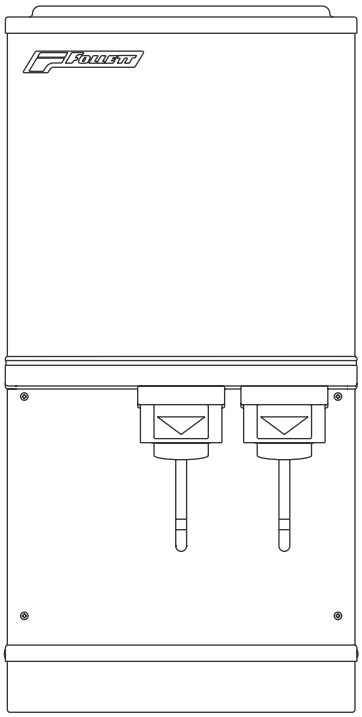
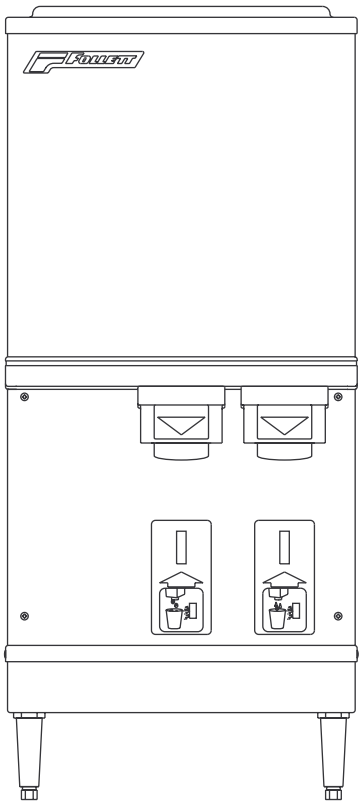
12 Series
Ice and Water Dispensers

Order parts online
www.follettice.com

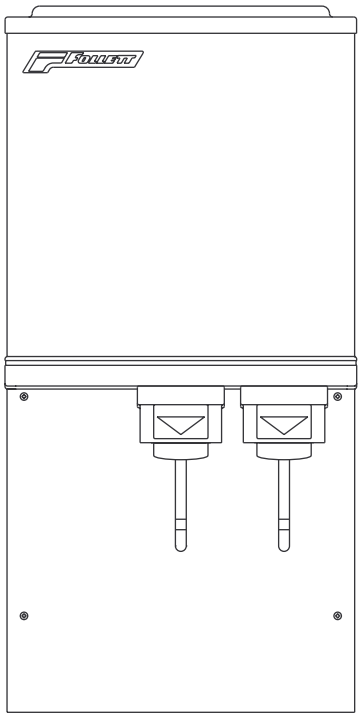
Installation, Operation and Service Manual



C125A
countertop dispenser



C125A
countertop dispenser with SensorSAFE™ actuation (shown with legs accessory)



H125A
wall mount dispenser (available with or without drain pan)

Following installation, please forward this manual to the appropriate operations person.

FOLLETT
Cool Ideas For Ice Management

801 Church Lane • PO Box D • Easton, PA 18044
Toll free (800) 523-9361 • (888) 2-FOLLETT
(610) 252-7301 • Fax (610) 250-0696 • www.follettice.com

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Welcome to Follett

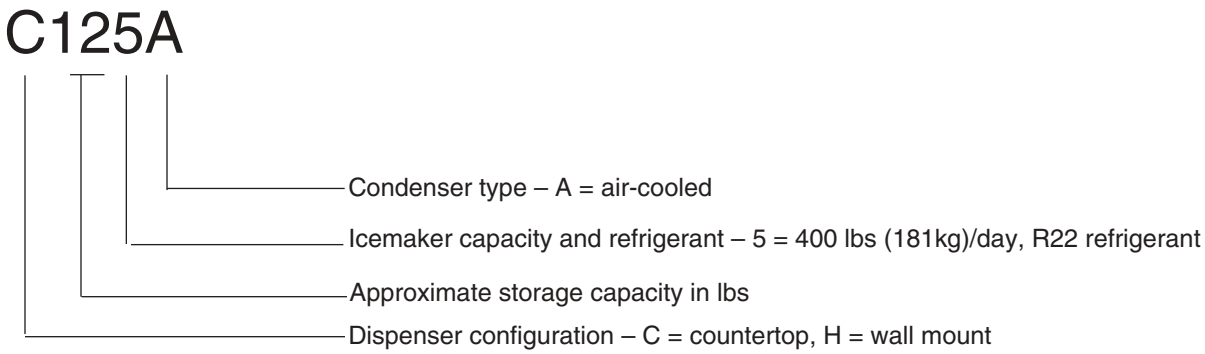
Follett ice dispensers enjoy a well-deserved reputation for excellent performance, long-term reliability and outstanding after-the-sale support. To ensure that this dispenser delivers that same degree of service, we ask that you review the installation portion of this manual before beginning to install the dispenser. Our installation instructions are designed to help you achieve a trouble-free installation. Should you have any questions or require technical help at any time, please call our technical service group at (800) 523-9361, (888) 2-FOLLETT or (610) 252-7301.

Following installation, please forward this manual to the appropriate operations person.

Before you begin

- After uncrating and removing all packing material, inspect the equipment for concealed shipping damage. If damage is found, notify your shipper immediately and contact Follett Corporation for help in filing a claim, if necessary.

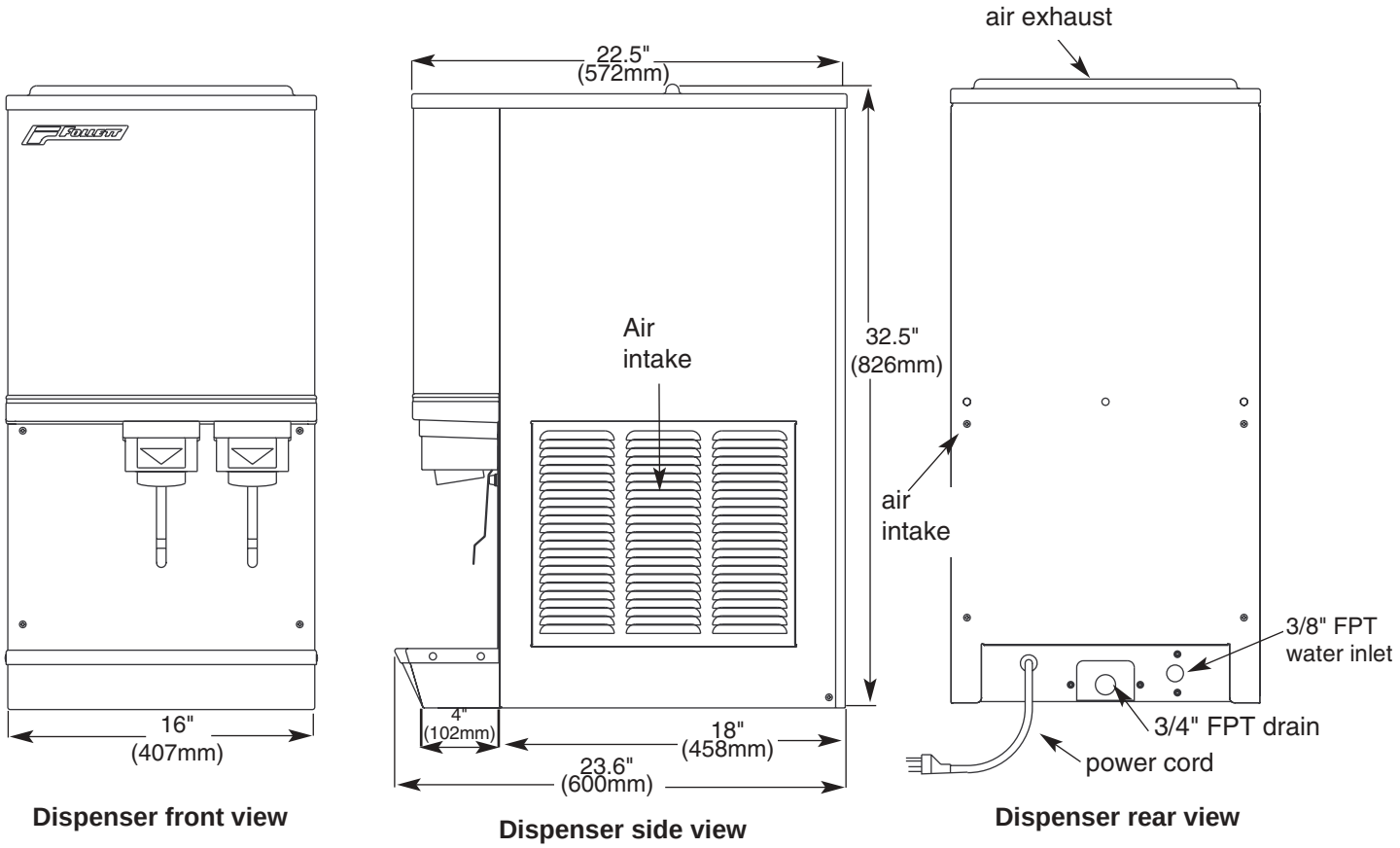
- Check your paperwork to determine which model dispenser you have. Follett model numbers are designed to provide information about the type and capacity of Follett ice dispensing equipment. Following is an explanation of model numbers:



Important cautions

- Do NOT tilt any unit further than 30° off vertical during uncrating or installation
- Dispenser bin area contains mechanical, moving parts. Keep hands and arms clear of this area at all times. If access to this area is required, power to unit must be disconnected first.
- Follett recommends installation of an activated carbon filter in icemaker inlet water line
- 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.
- Do not block right side air intake or top air exhaust

Specifications



Dispenser front view **Dispenser side view** **Dispenser rear view**

Electrical specifications

115V, 60Hz, 1 phase, 13.0 amps. Connect to 20 amp circuit, fuse or breaker.
Note: It is preferred that circuit be protected by a GFCI.

Furnished with 6 ft (1.8m) power cord with 5-20 plug

Ambient specifications

Air temp	100°F/38°C Max.	50°F/10°C Min. (Best performance below 80˚F/27˚C)
Water temp	90°F/32°C Max.	40°F/4°C Min. (Best performance below 70˚F/21˚C)
Water pressure	70 P.S.I. Max.	10 P.S.I. Min.

Plumbing specifications

	C125A	**H125A**
Dispenser drain	3/4" FPT	3/4" FPT
Water inlet	3/8" FPT	3/8" FPT

Note: Water shut-off recommended within 10 feet (3m) of dispenser. Drain to be hard-piped and insulated. Maintain at least 1/4" per foot (6mm per 30.4cm run) of slope.

Ventilation clearances

6" (153mm) on right side of dispenser, 12" (305mm) at top

Do not block right side air intake or top air exhaust.

Dry weight

175 lbs (79.4kg)

Installation procedures

Before you begin

- All dispensers must be installed level in both directions to ensure proper operation.
- Required service and ventilation clearances: 6" (153mm) on right side of dispenser, 12" (305mm) at top.
- Countertop units installed without legs provide the option of taking utilities out bottom or back of dispenser (on wall mount units and countertop units with legs, utilities exit out back). See counter cut-out drawings for bottom exiting utilities on units with and without drain pans. For installations where utilities exit through back of dispenser, refer to back view drawings.
- Wall mount models without drain pan are designed for use above sinks.
- Wall mount models require 30" (762mm) deep counters. Front of sinks must be installed no more than 2" (51mm) from front of counter.

Installing countertop dispensers without legs

1. Position dispenser in desired location, mark dispenser outline on counter and remove dispenser.
2. Regardless of whether utilities will exit through back or bottom of dispenser, drill four (4) 7/16" holes in counter to anchor dispenser to counter (Fig. 1).
3. **For utilities exiting through bottom only:**
   (a) Make cutout as shown in Fig. 1.
   (b) Move plug from drain T to back of unit (Fig. 2).
   (c) Remove 90 degree compression fitting and poly tube.
   (d) Run water line to 3/8" FPT water inlet.
4. **For all units:**
   Apply a thick bead - approximately 1/4" (6 mm) diameter - of NSF listed silicone sealant (Dow Corning RTV-732 or equivalent) 1/4" (6mm) inside marked outline of dispenser.
5. Carefully lower dispenser on counter in proper position and secure to counter with four (4) 3/8"-16NC bolts.
6. Smooth excess sealant around outside of dispenser.
7. Make final connections.

Fig. 1 Counter information

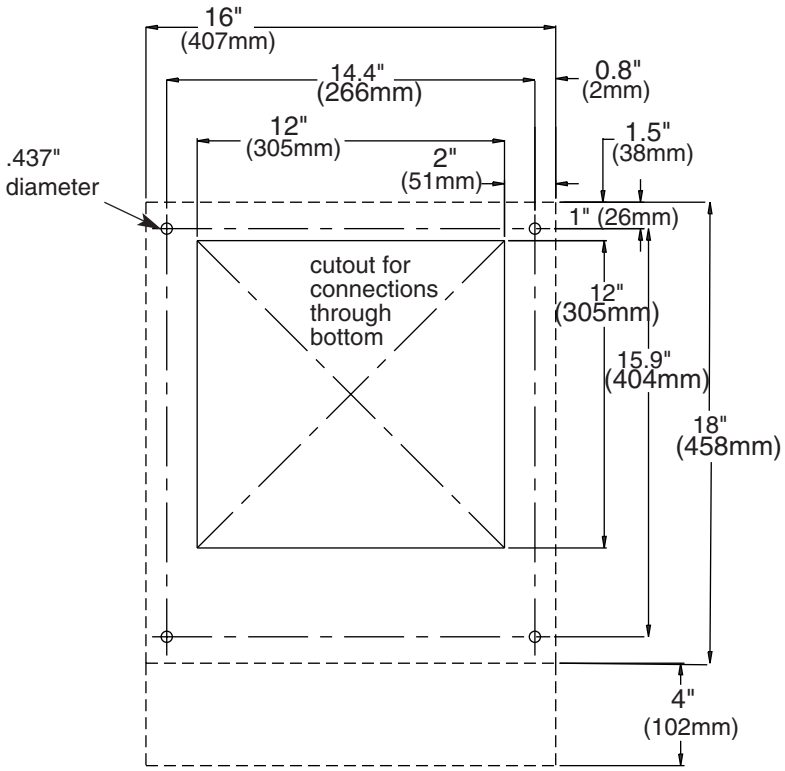


Fig. 2 Bottom exiting utilities (countertop units)

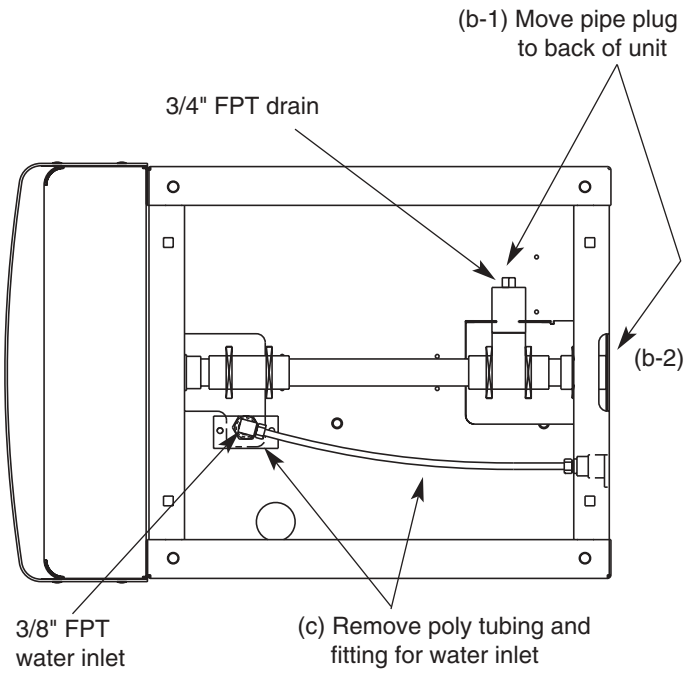
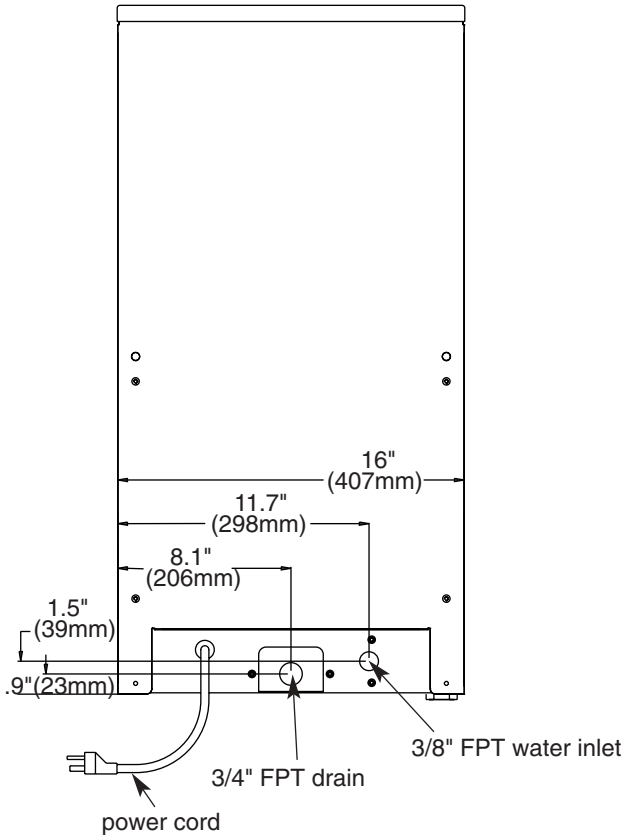


Fig. 3 Rear exiting utilities (countertop units)



Installing countertop dispensers with legs accessory

Do NOT tilt unit further than 30° off vertical.

Countertop dispensers that sit on legs (not bolted to counter) can be inadvertently moved. Care should be taken when operating and cleaning to avoid accidents.

1. Carefully tip dispenser back to expose underside and block up in place.
2. Screw legs (shipped taped to drain pan of dispenser) into dispenser bottom, taking care to seat legs securely against underside of dispenser.
3. Position unit in desired location and adjust bullets on legs to level in both directions.
4. Attach bottom panel and hardware to bottom of dispenser with supplied screws (Fig. 4).
5. Make final connections.

Fig. 4 Bottom panel assembly

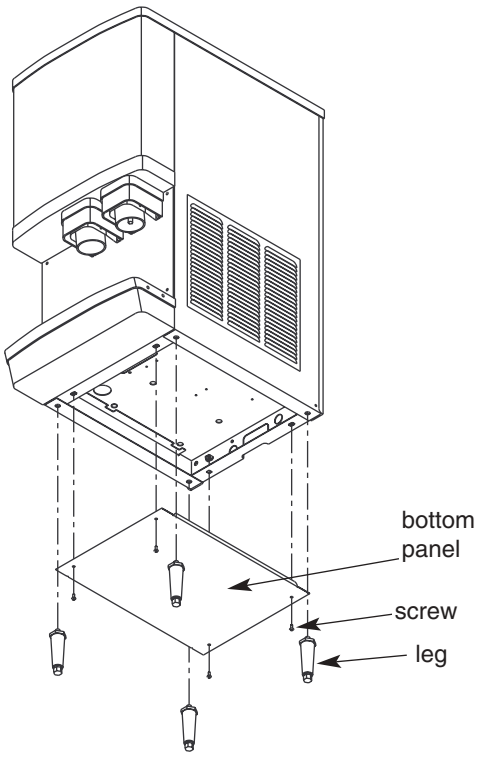
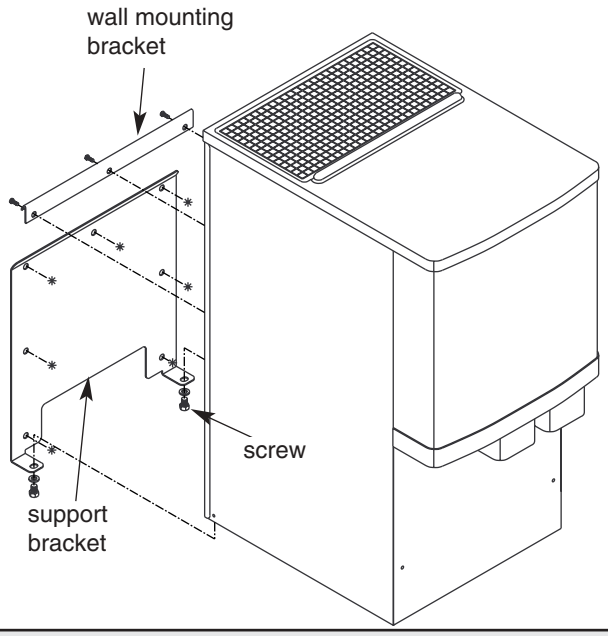
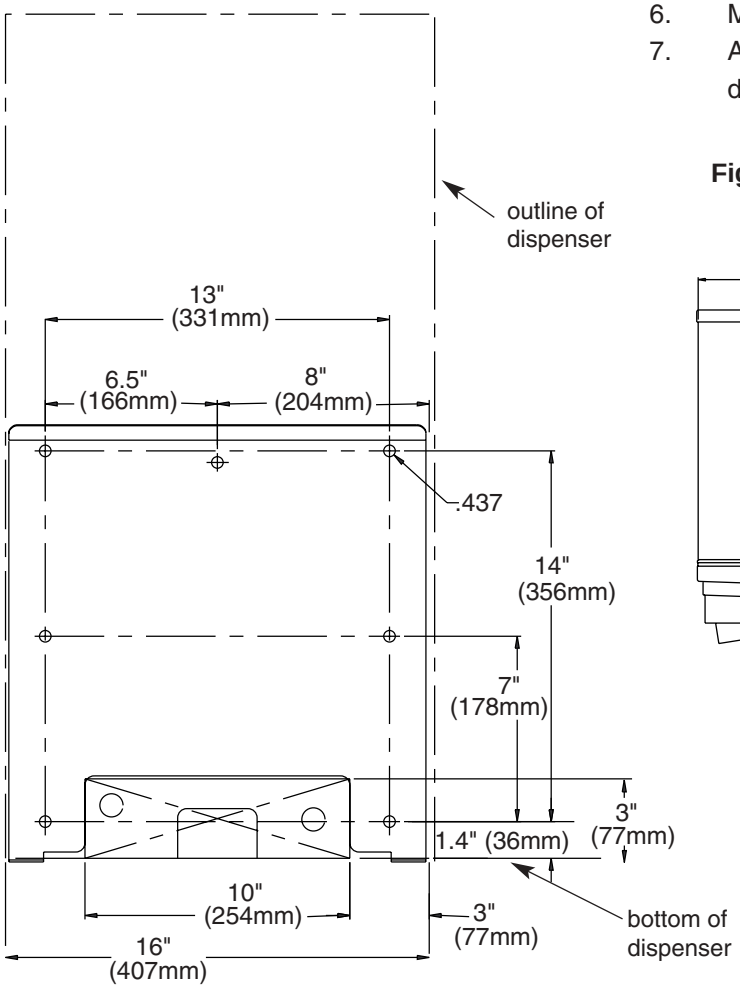


Fig. 5 Wall mount bracket and fastener requirements



WALL PREPARATION: Wall and fasteners must be of sufficient strength to carry weight of unit (185 lbs/83.9kg). *Hardware for this is not included.*

Fig. 6 Wall mount mounting dimensions



Installing wall mount dispensers

Wall mount models require 30" (762mm) deep counters and front of sinks must be installed no more than 2" (51mm) from front of counter.

Supporting wall must be reinforced to handle dispenser weight (185 lbs/83.9kg).

1. Cut utility hole in wall as shown in Fig. 10.
2. Mount support bracket to reinforced wall using fasteners of sufficient strength (fasteners not included, Fig. 6).
3. Rough in water and drain lines (Fig. 10).
4. Lift dispenser onto support bracket, positioning unit such that hook on back of dispenser is captured by support bracket angle (Fig. 7).

Caution: Do NOT rest dispenser weight on bottom of support bracket.

5. Install two (2) supplied 3/8"-16NC screws through bottom of support bracket into bottom of dispenser (Fig. 5).
6. Make final connections.
7. Attach bottom panel and hardware to bottom of dispenser as shown in Fig. 8.

Fig. 7 Wall mount side view

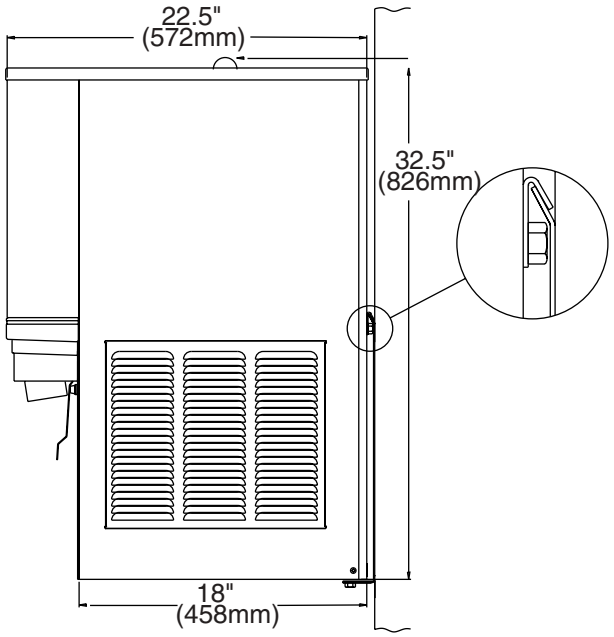


Fig. 8 **Wall mount unit bottom panel assembly**

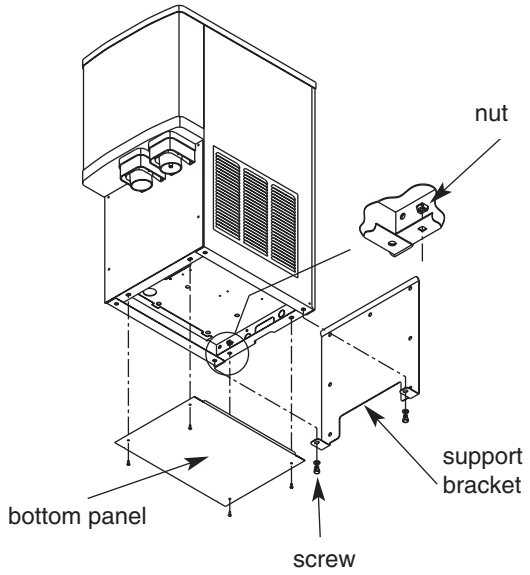


Fig. 9 **Wall mount bottom view**

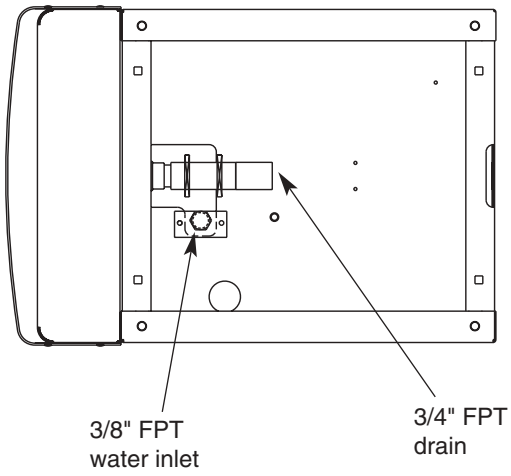
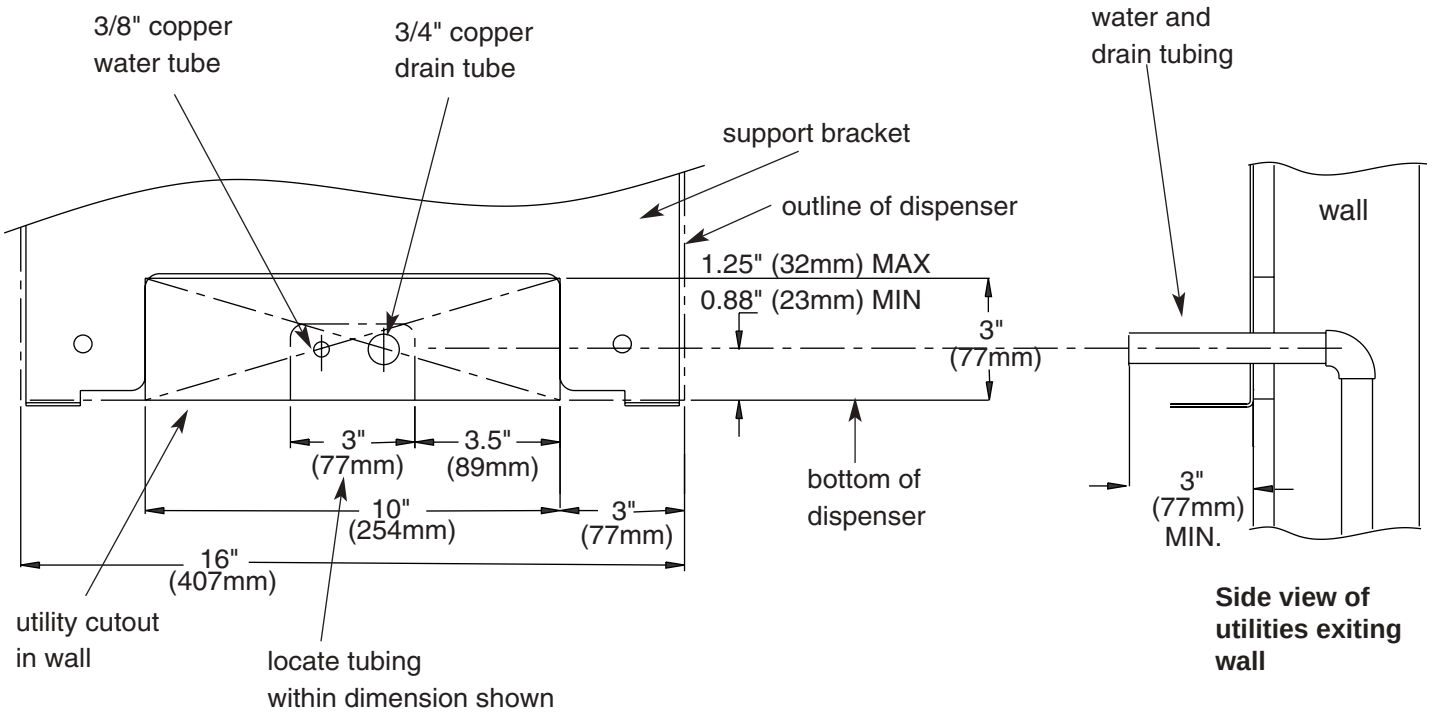


Fig. 10 **Front view of wall mount bracket – utility location**



Side view of utilities exiting wall

User information

How the dispenser works

Follett's 12 series automatic load ice and water dispensers are equipped with Follett's 400 lb (181kg)/day icemaker. In Follett's continuous icemaking process, water freezes to the inside walls of the evaporator. A rotating stainless steel auger carries the ice to the top of the evaporator where it is compressed and extruded through an outlet port. The ice is then pushed through a tube to the storage hopper. When the hopper is full, a bin stat opens and shuts the icemaker off. When the dispense mechanism is activated, a dispense motor is turned on, causing the wheel to turn. This moves ice to the dispense chute where it drops by gravity into the container held below the chute.

How the SensorSAFE™ accessory works

Follett's SensorSAFE accessory maximizes sanitation and minimizes the possibility of cross-contamination by eliminating physical contact between the cup or container and dispenser. Sensors in the panel use reflected infra-red light to detect the presence of the container and send a signal to a control board which then activates the appropriate components for ice or water dispensing.

- The SensorSAFE package includes a cleaning switch under the left side of the front cover which temporarily shuts off dispensing to allow cleaning of the panel and lenses. If the switch is not turned back on after cleaning, the dispenser automatically resets after two minutes for normal operation.
- SensorSAFE also includes a time limit safety feature which automatically stops ice dispensing after one minute of continuous dispensing. Dispensing can be resumed by moving the container away from the dispenser and returning it to the activation zone.

Cleaning and sanitizing procedures

Solution A: Prepare cleaning solution (200 ppm of available chlorine content) of Ecolab Mikro-chlor Cleaner or equal chlorinated detergent. Solution temperature must be 75˚F – 125˚F (24˚C – 52˚C).

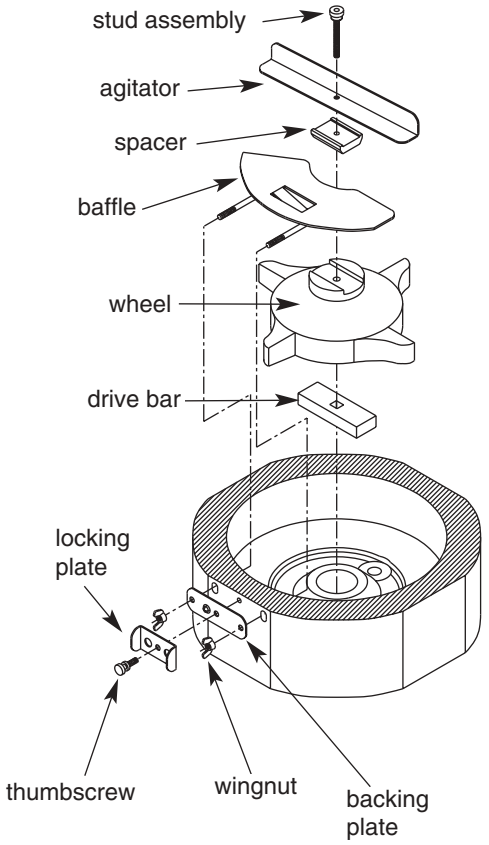
Solution B: Prepare sanitizing solution (50 ppm of available chlorine content) of Ecolab Mikro-chlor Cleaner or equal chlorinated detergent. Solution temperature must be 75˚F – 125˚F (24˚C – 52˚C).

Follett recommends the periodic cleaning schedule below to ensure the quality of ice provided. Use only recommended cleaning solutions. Do not use solvents, abrasive cleaners, metal scrapers or sharp objects.

Dispenser cleaning: start-up and quarterly intervals

Warning – Always disconnect power before cleaning.

1. Remove all ice from storage hopper.
2. Remove center thumbscrew, locking plate, two wingnuts and backing plate from front of storage hopper.
3. Remove stud assembly, agitator, spacer, baffle, wheel and drive bar in this sequence.
4. Remove dispense chute.
5. Wipe lid, wheel, baffle, inside of storage area and dispense chute with damp cloth wrung out in Solution A.



To avoid possible damage to motor assembly, use a damp cloth only. Do not allow water to run through center hole in bottom of bin area.

6. Rinse all above items with damp cloth rinsed and wrung out in clear water.
7. Sanitize all above items with damp cloth wrung out in Solution B. Do not rinse.
8. Pour 1 cup (284ml) household bleach into drain pan, followed by 1 gallon (3.8L) hot tap water to flush drains.
9. Reinstall all parts.

Dispenser grille and drain pan - weekly intervals

1. Remove grille and wash with Solution A. Rinse thoroughly.
2. Pour 1 cup (284ml) household bleach into drain pan, followed by 1 gallon (3.8L) of hot tap water to flush drains.

Splash panel front, SensorSAFE™ dispensers

1. Deactivate actuation by pressing and releasing clean switch located on left side of unit under top front cover.
2. Clean lens using a soft cloth and mild, non-abrasive cleaner.
3. Reactivate dispenser by pressing and releasing clean switch again.

Icemaker cleaning & sanitizing

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 which follow should be performed at least as frequently as recommended below 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.

Condenser cleaning - monthly

1. Use vacuum cleaner or stiff brush to carefully clean condenser coils of air-cooled icemaker to ensure optimal performance.
2. When reinstalling louver panels on side of dispenser, be sure ventilation louvers are facing down in order to prevent water, dust and other debris from falling into system.

Icemaking cleaning - quarterly

The icemaking system can be cleaned in place without disassembling the water system. This cleaning process should be performed at least every 3 months, and more often if local water conditions dictate. Failure to clean icemaker will result in decreased performance and potential damage to icemaker.

1. Disconnect power to unit.
2. Remove front panel (as shown on page 30) to gain access to water reservoir and electrical control box.
3. Turn compressor switch on electrical box to OFF position.
4. Remove water reservoir cover and block up reservoir float.
5. Drain water from reservoir and evaporator using evaporator drain hose teed off evaporator supply hose.
6. Following manufacturer's instructions, prepare 3 pints (1.4L) Calgon Ice Machine Cleaner or equivalent. Cleaning solution temperature must be 65˚ - 85˚F (18˚ - 29˚C).

Most ice machine cleaners contain citric or phosphoric acid which can cause skin irritation. Read caution label on product and follow instructions carefully.

7. Plug evaporator drain hose and pour part of cleaning solution into reservoir, filling almost to overflowing.
8. Remove stainless steel compression nozzle and submerge in cup of cleaning solution while cleaning rest of system.
9. Restore power to icemaker (gearmotor will now run, but compressor and fan motor will not).
10. After 15 minutes, turn power off and drain cleaning solution from reservoir and evaporator.
11. Plug drain hose and secure in mounting position.
12. Rinse compression nozzle in clean water and reinstall on evaporator outlet.
13. Clean evaporator drain pan and drain lines with liquid ice machine cleaner (remove left side panel for access, as shown on page30.)
14. Following manufacturer's instructions, prepare 1 gallon (3.8L) Calgon Ice Machine Sanitizer or equivalent. Sanitizing solution temperature must be 65˚ - 85˚F (18˚ - 29˚C).
15. If ice bin cleaning is also needed at this time, remove all ice from ice storage area and allow ice made during sanitizing process to fall into ice bin area.
    Note: If storage hopper will not be cleaned at this time, connect a separate ice transport tube to evaporator and divert ice into separate container.
16. Fill reservoir almost to overflowing with sanitizing solution.
17. Restore power to icemaker and turn compressor switch to ON position.
18. As unit starts to make ice, continue to pour sanitizing solution into reservoir, maintaining level just below reservoir overflow.
19. Continue to make ice until you have used 1/2 gallon (1.9L) sanitizing solution.
20. Unblock float, replace reservoir cover and continue to make ice for at least 15 minutes to flush all sanitizing solution from system.
21. Switch compressor switch to OFF position.
22. Wash storage hopper with remaining sanitizing solution and rinse with potable water.
23. Switch compressor switch to ON position.
24. Replace any panels removed prior to cleaning.

Start-up following cleaning

1. Clean and sanitize ice storage area of dispenser in accordance with instructions above before making ice.
2. Turn icemaker on and begin to make ice (icemaker should start within 45 seconds with power and bin signal supplied).
3. After approximately 30 minutes, test dispenser for proper dispensing.

Service information

How the icemaker works

Follett's icemaker consists of four distinct functional systems:

- Refrigeration system
- Water system
- Harvesting system
- Electrical control system

These four systems work together to produce and harvest ice. A problem in any one of these system areas will result in improper operation of the entire ice production cycle. When troubleshooting the icemaker, it is important to analyze the entire system operation to determine which system is not functioning properly, then pinpoint the component within that system that is malfunctioning. Determine what corrective action must be taken before making any adjustments or replacing any components.

Note: When performing electrical service, always use a meter to determine whether or not components being serviced are energized.

The icemaking process

Follett icemakers use a wrapped tube evaporator and operate on a continuous freezing cycle. Water is supplied to the evaporator from the water reservoir where the water level is controlled by a float valve. This valve also shuts off the water supply when the icemaker is not running.

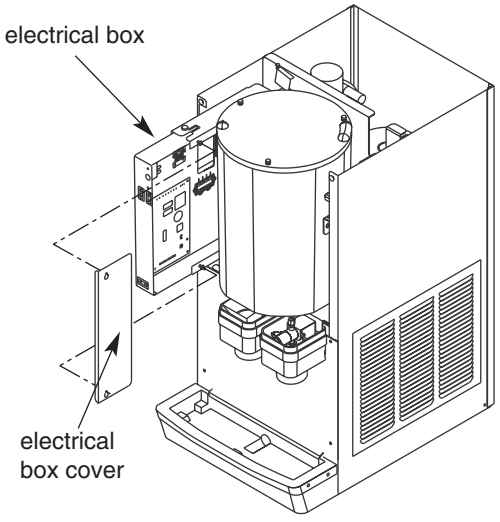
When the icemaker is running, a layer of ice forms on the interior surface of the evaporator. This ice is continuously removed by a slowly rotating (12 RPM) auger. The auger carries the ice upward into the cavity formed by the top bearing housing and the compression loop, where it is compressed to remove excess water. When the ice reaches the desired hardness it rotates within the cavity and is forced through a discharge port and compression nozzle and into the ice transport tube. The discharge tube and compression nozzle are slightly restricted to further compress the ice and produce the desired high quality. As the formation of ice continues, ice in the transport tube is pushed through the tube to the storage compartment in the ice dispenser bin. When the storage area is full, a bin stat opens and shuts the icemaker off.

A solid state control board located in the electrical box of the icemaker controls the normal operation of the icemaker and monitors gearmotor torque on an ongoing basis. This control board will shut down the icemaker should an over torque condition occur. It is very important that you familiarize yourself with the operational sequences detailed in this manual before attempting to service the icemaker.

Access to electrical box and control board

The 12 series electrical box has been designed to slide out for easy access to the control board and more convenient troubleshooting.

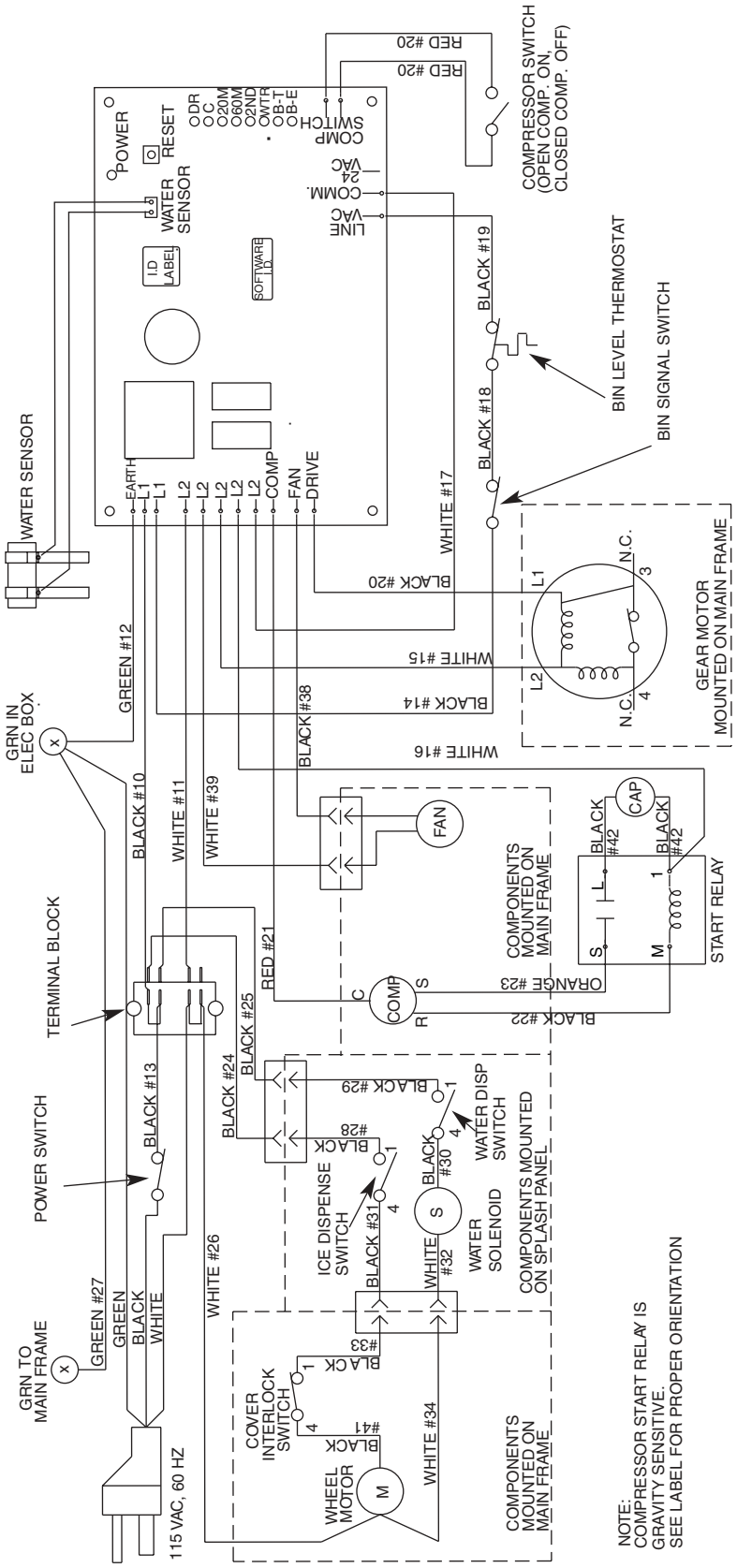
1. Remove top and front panels of dispenser (see page 30 for panel removal instructions).
2. Remove electrical box cover.
3. Pull electrical box toward front of unit.



Wiring diagram – lever model

How the unit works — lever model

The dispense wheel motor is energized through the power, dispense and cover interlock switches. The icemaker receives the bin signal through the power switch, the bin signal switch and the normally closed bin thermostat. When ice builds up around the bin thermostat, the contacts open, cutting power to the icemaker.



Wiring diagram – SensorSAFE™ model

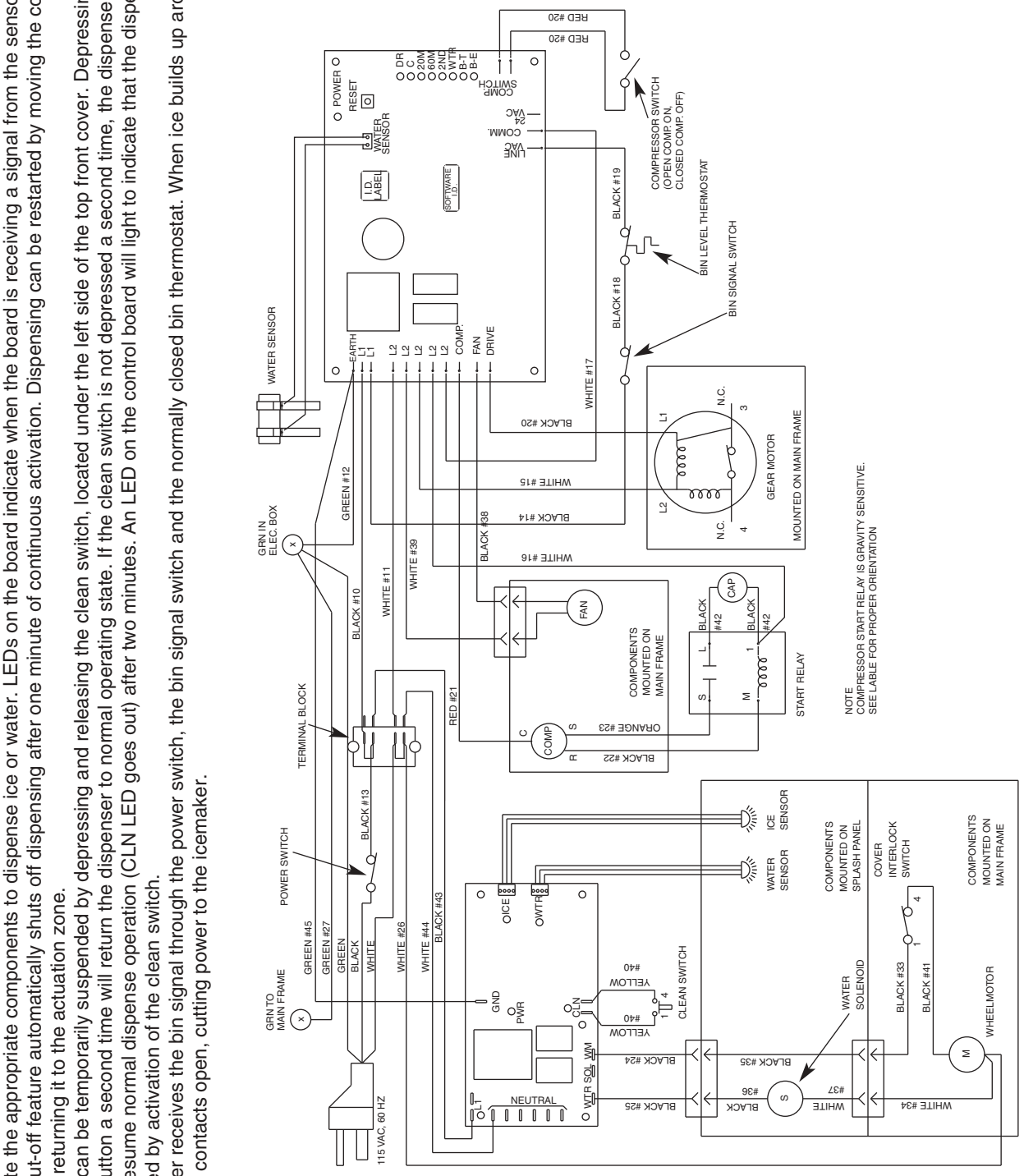
How the unit works — SensorSAFE model

SensorSAFE models provide "touchless" ice and water dispensing. When a container is placed within the actuation zone below the ice or water chute, an invisible, randomly-generated infra-red signal is emitted, reflected off the container and detected by the sensor. The sensor then sends a signal to the control board to activate the appropriate components to dispense ice or water. LEDs on the board indicate when the board is receiving a signal from the sensors.

A safety, shut-off feature automatically shuts off dispensing after one minute of continuous activation. Dispensing can be restarted by moving the container away and then returning it to the actuation zone.

Dispensing can be temporarily suspended by depressing and releasing the clean switch, located under the left side of the top front cover. Depressing and releasing the button a second time will return the dispenser to normal operating state. If the clean switch is not depressed a second time, the dispenser will automatically resume normal dispense operation (CLN LED goes out) after two minutes. An LED on the control board will light to indicate that the dispensing has been suspended by activation of the clean switch.

The icemaker receives the bin signal through the power switch, the bin signal switch and the normally closed bin thermostat. When ice builds up around the bin thermostat, the contacts open, cutting power to the icemaker.



Icemaker operational and diagnostic sequences

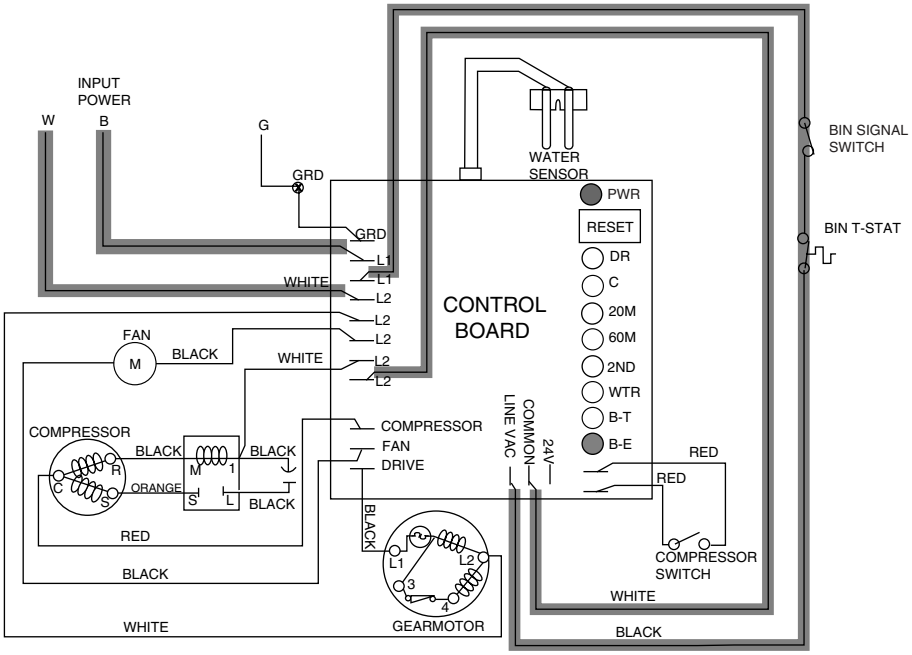
The wiring diagrams that follow illustrate the circuitry of Follett icemakers used with 12 series ice dispensers. Both normal operation (Stages 1 - 6) and non-normal diagnostic sequences showing torque-out (Stages 7 - 10) for use in troubleshooting are shown.

Circuitry notes

- Compressor switch should read open in ON position
- Compressor start relay is position sensitive. See label on start relay for proper orientation.
- Bin signal is 115V, 60Hz
- Flashing water LED at any time indicates that water signal to board had been lost for more than one second
- Ten-second delay: There is a 10 second delay in reaction to loss of water (WTR) or bin (B-E) signals. If signals are not lost for more than 10 seconds, no reaction will occur.

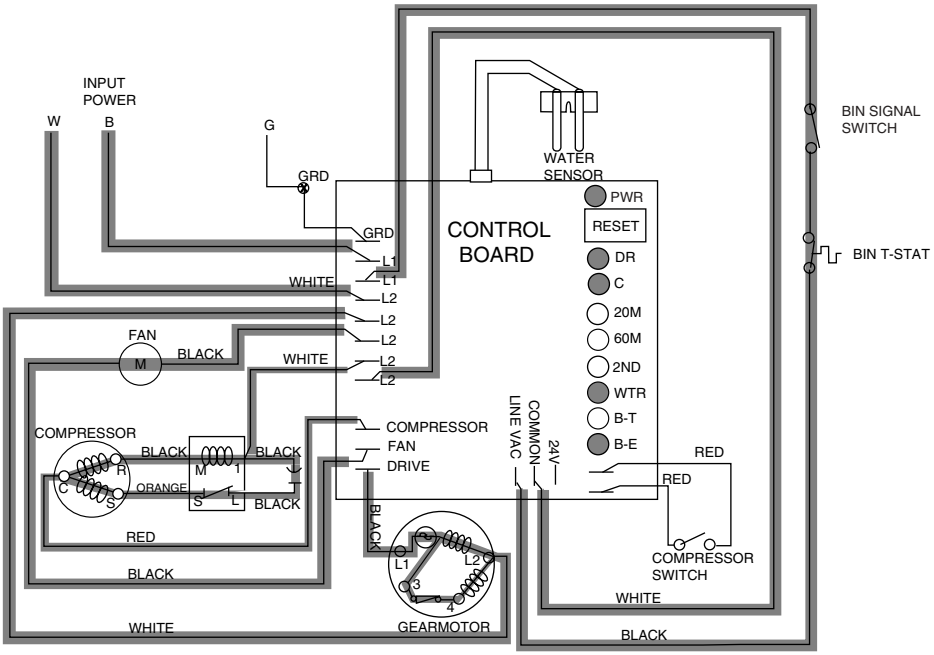
Normal operation – Stage 1

Power is supplied to L1 of the control board. The ice level control in the dispenser is closed and calling for ice, supplying signal voltage to the control board. The control board will now go through the start up sequence. Less than 30 seconds will elapse as the water sensor located in the float reservoir checks for water in the reservoir. The Bin Empty LED (B-E) will be on.



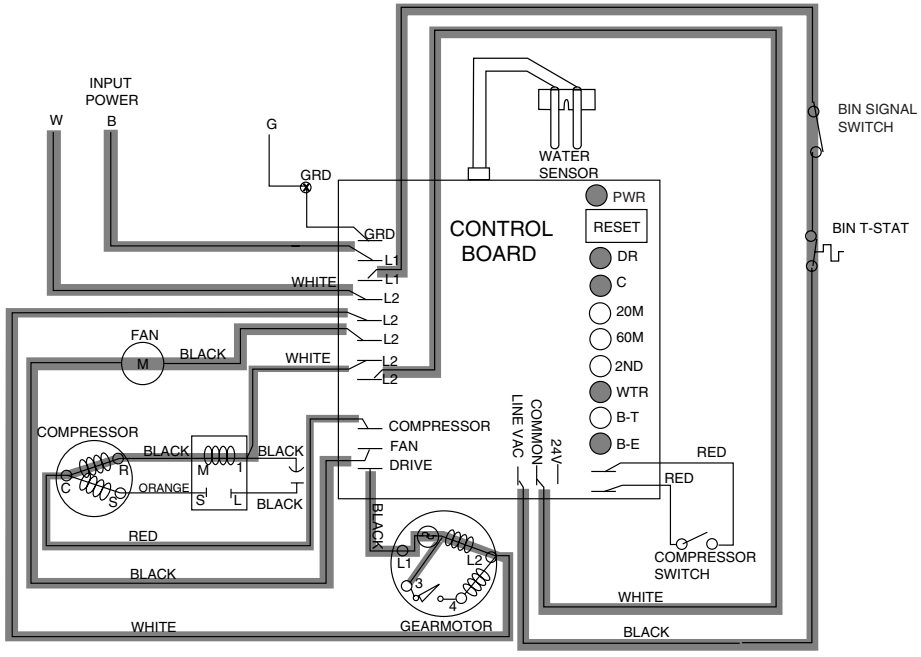
Normal operation – Stage 2

The water sensor verifies water in the float. The Water OK LED (WTR) comes on. At the same time, the gearmotor, compressor and condenser fan motor come on, lighting the Drive LED (DR) and compressor LED (C). The compressor is started through a current style relay that is pulled in by the initial high current draw of the compressor. The B-E and WTR LED remain on.



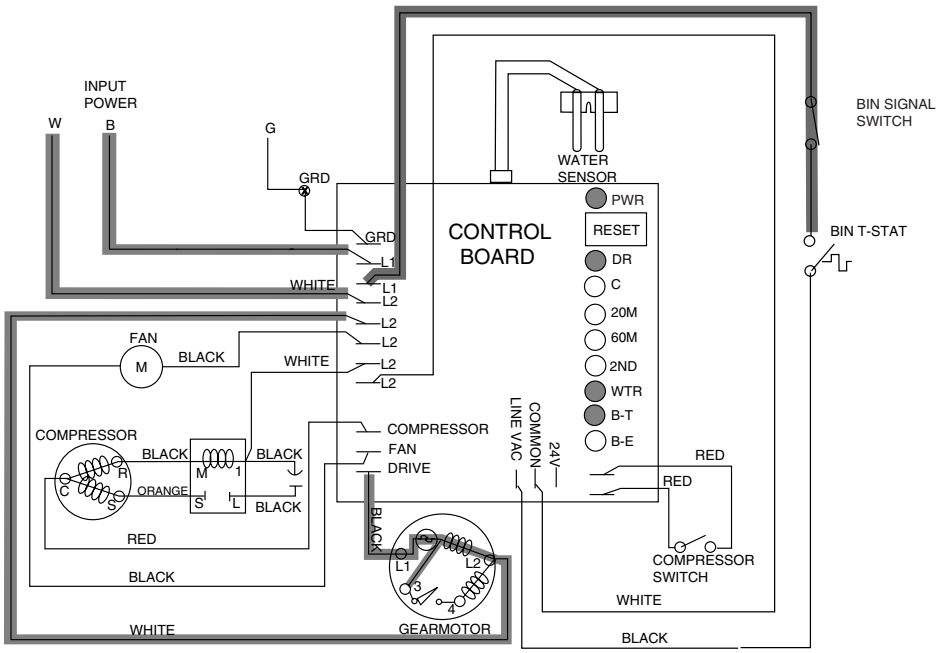
Normal operation – Stage 3

The gearmotor comes up to its normal running speed and the centrifugal switch located in the gearmotor opens, dropping out the start winding. As the compressor comes up to normal running speed, the compressor start relay contacts open, dropping out the start winding of the compressor. The icemaker is now in a normal icemaking mode. The icemaker will begin to produce ice and continue to produce ice until the bin level control in the ice dispenser is satisfied. The B-E, DR, C and WTR LEDs are all on.



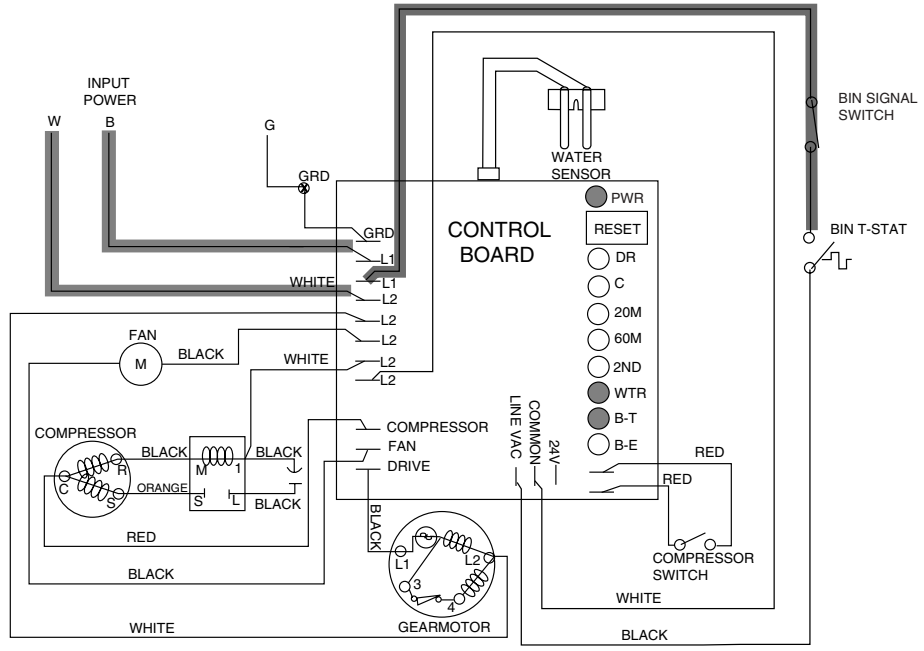
Normal operation – Stage 4

Once the ice level control opens, the B-E LED goes out. After a 10 second delay the LED (C), compressor and fan motor go off. (Should the ice level control not remain open for 10 seconds, the icemaker will continue to run.) The gearmotor continues to run for 60 seconds. The purpose of this function is to drive the remaining ice out of the evaporator and to boil off any refrigerant remaining in the evaporator.



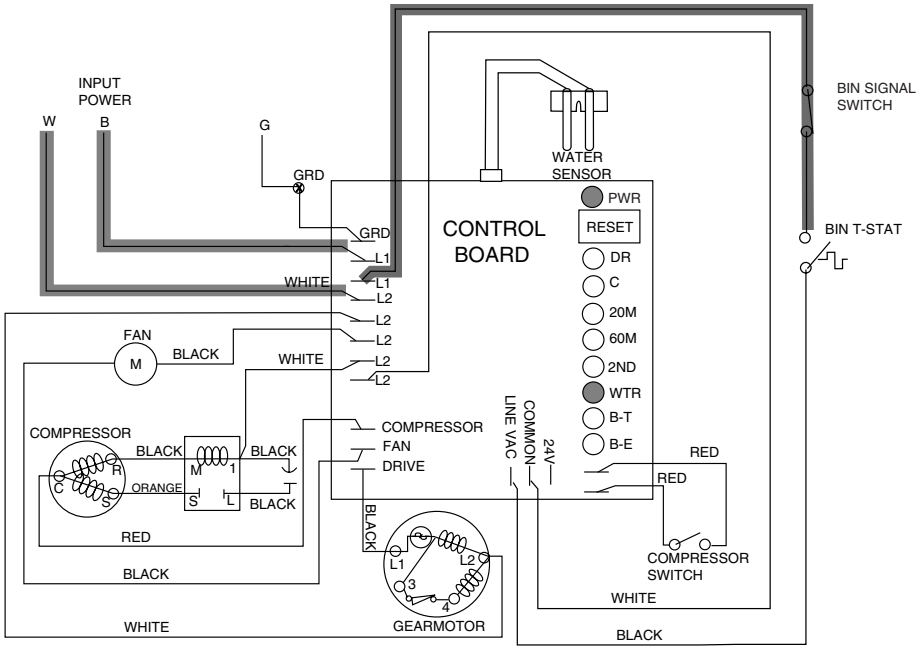
Normal operation – Stage 5

The B-T LED will remain on for 20 minutes. The icemaker will not start while the B-T LED is on. To restart the icemaker for troubleshooting purposes, press the reset button to clear the control board.



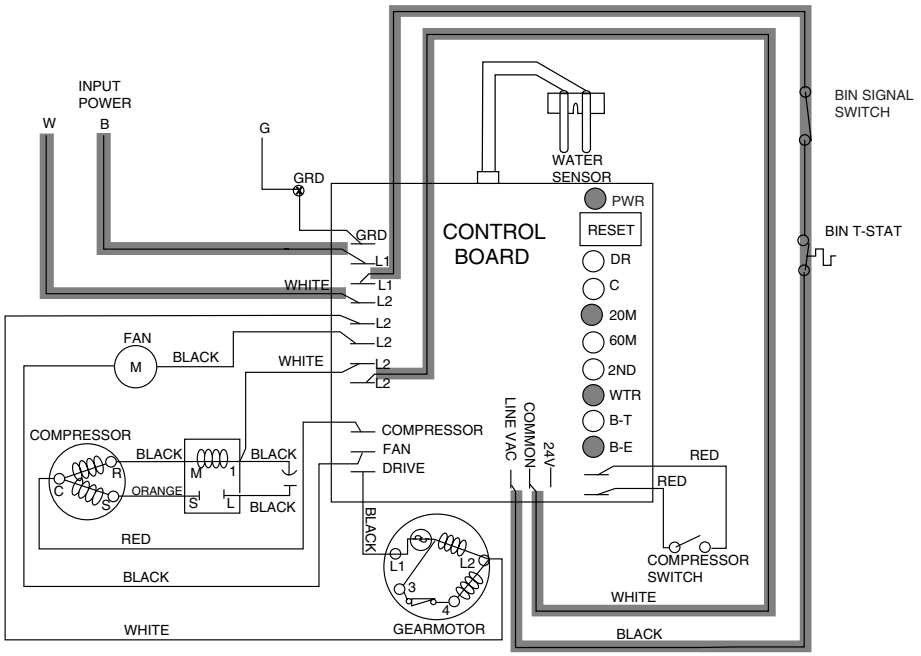
Normal operation – Stage 6

When the dwell time of 20 minutes has expired, the B-T LED goes off. The icemaker will go through the normal start up sequence when the bin level control signals the control board for ice. The WTR LED will remain on as long as the water sensor in the float reservoir senses water.



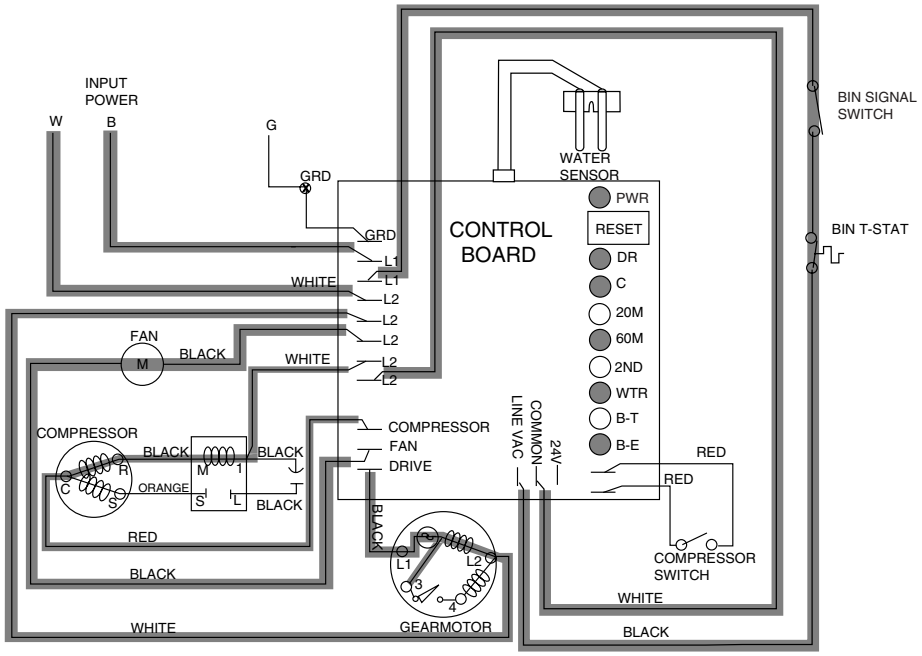
Diagnostic sequence – Stage 7

The 20 Minute Error LED (20M) is on indicating that the control board has sensed an over-torque condition (above 3.5 AMPS on the gearmotor). The 20M LED will remain on for 20 minutes after an over-torque condition has occurred. The icemaker will remain off as long as the 20M LED is on. When the 20M LED goes off, the control board will try to go through a normal start up sequence. The WTR LED remains on as long as the water sensor in the float reservoir senses water.



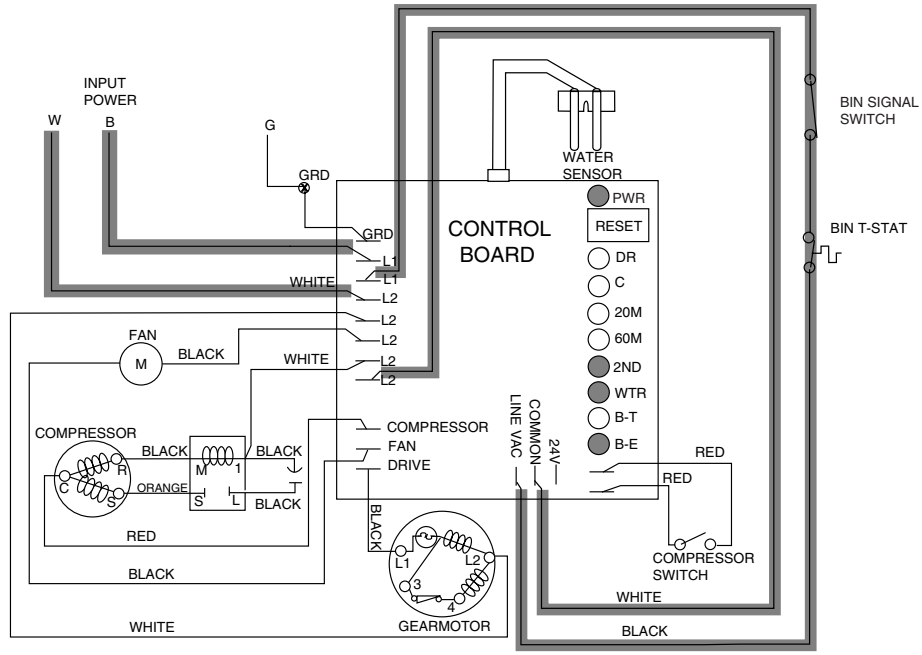
Diagnostic sequence – Stage 8

When the 20M LED goes off, the 60 Minute Timer LED (60M) comes on. The 60M LED will remain on for 60 minutes from restart. A lighted 60M LED tells the technician that the icemaker has experienced an over-torque condition. If the icemaker runs without problems for 60 minutes and no additional torque errors occur, the 60M LED will go off.



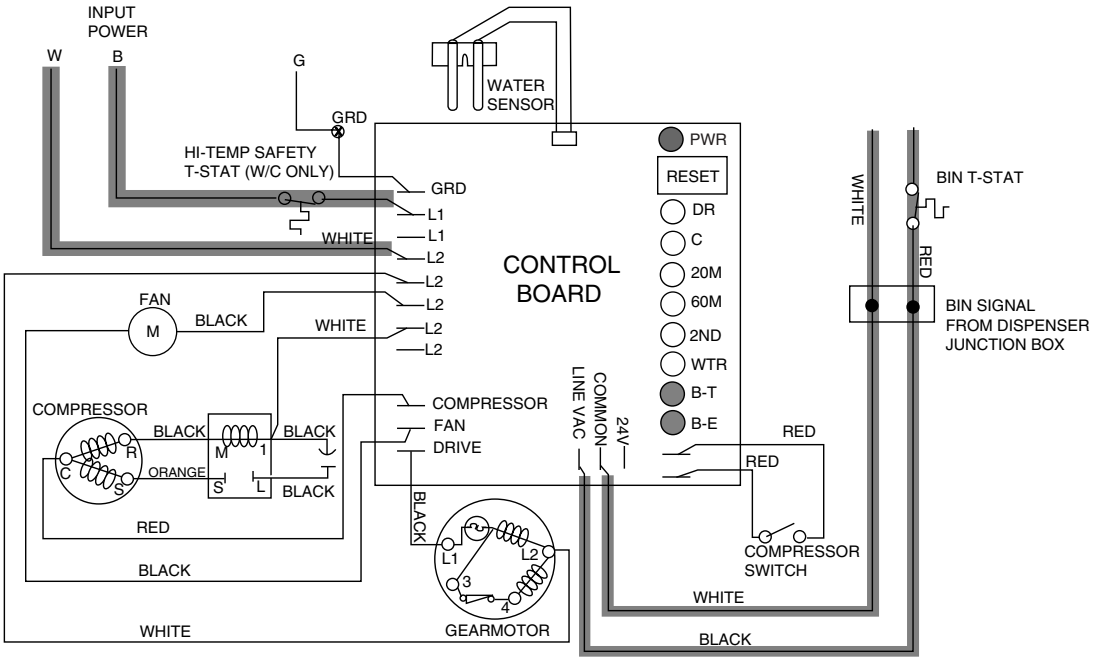
Diagnostic sequence – Stage 9

The second error (2ND) LED will come on if an over-torque condition occurs while the 60M LED is still lighted. The 2ND LED will indicate to the technician that two consecutive over-torque situations have occurred. The icemaker will be shut down at this time and will not restart unless the manual reset button is pressed.

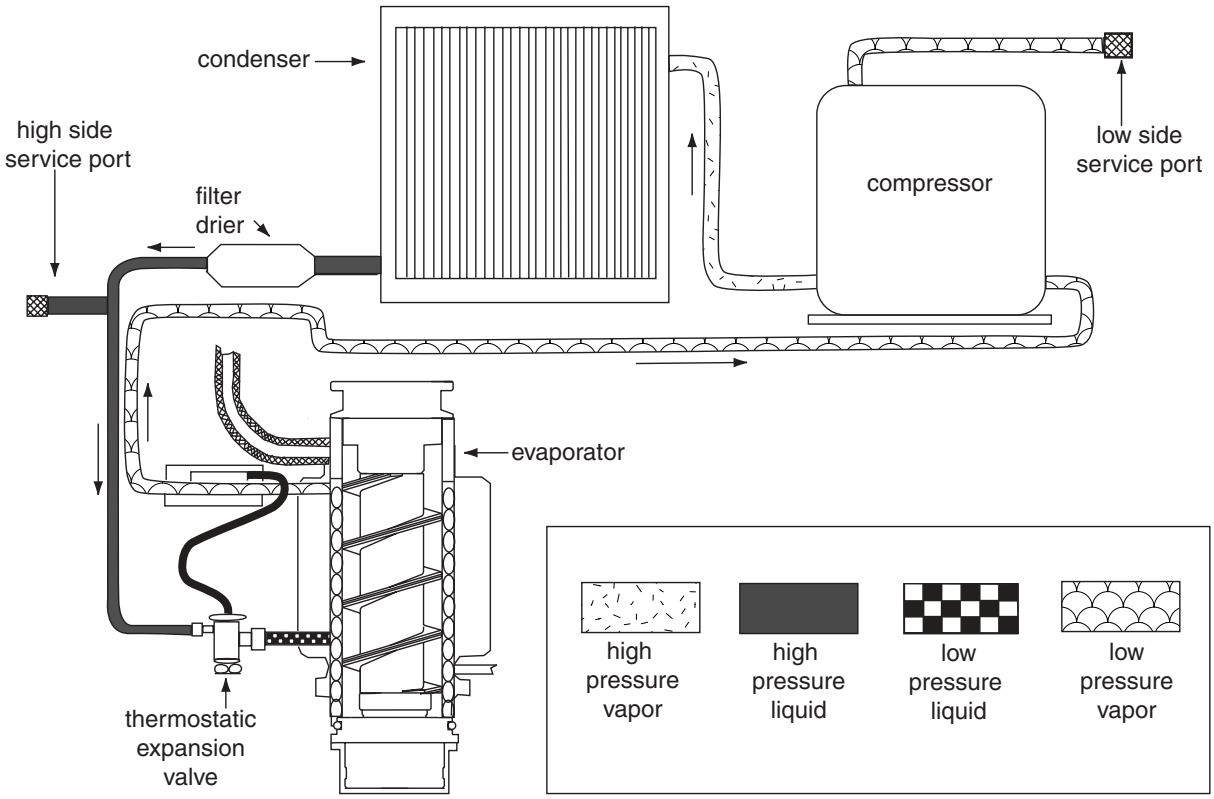


Diagnostic sequence - Stage 10

If the water level in the float reservoir drops to an unacceptable level, the WTR LED will go out, shutting the icemaker off. Also, the BT LED will come on, preventing the icemaker from restarting for twenty minutes. If water is restored, the WTR LED will come back on and flash to alert the technician that water to icemaker has been lost. The icemaker will then restart at the end of the 20 minute time delay. The flashing WTR LED can be cleared by pressing the reset button.



Refrigeration cycle



Air-cooled icemaker capacity/24 hours

Ambient Air Temperature °F/°C

Inlet Water Temperature °F/°C

F°	60°	70°	80°	90°	100°	110°	
C°	16°	21°	27°	32°	38°	43°	
50°	475	430	385	335	280	230	lbs.
10°	215	195	175	152	127	104	kg.
60°	440	410	360	315	265	215	lbs.
16°	200	186	163	143	120	98	kg.
70°	425	395	350	300	255	210	lbs.
21°	193	179	159	136	116	95	kg.
80°	405	375	330	285	240	200	lbs.
27°	184	170	150	129	109	91	kg.
90°	390	350	310	270	235	195	lbs.
32°	177	159	141	122	107	88	kg.
100°	375	340	300	260	225	190	lbs.
38°	170	154	136	118	102	86	kg.
110°	360	330	290	255	215	180	lbs.
43°	163	150	132	116	98	82	kg.

Table 1 – Refrigeration pressure data*

Ambient air temp.	60˚F 16˚C	65˚F 18˚C	70˚F 21˚C	75˚F 24˚C	80˚F 27˚C	85˚F 29˚C	90˚F 32˚C	95˚F 35˚C	100˚F 38˚C	105˚F 41˚C	110˚F 43˚C
Water temp. at float	60˚F 16˚C	65˚F 18˚C	70˚F 21˚C	75˚F 24˚C	80˚F 27˚C	85˚F 29˚C	90˚F 32˚C	95˚F 35˚C	100˚F 38˚C	105˚F 41˚C	110˚F 43˚C
Suction pressure PSIG	33	34	35	35	35	36	38	39	39	41	42
Head pressure PSIG	175	188	201	213	225	238	251	266	280	298	315

*** Note:** Readings within 10% of above table values should be considered normal.

Table 2 – Compressor data

Compressor current draw Ambient air temp.	60˚F/15.6˚C	70˚F/21.1˚C	80˚F/26.7˚C	90˚F/32.2˚C	100˚F/37.8˚C
	6.3A	6.5A	6.7A	6.9A	7.1A
Locked rotor amps	48.0				

Table 3 – Gearmotor data

Gearmotor current	2.25A (nominal)
Locked rotor amps	14 amps

Refrigeration system

Important: All service on refrigeration system must be performed in accordance with all federal, state and local laws that pertain to the use of refrigerants. It is the responsibility of the technician to ensure that these requirements are met.

R22 icemaker charge specifications

Model	Charge	Refrigerant type
C125A, H125A (air-cooled)	24 oz	R22

Recharging of unit at other than factory specifications will void icemaker warranty.

Refrigerant replacement requirements

1. Non-contaminated refrigerant removed from any Follett refrigeration system can be recycled and returned to the same system after completing repairs. Recycled refrigerant must be stored in a clean, approved storage container. If additional refrigerant is required, virgin or reclaimed refrigerant that meets ARI standard 700-88 must be used.
2. In the event of system contamination (for example, a compressor burn out, refrigerant leak, presence of non-condensibles or moisture), the system must be repaired, evacuated and recharged using virgin or reclaimed refrigerant that meets ARI standard 700-88.
3. Follett Corporation does not approve of recovered refrigerants. Improper refrigeration servicing procedures will void the factory warranty.

Evacuation

Evacuate the system to a level of 50 microns. When the 50 micron level is reached, shut the vacuum pump down. Allow the system to sit for approximately 30 seconds. During this period the system should not rise above 1000 microns. If the system rises above 1000 microns, evacuate the system again. If the system rises above 1000 microns for a second time, check the system for leaks.

Ambients	Minimum	Maximum
Air Temperature[1]	50˚F/10˚C	100˚F/37.8˚C
Water Temperature[2]	40˚F/4.4˚C	90˚F/32.2˚C

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

[2]Ambient water temperature is measured in the icemaker float reservoir.

Ice capacity test

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

1. Remove top panel and hopper lid of unit.
2. Run icemaker for at least 15 minutes.
3. Weigh and record weight of container used to catch ice.
4. Catch ice for 15 or 20 minutes.
5. Weigh harvested ice and record total weight.
6. Subtract weight of container from total weight.
7. Convert fractions of pounds to decimal equivalents (Ex. 6 lbs 8 oz = 6.5 lbs).
8. Calculate production using following formula:

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

9. Calculated amount per 24 hours should be checked against rated capacity for same ambient and water temperatures in Ice Production Tables.

Dispenser troubleshooting

Disconnect power to unit before putting hands or arms in storage area or attempting any repair or service to equipment.

Before calling for service:

- Check that there is ice in dispenser bin area
- Check that congealed ice is not causing a jam
- Check that all switches and circuit breakers are on
- Check that all drains are clear

Troubleshooting the dispenser – lever models

Problem	Possible cause	Solution
1. Does not dispense ice.	a. Power switch off or faulty. b. Faulty dispense switch. c. Wheel motor malfunction. d. Top lid off or ajar, opening interlock switch.	a. Check switch. Turn on or replace if faulty. b. Replace switch. c. Check motor and capacitor, and replace as required. d. Make sure lid is pressing interlock switch.
2. Dispense wheel rotates continuously.	a. Dispense switch contacts burned shut.	a. Replace dispense switch.
3. Icemaker runs continuously.	a. Faulty or incorrectly positioned bin stat.	a. Check for proper positioning. If stat does not open when ice is placed on capillary tube, replace stat.
4. Does not dispense water.	a. Faulty water solenoid valve. b. Faulty dispense switch. c. Power switch off or faulty.	a. Replace water solenoid valve. b. Replace dispense switch. c. Check switch; turn on or replace if faulty.

Troubleshooting the dispenser – SensorSAFE™ models

Problem: Does not dispense ice and/or water

Action	LED status PWR	CLN	ICE/WTR	Solution
1. Check LEDs on control board.	OFF	OFF	OFF	Check circuit breakers and power switch. Restore power or replace defective switch.
	ON	ON	OFF	Press clean switch on lower left side of electrical enclosure to return board to normal operation.
2. Place cup under drop zone.	ON	OFF	OFF	Troubleshoot appropriate lens/sensor and replace if required (see Lens/Sensor Troubleshooting).
	ON	OFF	ON	Verify power on appropriate output terminal (WTR, SOL or WM) on control board and replace board if required. If board tests okay, troubleshoot appropriate dispenser component.

Problem: Dispenses ice and/or water continuously

Action	LED status PWR	CLN	ICE/WTR	Solution
1. Check LEDs on control board.	ON	OFF	ON	Troubleshoot appropriate lens/sensor and replace if required (see Lens/Sensor Troubleshooting).
	ON	OFF	OFF	If there is power on any output terminal (WTR, SOL or WM) on control board, replace board.

Board guide

LEDs, when illuminated, indicate the following: PWR (board power), CLN (cleaning, no dispensing cycle), ICE (ice dispensing activated), WTR (water dispensing activated).
Terminals: LI (incoming power, hot), L2 (neutral terminals), WTR (power terminal for water solenoid), WM (power terminal for wheelmotor), CLN (terminals for clean cycle switch).
Note: SOL LED not used in 12 series dispensers.

Lens/sensor troubleshooting

Turn dispenser power switch off. Remove splash panel. Disconnect wires from output (WTR, SOL, WM) terminal(s) on board. Gently remove appropriate sensor/mounting block assembly from panel by moving block sideways until edge of block clears retaining tab of panel. Inspect lens and sensor assembly for foreign material and remove using non-abrasive cleaner. Turn dispenser power on and test sensor by moving hands through activation area (no closer than 3/16"/1.9mm) in front of sensor. If LED on board turns on and off, sensor is working properly and dispenser can be reassembled. If LED does not come on, switch sensor leads on board and retest. If the opposite LED comes on, board is defective and must be replaced. If LED does not come on, sensor is defective and must be replaced.

Troubleshooting the icemaker

Problem	Indicators/possible cause	Corrective action
1. Icemaker will not run. System status: compressor, gearmotor and fan motor inoperative.	1. No power to unit. 2. Open bin level control. 3. Water OK LED (WTR) not on. 4. 20M or 2ND LED is on indicating that first or second torque error has occurred. 5. Gearmotor locked up (immediate torque error indicated by LEDs when board is reset). 6. Centrifugal switch stuck in open or closed position (immediate torque error indicated by LEDs when board is reset).	1. Check that unit is plugged in, circuit breakers are on. 2. Adjust or replace ice level control. 3. Check reservoir for water; restore water to unit. 4. See Problem #6 below. 5. Repair or replace gearmotor. 6. Replace centrifugal switch.
2. Compressor will not run. System status: gearmotor and fan motor run.	1. Condenser coil plugged causing overheating. 2. Defective starting capacitor. 3. Defective starting relay. 4. Open motor winding. 5. No power output from compressor output terminal on control board.	1. Clean condenser coil and replace overload if necessary. 2. Replace start capacitor. 3. Replace relay. 4. Ohm out windings and replace compressor if necessary. 5. Check terminal connection and replace control board if necessary.
3. Unit cycles intermittently. System status: compressor, gearmotor and fan motor cycle.	1. Float reservoir running dry, sensing probe signalling for system to shut down. Control board will have flashing WTR LED.	1. Check water supply to float and float operation, ball valve and strainer.
4. Low ice production. Poor ice quality.	1. Dirty condenser coil. 2. Restricted air flow to condenser coil. 3. Mineral coated evaporator. 4. High ambient water supply and/or air temperature. 5. Improper exhaust air provisions. 6. Faulty expansion valve. 7. Low refrigerant charge. 8. Superheat incorrect. 9. Inefficient compressor.	1. Clean condenser. 2. Remove obstruction. 3. Clean evaporator. 4. Precool water and/or correct high ambient temperature. 5. Provide proper exhaust air provisions per Follett specifications. 6. Replace expansion valve. 7. Check for leaks; repair, evacuate, and weigh in correct charge. 8. Check that TEV sensing bulb is securely clamped in place and not damaged; check that insulated bulb cover is in place. 9. Replace compressor.

Troubleshooting the icemaker

Problem	Indicators/possible cause	Corrective action
5. Water leaks from bottom of evaporator.	1. O ring seal broken.	1. Replace O ring.
6. Icemaker runs for short period of time and shuts down on torque error. System status: 20M or 2nd LED is lit.	1. Kink in ice transport tube. 2. Bin level control remains in closed position. 3. Ice transport tube ruptured internally. 4. Worn evaporator bearings. 5. Faulty centrifugal switch. Icemaker torques out within 5 seconds of start-up. 6. Torque out occurs when storage bin fills to capacity.	1. Eliminate kink and check tube routing. 2. Adjust or replace control. 3. Replace complete run of ice transport tube. 4. Inspect bearings for roughness or binding, and replace if necessary. 5. Replace centrifugal switch. 6. Ensure that ice contacts bin thermostat before backing ice up in transport tube. See page 30 for proper thermostat and ice tube mounting.
7. Evaporator is iced up on the outside. No ice production. System status: compressor, gearmotor and fan motor running.	1. Gearmotor running but no output rotation. 2. Float reservoir empty. 3. Open gearmotor winding.	1. Check for broken gearmotor output shaft or damaged gearbox. 2. Check for defective water sensor (water OK (WTR) LED remains on even when float empty or probe removed from water). 3. Replace gearbox and motor.
8. Compressor cycles intermittently. System status: gearmotor and fan motor run.	1. Compressor start relay in wrong position. 2. Intermittent voltage from circuit board to compressor. 3. Clogged or dirty condenser coil. 4. Improper ventilation. 5. Defective compressor.	1. Position relay with arrow or word “top”. 2. Check for constant line voltage output on board compressor terminal and replace board if intermittent. 3. Clean condenser coil. 4. Provide inlet and exhaust air provisions per Follett specifications. 5. Replace compressor.
9. Unit runs but not making ice. System status: compressor, gearmotor and fan motor running.	1. Clogged or dirty condenser coil. 2. Compressor not pumping. 3. Low refrigerant charge.	1. Clean condenser coil. 2. Replace compressor. 3. Check for leaks; repair, evacuate and weigh in correct charge.
10. Compressor and fan motor will not run. Gearmotor runs.	1. Compressor switch in off position. 2. No output on compressor and fan motor terminals on control board.	1. Turn compressor switch on. 2. Replace control board.

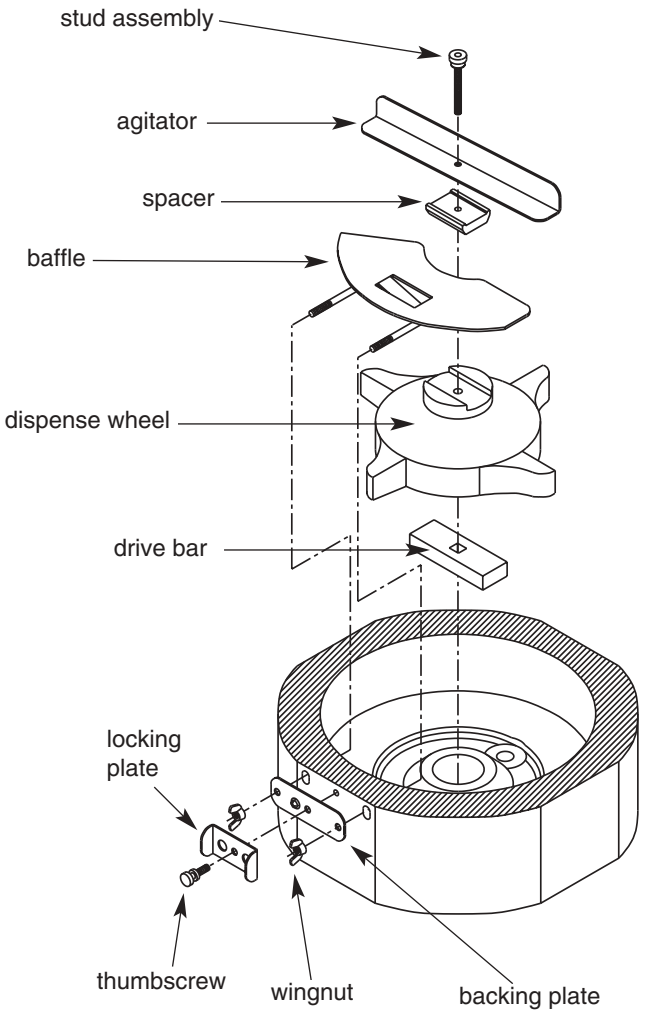
Disassembly and replacement instructions

Dispense chute removal

1. Remove top cover.
2. Remove stainless front cover.
3. Slide plastic dispense chute cover up and out to remove.
4. Remove four (4) push fasteners holding dispense tube in place and remove tube.

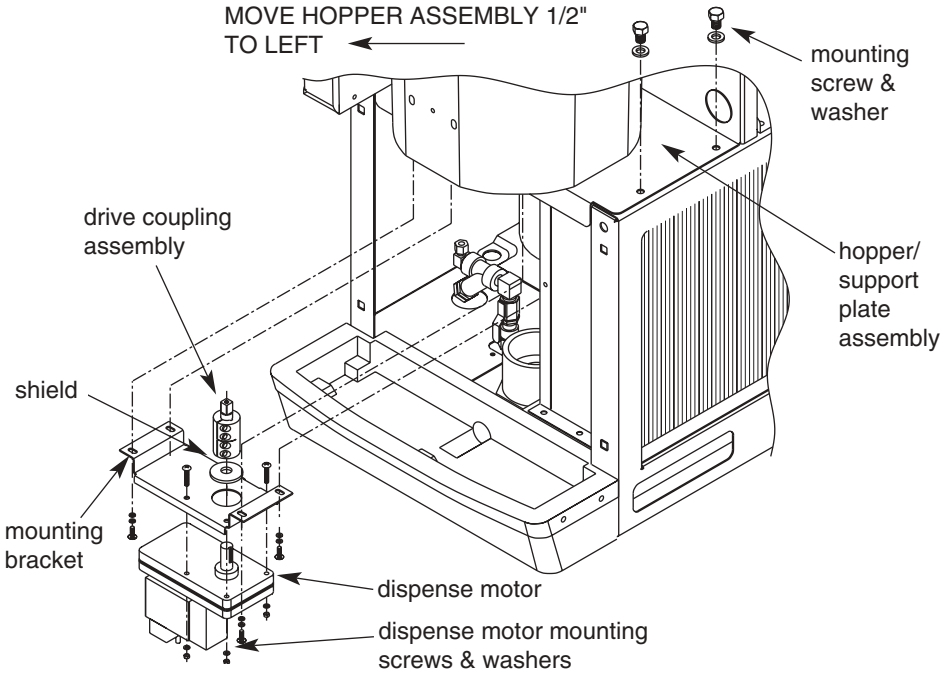
Dispense wheel and drive bar removal

1. Remove all ice from storage area of dispenser.
2. Remove center thumbscrew, locking plate, two wingnuts and backing plate from front of storage hopper (see drawing at right).
3. Remove stud assembly, agitator, spacer, baffle, wheel and drive bar in this sequence.



Wheelmotor removal

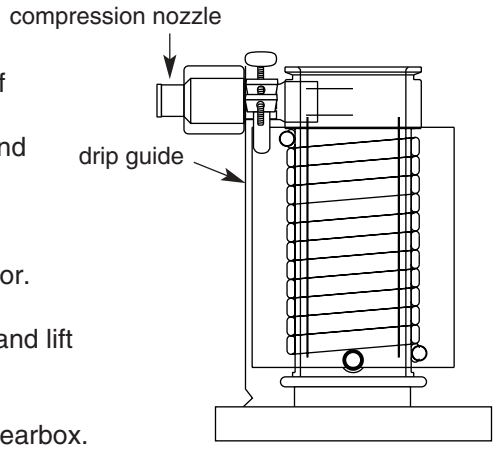
1. Remove dispense wheel and drive bar (see above).
2. Remove four (4) hopper/support plate mounting screws and washers (see drawing below).
3. Move hopper assembly 1/2" to left.
4. Remove four (4) dispenser motor bracket mounting screws and washers.
5. Loosen **only** two (2) lower screws on drive coupling and remove from motor shaft.
6. Remove four (4) screws holding motor to mounting bracket.



Evaporator disassembly

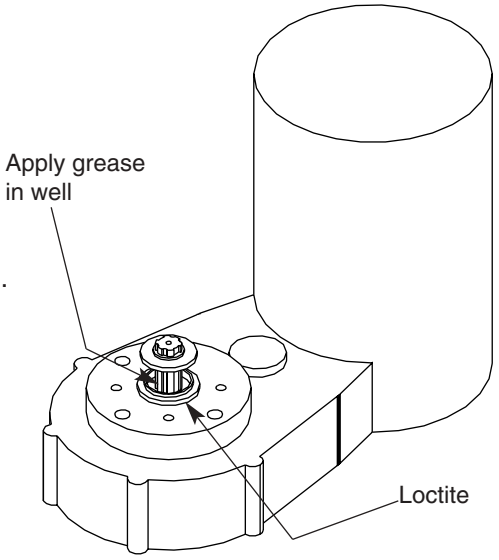
Note: The upper bearing, lower bearing and auger assemblies must be replaced as assemblies. The bottom and top bearing assemblies cannot be field assembled to factory specifications.

1. Disconnect power to icemaker.
2. Shut off water to icemaker.
3. Drain evaporator and float tank.
4. Disconnect plastic tubing from evaporator water inlet.
5. Disconnect ice transport tube from compression nozzle.
6. Remove nut from upper vee band coupling and remove from top of evaporator (pg. 39).
7. Lift top bearing assembly straight up with a slight rocking motion and remove.
8. Remove ice compression loop located at top of auger.
9. Lift auger straight up and out of evaporator.
10. Remove nut and lower vee band coupling from bottom of evaporator.
11. Lift evaporator to clear bottom bearing assembly.
12. Loosen hex head bolt in side of mounting base with 5/16" wrench and lift lower bearing assembly.
13. Remove condensate shield.
14. Remove 4 Allen head machine screws holding mounting base to gearbox.
15. If replacing evaporator, remove compression nozzle from evaporator port.



Evaporator reassembly

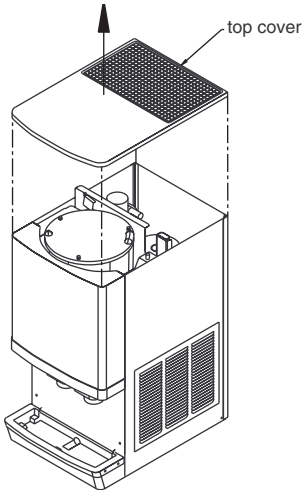
1. Clean gearmotor boss, output shaft and shaft well.
2. Degrease OD of gearmotor boss.
3. Apply 242 Loctite to OD of boss and install evaporator mounting base.
4. Fill gearmotor shaft well with food grade grease.
5. Install condensate shield and seat against gearmotor boss.
6. Install bearing O ring in groove in evaporator mounting base.
7. Lower bottom bearing assembly into evaporator mounting base.
8. While maintaining a slight downward pressure on bottom bearing assembly, tighten hex head bolt with a 5/16" wrench.
9. Position evaporator over lower bearing assembly and align grooves with pins in bearing assembly.
10. Align lower portion of compression nozzle drip guide inside evaporator drain pan.
11. Install vee band clamp and nut.
12. Place auger in center of evaporator and rotate to mate with spline.
13. Install ice compression loop, orienting loop as shown on page 36.
14. Install upper bearing and seal assembly, rotating bearing to slip pin into auger slot.
15. Install upper vee band clamp and nut.
16. If evaporator was replaced, reinstall compression nozzle on new.



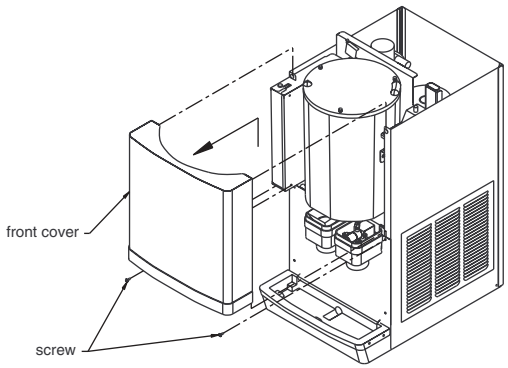
Gearbox and motor replacement

1. Disassemble evaporator as described above.
2. Remove gearmotor drip cap.
3. Remove gearmotor cover plate and disconnect wires.
4. Remove Heyco wire bushing and pull wires out.
5. Remove 4 screws holding gearmotor mounting plate to base of icemaker and lift gearbox and motor clear of icemaker.
6. Remove machine screws holding mounting plate to motor.
7. Install new gearbox and motor in reverse order.

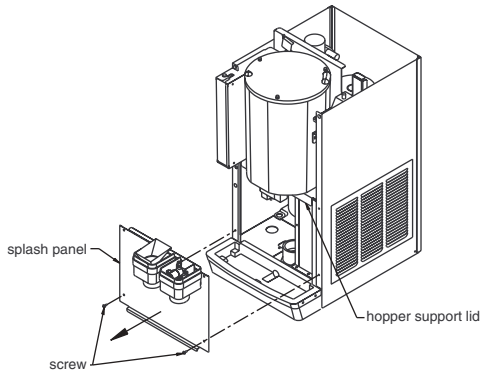
Panel removal



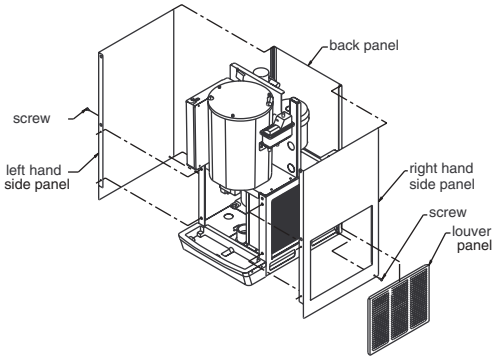
Top cover: Lift cover up and off Velcro strips.



Front cover: Remove 2 screws. Lift cover up and forward to unhook from keyhole slots and clear tabs on bottom of cover.

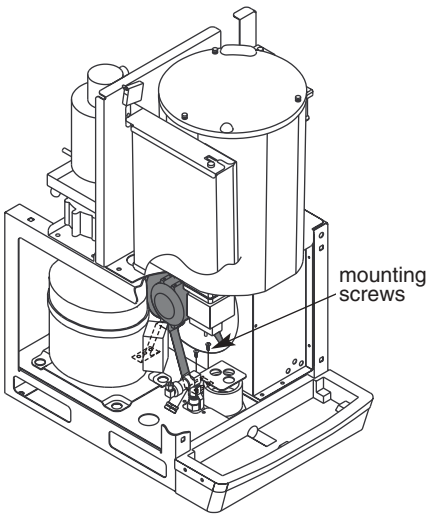


Splash panel: Remove 2 screws. Pull out bottom of panel to allow top to slide out from under hopper support lip.

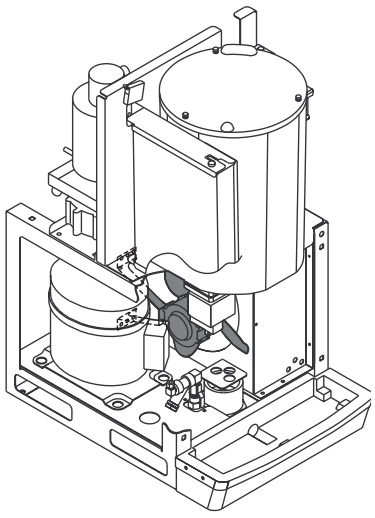


Side panels: Remove screw located on lower rear side. Pull side panel toward front of unit and out of back panel. Note: Before removing RH side, remove side louver panel by lifting up and pulling forward on panel.

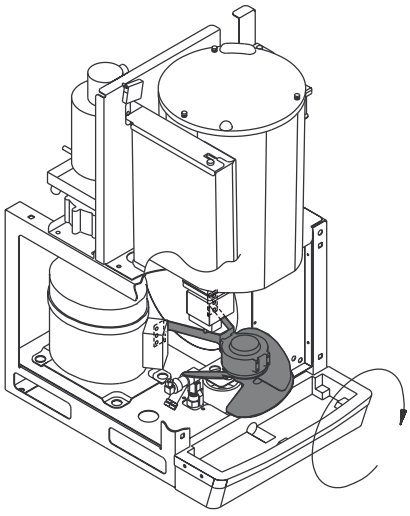
Fan removal



(a) Remove 4 fan mounting screws and 3 drain tubes.

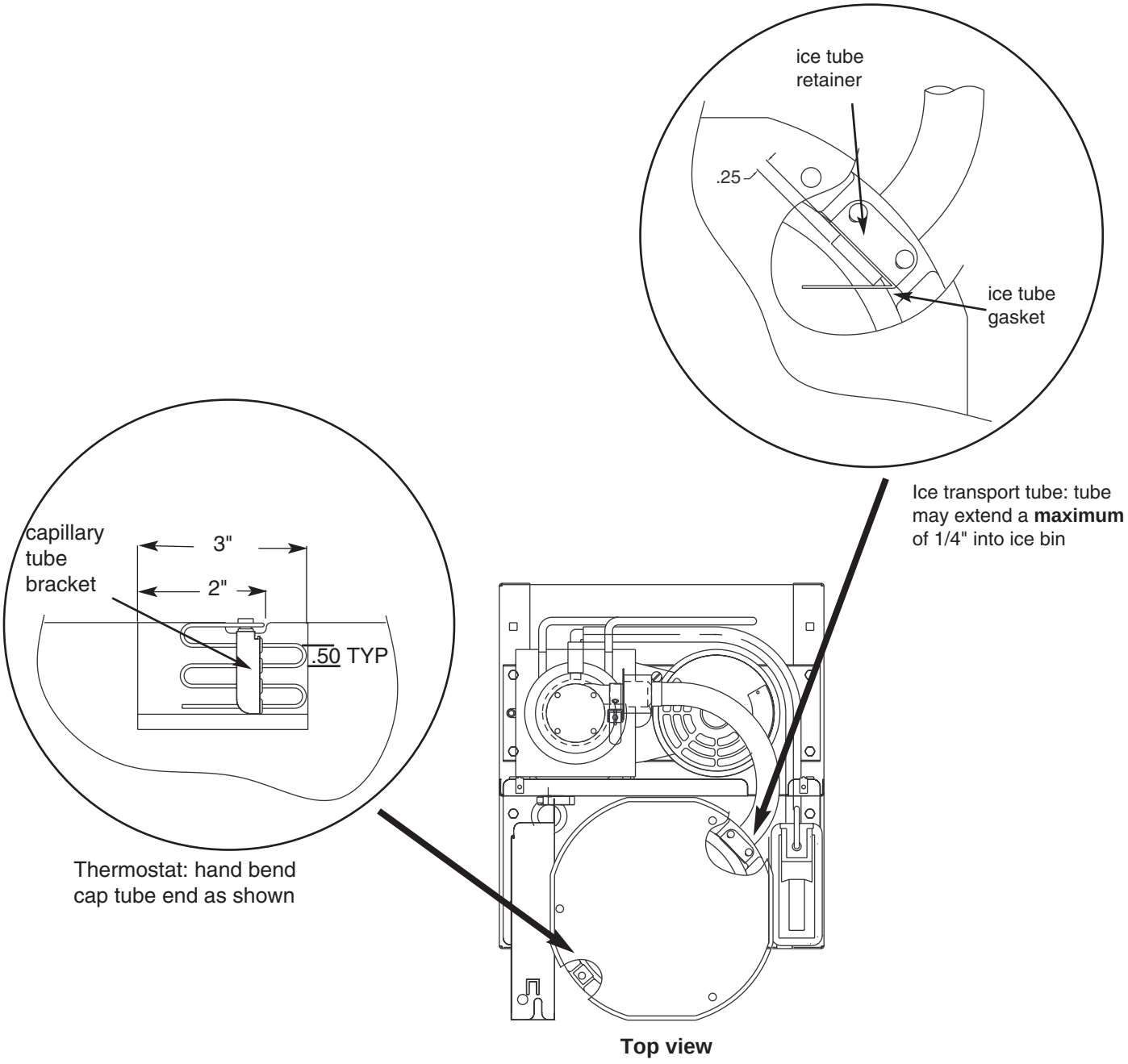


(b) Rotate fan mounting bracket toward back of unit and pull fan assembly toward front of unit.



(c) As fan assembly is being pulled toward front, rotate assembly clockwise as shown above.

Thermostat and ice transport tube replacement

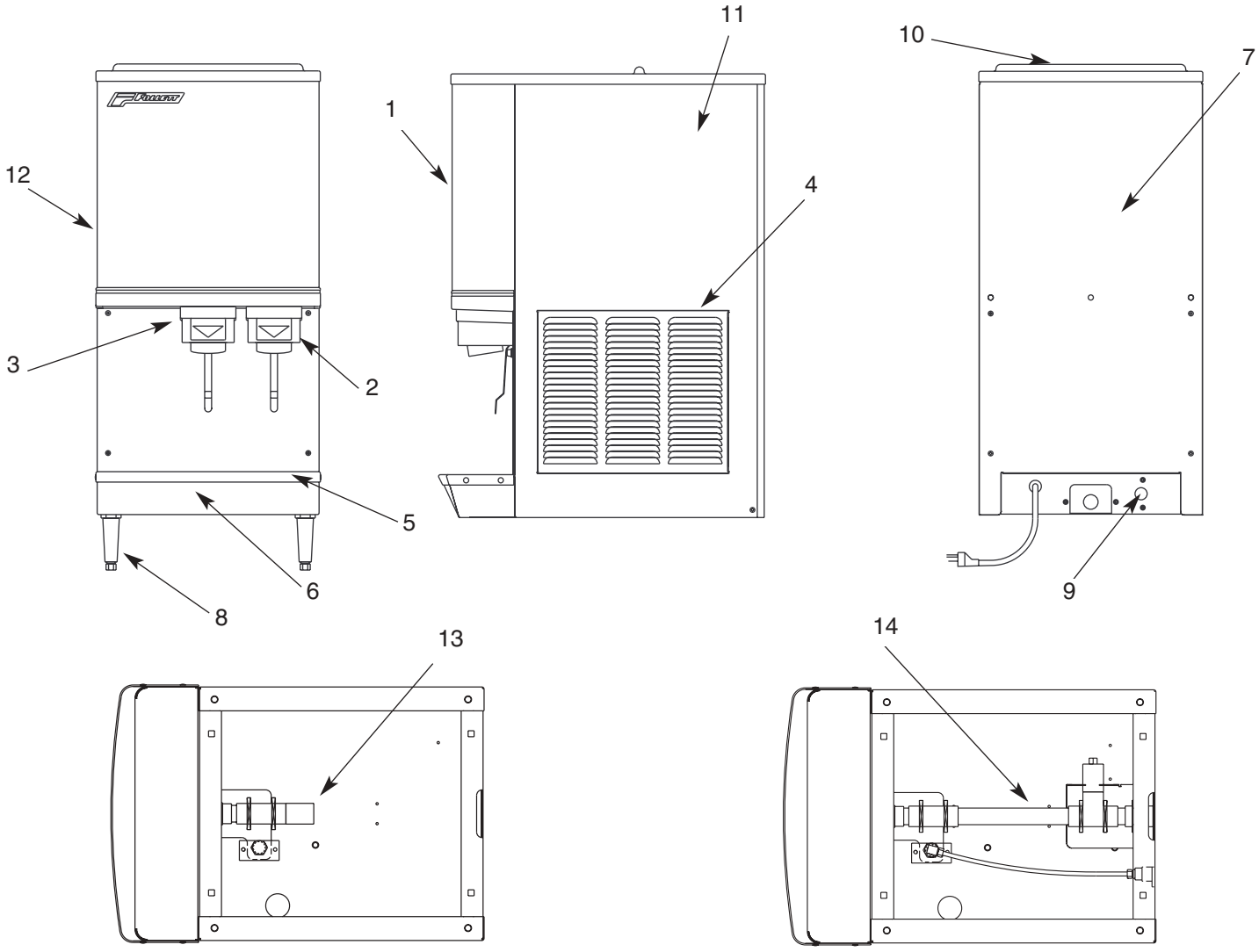


Ice transport tube replacement

1. Soak end of transport tube in hot water to soften.
2. Push tube onto evaporator port.
3. Position clamp behind lip on evaporator port and tighten clamp.

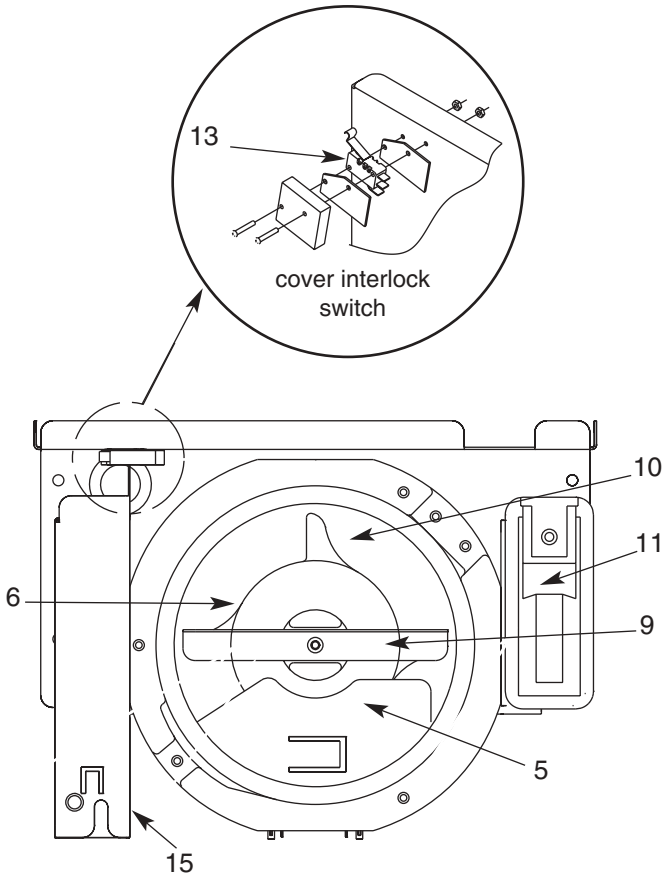
Parts

Dispenser exterior

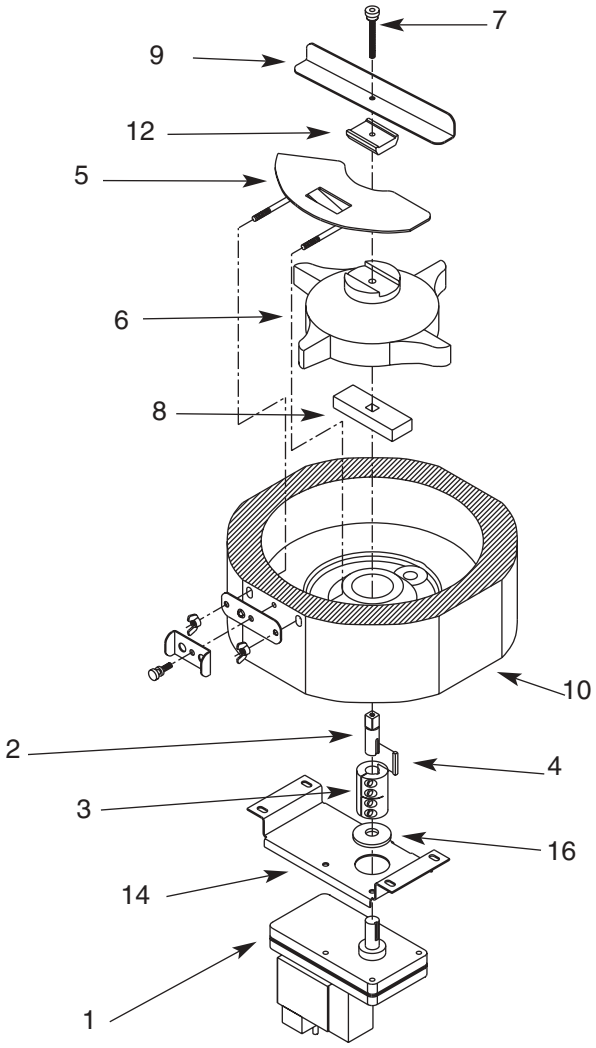


Part #	Description	Reference #
502393	Cover, front	1
502401	Cover, dispense assembly, water	2
502400	Cover, dispense assembly, ice	3
502402	Louver, intake	4
502412	Grille, drain pan	Not shown
502411	Drain pan, plastic	5
502410	Drain pan assembly (includes base, pan and grille)	6
502394	Panel, rear	7
502399	Leg kit, 4" (101mm), adjustable – set of 4	8
502415	Fitting, water inlet	9
502397	Lid, top panel, plastic	10
502396	Panel, right side	11
502395	Panel, left side	12
502422	Drain tube assembly, wall mount w/drain pan	13
502391	Drain tube assembly, countertop	14
502514	Drain tube assembly, wall mount w/o drain pan	Not shown

Wheelmotor and drive system

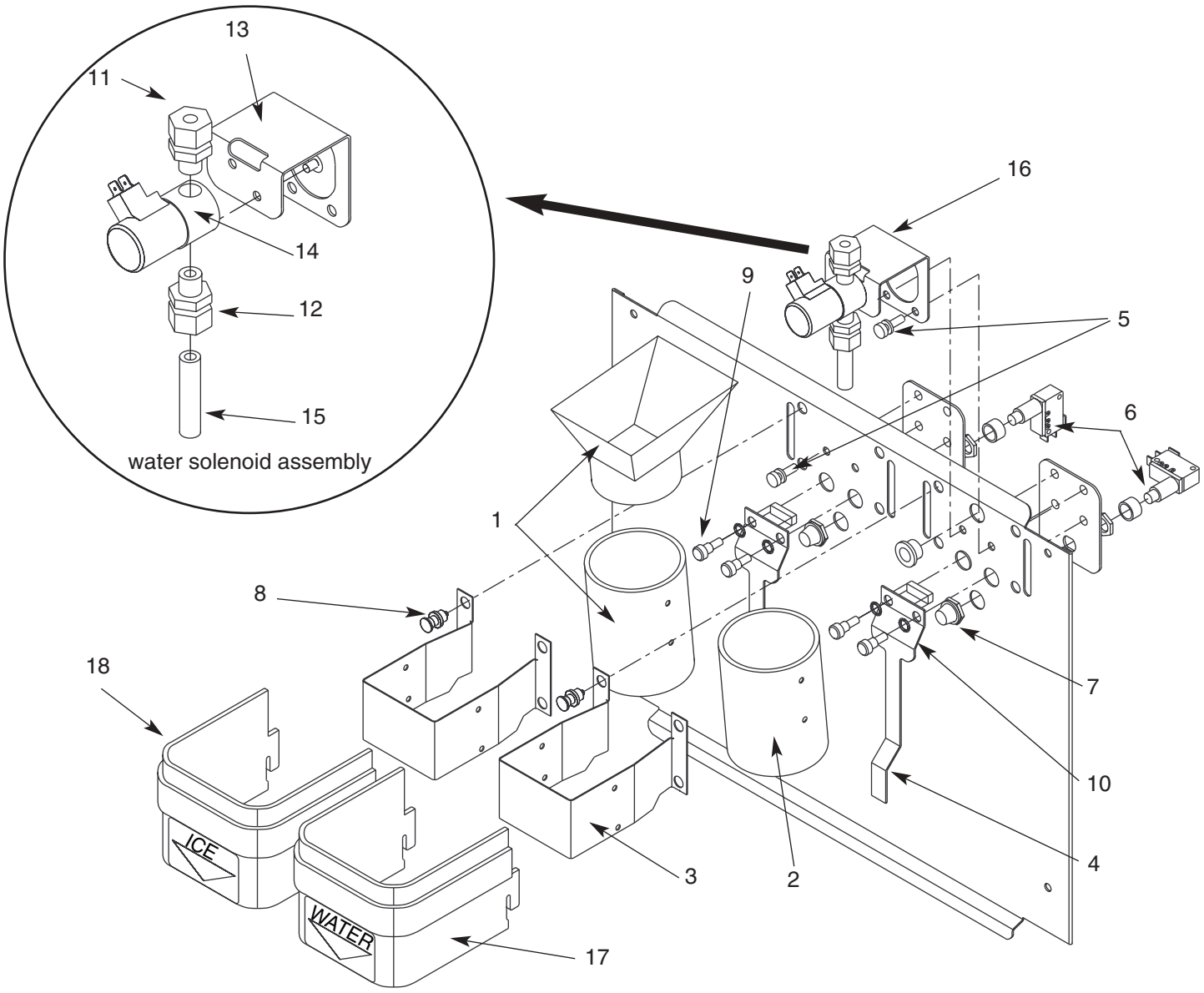


Top view



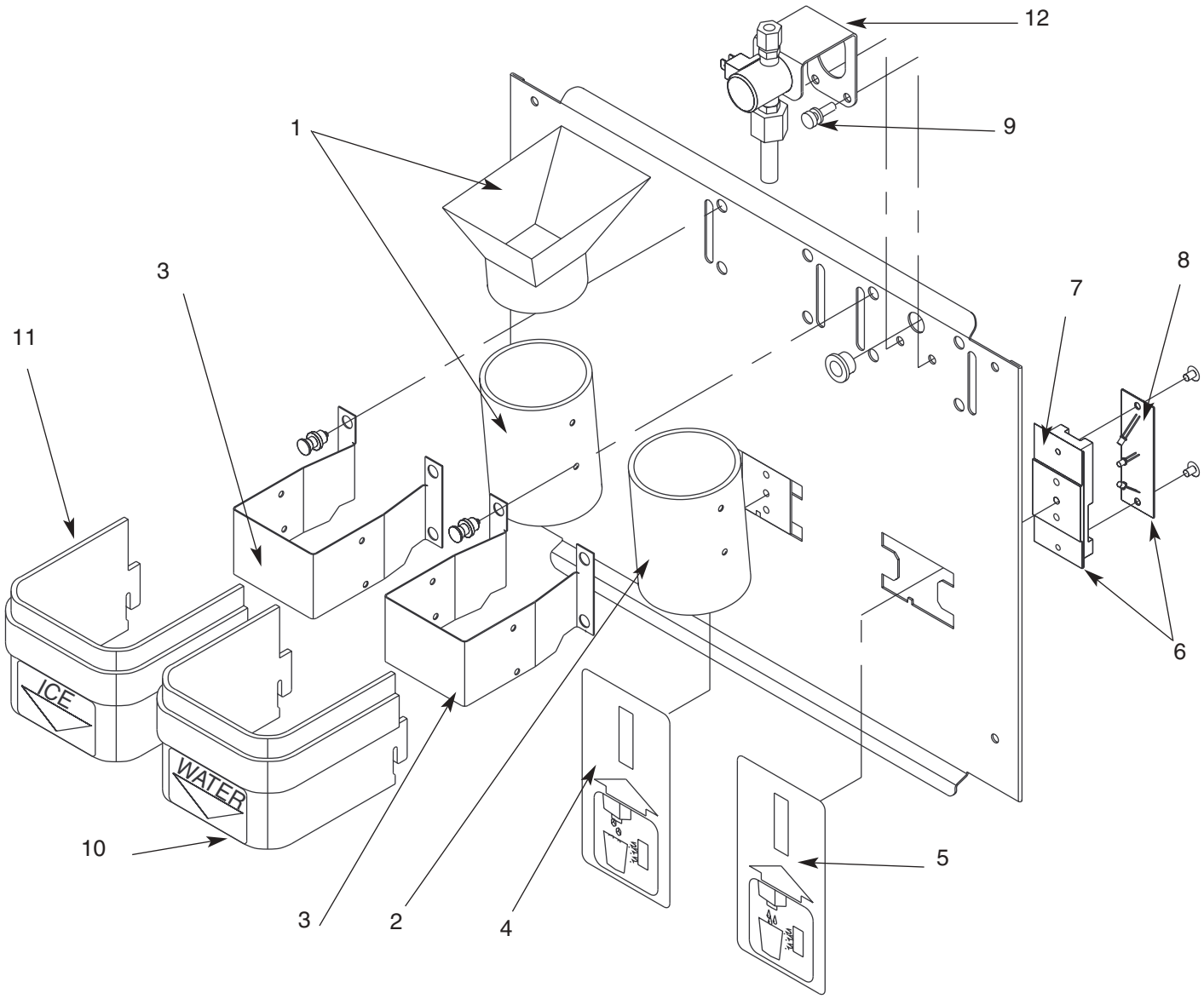
Part #	Description	Reference #
502580	Motor, wheel (includes 502537)	1
502384	Drive shaft extension	2
502385	Coupling (includes key)	3
501273	Key, 1/8" sq x 1-1/4 lg	4
502414	Baffle, ice (securing hardware included)	5
502387	Wheel, agitator	6
502390	Rod, threaded (includes knurled nut)	7
502388	Drive bar	8
502386	Agitator, rotating	9
502406	Bracket, capillary tube	See page 28
502404	Retainer, ice tube	See page 28
502405	Gasket, ice tube	See page 28
502413	Assembly, hopper (includes drain fitting)	10
500504	Float valve and reservoir	11
502389	Bar, spacer	12
502381	Fitting, hopper drain (includes nut)	Not shown
502416	Switch, interlock	13
502423	Support plate, motor	14
502408	Cover, electrical box	15
502537	Shield, gearmotor	16

Dispense chute and splash panel — lever model



Part #	Description	Reference #
502513	Chute assembly, ice	1
502249	Chute, water	2
502247	Bracket, dispense chute (includes four (4) 502057 fasteners)	3
502417	Lever	4
501100	Thumbscrew	5
502409	Switch, dispense, water/ice (includes nut, boot and spacer)	6
502418	Boot, dispense switch button (mounts over the dispense button)	7
502057	Fastener, dispense chute assembly (4 required)	8
501250	Screws, dispense lever	9
502427	O ring	10
502561	Fitting, 1/4" tube	11
502562	Fitting, 3/8" tube	12
502419	Support bracket, solenoid	13
502243	Valve, solenoid water	14
502420	Tube, water solenoid	15
502421	Solenoid, assembly (includes solenoid, fittings, tube & mounting bracket)	16
502401	Cover, dispense assembly, water	17
502400	Cover, dispense assembly, ice	18

Dispense chute and splash panel — SensorSAFE™ model



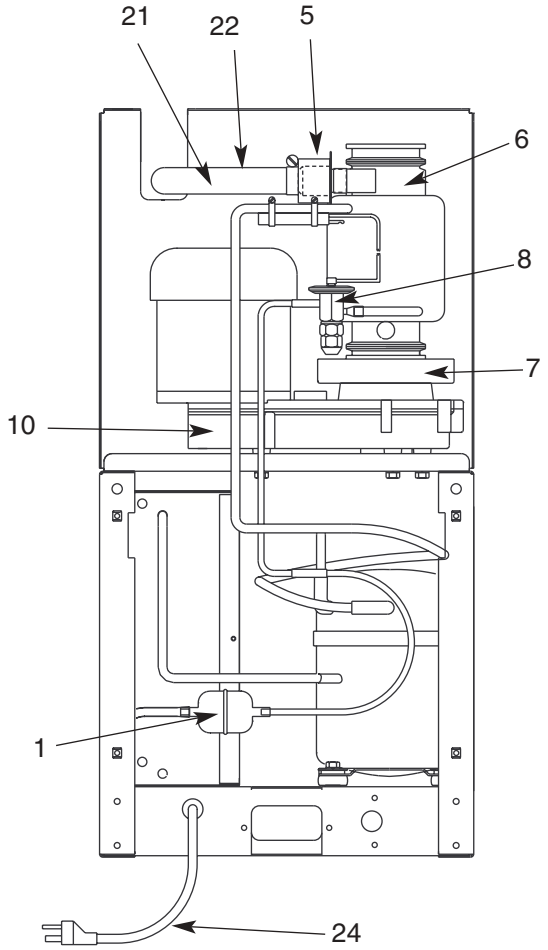
Part #	Description	Reference #
502513	Chute assembly, ice	1
502249	Chute, water	2
502247	Bracket, dispense chute (includes four (4) 502057 fasteners)	3
502251	Graphics, ice lens	4
502252	Graphics, water lens	5
502241	Assembly, sensor and mounting block (includes 502239 and 502240)	6
502239	Block, sensor mounting	7
502240	Sensor	8
501100	Thumbscrew	9
502401	Cover, dispense chute, water	10
502400	Cover, dispense chute, ice	11
502421	Solenoid assembly (includes solenoid, fittings, tube & mounting bracket (see page 34 for exploded view)	12

Icemaker components

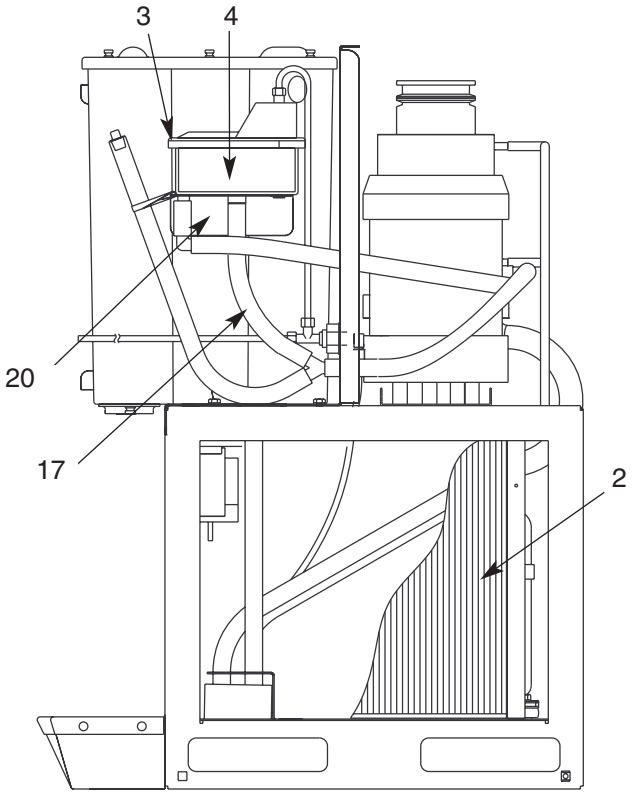
Part #	Description	Reference #
501581	Drier	1
501187	Coil, condenser	2
502116	Water sensor	3
500504	Float valve & reservoir	4
502078	Fitting, plastic, float valve (includes sleeve & stem)	Not shown
502221	Compression nozzle, without drain	5
	Evaporator (see page 39 for detailed drawing)	6
501820	Shroud, condenser coil	Not shown
502515	Drain pan, evaporator	7
501582	Valve, expansion, thermal	8
502222	Valve, shut-off, water	9
501992	Gearbox & motor assembly, 115V, 60Hz	10
500376	Strainer, water	11
500474	Fan blade	12
500672	Motor, fan, 115V, 60Hz	13
501188	Bracket, fan motor	14
501579	Overload, compressor, 115V, 60Hz	15
501583	Compressor, 115V, 60Hz	16
501191	Tubing, plastic, food grade, 1/2 ID (sold by the foot)	17
500623	Tubing, plastic, 5/8 ID x 13/16 OD (sold by the foot)	18
502079	Tubing, polypropylene, reservoir supply (sold by the foot)	19
502383	Reservoir mounting bracket	20
502403	Tube, ice transport	21
501176	Insulation, ice tube (12"/306mm required)	22
502521	Bracket, gearmotor mounting	23
502407	Cord and plug, power	24

Water filter kits and cartridge

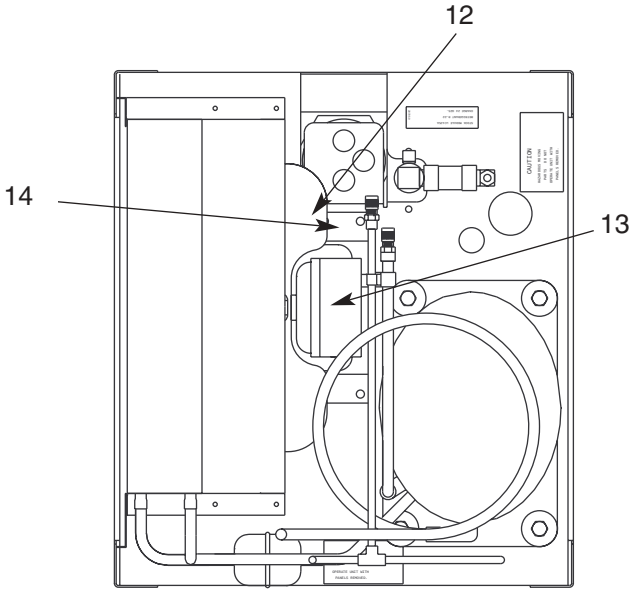
Part#	Description
AFSYSTMFL43	Follett QC4-FL4S water filter system (includes FL4S primary cartridge and head. coarse pre-filter and head, pressure gauge, flushing valve; assembled and installed on mounting bracket)
AFCARTFL4S	Follett FL4S primary replacement cartridge
AFPRECART	Everpure coarse pre-filter cartridge



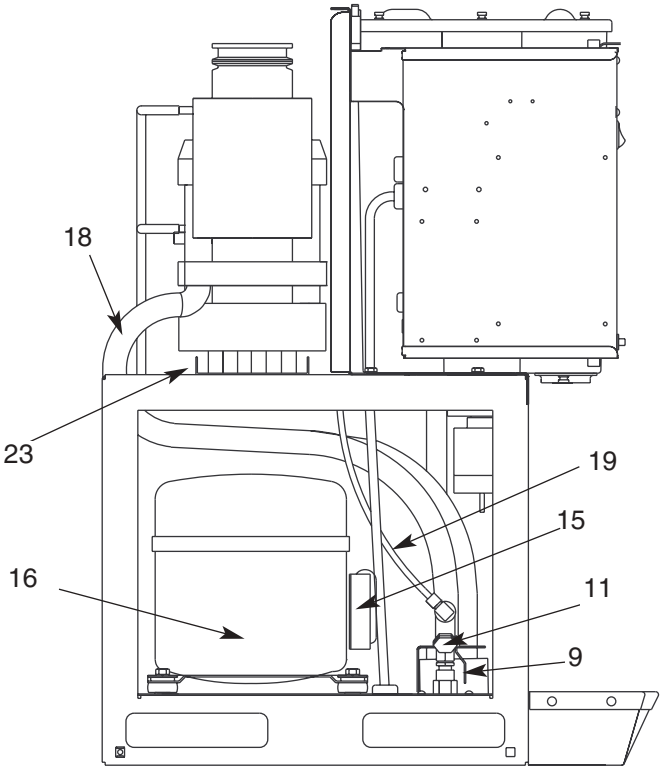
Rear view



Right side view

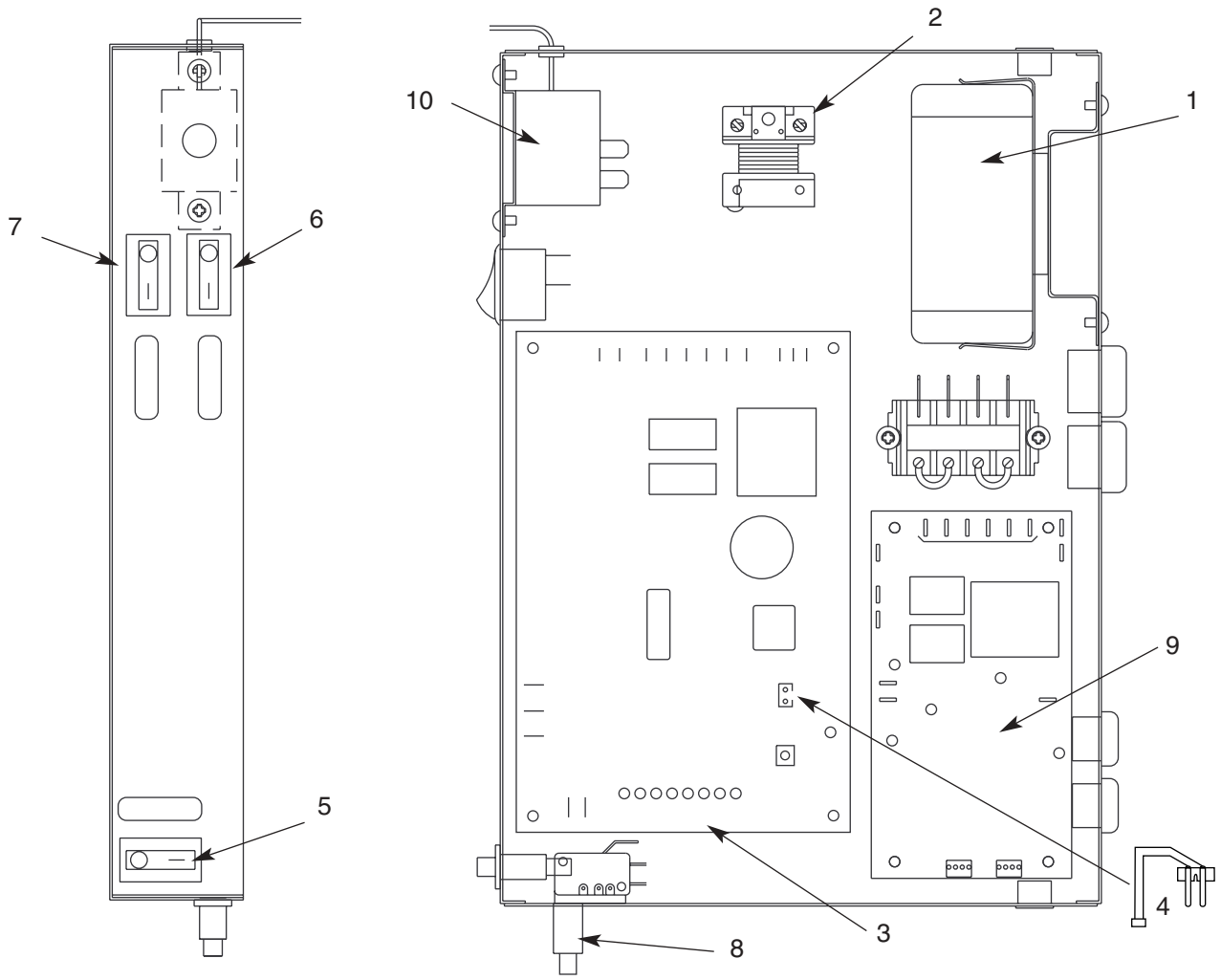


Top view
(lower section)



Left side view

Electrical components

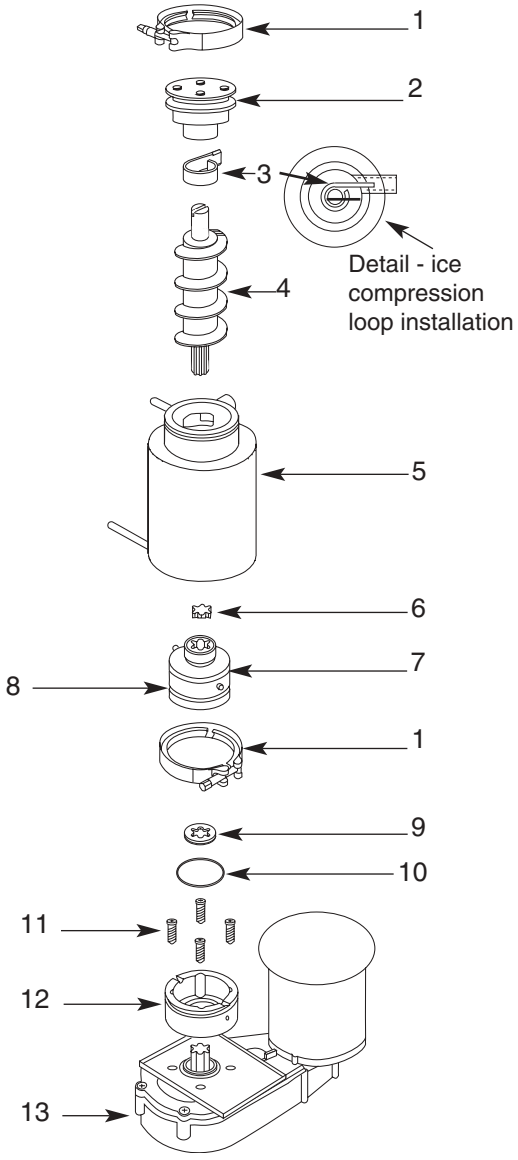


Side view **Top view**

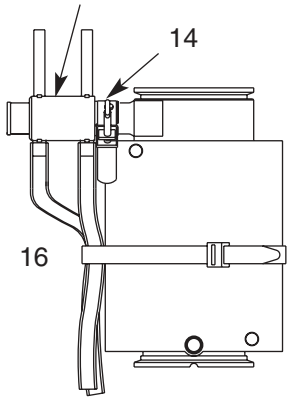
Part #	Description	Reference #
501586	Capacitor, start, compressor, 115V, 60Hz	1
501588	Relay, start, compressor, 115V, 60Hz	2
502331	Board, control circuit, 115V, 60Hz	3
502116	Water sensor	4
502392	Switch, on/off, compressor	5
502209	Switch, rocker, power	6
502209	Switch, rocker, bin signal	7
502409	Switch, cleaning, SensorSAFE models	8
502242	Control board, SensorSAFE models	9
500514	Bin thermostat	10

Evaporator

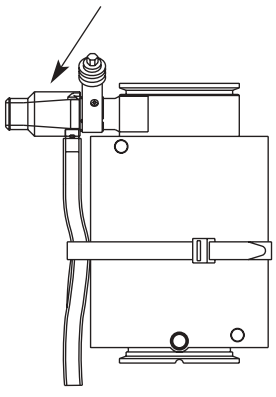
Part #	Description	Reference #
500486	Coupling, vee band, includes nut	1
501862	Bearing assembly, top	2
502081	Loop, ice compression, padded (For non-thick-walled evaporators, call service department before ordering)	3
502110	Loop, ice compression, beveled	3
502219	Auger, double chamfered	4
502107	Evaporator (includes 502110)	5
501079	Seal, spline	6
500496	O Ring, bearing housing	7
502137	Bearing assembly, bottom (includes spline seal and O Ring)	8
500744	Shield, condensate	9
501063	O Ring, mounting base	10
501080	Screw, Allen 1/4 20 x 1/2 (set of 4)	11
501053	Mounting base, evap. (includes 501063)	12
502227	Bolt, mounting base	Not shown
501992	Gearbox & motor assembly	13
501993	Gearbox & motor assbly, 230V	13
501190	Mounting base, gearbox	Not shown
502220	Compression nozzle, w/double drain	below
502221	Compression nozzle, w/single drain	below
	Compression nozzle w/o drain no longer available, replace with 502221.	
501289	Drain pan, evaporator	See pg. 17
502226	Clamp, compression nozzle and screw	14
502228	Drip guide, compression nozzle w/o drain	15
500680	Tubing, compression nozzle w/drain	16
501111	Grease, Chevron SRI-2, 14 oz	Not shown



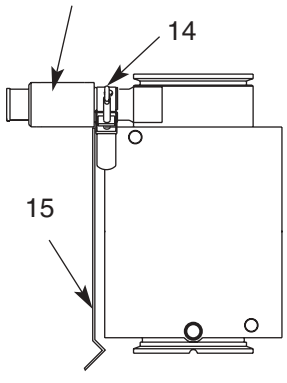
502220
Compression nozzle with double drain



502221
Compression nozzle with single drain

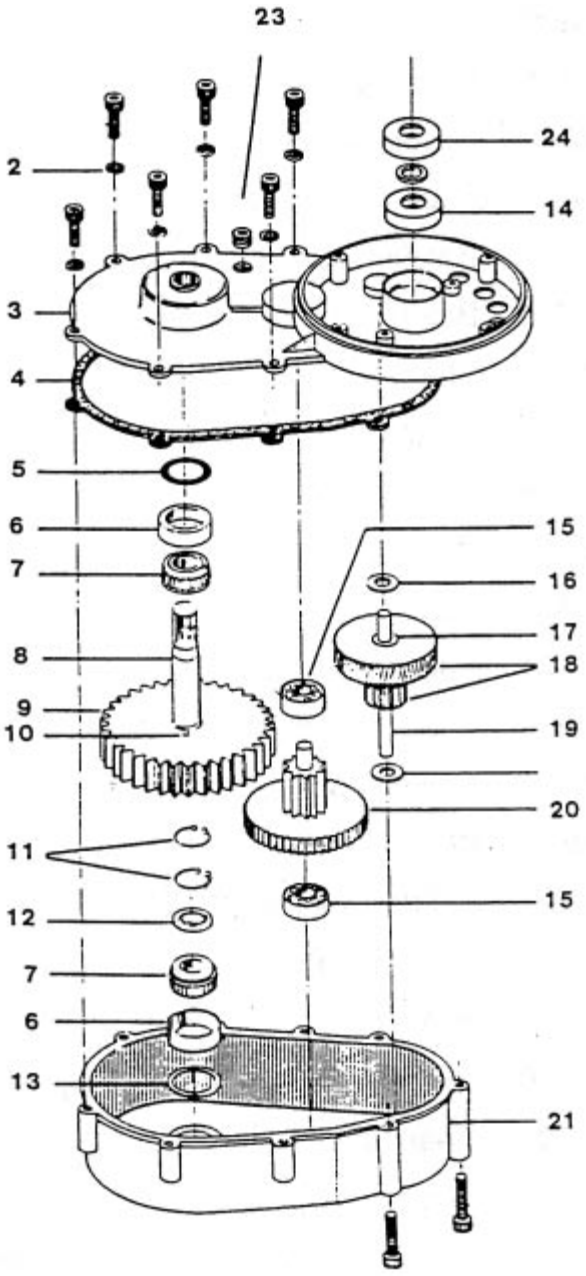


Compression nozzle without drain (original)



Gearbox and motor assembly

Part #	Description	Reference #
500937	Washer, lock	2
501988	Cover, gearcase	3
500765	Gasket, gearcase cover	4
500722	Seal, output shaft	5
500854	Bearing, cup	6
500720	Bearing, cone	7
500893	Shaft, output	8
500894	Gear, output	9
500895	Key, Woodruff	10
500892	Ring, retaining	11
500877	Spacer	12
500721	Spacer	13
501990	Seal, input shaft	14
500724	Bearing, ball	15
500841	Washer, thrust	16
500797	Bearing, needle (2 required)	17
500781	#2 Gear/#3 pinion assembly	18
500798	Shaft, #2 gear	19
500878	#4 Gear/#5 pinion assembly	20
501989	Gearcase	21
501994	Vent plug	23
501991	Bearing, ball, sealed	24
501144	Bearing, rotor, top	Not shown
501171	Switch, centrifugal	Not shown
501208	Overload, thermal	Not shown
500802	Oil, gearcase (1 pint)	Not shown



Miscellaneous parts

Part #	Description
501860	Pump, condensate
501781	Regulator, water pressure (25 PSI)
501111	Grease, Chevron, SRI-2, 14 oz tube
502538	Carton and foam packs