

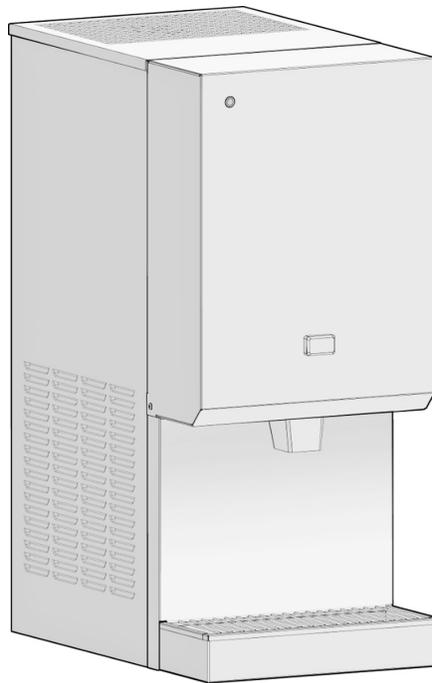
COUNTERTOP ICE MAKER

IMD315E Series

Installation Guide

Owner-Operator's Manual

Service Manual



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Revision: A

 **Marmon Foodservice
Technologies**
A Berkshire Hathaway Company

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Contact Information:

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This document contains the original instructions for the unit described.

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EQUIPMENT REGISTRATION



Thank you for purchasing your equipment from the Marmon Foodservice Technologies family of brands. From technical support to warranty dispatch to replacement parts sales, Marmon Link provides your entire after-sales support for Cornelius, Prince Castle, Silver King, and Angelo Po America equipment.

Registering your equipment will help us keep you up to date on equipment information, preventative maintenance resources, and other topics. Your equipment's warranty will not be affected if you choose to not fill out this form.

To expedite the process, we ask that you have the following:

- The serial numbers of the equipment you purchased.
- The name and email address for a designed store contact.
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REGISTER YOUR EQUIPMENT

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- Comprehensive after-sales service
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Complete with:

- Serial Number
- Equipment location details



Your equipment serial number will be validated against our database of existing serial numbers. If you are having difficulties entering a valid number, please contact Marmon Link at **1-866-275-6392**.

Model Number Guide

IMD315-EAUS1

I M D 315 - E A US 1

Decoder:

I: Ice

M: Maker

D: Dispenser

3: First Digit - 300 lbs (Daily ice production)

15: Second & Third Digits - 15 lbs. (Ice-bin storage capacity)

E: R290 refrigerant

A: Air Cooled (condenser component cooling)

US: United States (distribution zone)

1: Variant (depending on features)



TABLE OF CONTENTS

SAFETY INSTRUCTION.....	1
Read and Follow ALL Safety Instructions	1
Different Types of Alerts	1
Safety Tips	1
Qualified Service Personnel	2
Safety Precautions.....	2
Shipping And Storage	2
Power Cord.....	2
Sound Level	2
Unit Location	2
Flammable Refrigerants	3
 GENERAL INFORMATION	 4
General Description	4
Specification Chart	4
Climate Class	4
Temperature Chart.....	4
 DIMENSION DRAWING	 5
 INSTALLATION INSTRUCTIONS	 6
Remove Icemaker from Carton	6
Cabinet Removal	6
Preparation of Installation Site	6
Water Inlet Hook-up.....	7
Electrical Supply	7
Cabling	7
Check to Electrical Devices.....	8
Repairs to Sealed Components	8
Drain Connection	8
Auger Engagement.....	10
Detection of Flammable Refrigerants	11
Initial Start Up, Checks and Adjustment Instructions	12
 GUIDE TO SERVICE	 14
Icemaker Cleaning and Sanitizing Procedure.....	14
 MAINTENANCE	 15
 WATER LEVEL CONTROL.....	 16
How Water Level Control Works	16
Purpose	16
Replacing the Water Level Control.....	16
Replacing the Water Level Safety Switch	17

TABLE OF CONTENTS (Cont.)

Gear motor	18
Troubleshooting Gear Motors	18
Overload Check	18
GEARMOTOR SYSTEM	19
Gearmotor Check	19
Gearmotor Start Relay.....	19
Gearmotor Shaft Seal Installation & Replacement.....	20
Auger and Extruding Head Removal.....	21
Upper Nut and Bearing Assembly	22
Replace Upper Auger Bearing	22
Troubleshooting Compressor	23
Electrical Checkout	23
Overload Check	24
Compressor Check.....	24
Capacitor Check.....	24
SAFETY CONTROLS.....	25
REFRIGERATION SYSTEM.....	26
Removal and Evacuation	26
Charging Procedures	26
Recovery	27
Checks To The Work Area	27
Checks To The Refrigeration Equipment.....	28
GUIDE TO GOOD ICE	29
SCHEMATICS.....	30
TROUBLESHOOTING.....	32
ELECTRONIC CONTROLLER OVERVIEW & TROUBLESHOOTING	34

SAFETY INSTRUCTION

Read and Follow ALL Safety Instructions

Safety Overview

- Read and follow ALL SAFETY INSTRUCTIONS in this manual and any warning/caution labels on the unit (decals, labels or laminated cards).
- Read and understand ALL applicable OSHA (Occupational Safety and Health Administration) safety regulations before operating this unit.

Recognition

	<p style="text-align: center;"><i>Recognize Safety Alerts</i></p> <p style="text-align: center;"><i>This is the safety alert symbol. When you see it in this manual or on the unit, be alert to the potential of personal injury or damage to the unit.</i></p>
---	--

Different Types of Alerts



DANGER:

Indicates an immediate hazardous situation which if not avoided **WILL** result in serious injury, death or equipment damage.



WARNING:

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in serious injury, death, or equipment damage.



CAUTION:

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury or equipment damage.

Safety Tips

- Carefully read and follow all safety messages in this manual and safety signs on the unit.
- Keep safety signs in good condition and replace missing or damaged items.
- Learn how to operate the unit and how to use the controls properly.
- Do not let anyone operate the unit without proper training. This appliance is not intended for use by very young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
- Keep your unit in proper working condition and do not allow unauthorized modifications to the unit.

Qualified Service Personnel

WARNING:

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. Servicing shall be performed only as recommended by the manufacturer. **ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES. FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.**

Safety Precautions

This unit has been specifically designed to provide protection against personal injury. To ensure continued protection observe the following:

WARNING:

Disconnect power to the unit before servicing following all lock out/tag out procedures established by the user. Verify all of the power is off to the unit before any work is performed. Failure to disconnect the power could result in serious injury, death or equipment damage.

CAUTION:

Always be sure to keep area around the unit clean and free of clutter. Failure to keep this area clean may result in injury or equipment damage.

WARNING:

Keep ventilation openings clear of obstructions., This applies to the appliance the enclosure or the built-in structure.

SHIPPING AND STORAGE

CAUTION:

Before shipping, storing or relocating the unit, it must be sanitized and all sanitizing solution must be drained from the system. A freezing ambient environment will cause residual sanitizing solution or water remaining inside the unit to freeze, resulting in damage to internal components.

POWER CORD

CAUTION:

If the power cord is damaged, it must be replaced by a special cord available from the manufacturer or its service agent.

SOUND LEVEL

CAUTION:

The A-weighted sound pressure level has been determined to be below 70dBA.

Unit Location

CAUTION:

Appliance is not suitable for installation in an area where a water jet could be used.

⚠ CAUTION:

The appliance must be placed in a horizontal position.

⚠ WARNING:

This unit is not designed for use in outdoor locations.

FLAMMABLE REFRIGERANTS**⚠ WARNING:**

Refer to nameplate. Some ice-maker models may contain up to 150 grams of R290 (propane) refrigerant. R290 (propane) is flammable in air concentrations of approximately 2.1% to 9.5% by volume (LEL lower explosion limit and UEL upper explosion limit). An ignition source at a temperature above 470°C is needed for combustion to occur.

⚠ WARNING:

For ice makers with flammable refrigerant in their cooling units: installation, handling, servicing and disposal must be carried out by authorized technicians only.

⚠ WARNING:

This equipment must be installed in accordance with the ASHRAE 15 Safety Standard for Refrigeration Systems.

⚠ WARNING:

Do not use mechanical devices or other means to accelerate the defrosting process or during cleaning, other than those recommended by the manufacturer.

⚠ WARNING:

This equipment cannot be installed in corridors or hallways of public buildings.

⚠ WARNING:

Do not use electrical appliances inside the food/ice storage compartments unless they are of the type recommended by the manufacturer.

⚠ WARNING:

The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

⚠ WARNING:

Do not pierce or burn.

⚠ WARNING:

Be aware that refrigerants may not contain an odor.

⚠ WARNING:

Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

⚠ WARNING:

To minimize the risk of possible ignition due to incorrect parts, component parts shall only be replaced with like components.



GENERAL INFORMATION

General Description

This section gives the description, theory of operation, and design data for continuous flow ice makers.

Electrical & Refrigerant Specification Chart

Table 1:

Model	Condensing Unit	Current Draw (Amps)	Required Circuit Size (Amps)	VAC	HZ	PH	Wire	Refrigerant		Power Cord
								Grams/Oz.	Type	
IMD315-EAUS1	Air Cooled	6.0	15	115	60	1	2	45 / 1.59	R290	5-15P

NOTE: For units not listed in above chart, refer to nameplate or contact factory service.

Climate Class

The climate class indicates the condition of the test room in which the machine was evaluated. During the test, the test room maintained values of temperature and humidity within ± 1 °C of the temperature and ± 5 units of the relative humidity percentage figures at the specified climate measuring point(s).

Table 2:

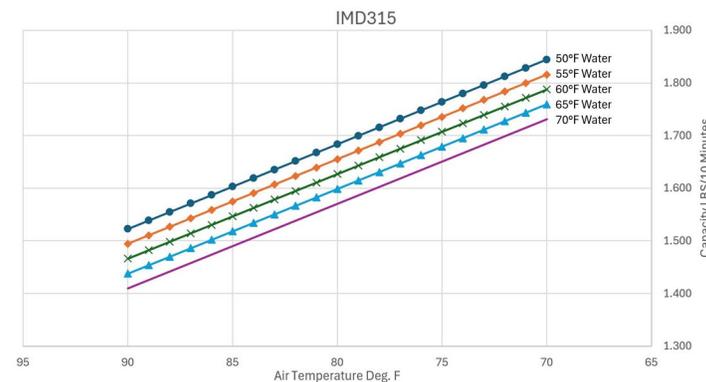
Test room climate class rating	Dry bulb temperature	Relative humidity	Dew point (°C)	Water vapor mass in dry air (g/kg)
4	30°C (86°F)	55% RH	20°C (68°F)	14.8 g/kg (11.56 oz/gal)

Temperature Chart

Table 3:

Air Temp °F	Capacity @50°F Water	Capacity @60°F Water	Capacity @70°F Water
70	1.84	1.79	1.73
80	1.68	1.63	1.57
90	1.52	1.47	1.41

NOTE: All capacities are in LBS/10 minutes and carry a tolerance of +/- 3%



DIMENSION DRAWING

IMD315-EAUS1

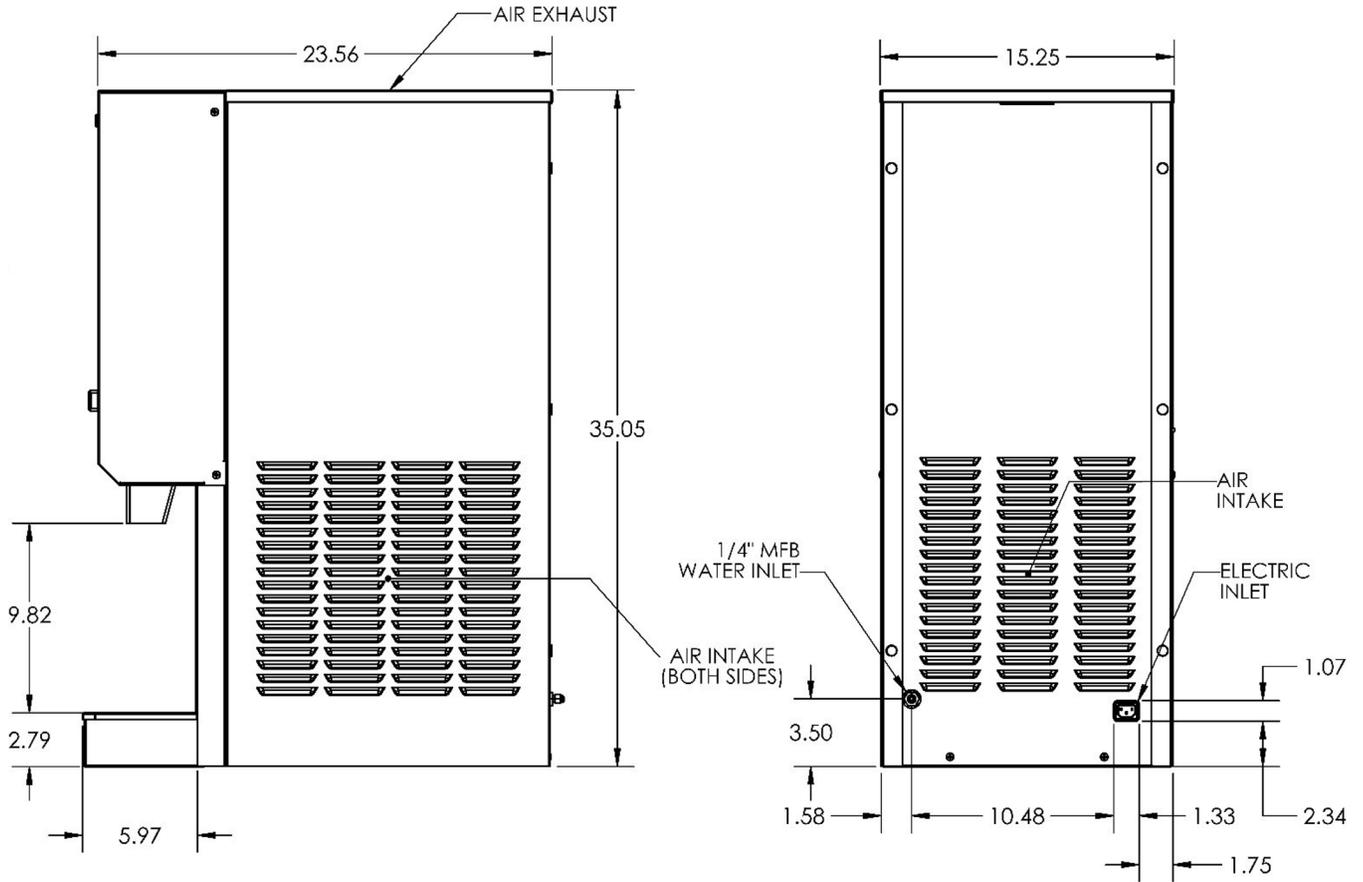


Figure 1. Dimension Drawing IMD315-EAUS1

INSTALLATION INSTRUCTIONS

This manual covers unpacking and inspection, selecting location, installing unit, and preparing for operation.

Remove Ice maker from Carton

Keep unit in the upright position, remove carton and pallet from unit and inspect unit for damage.

Upon inspection of the unit, if any damage is found, file a claim with carrier immediately.

Before the removal of any ice maker cabinet panels, ensure that the unit is not plugged in.

Cabinet Removal

1. Confirm the unit is not powered on. Locate and remove the (4) screws from the sides of the front cover. Lift cover forward and up to remove. Unplug the wire connector on the front cover inside and set the cover away from the unit.
2. Remove the (2) screws exposed by the front cover. Lift the splash panel (located behind the ice chute) up slightly to disengage the front, then tilt forward and remove.
3. Lift up front edge of top cover. Slide back about 1/2 inch (12.7 mm) and remove.
4. Remove (2) screws from the front of the machine and remove side panels by sliding the front edge out away from the unit and then back slightly to disengage.
5. Remove back panel if required by removing (4) panel screws.

Preparation of Installation Site

The refrigeration system on air-cooled units requires airflow; choose a well ventilated area for the unit location.

1. Install the unit in a room with a minimum area of 33.48 ft² (3.11 m²).
2. **Ventilated Area** - Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.
3. A minimum of 5 inches (127 mm) must be maintained, free of any obstructions, for air intake through the back panel. One side (left or right) must maintain a minimum of 3 inches (76.2 mm) clearance without obstruction for air intake. An open top clearance is required for air exhaust.
4. With template provided, part number 620075184, make the necessary provisions in the counter for water drain.

Water Inlet Hook-up

1. **Water Inlet** - Fitting is a 1/4" (6.35 mm) SAE male flare located at the rear of the unit. Connect water supply with a 1/4" (6.35mm) or larger copper or flexible tubing.



CAUTION:

Unit must be installed with only potable water.

NOTE: A shut-off valve with a loop of additional tubing for service is recommended.

2. **Water Pressure** - Unless otherwise specified, the unit is designed to operate on water pressures between 10 -90 PSI. (68.9 - 620.5 kPa). A recommended water supply is with temperatures between 50° F - 90° F (10° C - 32° C) with a pressure between 20 - 70 PSI (137.9 - 482.6 kPa).

NOTE: For pressures above 90 PSI (620.5 kPa) a regulator must be installed.

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

3. **Filter** - IMF (Phosphate Feeder) Water Filters and Scale inhibitors are not recommended for use with Icemaker, Taste & Odor only should be used. Total dissolved solids in the water should be within the below specified limit

Min dissolved solids = 270 PPM(TDS).

Max dissolved solids = 500 PPM(TDS).

NOTE: Water inlet for the Ice Maker should not be with an RO Filtration System. **NOTE:** Unit must be installed per local plumbing code.

Electrical Supply

Power Access – is provided via a detachable power cord with a 3-prong plug. The cord is attached via an electronic receptacle at the rear of the unit.

NOTE: Only trained and certified electrical technicians should replace the power cord or the unit should be returned to an Authorized Service Center for power cord replacement. The replacement cord must meet all requirements of the original equipment manufacturer.

NOTE: Unit must be installed with a dedicated & appropriately rated fuse or circuit breaker (Table 1).

NOTE: Unit must be installed according to all required local, state and national electrical codes.

NOTE: Unit must be grounded.

NOTE: Use of GFCI/GFI circuit protection is generally not recommended for this type of appliance to reduce the possibility of nuisance trips. However, if the circuit protection is required per code, a GFCI/GFI breaker is preferred rather than an outlet type.



CAUTION:

Failure to comply could result in serious injury, death or damage to the equipment

Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges, or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

Checks To Electrical Devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily resolved. If the fault cannot be corrected immediately, but it is necessary to continue operation, an adequate temporary solution should be used. Report this to the owner of the equipment, so all parties are advised.

Initial safety checks include:

- a) that capacitors are discharged: this must be done in a safe manner to avoid possibility of sparking. A capacitor discharge pen or similar tool **MUST** be used to avoid arcing or sparking of the capacitor;
- b) that no live electrical components and wiring are exposed while charging, recovering or purging the system;
- c) that there is continuity of earth bonding.

Repairs To Sealed Components

During repairs to sealed components, all electrical supplies must be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.

NOTE: Typical service will require power to be applied to the device to reset the Cleaning timer.

Particular attention must be focused on the following to ensure that when working on electrical components, the casing is not altered in such a way that the level of protection is affected. This includes damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

Ensure that the apparatus is mounted securely.

Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts must be in accordance with the manufacturer's specifications.

Drain Connection

1. Install splash panel on machine and hold in place with (2) screws. Do not tighten at this time.
2. Remove drain tray mounting bracket from shipping carton.
3. Clip the drain tray mounting bracket onto the bottom of the splash panel on the brackets provided.
4. Hook the drain tray into the splash panel and onto the mounting bracket.
5. Push the drain elbow securely onto the drain tray. Do not glue in place.
6. Complete drain hookup according to the instructions provided with unit.

NOTE: Steps 7 and 8 to be completed only after all start up checks and adjustments are performed (see section: Initial Start Up, Checks & Adjustment Instructions).

7. Replace side panels tightening all (6) screws (including splash panel screws left loose).
8. Replace top panel and front cover and secure with (4) screws.

NOTE: In those cases where the unit is base mounted and not on legs it should be sealed all around the base with NSF listed sealant.

NOTE: Use PVC cement to secure all PVC joints.

NOTE: Refer Drain hook up connections (Figure 2) for more information.

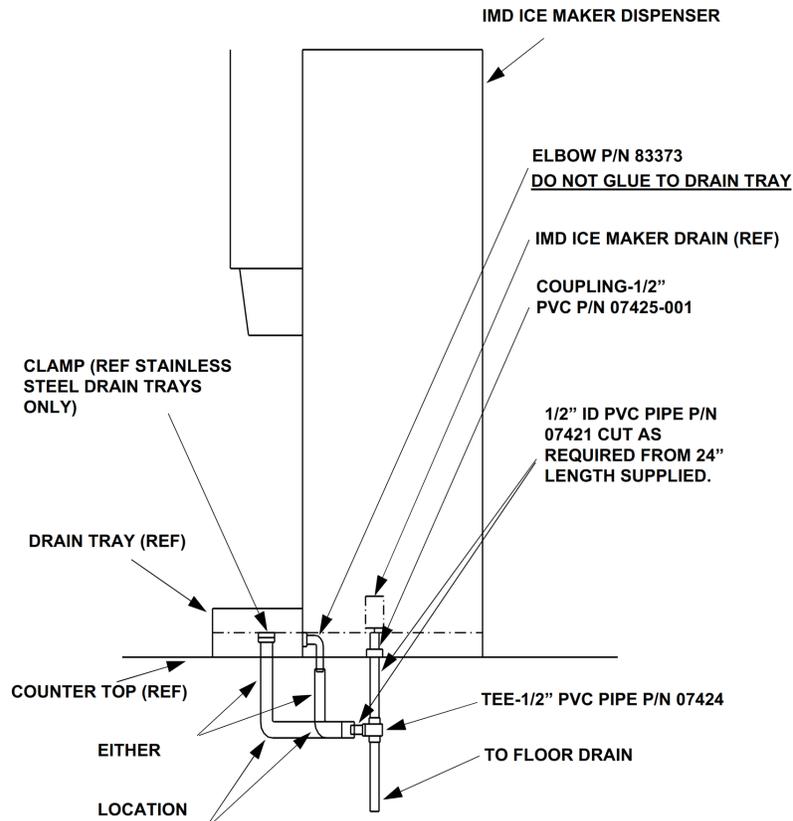


Figure 2. Drain Connection

Auger Engagement

Make certain that the auger is fully engaged to lower drive motor and that the extruder head is fully engaged into the evaporator. Perform the following procedure to engage the auger properly.

1. Install the extruder head on top of the evaporator, as shown in Figure 3.

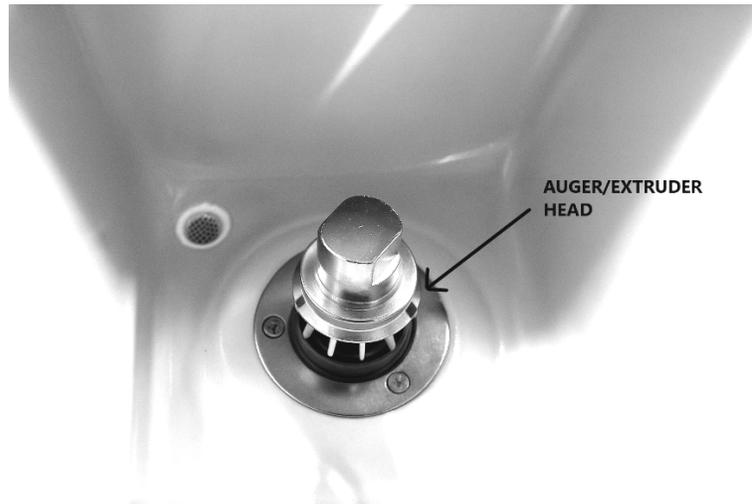


Figure 3.

2. When the auger is lowered into the evaporator, rotate the auger to engage the motor drive shaft, as shown in Figure 4.

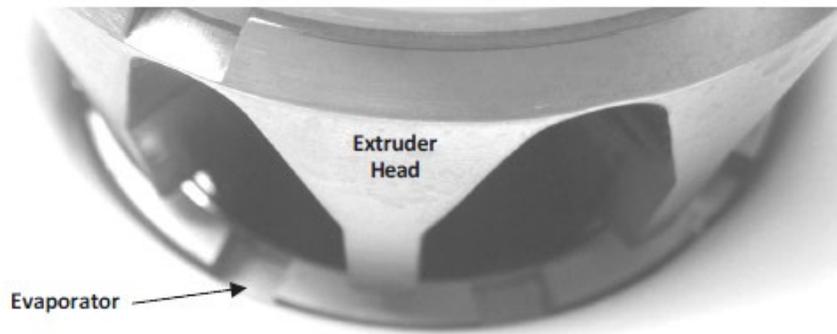


Figure 4.

3. Carefully rotate the extruder head until the tabs on the extruder head drop into the slots on the evaporator plate, as shown above. When the head assembly is rotated to the proper position, it will drop about 1/4 inch to more fully engage the motor drive shaft.

NOTE: Not all the tabs are the same width. You must rotate the auger until all the tabs are properly aligned with the evaporator slots. This may require a nearly complete rotation of the extruder head to complete.

⚠ CAUTION:

Keep hands out of the way when rotating the extruder head. When the auger is aligned, it drops down quickly and a finger may be pinched due to the weight of the auger/extruder head assembly.

IMPORTANT: Failure to lock the extruder head tabs into the evaporator slots causes the auger to be out of proper alignment with the evaporator. This may cause excessive loads on the auger that can potentially result in excessive noise and tripping the drive motor overload.

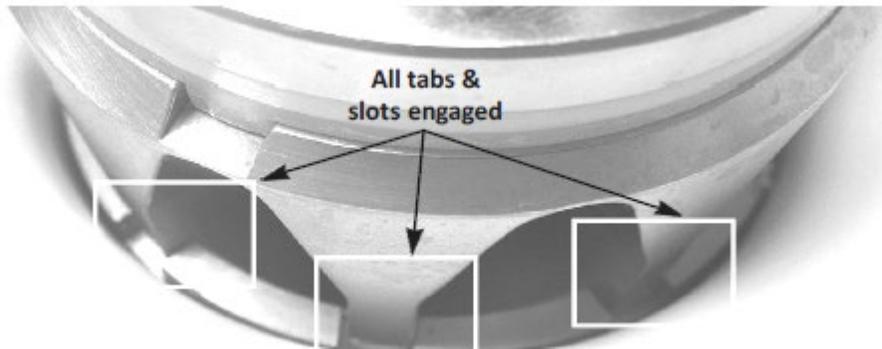


Figure 5.

Detection of Flammable Refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

The following leak detection methods are deemed acceptable for all refrigerant systems.

Electronic leak detectors may be used to detect refrigerant leaks but, in the case of FLAMMABLE REFRIGERANTS, the sensitivity might not be adequate, or might need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.

Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine can react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed/extinguished.

If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.

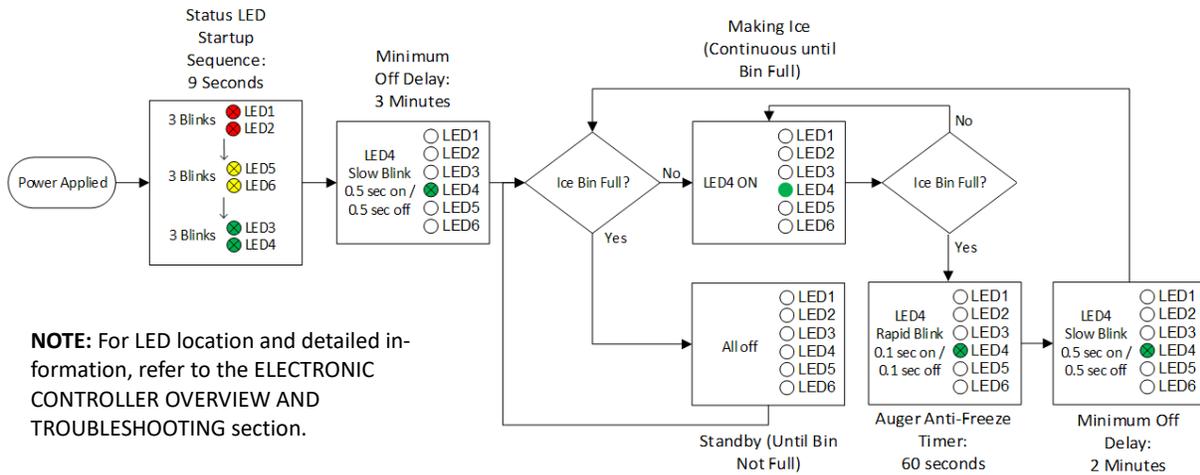
Initial Start Up, Checks and Adjustment Instructions

NOTE: Do not start unit before completing installation steps on the previous page.

Turn on water supply and plug in the power cord to power-up the icemaker.

NOTE: The unit has a timed delay between plug in and the start of ice production: **3 minutes**.

Flowchart 1 shows the typical start up Ice Making Status LED sequence. Note: This flowchart assumes no errors.



Flowchart 1.

Perform the Following System Checks:

NOTE: If unit will not start be sure water reservoir is full. Low water safety control must be properly adjusted to start and shut down unit. If water level drops below bottom of reservoir, unit must shut down. Adjustment is made by moving magnet up or down.

Water Level - If necessary adjust the float by bending the float arm up or down as needed, push float assembly down until unit stops running. Release float and unit will restart. Keep water in reservoir at level line while unit is in operation.

Low Water Safety Control - Adjust magnet by bending magnet arm as needed to shut unit down if water level drops below bottom of reservoir.

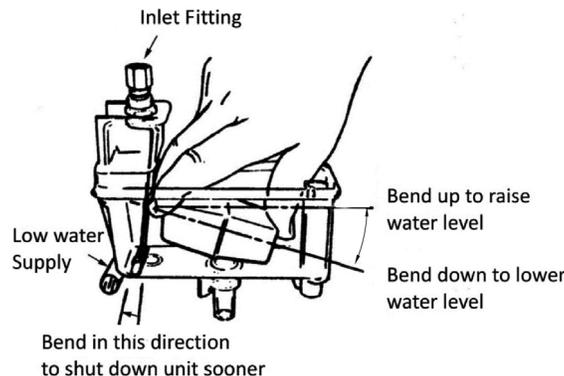


Figure 6. Icemaker Float Assembly

Bin Control -

1. Remove two bottom Ebox screws, lift the Ebox slightly and pull forward.
2. Slide Ebox down the bracket slots to expose the bin control lid.
3. Remove two agitator thumb screws.
4. Loosen the two metal plate thumb screws and push the metal plate up from the top of bin cover.
5. Re-tighten the plate thumb screws to hold the plate in place.
6. Lift the agitator cover so bin control plate can be manually lifted until the unit shuts down.
7. Release plate and the unit will restart.
8. Replace the thumb screws and lower the plate back down when finished.

Dispense Switch and Mechanism - By depressing the dispense switch, the dispense mechanism door on the storage bin will open and agitator will rotate counterclockwise.

Initial Cleaning & Sanitizing – Perform the initial cleaning process, see following procedure.

NOTE: If any of these checks or adjustments cannot be achieved, refer to Troubleshooting and Service Sections of this manual or call our Technical Support Center for assistance at 1-800-238-3600.

Panel Indicator

The ice maker is equipped with a multicolor indicator visible on the front panel of the unit. This indicator shows if a cleaning reminder counter has expired and/or if there is an error resulting in non-operation of the unit. The normal condition of the indicator is off.

The indicator will illuminate solid yellow if the total operating time has exceeded 90 days since the last cleaning.

Note: The counter does not increment if the ice maker is not powered. If the unit is stored for an extended amount of time, the operator should clean the unit before reinstalling it.

⚠ CAUTION:

The icemaker will not halt ice production based on the expiration of this cleaning reminder counter, however, continued use may result in inefficient ice production and/or damage to the equipment.

The panel indicator will illuminate red if an error has occurred in the unit that prevents ice making. There are multiple error codes indicated by a series of flashes. Refer to the service section for additional details. Refer to the LED1 fault definitions in section ELECTRONIC CONTROLLER OVERVIEW & TROUBLESHOOTING.

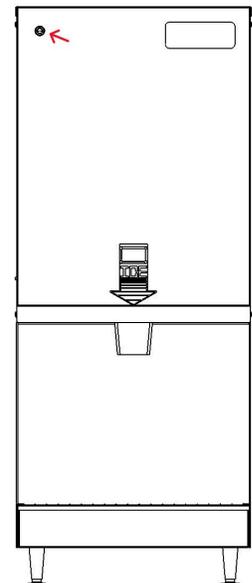


Figure 7. Panel Indicator

GUIDE TO SERVICE

Icemaker Cleaning and Sanitizing Procedures

WARNING:

Qualified Service Personnel

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. Servicing shall be performed only as recommended by the manufacturer. **ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES. FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.**

WARNING:

Cleaning solution must be safe for stainless steel. NO EXCEPTIONS.

Do not use any of the ice made during cleaning operations.

Clean and sanitize the ice storage area when cleaning icemaker.

1. Turn icemaker off (unplug power cord) and shut off water supply.
2. Remove the front panel, splash panel, top and side panels to access the required components
3. Remove ice from storage bin.
4. Mix approved cleaner (2 gallons as directed). **Recommended cleaning solution:** Nu-Calgon Nickel-Safe liquid ice machine cleaner. **Mixture:** Per cleaner manufacturer recommendation.
5. Clean auger and agitator assembly in a sink using cleaner mixture. Do not clean the agitator assembly electrical components. Using cleaner, wipe down the ice storage bin, door assembly, and chute. Reinstall auger and agitator assembly.
7. Turn machine on and add cleaner solution to water level control until 2 gallons have been used.
8. Turn on water supply and run machine for 15 minutes.
9. Turn off machine and remove all ice.
10. Sanitize using **household liquid bleach** (50 ppm chlorine). **Mixture:** 1 fluid ounce per gallon room temperature water. 2 minute exposure time.
11. Sanitize auger and agitator assembly in a sink using sanitizing solution. Do not sanitize the agitator assembly electrical components. Using sanitizer, wipe down the ice storage bin, door assembly, and chute. Reinstall auger & agitator assy.
12. Fill icemaker with sanitizer by slowly pouring solution into water feed reservoir until full. Drain solution from reservoir and evaporator. Do not run machine. Allow to air dry. Failure to dry and remove sanitizer may result in freezing of sanitize solution within evaporator and stoppage of ice production.
13. Reset Cleaning light: Plug in power cord to start unit. Hold Reset button (indicated below) down for five (5) seconds and cleaning light will turn off.
14. Reinstall the access panels.



Figure 8. Cleaning Reset Button on PCB

MAINTENANCE

Maintenance

Preventive maintenance can increase the trouble free life of your icemaker. Many authorized service agencies offer service contracts for your icemaker. Contact your local distributor for further information.

Monthly

Clean the condenser. Use a brush, vacuum cleaner or blow from inside with air or CO₂ gas.

Inspect water feed reservoir at least once a month until a definite pattern for cleaning and sanitizing has been established.

Quarterly

This is the maximum period of time between cleaning and sanitizing the icemaker. In addition to recommended monthly procedure, and if a more frequent cleaning and sanitizing pattern has not been established, unit must be cleaned and sanitized.

Semi-Annually

Semi-Annually in addition to all previously established service procedures perform the following:

1. Check for water leaks in tube connections, water fittings and lower icemaker water seal.
2. Check drain tubes for clogs and aged tubes. Replace if tubes are stained or brittle.
3. Check for signs of condensation. Clean where necessary and replace insulation properly.
4. Check safety circuits for proper operation.
5. Check refrigeration system.
6. Check unit for abnormal noise. Tighten machine and cabinet screws, if necessary.
7. Check white upper bearings on auger assembly (Fig. 10). If bearings are less than 1/16" thick, replace.

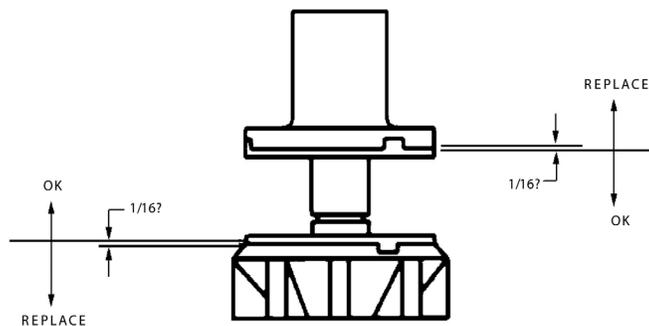


Figure 9. Upper Nut and Bearing Assembly

WATER LEVEL CONTROL

How the Water Level Control Works

When water is introduced through the inlet fitting, the float rises. The float pushes against a lever which forces the poppet assembly against the inlet fitting valve seat which seals the water off. Before the water inlet is sealed the safety switch is activated. In the event of a water failure, the float would drop down and operate the safety switch to shut off the machine.

If the water level control will not shut off and seal at level as indicated, be sure inlet pressure does not exceed the recommended factory operating range.

Under ordinary circumstances, adjustment should not be necessary providing it was properly adjusted when the unit was installed or relocated. If, however, the control becomes inoperative, repair or replace it. Refer to **Initial Start Up, Checks and Adjustment Instructions** shown previously.

Purpose

1. To automatically maintain proper water level in the evaporator when unit is running and making ice.
2. A safety switch is activated in the event of an interruption in water supply. The switch shuts off the electrical power to the icemaker and its refrigeration system. The switch will reset after the cause of water failure has been corrected and the water level in the icemaker returns to normal.
3. The transparent bowl not only provides a visible check of water level, but it's also a good guide to the internal conditions within the icemaker assembly itself. (See Cleaning Procedure.)

Replacing the Water Level Control

WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work. Failure to comply could result in serious injury, death or damage to the equipment.

1. Shut off the water supply. Shut off the main power switch or unplug the ice dispenser from the electrical outlet.
2. Remove the flexible tubing from the bottom of water level control and drain the water from the water level control and evaporator.
3. Remove the flexible tubing at the bottom of the water-level bowl connected to the overflow.
4. Hold the water inlet fitting with a suitable tool to prevent it from rotating when disconnecting the water inlet.
5. Remove the wing nut holding the water control to its mounting bracket. Remove the water control by lifting it straight up.

Replacing the Water Level Safety Switch

WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work. Failure to comply could result in serious injury, death or damage to the equipment.

1. Shut off main power switch or unplug the ice dispenser from electrical outlet.
2. Unplug the Molex connector connecting the switch to the electrical box.
3. Remove the 2 screws anchoring the water level safety switch to the bottom of the water level control mounting bracket.

Ice Level Control

The ice level control assembly is secured to the top of the ice storage bin cover. The cover is secured to the storage bin with two thumb screws and one metal plate. The level control switch is operated by a plate assembly. When the plate assembly is down, due to lack of ice in the storage bin, electrical impulse is sent to compressor, starting the ice making cycle. As ice level increases in the storage bin, the plate assembly is pushed up. When the storage bin is full, it de-actuates the switch, stopping the compressor and ice-making cycle.

The operating positions of the switch are fixed, no adjustments are necessary. If switch replacement becomes necessary, simply disconnect cable at the connector and remove the wires from switch.

Refrigeration System

A complete understanding of the ice maker and hermetic refrigeration system is necessary. The refrigeration technician must use high and low side pressure readings, water, and air temperatures, plus general conditions of cleanliness to assess the refrigeration system status.

All ice maker products are tested at the factory prior to shipment where the ambient temperature ranges from 65°F to 90°F, depending on the season of the year.

CAUTION:

Very high discharge pressure is present in system. Using quick-disconnects on gauges will minimize danger and loss of refrigerant. Comply with federal regulations for reclaiming refrigerant.

Gear Motor

The gear motor is equipped with a start relay remotely mounted in the Ebox and a manual reset overload.

When current is applied, the relay energizes and completes the circuit to the start winding. The motor reaches a predetermined speed and the relay drops out, disconnecting the start winding. The run winding remains in the circuit if current is applied.

Purpose & Operation

The purpose of the overload is to automatically shut off the motor in the event of a mechanical binding of the transmission, an overload condition within the evaporator or an electrical malfunction. It does this by sensing amperage draw. If the motor stalls the start relay would energize and stay energized. The amperage would surge 5 to 6 times greater than the normal draw. In this event the overload would shut off the transmission in 4 to 8 seconds.

If the motor is subjected to an abnormal load, but does not reach a stall condition, the overload will react, but over a greater period of time. The reaction time depends upon the amperage to which it is subjected.

The overload, through the safety circuit, also shuts off the compressor.

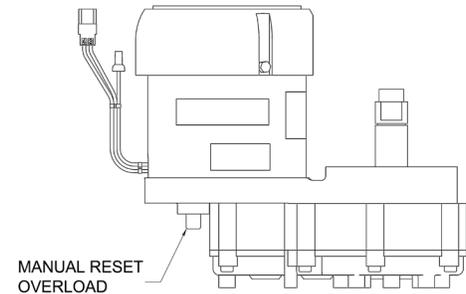


Figure 10. Motor Reset

Troubleshooting Gear Motors

Gear motor problems can be narrowed down to three areas of checkout.

The gear motor will not run

No voltage to the transmission terminals - check external circuit.

1. Low voltage - check supply.
2. Problems in the gear motor electrical circuit. See Figure 12.

The gear motor starts but trips repeatedly on the overload protector

1. Voltage - high or low voltage can cause the overload to trip.
2. High gear motor amperage draw, see Specification Chart for ratings and Troubleshooting Guide.

The Motor Runs but the output shaft does not rotate

1. Replace defective gear motor



CAUTION:

Be sure unit is disconnected from the power source. Disconnect the transmission cable.

OVERLOAD CHECK

1. Allow motor to cool and reset overload if necessary.
2. Remove motor end bell and stator, if necessary.
3. Using a volt-ohm meter, check terminals 1 and 3 on overload. If no continuity, replace the overload.

NOTE: Gear motor and related components can be checked from pin connector (Fig. 10).

GEARMOTOR SYSTEM

⚠ WARNING:

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. Servicing shall be performed only as recommended by the manufacturer. ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES. FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.

Gearmotor Check

⚠ WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work. Failure to comply could result in serious injury, death or damage to the equipment.

⚠ WARNING:

The resistance readings on the winding will be between 5 to 25 ohms. A meter capable of these low readings must be used. The start relay cover must be removed.

If there is no continuity on the start or run winding test, replace the gearmotor. If there is continuity on the grounded motor test, replace the gearmotor.

Gearmotor Start Relay

⚠ WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work. Failure to comply could result in serious injury, death or damage to the equipment.

1. Check between "2" and "4" on relay (with relay unplugged). If there is continuity replace the relay, as the relay contacts should be open.
2. Check between "3" and "4" on relay, if no continuity replace the relay.

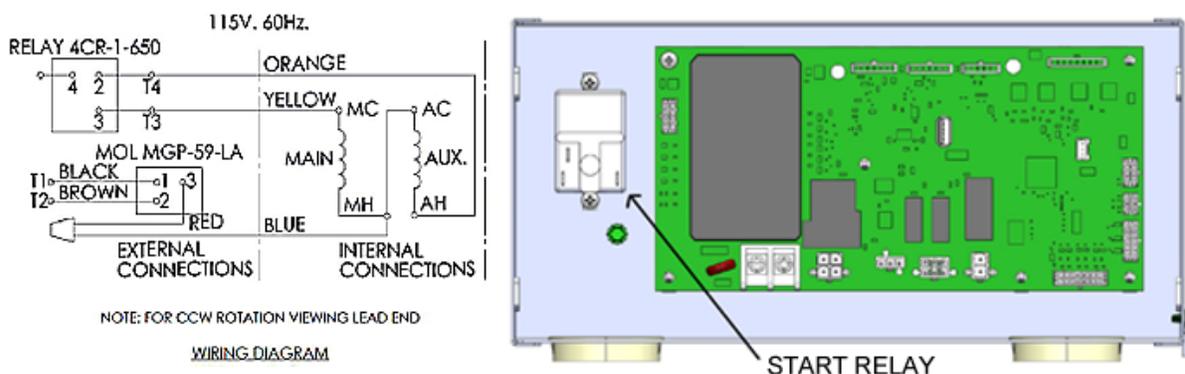


Figure 11. Gear Motor Start Relay and Pin-out

Shaft Seal Installation and Replacement

1. Place the shaft seal locator seat over the gear motor output shaft, embossed side down, and push down until the shaft seal seat rests flush on top of the gear motor.
2. Place the rubber-coated ceramic seal (important: ceramic face up) over the output shaft and push down until the seal rests on top of the shaft-seal seat. (Lubricate the rubber on ceramic seal with P/N 321471000 Molykote 111 silicone lubricant.)
3. Place the shaft seal with the carbon face down (spring up) over the output shaft and push (gently) downward until the seal rests on the carbon face of the output-shaft seal.
4. Push down on the shaft seal compressing the spring. While holding the seals down in place, slide the E-Ring into the groove on the output shaft.

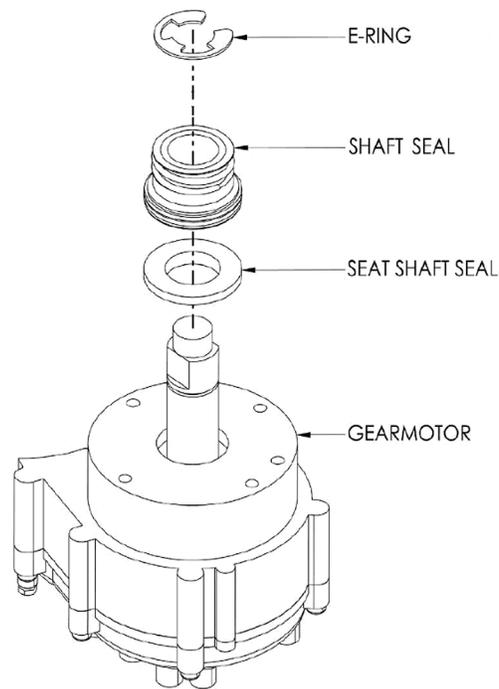


Figure 12. IMD315 Shaft Seal

Auger & Extruding Head Removal

WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work. Failure to comply could result in serious injury, death or damage to the equipment.

1. Remove the storage bin cover/agitator and set aside.
2. Turn off water supply to ice maker.
3. After ice has melted from head, take hold of the auger nut and lift straight up to disengage it from the icemaker.

When replacing the auger assembly, make certain that both the auger engages the output shaft drive and the extruding head ribs engage the evaporator tube collar (refer to Figs. 4 & 5 previously).

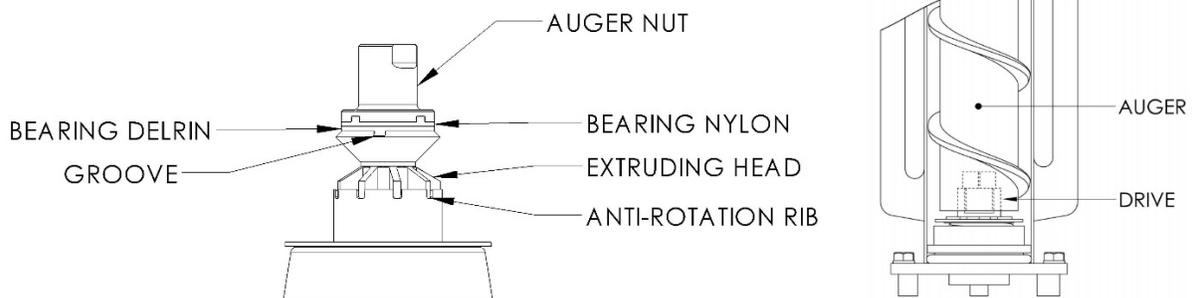


Figure 13. Auger and Extruding Head Removal

Upper Nut and Bearing Assembly

The upper bearings, located on top of the auger, are used to absorb the force between the auger and extruding head.

NOTE: The bearings are 3/32 thick. When they wear they must be replaced. Bearings must be inspected for wear during quarterly maintenance.

Replace Upper Auger Bearing



WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work. Failure to comply could result in serious injury, death or damage to the equipment.

1. Dispense all ice from the unit.
2. Remove panels.
3. Unplug the Dispense Motor and the Ice Level Switch.
4. Remove the two screws and plate holding the dispense cover in place.
5. Remove the dispense cover assembly.
6. Use a wrench on the auger nut connected to the bearing and turn counterclockwise to remove the assembly.
7. Remove the worn bearings. Replace with new bearings and then reinstall the assembly.

NOTE: If auger turns with nut, remove the cover on top of the gear motor stator and hold the rotor while loosening the nut.

8. Reconnect power to the icemaker.

Troubleshooting Compressor

The compressor problems can be narrowed down to three areas of checkout.

1. THE COMPRESSOR WILL NOT RUN

- No voltage to the compressor terminals - check circuit.
- Low voltage - below 90% of nameplate rated voltage.
- Problems in the compressor electrical circuit. See Electrical Checkout Instructions.

2. THE COMPRESSOR STARTS BUT TRIPS REPEATEDLY ON THE OVERLOAD PROTECTOR

- Check for proper fan operation and clean condenser.
- Check the compressor suction and discharge pressures.
- Voltage - The voltage should be within 10% of the rated nameplate voltage.
- High compressor amperage draw. It should never exceed 120% of the rated nameplate amperage. See Electrical Checkout Instructions.

Electrical Checkout

1. Be sure the unit is disconnected from the power source. Remove the compressor electrical box cover. Check for obvious damage and loose wires.
2. Disconnect the fan motor leads. Since the capacitor stores energy, they must be discharged before servicing. A capacitor discharge pen or similar tool **MUST** be used to avoid arcing or sparking of the capacitor.
3. Disconnect the compressor terminal wires.

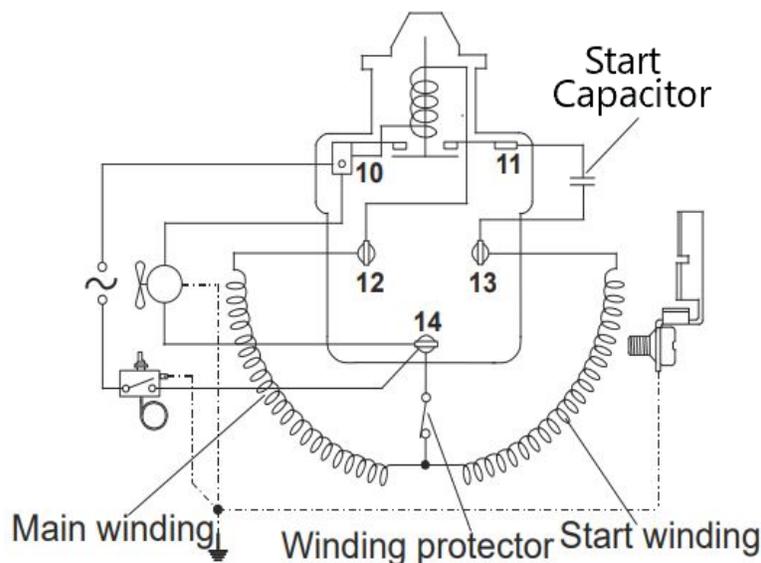


Figure 14. Compressor Winding

Overload Check

Using a volt-ohm meter check the continuity across the overload, contacts #10 & #12. If none, wait for unit to cool down and try again. If still no continuity, the overload protector is defective.

Compressor Check

The resistance readings on the windings will be between 0.25 and 10.00 ohms, a meter capable of these low readings must be used.

1. Check between "12" & "14". Replace compressor if there is no continuity as the main windings are open.
2. Check between "14" & "13". Replace the compressor if there is no continuity as the start windings are open.
3. Check between "13" & "14", or "12" and shell of the compressor. If there is continuity replace the compressor as the motor is grounded.

RESISTANCE VALUES IMD315-E*** Compressor Model ASE26C7U-1FA		
12 "R" and 13 "S" (OHMS)	13 "S" and 14 "C" (OHMS)	12 "R" and 14 "C" (OHMS)
9.0 +/-0.2	6.0 +/- 0.2	2.0 +/- 0.2

Capacitor Check

WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work. Failure to comply could result in serious injury, death or damage to the equipment.

Since capacitors store energy, they must be discharged before servicing. A capacitor discharge pen or similar tool MUST be used to avoid arcing or sparking of the capacitor.

1. To check or replace the run capacitor, disconnect the bleed resistor (if present) before checking for a shorted capacitor.

SAFETY CONTROLS

The Icemaker has several safety and control devices incorporated into its design.

⚠ WARNING:

None of the devices described below should ever be “bypassed” to allow the unit to function. The safety and control system shut-off devices are:

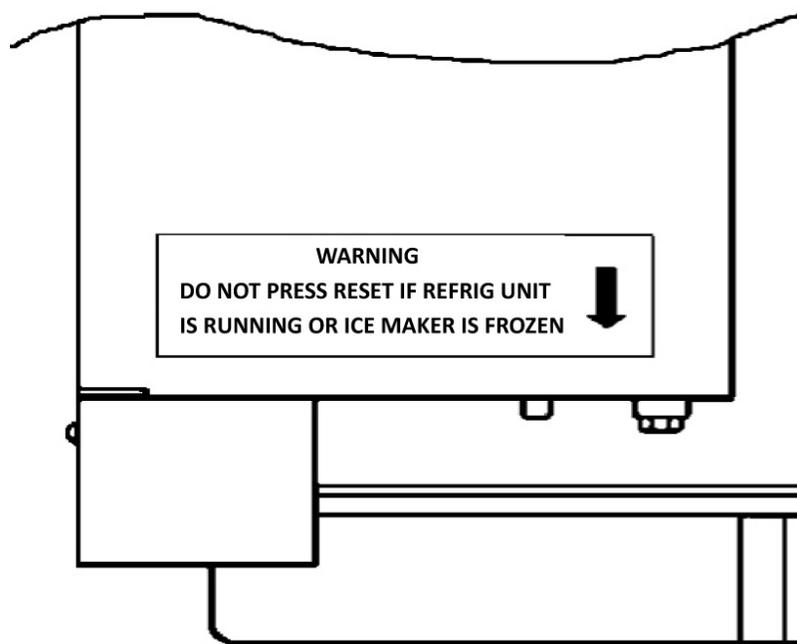


Figure 15. Gear Motor Warning

1. Gear motor thermal overload, manual reset type (RED button on motor). See Figure 14.
2. Low-water shut-off reed switch located in the icemaker float assembly (Automatic reset type).
3. Compressor thermal overload, automatic reset type.
4. Storage bin shut-off.
5. A detachable power cord.

⚠ WARNING:

Do not reset the gear motor overload if ice is present in the evaporator.

REFRIGERATION SYSTEM

WARNING:

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. Servicing shall be performed only as recommended by the manufacturer. ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES. FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.

WARNING:

Disconnect power to the unit before servicing following all lock out/tag out procedures established by the user. Verify all of the power is off to the unit before any work is performed. Failure to disconnect the power could result in serious injury, death or equipment damage.

Removal And Evacuation

When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used. However, for flammable refrigerants it is important that best practice be followed, since flammability is a consideration. The following procedure shall be adhered to:

- a) safely remove refrigerant following local and national regulations;
- b) purge the circuit with inert gas;
- c) evacuate (optional for A2L);
- d) purge with inert gas (optional for A2L);
- e) open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes. For appliances containing flammable refrigerants, the system shall be purged with oxygen-free nitrogen to render the appliance safe for flammable refrigerants. This process might need to be repeated several times. Compressed air or oxygen shall not be used for purging refrigerant systems.

For appliances containing flammable refrigerants, refrigerants purging shall be achieved by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum (optional for A2L). This process shall be repeated until no refrigerant is within the system (optional for A2L). When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.

Ensure that the outlet for the vacuum pump is not near any potential ignition sources and ventilation is available.

Charging Procedures

In addition to conventional charging procedures, the following requirements shall be followed.

- a) Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
- b) Cylinders shall be kept in an appropriate position according to the instructions.
- c) Ensure that the refrigerating system is earthed prior to charging the system with refrigerant.
- d) Label the system when charging is complete (if not already).
- e) Extreme care shall be taken not to overfill the refrigerating system.

Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labeled for that refrigerant (i.e., special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

Checks To The Work Area

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following shall be completed prior to conducting work on the system. Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e., non-sparking, adequately sealed, or intrinsically safe.

If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available on hand. A dry chemical or CO₂ fire extinguisher should be adjacent to the charging area.

No person carrying out work in relation to a refrigerating system which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment shall be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

The unit shall be installed in a room with a minimum area of 72.1 ft² (6.7 m²).

Ventilated Area - Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

Checks To The Refrigeration Equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times, the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance.

The following checks shall be applied to installations using flammable refrigerants:

the actual refrigerant charge is in accordance with the room size within which the refrigerant containing parts are installed;

the ventilation machinery and outlets are operating adequately and are not obstructed;

if an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;

marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected; refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

GUIDE TO GOOD ICE

CUSTOMER COMMENTS

"It runs but the ice is too soft."

"The icemaker is not producing enough ice."

"The ice is too wet."



CHECK ICEMAKER LOCATION CONDITIONS FIRST

Proper air flow for condensing system.

Location too close to high units such as coffee urns, deep fryers, grills, etc.

Supply water conditions

Water too warm (above 90°F).

Water artificially softened above 262 ppm sodium chloride.

Normal water supply too high in total dissolved solids (above 500 PPM).

CHECK ICE MAKER

Use gauges for checking suction and head pressures. See manual for correct reading and conditions. Check frost line and sight glass.

Check water level for proper adjustment and restrictions. See Manual.

Check evaporator assembly for worn parts, bearings, scored evaporator and auger, bad expansion valve, etc.

"It makes too much noise."

(With this comment the ice is usually extremely hard and larger than normal.)



Over Compression

Check to see if noise objection is normal fan and air flow noise.

Supply water conditions.

Water too cold (below 50°F). (Possibly running from pre-cooler.)

Obstructions partially blocking ice exit from top of evaporator.

Check fan and fan shroud.

Check for loose parts and screws rattling.

Check evaporator assembly for worn parts, bearings, scored evaporator and auger, bad expansion valve, etc.

SCHEMATICS

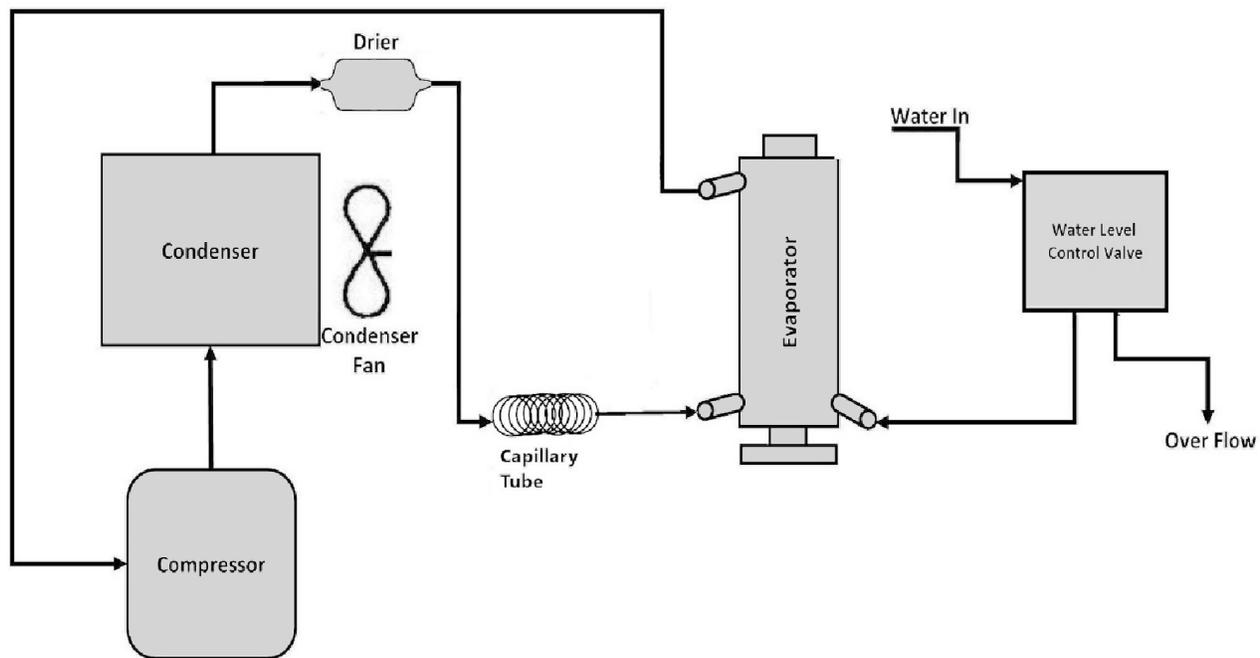


Figure 16. Component Interconnection Schematic

SCHEMATICS

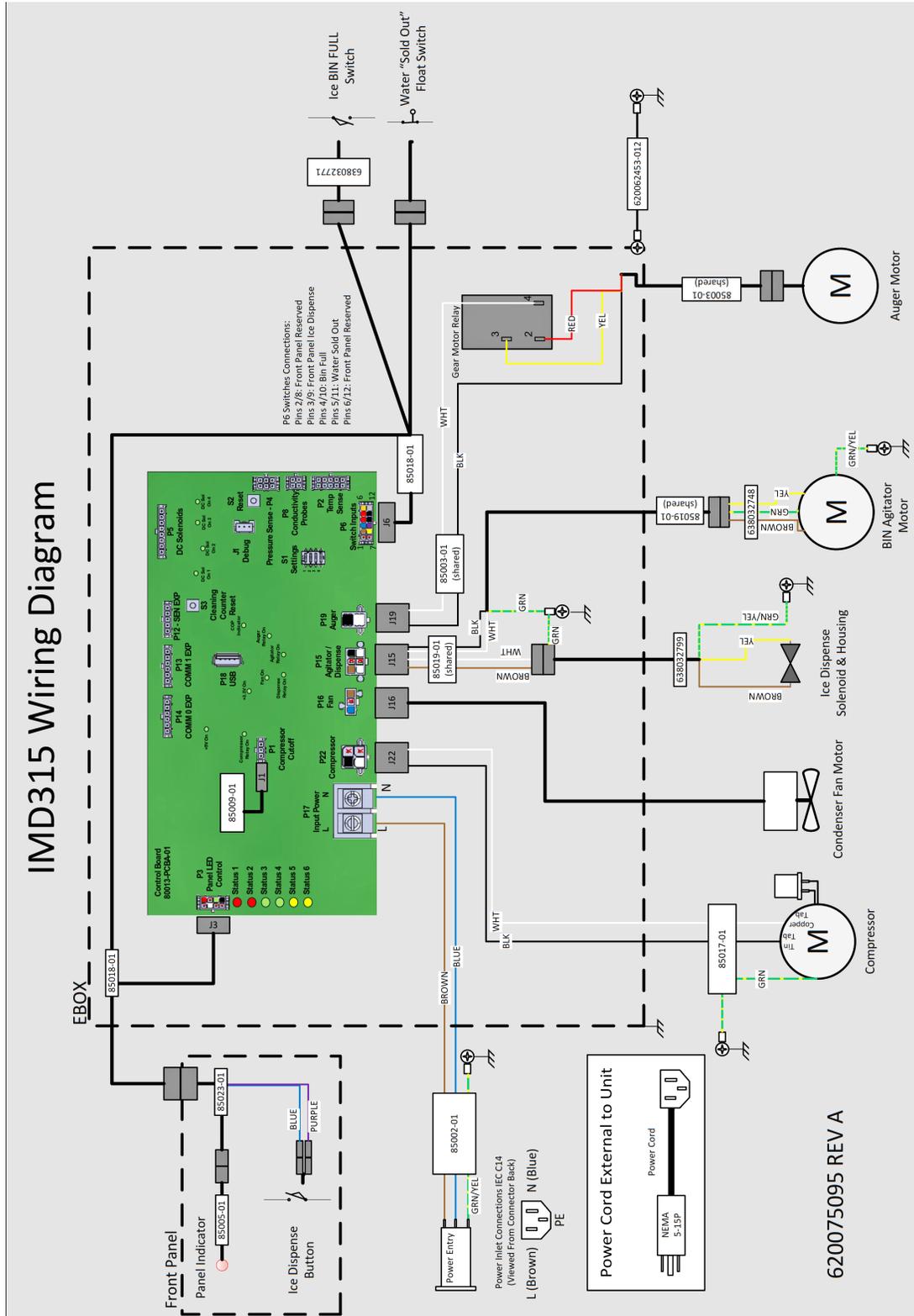
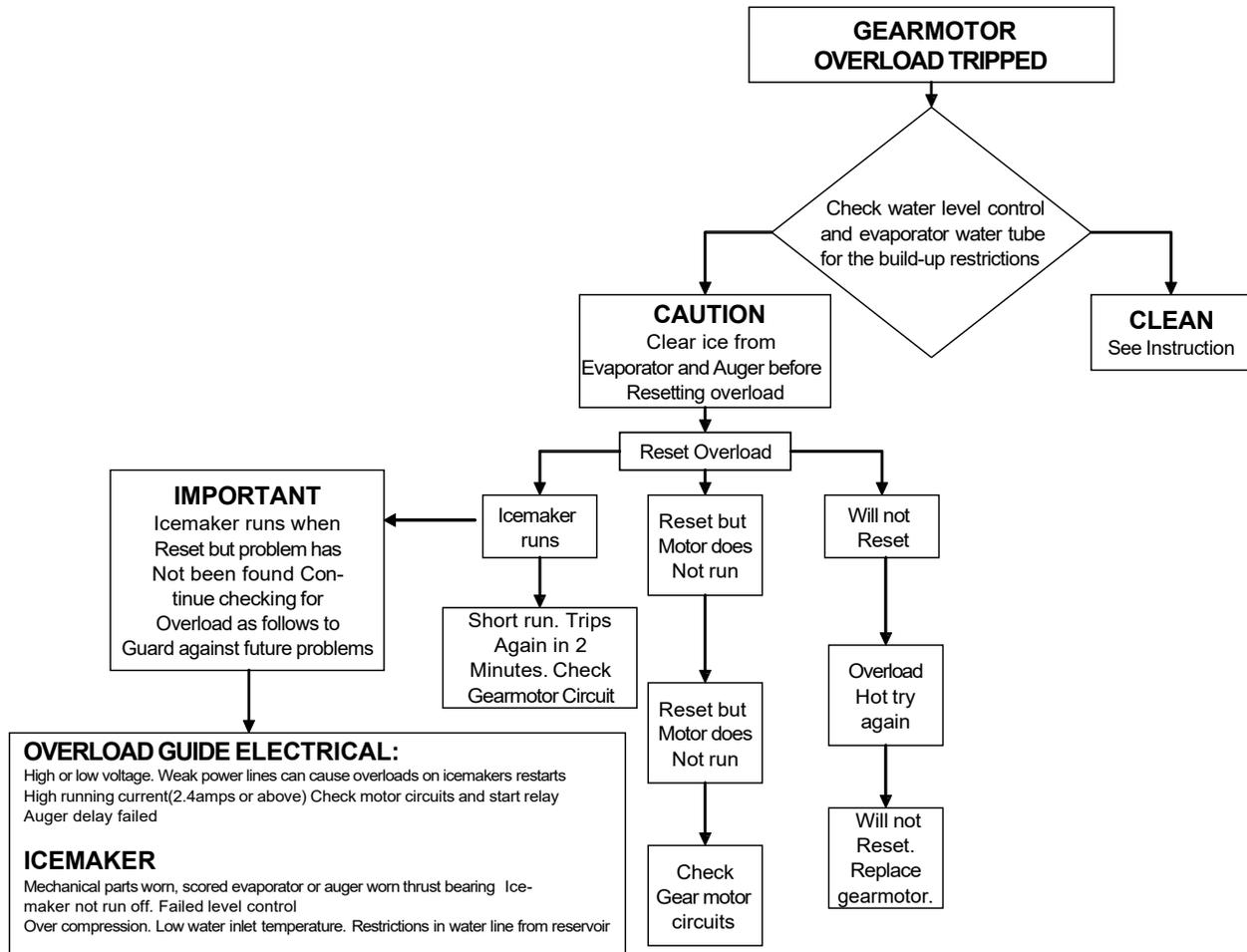


Figure 17. Electrical Schematic

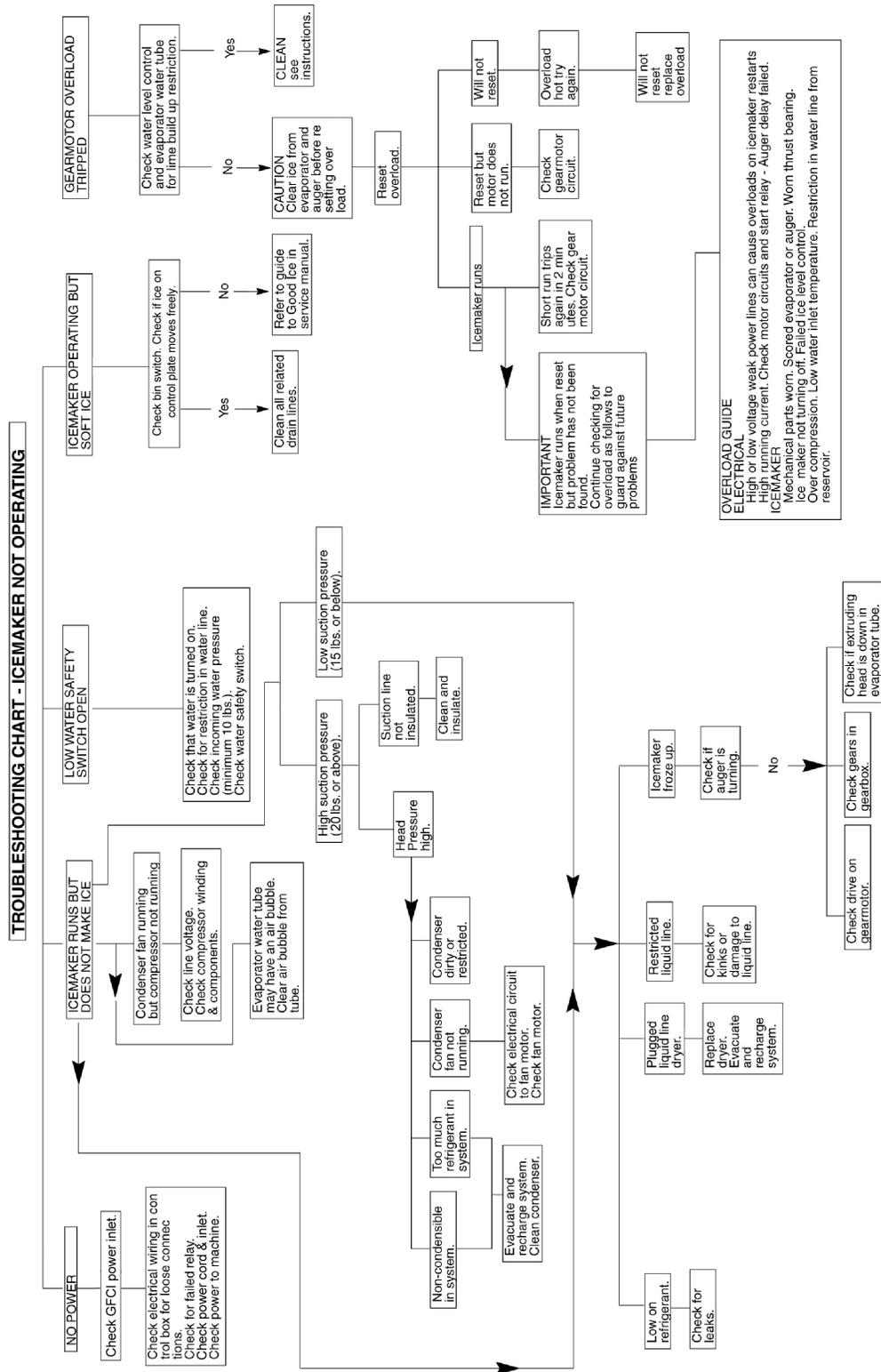
TROUBLESHOOTING

Troubleshooting Flowchart - Gearmotor



Flowchart 2.

TROUBLESHOOTING



Flowchart 3.

ELECTRONIC CONTROLLER OVERVIEW AND TROUBLESHOOTING

The ice making equipment is controlled via an electronic printed circuit board (Part Number 80013-PCBA-01). This control board is responsible for all functions of the equipment's operation. Figure X shows the layout of the control board. The following sections define each LED indicator function, each switch function, and each connector's function.

Note: Functions utilized are model specific.

Precautions



WARNING:

Risk of electric shock. Care should be taken not to touch live terminals. Control board access should only be performed by qualified personnel.



CAUTION:

Control board should be considered fragile if/when replacing. Care should be taken not to overstress the control board.



CAUTION:

The control board utilizes electrostatic sensitive circuits. It is important to touch the metal chassis of the ice maker before touching the control board if required. Care should be taken not to touch any of the electronic circuitry on the board.

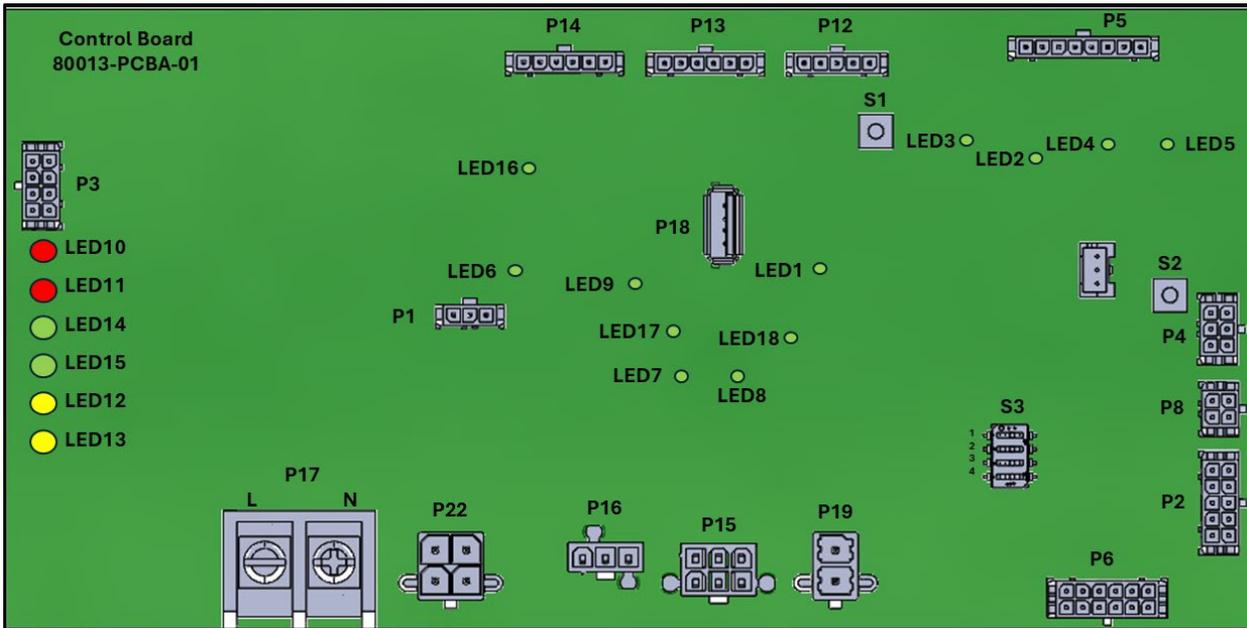


Figure 18. Main Control PC Board

LED Indicators

LED Indicator	Color	Description
LED10	Red	Status LED 10 (See details below)
LED11	Red	Status LED 11 (See details below)
LED14	Green	Status LED 14 (See details below)
LED15	Green	Status LED 15 (See details below)
LED12	Yellow	Status LED 12 (See details below)
LED13	Yellow	Status LED 13 (See details below)
LED16	Green	Illuminated if Power Supply 1 is Functional
LED3	Green	Illuminated when Solenoid 1 Power Control is enabled
LED2	Green	Illuminated when Solenoid 2 Power Control is enabled
LED4	Green	Illuminated when Solenoid 3 Power Control is enabled
LED5	Green	Illuminated when Solenoid 4 Power Control is enabled
LED6	Green	Illuminated when Compressor Power Control is enabled
LED9	Green	Illuminated if Power Supply 2 is Functional
LED1	Green	Computer Operating Properly (See details below)
LED17	Green	Illuminated when Condenser Fan Power Control is enabled
LED18	Green	Illuminated when Ice Auger Power Control is enabled
LED7	Green	Illuminated when Ice Dispensing Solenoid Power Control is enabled
LED8	Green	Illuminated when Ice Bin Agitator Motor Power Control is enabled

Status LED Definition

Status LED	Definition
Status1 (LED10)	<p>This LED indicates major errors in the system. It is shared with the front panel indicator red LED.</p> <p>The LED definition is as follows:</p> <p>Off: No errors ON Solid: Built in Test Error During Boot – See Status5 for additional diagnostics. 1 Blink: Expansion Communication Bus 0 Error 2 Blinks: Expansion Communication Bus 1 Error 3 Blinks: Pressure Sensor Out of Range 4 Blinks: Temperature Sensor Out of Range 5 Blinks: Auger No Current Detected Error 6 Blinks: Ice Dispensing Bin Full Error 7 Blinks: Dispense Tray Cutoff Switch Error</p> <p>NOTE: Blink count will occur rapidly followed by a 2 second pause before repeating.</p> <p>NOTE: If there are multiple errors detected the order of precedence shall be determined by the following order: Solid on is highest priority, then highest number of blinks down to lowest number of blinks.</p>
Status2 (LED11)	Unused – Set to OFF
Status3 (LED14)	<p>This LED indicates USB interaction in the system. It should be off in normal operation.</p> <p>Service information only: Upon USB drive detection, this LED will turn on and remain on while USB drive is in use. Once all files are read and written it Blinks at a rate of 0.5 seconds on and 0.5 seconds off indicating the process is complete and indicating the drive can be pulled out.</p> <p>NOTE: The control will automatically reboot during this process if a firmware update is required.</p>
Status4 (LED15)	<p>This LED indicates the ice making state and the definition is as follows:</p> <p>Off if the unit is in standby (no errors and no ice making happening) On if the unit is making Ice Blinks at a rate of 0.5 seconds on, 0.5 seconds off if the unit is waiting on compressor minimum off timer. Blinks at a rate of 0.1 seconds on, 0.1 seconds off if the unit is in Auger Anti-Ice Timeout at end of Ice making.</p>
Status5 (LED12)	This LED indicates if the cleaning timer has expired. It is shared with the front panel indicator yellow LED.

LED6	<p>This LED indicates minor (potentially self recoverable) errors in the system as well as the specific Built in Test Error that occurred during boot.</p> <p>The LED definition is as follows if a Built in Test error has occurred (Status1 is solid on):</p> <p>ON Solid: Configuration Parameters are missing. 1 Blink: Expansion Communication Bus 0 Error 2 Blinks: Expansion Communication Bus 1 Error 3 Blinks: DC Solenoid Startup Current Error 4 Blinks: Ice Auger Startup Current Error 5 Blinks: Pressure Sensor is out of range 6 Blinks: Temperature Sensor is out of range 7 Blinks: On board temperature is out of range 8 Blinks: Local Microcontroller Memory Error</p> <p>The LED definition is as follows if the Status1 is NOT on.</p> <p>ON Solid: No Water Present 1 Blink: Board Over Temperature 2 Blinks: Potential Low Water Pressure Detected 3 Blinks: Ice Dispense Timeout Detected 4 Blinks: Water Dispense Timeout Detected 5 Blinks: DC Solenoid Operation Over Current Detected 6 Blinks: Auger Operation Over Current Detected 7 Blinks: Refrigeration Error Detected 8 Blinks: Reserved for Future Expansion 9 Blinks: Reserved for Future Expansion 10 Blinks: Dispense Tray Cutoff Switch is Open</p> <p>NOTE: Blink count will occur rapidly followed by a 2 second pause before repeating.</p> <p>NOTE: If there are multiple errors detected the order of precedence shall be determined by the following order: Solid on is highest priority, then highest number of blinks down to lowest number of blinks.</p>
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Computer Operating Properly (COP) LED Definition

LED14 will blink at an interval of 1 second on and 1 second off. This indicates that the local microcontroller is operating properly. If the LED is not behaving in this manner, service personnel should be notified.

Switch Definitions:

S1: Cleaning Counter Reset Switch

This switch is used to reset the cleaning reminder counter. It is utilized as part of the cleaning procedure covered above.

S2: Controller Reset Switch

This switch will reset the controller and initiate a reboot upon release. It should be used only by trained personnel.

S3: Configuration Switch

There are 4 individual, settable switches contained within this switch. They have no bearing on the ice maker's operation.

Connector Definitions:

This section provides a general description of each connector's function. Refer to the wiring diagram for utilized connections as each ice maker is different.

Connector Designator	Generic Function
P1	Compressor Power Cutoff Connection
P2	Temperature Probe(s) Connections
P3	Front Panel Indicator LED Connections
P4	Pressure Sensor(s) Connections
P5	DC Solenoid Power Connections
P6	Control Switch(es) Connections
P8	Water Level Conductivity Probe(s) Connections
P12	Discrete Sensor(s) Connections
P13	Additional Module(s) Slot 1 Connection
P14	Additional Module(s) Slot 0 Connection
P15	Ice Dispense Solenoid and Ice Bin Agitator Motor Power Connections
P16	Condenser Fan Power Connection
P17	Control Input Power Connection
P18	USB Type "A" In Field Support Connection
P19	Ice Auger Motor Power Connection
P22	Compressor Motor Power Connection

Major and Minor Errors

A major error, as indicated by the status LEDs, will cause the unit to be non-functional. The error is only cleared with a power cycle of the unit.

A minor error, as indicated by the status LEDs, will result in loss of the function to which the error pertains, however it will self-recover if the error no longer persists. The self-recovery is different based on the type of soft error.

- No Water Present error will clear instantly when water is detected again.
- Potential Low Water Pressure error will clear when there are less than 3 No Water Present Errors occurring within 1 hour.
- Ice Dispense and Water Dispense (if equipped) Errors will clear when a change in the respective dispense switch is detected.
- The Board Over Temperature, Over Current, and Refrigeration errors will clear after 60 minutes has elapsed and the error is subsequently no longer detected.

Typical Initial Power On and Ice Making Steps

 **WARNING:**

Risk of electric shock. Care should be taken not to touch live terminals. Control board access should only be performed by qualified personnel.

 **WARNING:**

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. Servicing shall be performed only as recommended by the manufacturer. **ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES. FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.**

Basic Control Board Troubleshooting for Unit Not Producing Ice

- 1) Upon power being applied, ensure LED9 and LED16 are on. If not, check input power connections to the controller at P17.
- 2) Ensure the LED1 (COP) LED is blinking at the specified rate upon power being applied.
- 3) Ensure Status1 is not on. If Status1 is on check for Status6's error code. If Status1 is blinking with an the error code and check all appropriate cabling and/or sensors.
- 4) Ensure Status6 is not on. If Status6 is on and solid, check that there is water in the input reservoir.
- 5) If Status6 is blinking with an error code, check all appropriate cabling and/or sensors.

Contact support for further Troubleshooting.

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