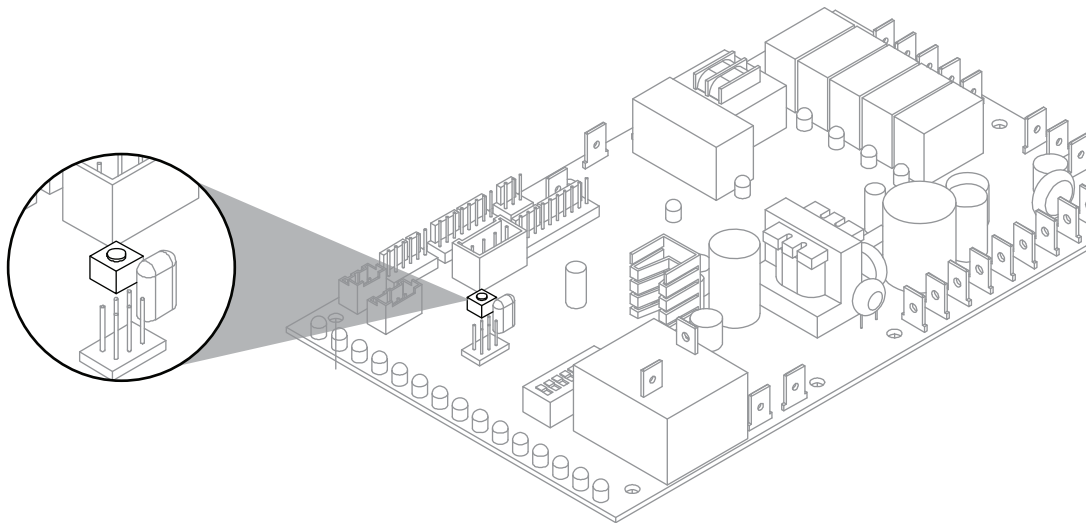
¹Ambient air temperature is measured at the air-cooled condenser coil inlet.

²Ambient water temperature is measured at the water feed valve inlet.

Ice capacity test

Ice machine production capacity can only be determined by weighing ice produced in a specific time period.

1. Replace all panels on ice machine.
2. Run ice machine for at least 15 minutes.
3. Move TDS switch to LOW.
4. Press the reset button on the board.



5. Weigh and record weight of container used to catch ice.
6. Catch ice for 15 minutes.
7. Weigh harvested ice and record total weight.
8. Subtract weight of container from total weight.
9. Convert fractions of pounds to decimal equivalents (ex. 6 lbs 8 oz = 6.5 lbs).
10. Calculate production using following formula:

$$\frac{1440 \text{ min.} \times \text{wt. of ice produced}}{\text{Total test time in minutes}} = \text{Production capacity/24 hr.}$$

11. Calculated amount per 24 hours should be checked against rated capacity for same ambient and water temperatures in Ice Production Tables.
12. Move TDS switch to the HI TDS position.

Troubleshooting

Please see "Service" section for a description of each function.

Ice machine disposition	Possible causes	Corrective action
Legend: <input checked="" type="radio"/> ON <input type="radio"/> OFF <input type="radio"/> ON or OFF <input checked="" type="radio"/> FLASHING		
1. Ice machine is in running condition but not making ice. CLEANER FULL <input type="radio"/> DRAIN CLOG <input type="radio"/> HI PRESS <input type="radio"/> HI AMPS <input type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input type="radio"/> TIME DELAY <input type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input checked="" type="radio"/> LOW BIN <input checked="" type="radio"/> POWER ON <input checked="" type="radio"/>	1. Defective compressor. 2. Defective start relay. 3. Defective start capacitor. 4. Defective run capacitor. 5. Defective main contactor. 6. No output from PC board.	1. Replace compressor. 2. Replace start relay. 3. Replace start capacitor. 4. Replace run capacitor. 5. Replace main contactor. 6. Replace PC board.
2. Machine in TIME DELAY without full bin. CLEANER FULL <input type="radio"/> DRAIN CLOG <input type="radio"/> HI PRESS <input type="radio"/> HI AMPS <input type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input type="radio"/> TIME DELAY <input checked="" type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input type="radio"/> LOW BIN <input checked="" type="radio"/> POWER ON <input checked="" type="radio"/>	1. Ice jamming due to improperly installed transport tube causing a false shuttle. 2. Shuttle stuck in up position. 3. Damaged or improperly installed thermostat (open). 4. Transport tube backed-out of coupling.	1. Correct transport tube routing. 2. Repair or replace shuttle mechanism. 3. Replace or reposition thermostat. 4. Correct coupling installation.
3. Ice machine is not making ice. HI AMPS. CLEANER FULL <input type="radio"/> DRAIN CLOG <input type="radio"/> HI PRESS <input type="radio"/> HI AMPS <input checked="" type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input type="radio"/> TIME DELAY <input type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input type="radio"/> LOW BIN <input checked="" type="radio"/> POWER ON <input checked="" type="radio"/>	1. Poor water quality causing ice to jam auger. 2. Drain not draining/slow to drain. 3. Damaged shuttle mechanism. 4. Intermittent drive output from PC board. Evaporator will freeze causing a HI AMPS error. 5. Gearmotor is unplugged.	1. Clean ice machine. Position TDS switch to High TDS setting. 2. Clear and/or correct drain. 3. Replace or repair shuttle mechanism. 4. Replace PC board. 5. Plug in gearmotor.
4. Ice machine is not making ice. HI PRESSURE. CLEANER FULL <input type="radio"/> DRAIN CLOG <input type="radio"/> HI PRESS <input checked="" type="radio"/> HI AMPS <input type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input type="radio"/> TIME DELAY <input type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input type="radio"/> LOW BIN <input checked="" type="radio"/> POWER ON <input checked="" type="radio"/>	1. High ambient temperatures >100 F (38 C). 2. Poor ventilation or air recirculation. 3. Clogged condenser (air-cooled). 4. Fan not working properly. No air flow. <ul style="list-style-type: none"> Blocked fan blades No fan output from PC board Faulty fan motor 	1. Air condition area to below 100 F (38 C). 2. Reposition ice machine or properly ventilate. Prevent ice machine exhaust from recirculating. 3. Clean condenser grille (air-cooled). 4. Correct air flow. <ul style="list-style-type: none"> Remove any blockage from fan blades Replace PC board Replace fan motor
5. Ice machine is not making ice. Drain clog. CLEANER FULL <input type="radio"/> DRAIN CLOG <input checked="" type="radio"/> HI PRESS <input type="radio"/> HI AMPS <input type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input type="radio"/> TIME DELAY <input type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input type="radio"/> LOW BIN <input checked="" type="radio"/> POWER ON <input checked="" type="radio"/>	1. Internal water leak touching chassis sensor.	1. Identify and repair leak. Clean/dry chassis and sensors and restart machine.

Ice machine disposition	Possible causes	Corrective action
Legend: <input checked="" type="radio"/> ON <input type="radio"/> OFF <input type="radio"/> ON or OFF <input checked="" type="radio"/> FLASHING		
6. Ice machine is making ice. Drain clog. CLEANER FULL <input type="radio"/> DRAIN CLOG <input checked="" type="radio"/> HI PRESS <input type="radio"/> HI AMPS <input type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input type="radio"/> TIME DELAY <input type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input type="radio"/> LOW BIN <input type="radio"/> POWER ON <input checked="" type="radio"/>	1. Improper flow in drain system.	1. Correct/clean drain system.
7. Ice machine is making ice. Excessive water in bin or coming into bin from transport tube. CLEANER FULL <input type="radio"/> DRAIN CLOG <input type="radio"/> HI PRESS <input type="radio"/> HI AMPS <input type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input type="radio"/> TIME DELAY <input type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input checked="" type="radio"/> LOW BIN <input checked="" type="radio"/> POWER ON <input checked="" type="radio"/>	1. Failed water sensors. Processor assumes there is no water when there is water. 2. Blocked reservoir vent. 3. Defective water feed solenoid valve. Stuck in open position.	1. Clean or replace water probe assembly. Check wiring connections. 2. Clean or replace vent tubes. 3. Replace water feed solenoid valve.
8. Ice machine is not making ice. Lo water. CLEANER FULL <input type="radio"/> DRAIN CLOG <input type="radio"/> HI PRESS <input type="radio"/> HI AMPS <input type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input checked="" type="radio"/> TIME DELAY <input checked="" type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input type="radio"/> LOW BIN <input checked="" type="radio"/> POWER ON <input checked="" type="radio"/>	1. Water supply is insufficient. 2. Low water pressure. 3. Defective water feed solenoid valve. Stuck in closed position. 4. No water feed output from PC board. 5. Plugged screen on inlet side of fill solenoid. 6. Plugged check valve.	1. Restore water supply and check water filters. If evaporator was completely empty the reset button may have to be pressed to restart the ice machine. 2. Ice machine will eventually start when water reaches normal lo level. 3. Replace water feed solenoid valve. 4. Replace PC board. 5. Remove and clean screen. 6. Remove and clean.
9. LOW WATER blinking and low bin. CLEANER FULL <input type="radio"/> DRAIN CLOG <input type="radio"/> HI PRESS <input type="radio"/> HI AMPS <input type="radio"/> SERVICE <input type="radio"/> MAINT/CLEAN <input type="radio"/> LOW WATER <input checked="" type="radio"/> TIME DELAY <input checked="" type="radio"/> NOT USED <input type="radio"/> MAKING ICE <input type="radio"/> LOW BIN <input checked="" type="radio"/> POWER ON <input checked="" type="radio"/>	1. Refrigeration issue.	1. Check outdoor condensing unit for proper function.



ATTENTION!

To prevent circuit breaker overload, wait 5 minutes before restarting this unit. This allows the compressor to equalize and the evaporator to thaw.

Warranty Registration and Equipment Evaluation

Thank you for purchasing Follett equipment. Our goal is to earn your complete satisfaction by delivering high-value products and services backed by outstanding customer and technical support.

Please review the installation instructions thoroughly. It is important that the installation be performed to factory specifications so your equipment operates at its maximum efficiency.

Follett LLC will not be liable for any consequential damages, expenses, connecting or disconnecting charges, or any losses resulting from a defect of the machine. For full warranty details, visit our website www.follettice.com/productwarranties.

Registering your equipments helps Follett track your equipment's service history should you need to contact us for technical support, and your feedback helps us improve our products and services. Please visit www.follettice.com/support to complete the Warranty Registration form.

Should you have any questions, please contact Follett's technical support group at (877) 612-5086 or (610) 252-7301 and we will be happy to assist you.

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