



INSTALLATION MANUAL

ICE/BEVERAGE DISPENSER

Model: PBD ED175 REF & PBD ED175 REF FL



PBD ED175 REF



PBD ED175 REF FL

Publication Number: 620062763INS

Release Date: December 16, 2015

Revision Date: December 08, 2016

Revision: B

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This document contains the original instructions for the unit described.

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Printed in U.S.A.



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SAFETY INSTRUCTIONS

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

<i>Recognize Safety Alerts</i>

<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>

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. **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.

SHIPPING AND STORAGE

CAUTION:

Before shipping, storing, or relocating the unit, the unit 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.

CO₂ (CARBON DIOXIDE) WARNING

DANGER:

CO₂ displaces oxygen. Strict attention **MUST** be observed in the prevention of CO₂ gas leaks in the entire CO₂ and soft drink system. If a CO₂ gas leak is suspected, particularly in a small area, **IMMEDIATELY** ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentrations of CO₂ gas experience tremors which are followed rapidly by loss of consciousness and **DEATH**.

MOUNTING IN OR ON A COUNTER

WARNING:

When installing the unit in or on a counter top, the counter must be able to support a weight in excess of **415 lbs.** to insure adequate support for the unit. **FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.**

NOTE: Many units incorporate the use of additional equipment such as ice makers. When any addition equipment is used you must check with the equipment manufacturer to determine the additional weight the counter will need to support to ensure a safe installation.

NOTE: Units not mounted on legs MUST be sealed to the counter. Apply a continuous bead of NSF silastic sealant (Dow 732 or equal) around the entire base on front of the unit one the front cladding is secured in place. Immediately wipe off any excess sealant to form a watertight seal. If the front cladding is removed for service, the seal must be reapplied.



DESCRIPTION

The “ENDURO” series of ice dispensers solves your ice and beverage service needs in a sanitary, space saving, economical way. Designed to be manually filled with ice from any remote ice-making source, these dispensers will dispense cubes (up to 1-1/4 inch in size), cube lets and hard-chipped or cracked ice; and, in addition, several flavors of post-mix beverages. “BC” units include beverage faucets and a cold plate and are designed to be supplied direct from syrup tanks and carbonator, with no additional cooling required.

SPECIFICATIONS

Model Descriptions:	PBD ED175 REF -- FL (Flavor Option)
Ice Storage:	175 lbs
Maximum Number of Faucets Available:	8
Built-in Cold Plate:	Yes
Electrical:	120/1/60, 3.0 Amps total unit draw
Dimensions:	Std unit = 24--1/2 in. Wide X 30--11/16in. Deep X 35--5/8 in. High Z--Model = 24--1/2in. Wide X 23--1/16 in. Deep X 35--5/8 in. High

INSTALLATION INSTRUCTIONS

It is the responsibility of the Installer to ensure that the water supply to the dispensing equipment is provided with protection against backflow by an air gap as defined in ANSI/ASME A112. 1.2-1979; or an approved vacuum breaker or other such method as proved effective by test and must comply with all Federal State and local codes, Failure to comply could result in serious injury, death or damage to the equipment

Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed, and maintained according to Federal, State, and Local laws.

1. Locate the dispenser indoors on a level counter top.

A. LEG OPTION

Unpack the four (4) legs and install them into the threaded holes provided in the bottom of the unit. The installer must provide flexibility in the product and utility supply to permit shifting the position of the dispenser sufficiently to clean the area beneath it.

B. COUNTER MOUNTING

The ice dispenser must be sealed to the counter. The template drawing (see Figure 5) indicates where openings can be cut in the counter. Locate the desired position for the dispenser, then mark the outline dimensions on the counter using the template drawings. Cut openings in counter.

2. Apply a continuous bead of NSF International (NSF) silastic sealant (Dow 732 or equal) approximately 1/4" inside of the unit outline dimensions and around all openings. Then, position the unit on the counter within the outline dimensions. All excess sealant must be wiped away immediately.
3. The beverage tubes, drain tube and power cord are routed through the large opening in the bottom of the unit. See the MOUNTING TEMPLATE (Figure 5) for locating the required clearance opening in the counter for these utility lines.
4. DRIP TRAY DRAIN ASSEMBLY (See Figure 6): Route the drain tube to an open drain with the end of the tube above the "flood" level of the drain. Use the tubing, fittings, clamps, and insulation provided with the Dispenser to assemble the drain. The completed drain line must pitch continuously downward and contain no "traps" or improper drainage will result.
5. Connect the beverage system product tubes as indicated in applicable Flow Diagram Figure 7 or Figure 8. This work should be done by a qualified service person.

NOTE: See applicable Flow Diagram (see Figure 7 or Figure 8) or Decal on the lower front of the unit for the location of syrup and water connections.

6. Clean the hopper interior (see CLEANING INSTRUCTIONS in Owner's Manual).

WARNING:

This unit must be grounded to avoid possible fatal electrical shock or serious injury to the operator. The unit power card is equipped with a three-prong plug. If a three-hole (grounded) outlet is not available, use an approved method to ground the unit, failure to ground the unit could result in serious injury, death or damage to the equipment.

7. Connect the power cord to a 120 volt, 60 cycle, 3-wire grounded receptacle.
8. Maximum and minimum ambient temperature rating for correct operation is 40 to 105dF.
9. The dispenser is not designed for a wash down environment and must not be placed in an area where a water jet could be used.
10. The unit has to be placed in a horizontal position.
11. If the supply cord is damaged, it must be replaced by the manufacturer, it's service agent or similarly qualified persons in order to avoid a hazard.

ADJUST WATER-TO-SYRUP RATIO

1. Remove the valve cover and install syrup separator over the diffuser and through the nozzle.
2. Hold cup under the valve and beverage for a specific time (i.e. 2 seconds)

NOTE: Water and syrup must be cold before checking the ratios.

3. Adjust carbonated water flow to the desired rate (such as 90 to 110 ml(3 to 3.75 oz) per second). Turn the flow adjuster 1/4 of a turn at a time and recheck the flow. Increase reading turn clockwise.
4. Set a syrup flow adjuster to get the desired ration.
5. Test the valve and adjust until a consistent ratio is delivered three consecutive times.

Repeat procedure for other valves.

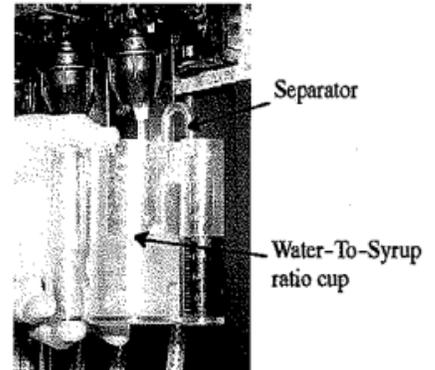


Figure 1.

FLAVOR SHOT TIMING

Locate the flavor shot controller on the front or inside of the E-box cover. See Figure 2 for dip switch settings.

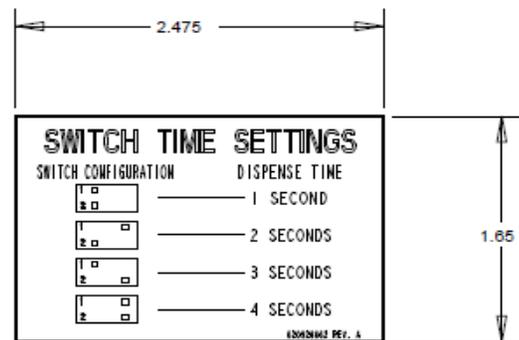


Figure 2.

FLAVOR SHOT SETTINGS

Flavor Shot Time	1 Second
Flow Rate	0.3 Oz/sec (9 ml or 9 gm)
BIB Pressure	30 to 45 psig

FLAVOR SHOT DOSING INSTRUCTIONS

- Press 1 time for cup size 12-24 Ounces
- Press 2 times for cup size 25-48 Ounces
- Press 3 times for cup size 49-72 Ounces

HOPPER AGITATION FREQUENCY ADJUSTMENT

It is important to correctly set the ON/OFF times for off-cycle ice agitation to prevent ice dispense and storage issues. The default factory timer settings are set at 4 seconds ON / 1 hour OFF. It may be necessary to adjust these times based on ice type and quality used with this dispenser.

⚠ DANGER:

Electrical shock hazard, disconnect power before servicing unit.

⚠ CAUTION:

Disconnect power to dispenser before making adjustments.

⚠ IMPORTANT:

If ice chute is removed or loosened check ice gate restrictor plate for proper setting.

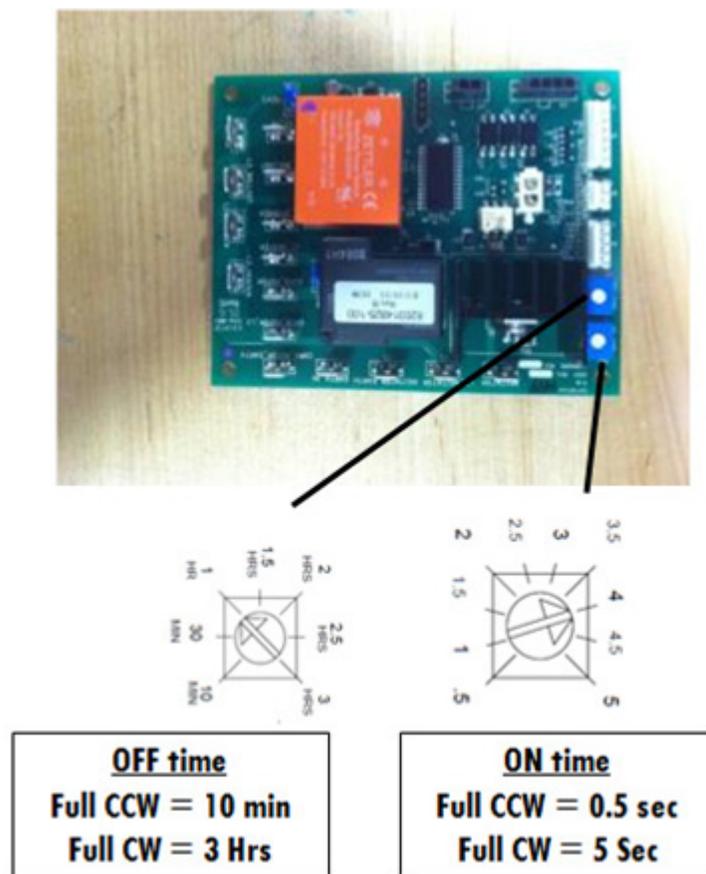


Figure 3. Hopper Agitation Frequency Adjustment

GATE RESTRICTOR PLATE



CAUTION:

Disconnect power to dispenser before installing, removing or adjusting restrictor. See safety section of this Manual.

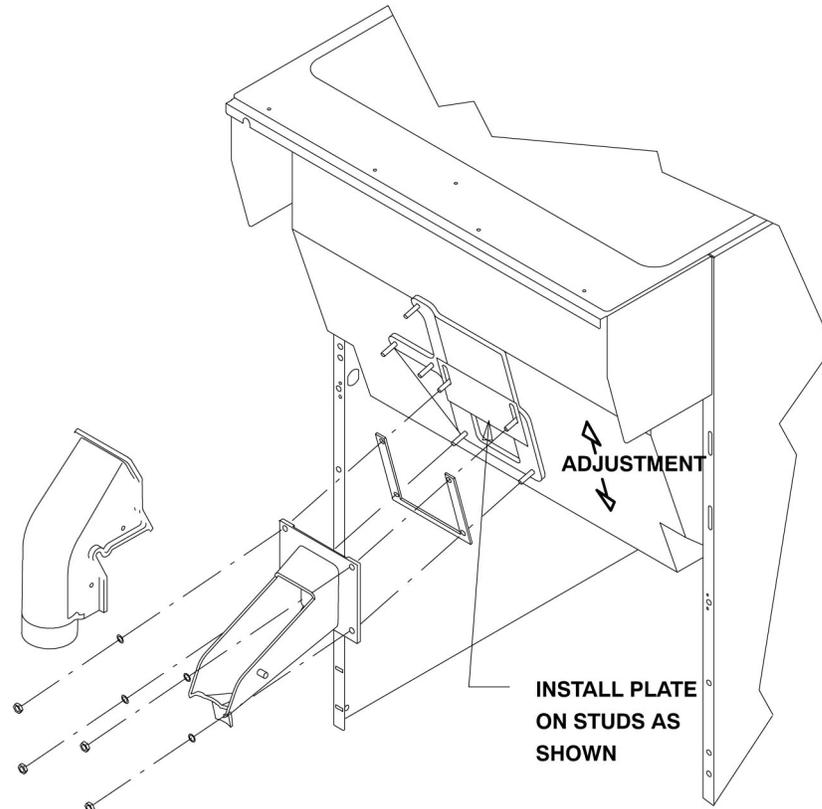
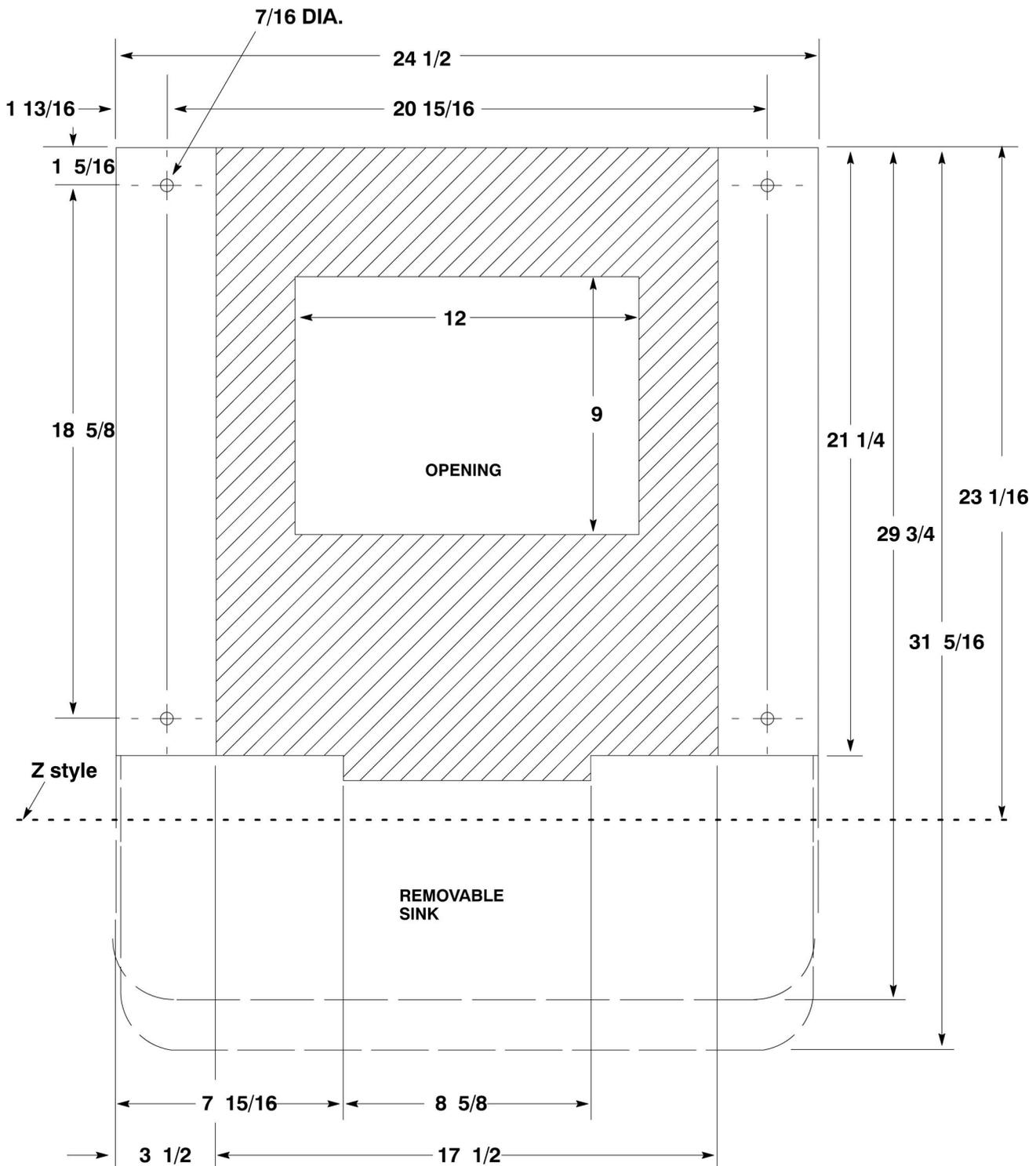


Figure 4. Gate Restrictor Plate

ADJUSTMENT

This plate may be adjusted as shown to reduce or increase the dispensing rate of ice, especially desirable when using glasses or other containers with small openings. Adjustment can be made by sliding up or down with nuts loosened, to obtain the desired amount of restriction.



COMMENDED COUNTER OPENING SIZE
 9" X 12" FOR UTILITIES AND BEVERAGE
 TUBING. OPENING CAN BE LOCATED ANYWHERE
 WITHIN THE SHADED AREA.

Figure 5. Mounting Template

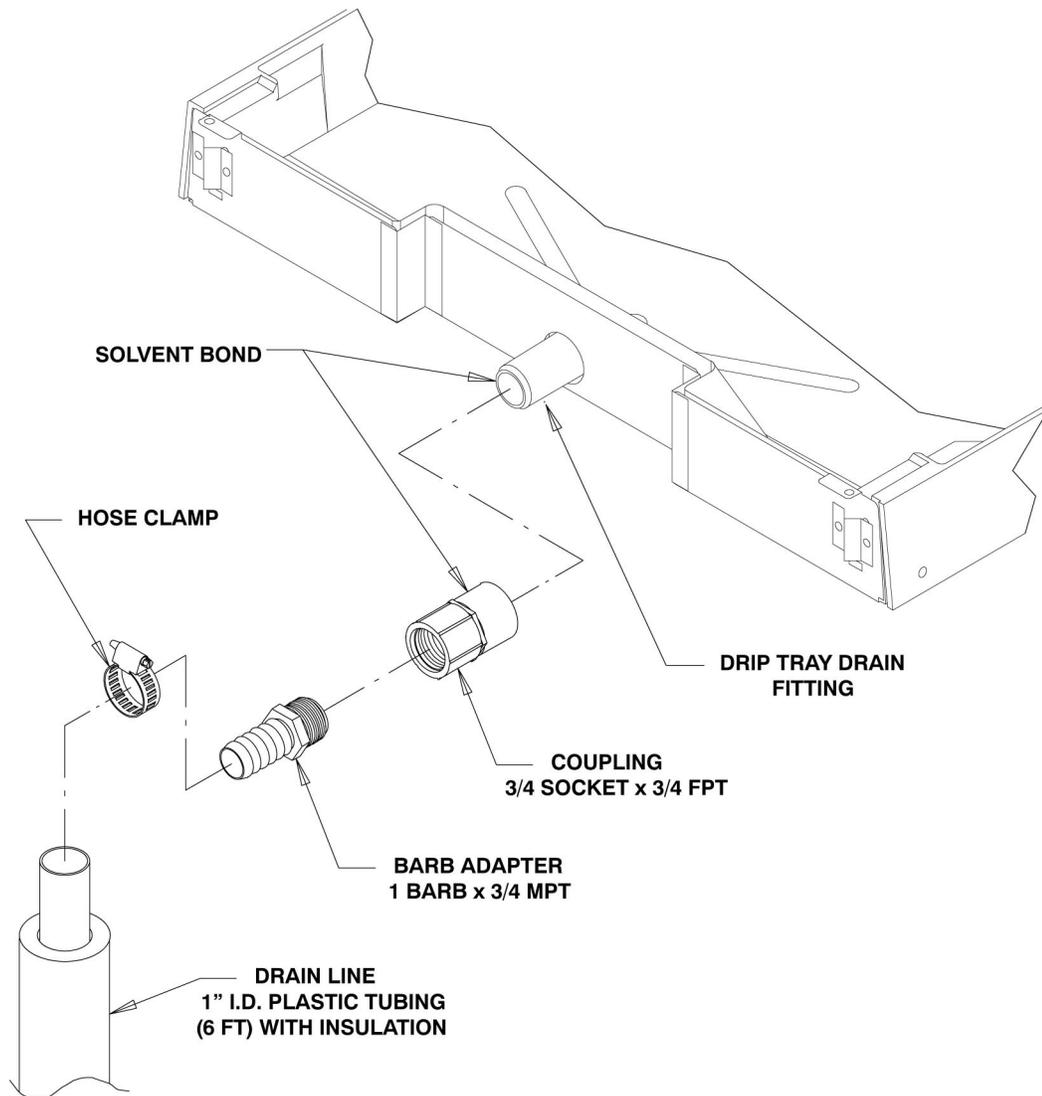
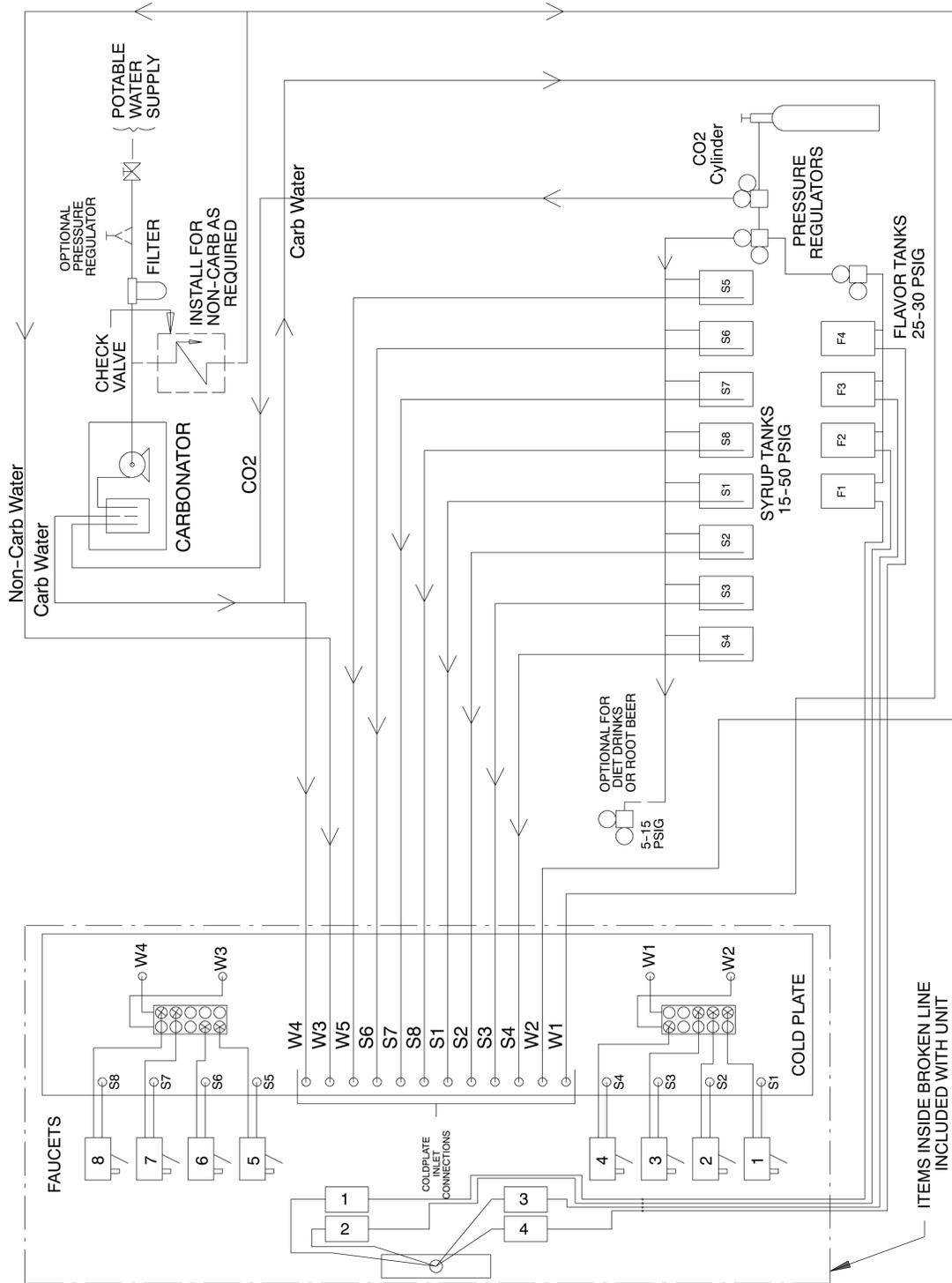
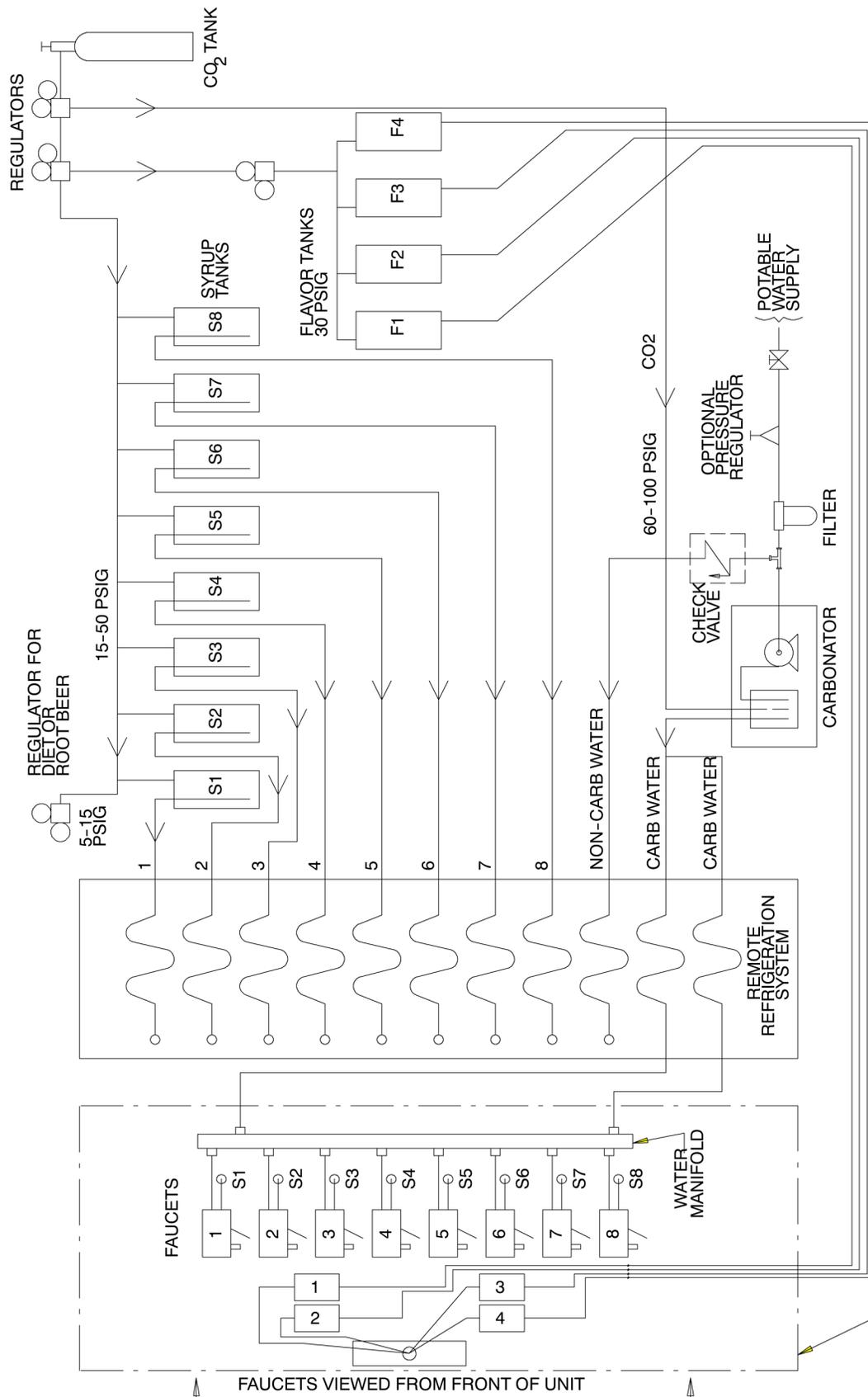


Figure 6. Drip Tray Drain Assembly



FAUCETS VIEWED FROM THIS SIDE

Figure 7. Flow Diagram (Bc Models With Eight Beverage Faucets)



* - FOR NON-CARBONATED DRINK(S)/PLUG. APPROPRIATE WATER MANIFOLD OUTLET.

ITEMS OUTSIDE BROKEN LINES ARE NOT INCLUDED WITH UNIT.

Figure 8. Flow Diagram (B Models With Eight Beverage Faucets)

TROUBLESHOOTING

IMPORTANT:

Only qualified personnel should service internal components or electrical wiring.

WARNING:

If repairs are to be made to a product system, remove quick disconnects from the applicable product tank, then relieve the system pressure before proceeding. If repairs are to be made to the CO₂ system, stop dispensing, shut off the CO₂ supply, then relieve the system pressure before proceeding. If repairs are to be made to the refrigeration system, make sure electrical power is disconnected from the unit.

Should your unit fail to operate properly, check that there is power to the unit and that the hopper contains ice. If the unit does not dispense, check the following chart under the appropriate symptoms to aid in locating the defect.

Trouble	Probable Cause
Blown Fuse Or Circuit Breaker.	A. Short circuit in wiring. B. Defective gate solenoid. C. Defective agitator motor.
Gate Does Not Open. Agitator Does Not Turn.	A. No power. B. Bent depressor plate (does not actuate switch). C. Defective dispensing switch. D. Interlocks active.
Gate Does Not Open Or Is Sluggish. Agitator Turns.	A. Defective gate solenoid. B. Excessive pressure against gate slide. C. Defective Rectifier.
Ice Dispenses Continuously.	A. Stuck or bent depressor plate (does not release switch). B. Defective dispensing switch. C. Improper switch installation.
Slushy Ice. Water In Hopper	A. Blocked drain. B. Unit not level. C. Poor ice quality due to water quality or ice maker problems. D. Improper use of flaked ice.
Beverages Do Not Dispense.	A. No 24 volt power to faucets. B. No CO ₂ pressure.
Beverages Too Sweet.	A. Carbonator not working. B. No CO ₂ pressure in carbonator. C. Faucet brix requires adjusting.
Beverage Not Sweet Enough.	A. Empty syrup tank. B. Faucet brix requires adjusting.



Beverages Not Cold (Units With Built-in Cold Plate).	A. Unit standing with no ice in hopper -- no ice in cold plate cabinet.
Flavor Syrups Do Not Dispense	A. No 24 volt power to PC board. B. No CO ₂ pressure. C. Empty syrup tank. D. Kinked tubing. E. Clogged inner nozzle. F. Defective PC board. G. Defective harness from keypad. H. Defective Flow control. I. Defective solenoid harness. J. Defective keypad.
Flavor Dispenses For More Than 1 Sec	A. Dip switch settings on control board incorrect. B. PC board defective. C. Defective flow control.
Flavor Dispenses More Than .5 Oz	A. Dip switch settings on control board incorrect. B. Flow control incorrectly set. C. PC board defective. D. Defective flow control.

Contact your local syrup or beverage equipment distributor for additional information and troubleshooting of beverage system.

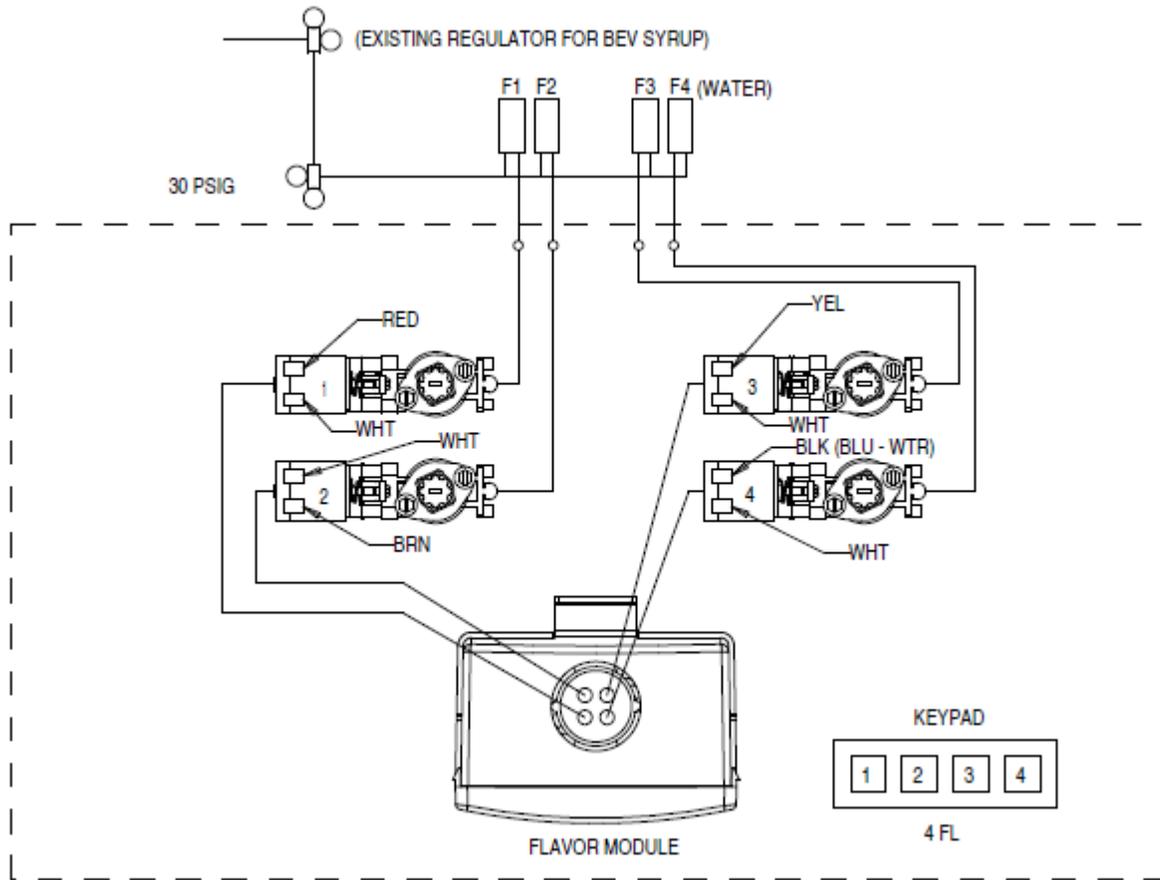


Figure 9. PBD ED175 REF FL Plumbing/Electrical Connections

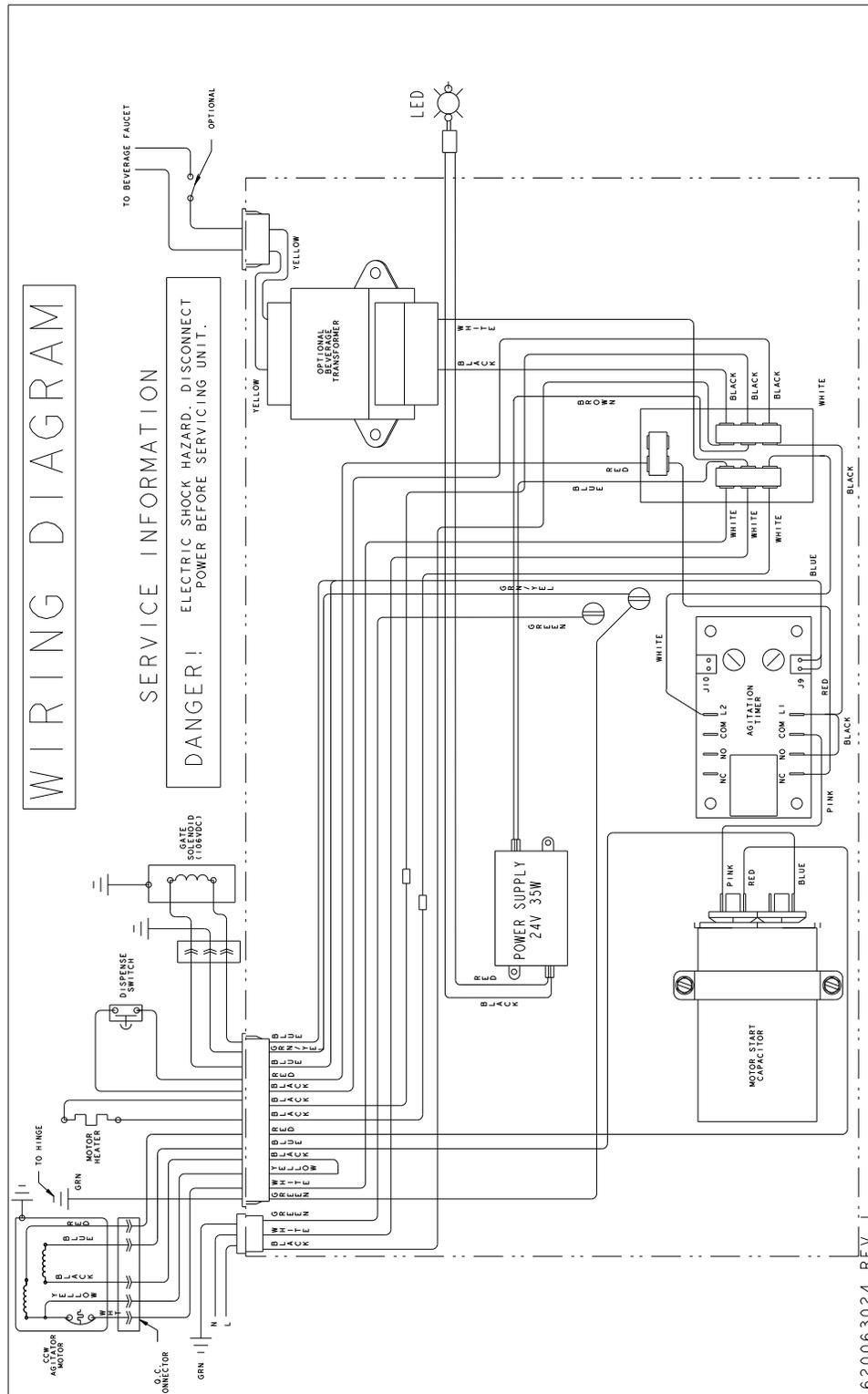


Figure 10. Wiring Diagram

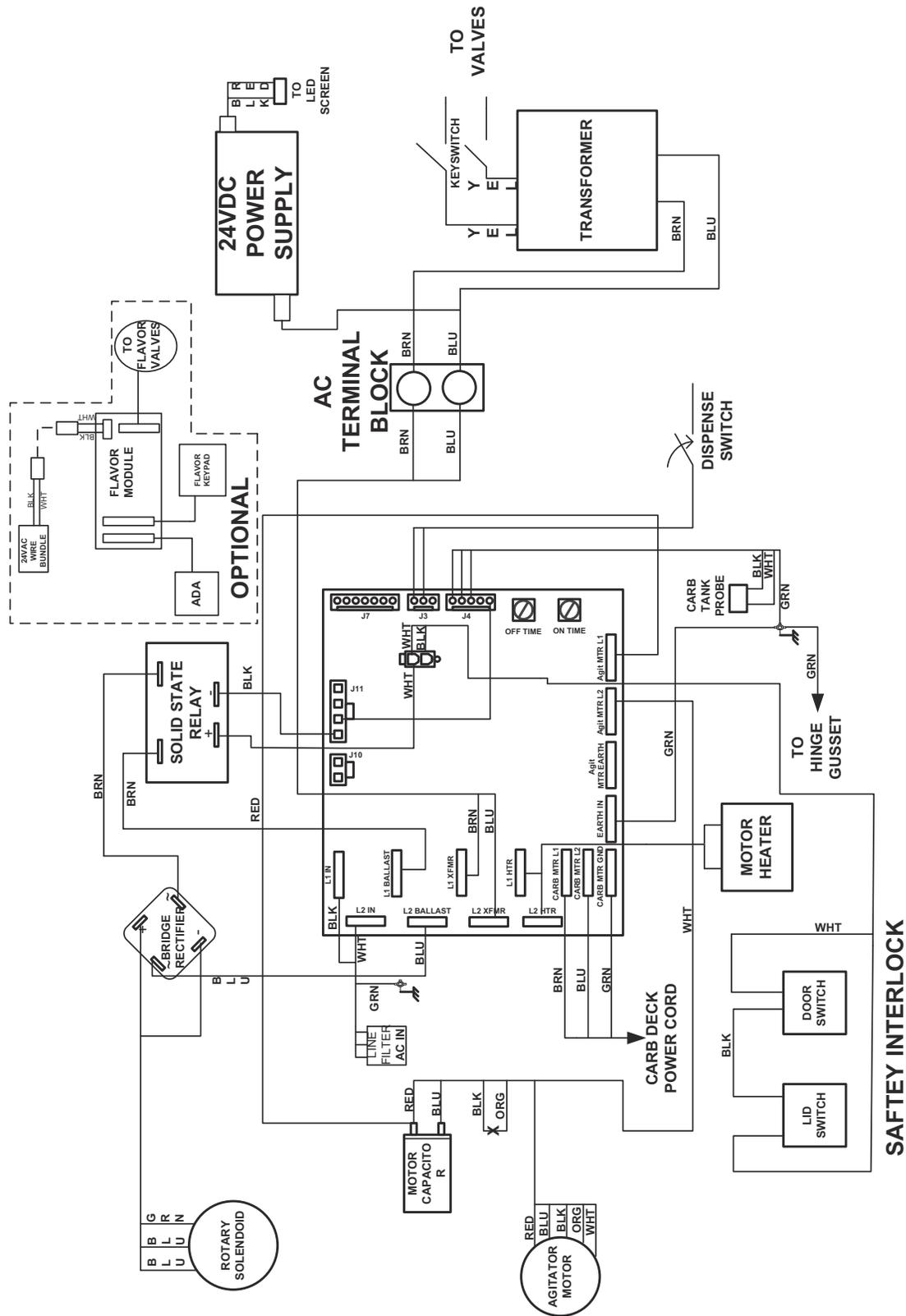


Figure 11. Wiring Schematic FL Model

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