MULTIPLEX®

Flav'R-Pic Series Selectable Ice / Beverage Dispensers

Installation, Use & Care Manual

This manual is updated as new information and models are released.
Visit our website for the latest manual. www.multiplexbeverage.com

Leader in Ice & Beverage Dispensers

Part Number 020003315 1/11

Safety Notices

As you work on Multiplex equipment, be sure to pay close attention to the safety notices in this manual. Disregarding the notices may lead to serious injury and/or damage to the equipment.

Throughout this manual, you will see the following types of safety notices:

⚠ Warning

Text in a Warning box alerts you to a potential personal injury situation. Be sure to read the Warning statement before proceeding, and work carefully.

⚠ Caution

Text in a Caution box alerts you to a situation in which you could damage the equipment. Be sure to read the Caution statement before proceeding, and work carefully.

Procedural Notices

As you work on Multiplex equipment, be sure to read the procedural notices in this manual. These notices supply helpful information which may assist you as you work.

Throughout this manual, you will see the following types of procedural notices:

Important

Text in an Important box provides you with information that may help you perform a procedure more efficiently. Disregarding this information will not cause damage or injury, but it may slow you down as you work.

NOTE: Text set off as a Note provides you with simple, but useful, extra information about the procedure you are performing.

Read These Before Proceeding:

⚠ Caution

Proper installation, care and maintenance are essential for maximum performance and trouble-free operation of your Multiplex equipment. Read and understand this manual. It contains valuable care and maintenance information. If you encounter problems not covered by this manual, do not proceed, contact Multiplex Beverage. We will be happy to provide assistance.

Important

Routine adjustments and maintenance procedures outlined in this manual are not covered by the warranty.

⚠ Warning

PERSONAL INJURY POTENTIAL

Do not operate equipment that has been misused, abused, neglected, damaged, or altered/modified from that of original manufactured specifications.

NOTE: SAVE THESE INSTRUCTIONS.

We reserve the right to make product improvements at any time.
Specifications and design are subject to change without notice.

Section 1
General Information

Section 2
Installation Instructions

Section 3
Operation

Section 4
Maintenance

Table of Contents

Section 1
General Information

Read This Manual

Multiplex Beverage developed this manual as a reference guide for the owner/operator and installer of this equipment. Please read this manual before installation or operation of the machine. A qualified service technician must perform installation and start-up of this equipment, consult **Section 5** within this manual for service assistance.

If you cannot correct the service problem, call your Multiplex service Agent or Distributor. Always have your model and serial number available when you call.

Your Service Agent _____

Service Agent Telephone Number _____

Your Local MBE Distributor _____

Distributor Telephone Number _____

Model Number _____

Serial Number _____

Installation Date _____

Unit Inspection

Thoroughly inspect the unit upon delivery. Immediately report any damage that occurred during transportation to the delivery carrier. Request a written inspection report from a claims inspector to document any necessary claim.

⚠ Warning

PERSONAL INJURY POTENTIAL

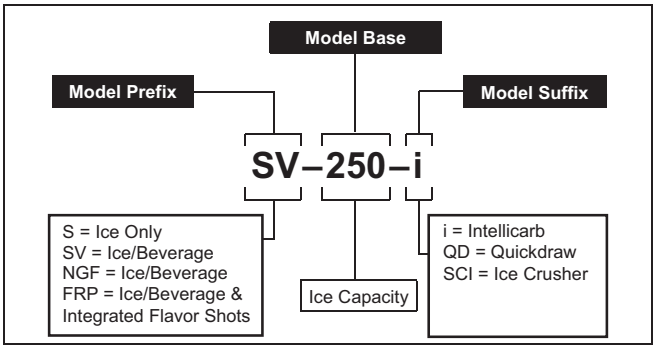
Do not operate equipment that has been misused, abused, neglected, damaged, or altered/modified from that of original manufactured specifications.

Model Numbers

This manual covers the following models:

Beverage/Ice Dispensers
FRP-250, FRP-250SCI

HOW TO READ A MODEL NUMBER



Accessories

BAFFLE FOR MANITOWOC® ICE MACHINE

When installing a Manitowoc Ice Machine on a dispenser, a baffle kit is required for proper installation. The baffle kit is designed to prevent ice from lying against the front of the ice machine, and melting down the front of the dispenser. There are two different baffle kits available for “S” series ice machines, one kit is for the 30" wide machine, and the other kit is for the 22" wide machine. There is also a kit for “Q” series ice machines.

Kits are available through your local distributor. List prices may be subject to change without notification. Please call your local parts distributor for current pricing before ordering.

MANUAL FILL LID - DISPENSERS WITH AN ICE MACHINE

If you are top mounting your dispenser with a ice machine, you will require a lid for the manual fill area at the top, front of the dispenser.

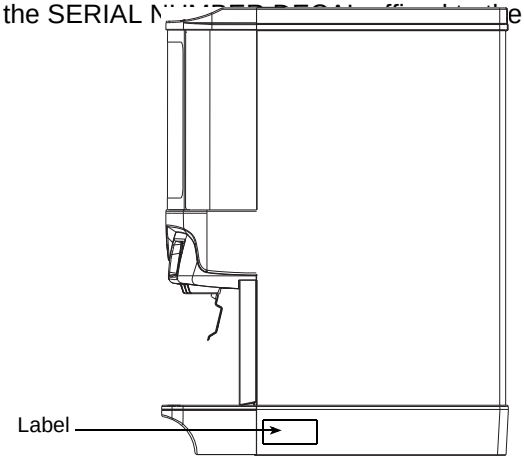
If you ordered a dispenser and a ice machine at the same time, the manual fill lid was included with the unit. The manual fill lid can be ordered from your local distributor.

LEGS

Legs are optional equipment with most Multiplex dispensers. Standard legs are 4" (10.2 cm) tall stainless steel legs. If an ice machine is installed on top of the dispenser, legs must not be installed. We do not recommend using legs when an ice machine is mounted on the dispenser. The combined weight of the dispenser, ice and ice machine is more evenly distributed when the base area of the dispenser is in contact with the counter top.

Serial Number Location

This number is required when requesting information from your local distributor. The serial number is listed on the SERIAL N[illegible] affixed to the dispenser.



Serial Number Location

Warranty Information

Consult your local Multiplex Distributor for terms and conditions of your warranty. Your warranty specifically excludes all beverage valve brixing, general adjustments, cleaning, accessories and related servicing.

Your warranty card must be returned to Multiplex to activate the warranty on this equipment. If a warranty card is not returned, the warranty period can begin when the equipment leaves the Multiplex factory.

No equipment may be returned to Multiplex without a written Return Materials Authorization (RMA). Equipment returned without an RMA will be refused at Multiplex's dock and returned to the sender at the sender's expense.

Please contact your local MBE distributor for return procedures.

Section 2
Installation Instructions

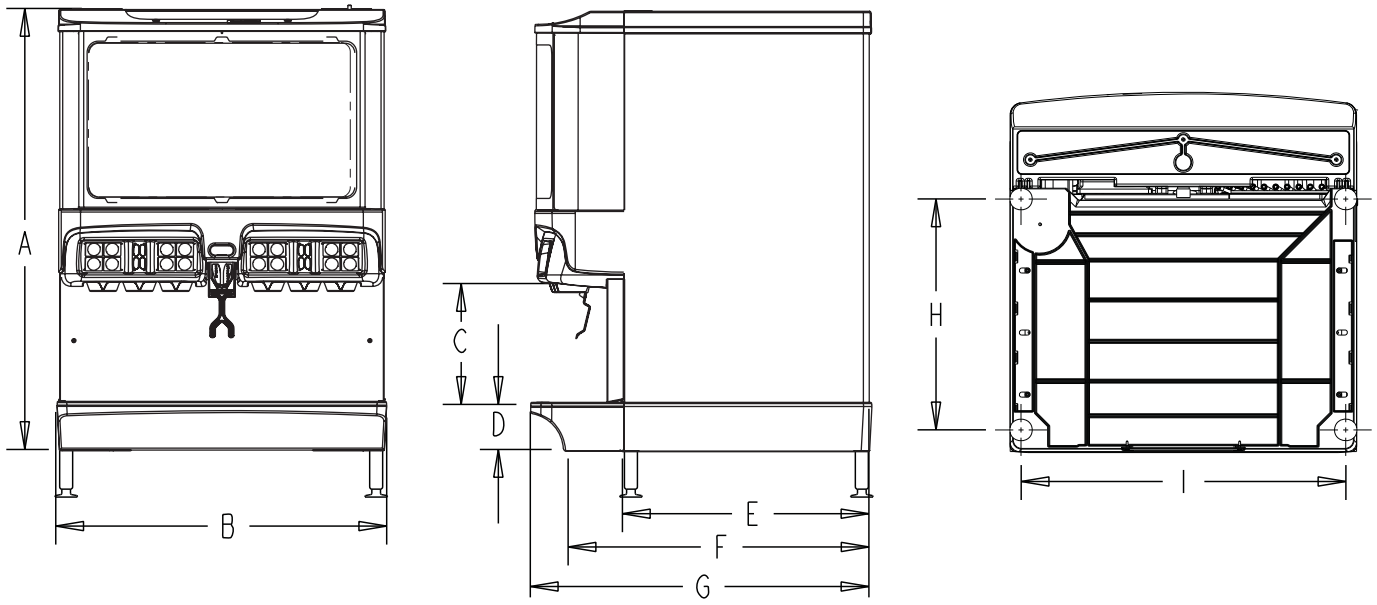
General

These instructions are provided to assist the qualified installer. Contact your Multiplex Beverage Service Agent or call Multiplex Beverage Equipment for information regarding start-up services.

Important

Failure to follow these installation guidelines may affect warranty coverage.

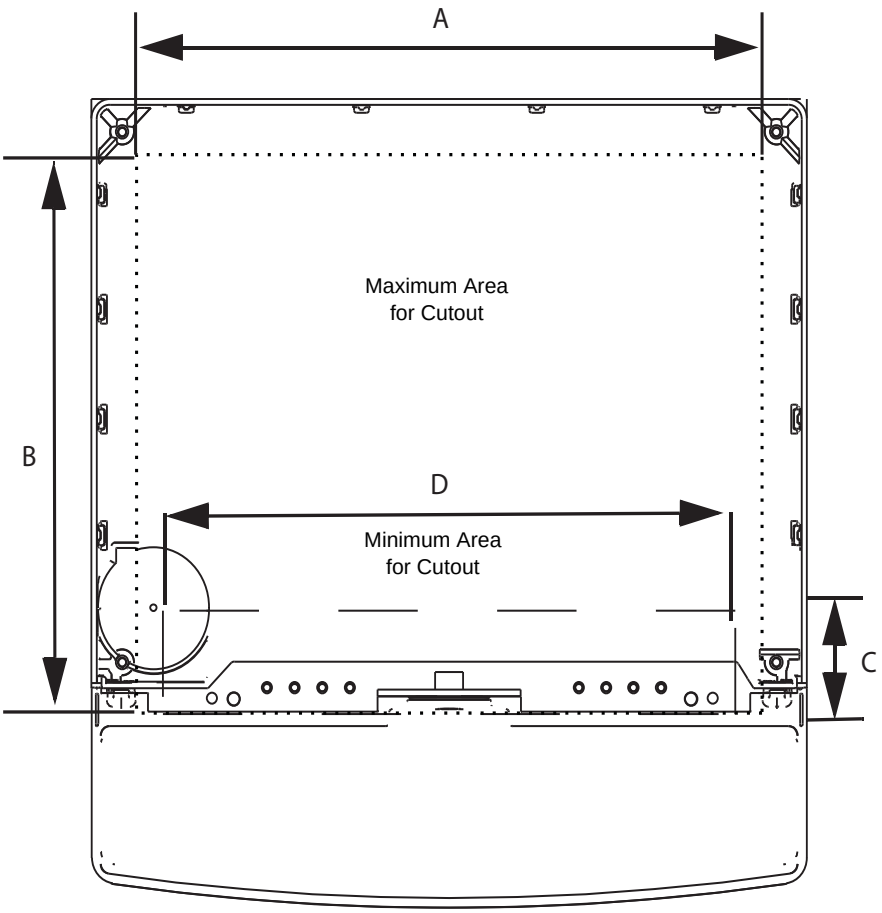
Dimensions



FRP-250	A	B	C	D	E	F	G	H	I
250*	39.81" (101.1 cm)	30.00" (76.2 cm)	9.94" (17.6 cm)	4.44" (11.3 cm)	22.63" (57.5 cm)	28.00" (71.1 cm)	31.13" (79.1 cm)	20.00" (50.8 cm)	27.44" (69.7 cm)

* Includes FRP-250SCI

FRP-250 Footprint



Flav'R-Pic	Maximum		Minimum	
	A	B	C	D
250*	26.00" (66.0 cm)	17.81" (45.2 cm)	4.00" (20.30 cm)	24.00" (61.00 cm)

⚠ Caution

Cutting the countertop may decrease its strength. Counter must be braced to support the dispenser countertop weight plus ice storage capacity and weight of icemaker, if applicable.

Location

The location selected for the beverage dispenser must meet the following criteria. If any of these criteria are not met, select another location.

- The air temperature must be at least 50°F (10°C), but must not exceed 95°F (35°C).
- The location must not be near heat-generating equipment or in direct sunlight and must be protected from weather.
- The countertop must be level. Verify that the countertop can support the weight of the dispenser, or the dispenser/ice machine combination plus the weight of the stored ice.
- Water lines, drains and power outlet must be within 6' (1.8 m) of location.

⚠ Warning

Carbon Dioxide (CO_2) displaces oxygen. Exposure to a high concentration of CO_2 gas causes tremors, which are followed rapidly by loss of consciousness and suffocation. If a CO_2 gas leak is suspected, particularly in a small area, immediately ventilate the area before repairing the leak. CO_2 lines and pumps must not be installed in an enclosed space. An enclosed space can be a cooler or small room or closet. This may include convenience stores with glass door self serve coolers. If you suspect CO_2 may build up in an area, venting of the B-I-B pumps and / or CO_2 monitors must be utilized.

Location Requirements for Top Mounted Ice Machine Installations

Location — Avoid placing the dispenser and/or ice machine near heat sources such as radiators, ovens, refrigeration equipment and direct sunlight.

Clearances — Refer to the ice machine installation manual for clearances.

Front of ice machine to be flush with front of dispenser — Some ice machines may overhang at the back of the dispenser.

Drains — A separate drain line is required for the ice machine, in addition to a drain line for the ice/beverage dispenser.

Dispensers may require an adapter kit to install some top-mounted ice machines. Contact your local distributor for the correct adapter kit.

For full information about ice machine installation, including clearances, plumbing lines, connections, and electrical requirements, see the ice machine installation manual.

Pre-installation Checklist

When installing any system, first make sure the major components are available. Generally the major components necessary for an installation are:

PRE-MIX SYSTEM

- ☐ CO_2 regulator set
- ☐ Product connectors for Figal tank
- ☐ Gas connectors for Figal tank
- ☐ Beverage dispenser
- ☐ Beverage tubing
- ☐ CO_2 tank
- ☐ Figal beverage tanks
- ☐ Stepless (Oetiker) clamps
- ☐ Chain for CO_2 tank

B-I-B SYSTEM

- ☐ B-I-B connectors
- ☐ B-I-B regulator set
- ☐ B-I-B rack
- ☐ B-I-B syrup boxes

POST MIX SYSTEM

- ☐ CO_2 regulator set
- ☐ Beverage dispenser
- ☐ Beverage tubing
- ☐ CO_2 tank
- ☐ Carbonator
- ☐ Stepless (Oetiker) clamps
- ☐ Chain for CO_2 tank

FIGAL SYSTEM

- ☐ Syrup connectors for Figal tank
- ☐ Gas connectors for Figal tank
- ☐ Figal syrup tanks

BULK SYRUP SYSTEM

- ☐ Syrup connectors for Bulk tank
- ☐ Gas connectors for Bulk tank
- ☐ Bulk syrup tanks

DOUBLE CHECK:

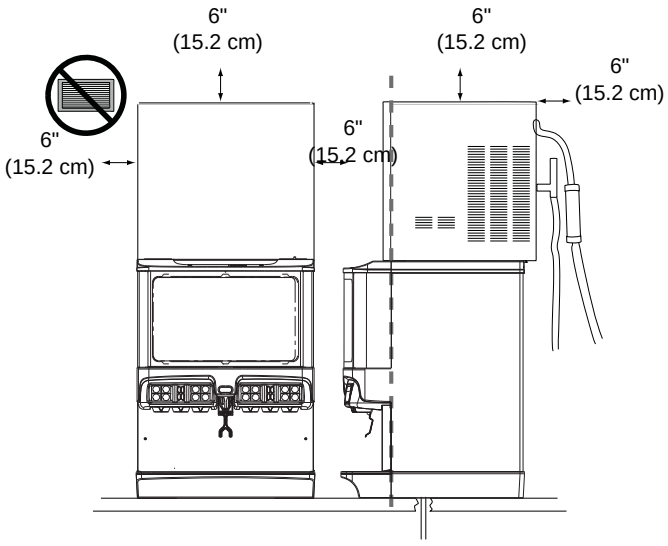
- ☐ Do you have enough space to install the dispenser or a dispenser and top mounted ice machine?
- ☐ Does top mounted ice machine (if utilized) have a minimum of 6 inches (15.3 cm) clearance on all sides?
- ☐ Is the countertop level?
- ☐ Can the countertop support the weight of the dispenser, or the dispenser/ice machine combination plus the weight of the stored ice?

ALSO CONSIDER THE LOCATION OF THE FOLLOWING ITEMS BEFORE INSTALLATION:

- ☐ Water line
- ☐ Drain
- ☐ Power outlet
- ☐ Heating and air conditioning ducts

ADDITIONAL CHECKS FOR TOP MOUNTED ICE MACHINE INSTALLATIONS

- ☐ **Location** — Avoid placing the dispenser and/or ice machine near heat sources such as radiators, ovens, refrigeration equipment and direct sunlight.
- ☐ **Clearances** — Six inch (15.2 cm) clearance on all sides of the icemaker is needed.
- ☐ **Front of icemaker to be flush with front of dispenser** — The front of the icemaker must be flush with the front of the dispenser. When the icemaker is flush with the front of the dispenser, some icemakers may overhang at the back of the dispenser.
- ☐ **Drains** — A separate drain line is required for the ice machine, in addition to a drain line for the ice/beverage dispenser.
- ☐ Dispensers may require an adapter kit to install some top-mounted icemakers. Contact your local distributor for the correct adapter kit.



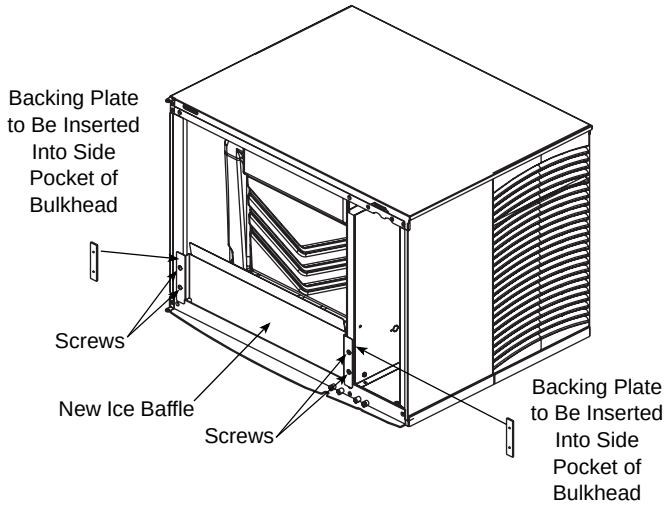
For full information about icemaker installation, including plumbing lines connections and electrical requirements, see the icemaker installation manual.

Assembly

BAFFLE FOR ICE MACHINE INSTALLATIONS

“S” Series Baffle

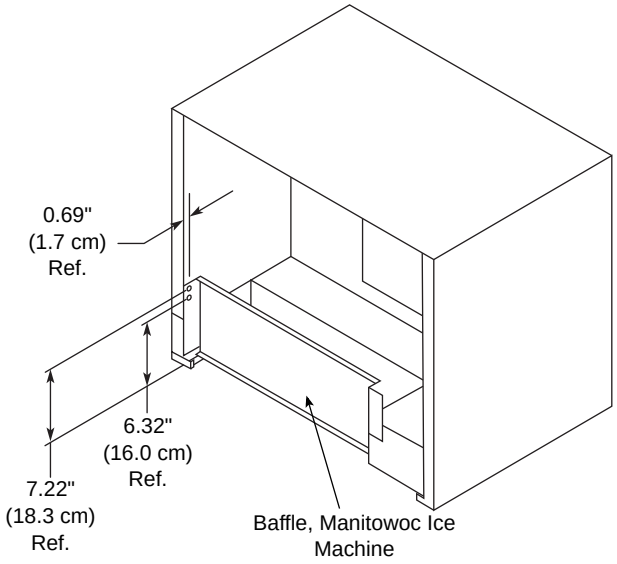
1. Remove both front panels.
2. Examine the ice machine to see if the machine has four screws on the lower front plastic panels.
3. If there are screws, remove them from the countersunk holes on the front surface of the machine, save the screws.
4. Install the deflector, using the four screws removed in step three.
5. Four screws and two backing plates are in the kit.
6. If there are no screws on the ice machine (step 2), pierce the thin plastic countersunk holes, install the backing plates and install the deflector using the screws from the kit.
7. Replace the front panels.



"S" Series Ice Machine

"Q" Series Baffle

1. Position baffle on top of water well with tab on the front and the other tab inside the water well.
2. Mount the baffle on the left side of the ice machine using the hole and screw provided.



"Q" Series Ice Machine

Electrical

GENERAL

⚠ Warning

All wiring must conform to local, state and national codes.

MINIMUM CIRCUIT AMPACITY

The minimum circuit ampacity is used to help select the wire size of the electrical supply. (Minimum circuit ampacity is not the beverage/ice machine's running amp load.) The wire size (or gauge) is also dependent upon location, materials used, length of run, etc., so it must be determined by a qualified electrician.

ELECTRICAL REQUIREMENTS

Refer to Ice Machine Model/Serial Plate for voltage/ amperage specifications.

VOLTAGE

The standard voltage for FRP-250 Series dispensers is 120VAC-60Hz. A power cord is provided with 120VAC-60Hz models only. FRP-250 Series dispensers use a 1/7 hp gearmotor.

MINIMUM CIRCUIT AMPERAGE CHART

Important

Due to continuous improvements, this information is for reference only. Please refer to the dispenser serial number tag to verify electrical data. Serial tag information overrides information listed on this page.

Dispenser	Voltage/Cycle	Minimum Circuit Amps
FRP-250, FRP-250SCI	115/60	2.8
	220/50, 220/60, 240/50, 240/60	1.5
	220-240/50	5 (with carb deck)

Grounding Instructions

⚠ Warning

Risk of electrical shock. Connect to a properly grounded outlet only.

This appliance must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

⚠ Warning

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment grounding conductor. If repair or replacement of the cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the appliance is properly grounded. Do not modify the plug provided with the appliance — if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

⚠ Warning

When using electric appliances, basic precautions should always be followed, including the following:

a. Read all the instructions before using the appliance.

b. To reduce the risk of injury, close supervision is necessary when an appliance is used near children.

c. Do not contact moving parts.

d. Only use attachments recommended or sold by the manufacturer.

e. Do not use outdoors.

f. For a cord-connected appliance, the following shall be included:

- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Unplug from outlet when not in use and before servicing or cleaning.
- Do not operate any appliance with a damaged cord or plug, or after the appliance malfunctions or is dropped or damaged in any manner. Contact the nearest authorized service facility for examination, repair, or electrical or mechanical adjustment.

g. For a permanently connected appliance — Turn the power switch to the off position when the appliance is not in use and before servicing or cleaning.

h. For an appliance with a replaceable lamp — Always unplug before replacing the lamp. Replace the bulb with the same type.

i. For a grounded appliance — Connect to a properly grounded outlet only. See Grounding Instructions.

PUMP DECK WIRING

The supply cord is equipped with a three prong 5-15P. When a Ground Fault Circuit Interrupter (GFCI) is required by code, a breaker type protector must be used. We do not recommend GFIC outlets as they are known for more intermittent nuisance trips than panel breakers. To ensure both the safety and proper operation of this equipment, be certain that the electrical receptacle is a proper design so as to accept this plug, ensuring that the carbonator assembly is properly grounded.

If the pump deck is to be installed in an area or community whose local codes require permanent wiring, the following procedure must be followed.

1. The three wires (white, black and green) must be fed through the cable connector and brought into the wiring compartment. The cable must be secured into the connector.
2. The green wire from the cable must be connected to the green screw that attaches to the inside panel of the wiring compartment. Be sure to use a ring torque terminal for connecting the wire to the screw.
3. The white wire from the cable must be joined to the N terminal of the liquid level control board by a suitable U.L. listed insulated cable connector.

The black wire from the cable must be joined to the L1 terminal of the liquid level control board by a suitable U.L. listed insulated cable connector.

Water Supply

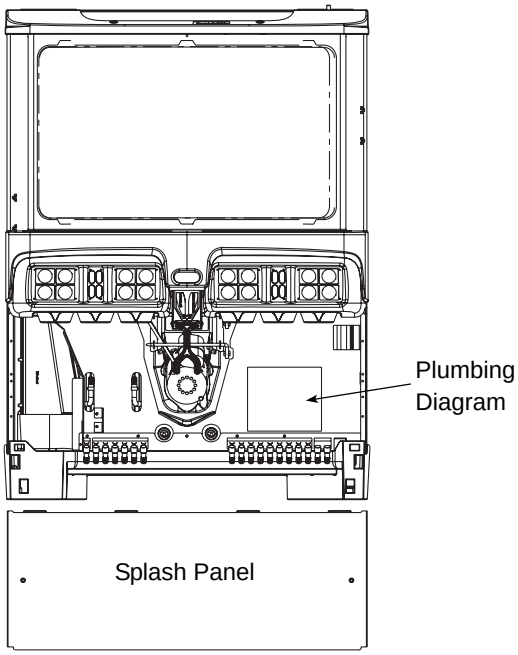
RECOMMENDED PLUMBING

The plumbing diagram is printed on a white vinyl label, normally located above the inlet tubes for syrup and water. The plumbing diagram label can be accessed by removing the splash panel of the dispenser. The plumbing diagram label explains which inlet coldplate fittings supply which dispenser valves and water manifolds.

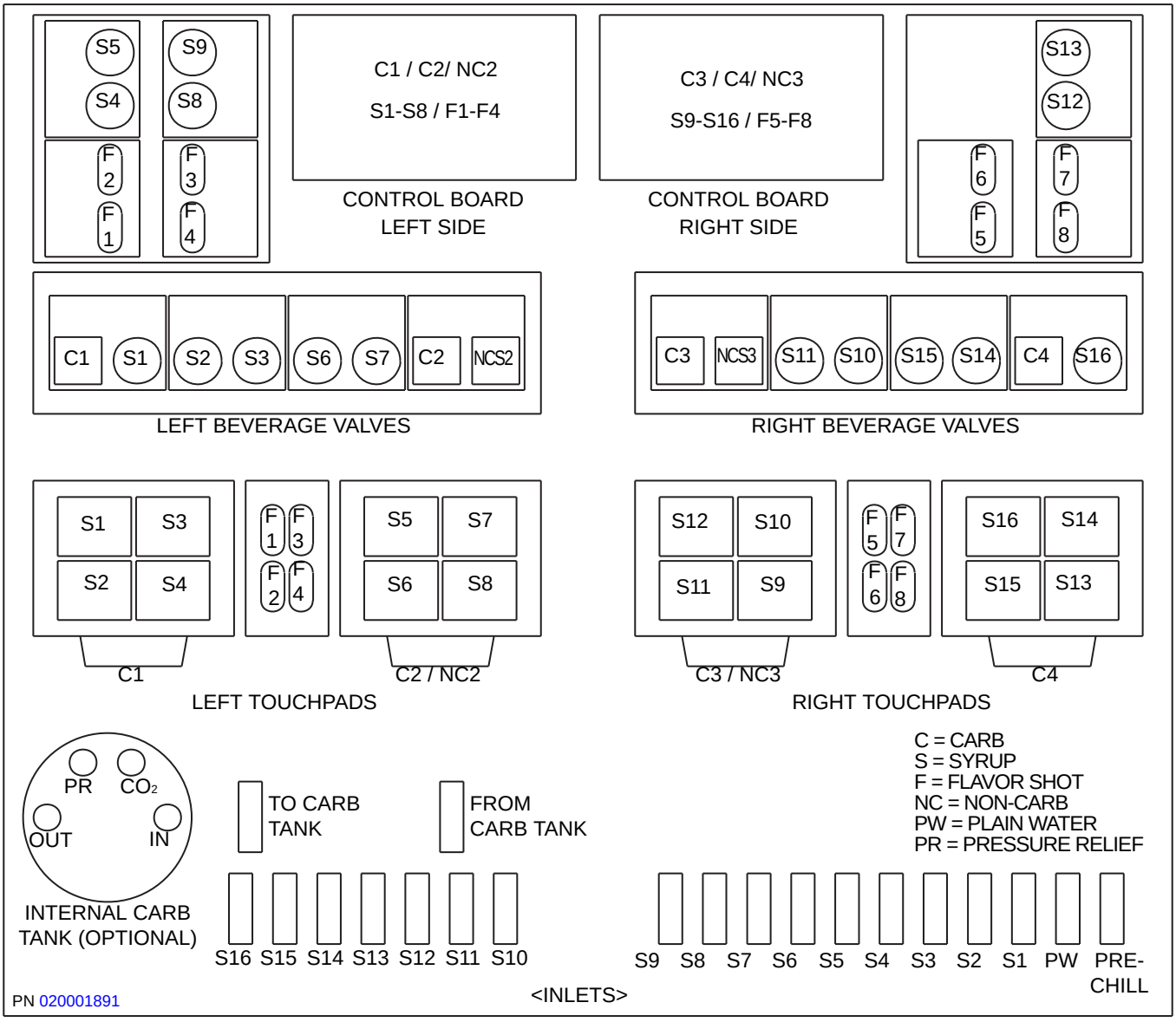
The water supply must first be connected to the carbonator pump (not shown) before plumbing to connection “A” shown on plumbing diagram. The carbonator pump deck must be within six feet of the dispenser for optimum performance. See BIB installation diagram for system pressure settings.

A check valve must be installed in the water supply line 3 feet from the noncarbonated water connection “PW”. Contact factory if not installed.

DIAGRAM LOCATION



FRP-250 PLUMBING DIAGRAM



= WATER

= SYRUP

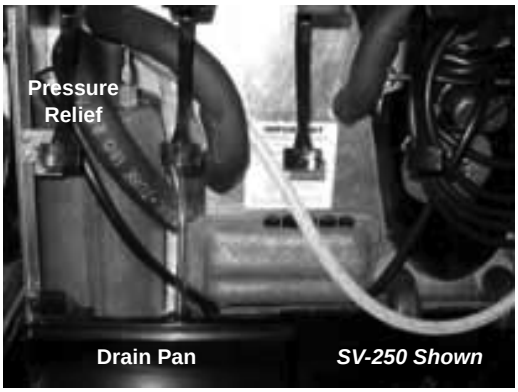
= FLAVOR SHOT

CO_2 System

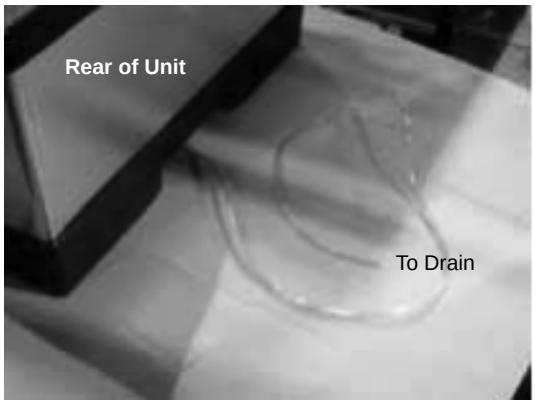
ROUTING INTERNAL CARB TANK PURGE TUBE

Some models are equipped with an internal carbonation tank.These models require that the purge/pressure relief tubing be routed to a drain.

1. Remove the splash panel.
2. Uncoil tubing and route between the front of the dispenser and the drain pan.

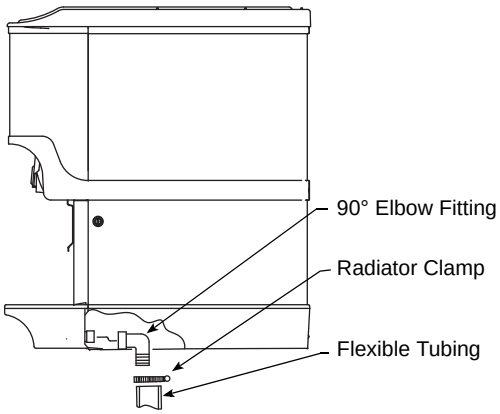


3. Depending on drain location route the tubing through the tubing bundle cutout or out the back of the dispenser.

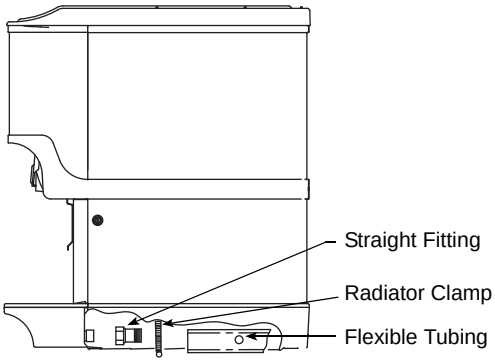


4. Verify the tubing is not kinked and then secure tubing to maintain a minimum 1" (2.5 cm) air gap at the drain. Follow any applicable local or national codes.

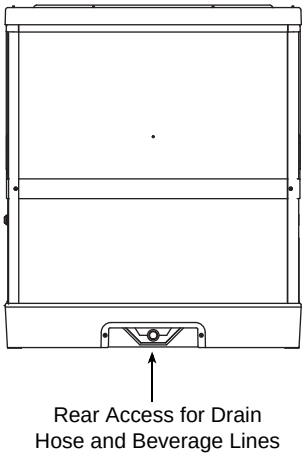
DRAINS



Drainage Through Bottom



Drainage Through Back



Rear View

Step by Step Installation

GENERAL

Flav'R-Pic and Selectable Ice Series dispensers have a stainless steel cabinet and lighted merchandiser standard.

Beverage valves, coldplate connections, drain connections and electrical components are front serviceable.

CAPACITIES

Dispenser	Valves	Ice Storage
FRP-250	16 Flavors, 8 Flavor Shots	250 lbs

SPECIFICATIONS CHART

	MIN.	MAX
Incoming Plain Water Pressure	40 psi dynamic	70 psi static
Plain Water Pressure to Carb Tank	55 psi	65 psi
Ambient Temperature	40°F (4°C)	105°F (41°C)
Co_2 Pressure (Primary)	90 psi	100 psi
Electrical	115V/60 Hz/1	230V/50-60 Hz/1
Pre-mix Pressure		
Normal	60 psi*	
Diet	40 psi*	
B-I-B (Secondary)	75 psi or according to line run	
Flavor Shots	30 psi or according to line run	

* This is the optimal pressure. For high foam, decrease the pressure, for spitting/popping, increase the pressure.

UNIT INSTALLATION

1. Place the dispenser in the desired location.

NOTE: The unit must be placed and operated in a horizontal, level position. This unit is not suitable for areas cleaned with a water jet, pressure washers or water hoses.

2. Run the beverage lines and water lines; make sure to install the water connections to the proper inlets. Connection "A" comes from the brass carbonator pump and connection "B" is your plain water supply.
3. Install plumbing drains and insulate.
4. Fill bin with ice.
5. Set flexible manifold for correct drink settings.
6. Turn water supply on to the dispenser.
7. Purge air from the carbonator tank. Lift the pressure relief valve tab on the carbonator tank until water comes out of the relief valve.
8. Connect the pump deck control lead to the pump motor.
9. Connect power supply cords. (There are (2) two cords that need to be connected to a 115V power supply.)
10. Brix beverage valves.

SYSTEM PRESSURES

1. **Incoming tap water** - must be at a minimum dynamic pressure of 40 psi and maximum static pressure of 70 psi.

Important

If incoming water pressure is under 40 psi dynamic, a water booster is recommended. If incoming water pressure is over 55 psi, a water regulating valve is recommended.

NOTE: For water booster setups, connect directly to the incoming water to the unit. A regulator may be needed to maintain 40 - 55 psi to the carbonator or water may be routed around the booster to the carbonator. If water pressure is too high to the carbonator poor drink carbonation can result.

Important

Water boosters are preset to turn on at 65 psi and off at 85 psi.

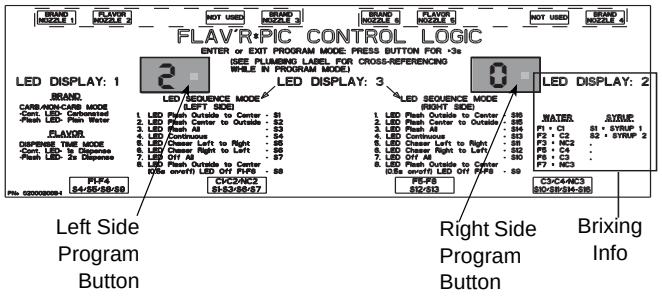
2. BIB pressure gauge must be set for 75 psi or according to your line run.
3. Carbonator Pressure gauge (Use Preset Regulator):
   - Cold Carbonation set for 75 psi.
   - Ambient systems must be set at 90 psi to 105 psi.

NOTE:
For models with flavor shots you want to achieve .5 oz (14.787 cc) a second dispense, adjust flow controls accordingly. See Section 3 for how to program the flavor shot dispense duration on FRP models.

BRIXING PROCEDURE

If the merchandiser and splash panel are on the front of the unit, remove them. Merchandiser removal will give you access to the syrup and water valves. Splash panel removal will give you access to the plumbing label located on the foam front and/or in the Plumbing section of the Use & Care Manual. This label will be needed to identify valve and touch pad locations.

Placing a control Board into Brix Mode

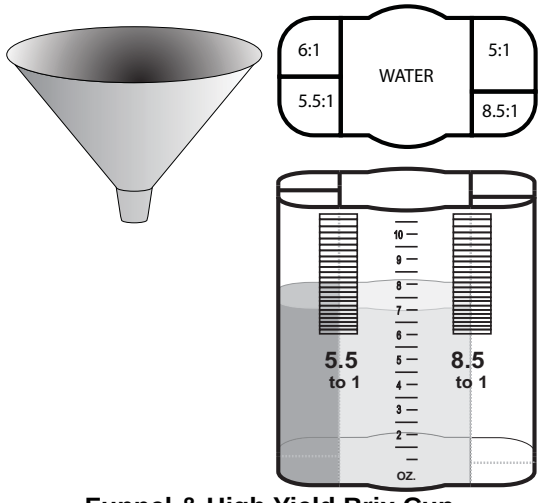


Control Board Label

NOTE: See Section 3 for Program Mode Operations.

Mode 2 puts your Flav'R-Pic into brix mode, follow the steps below to put a board into brix mode.

1. Choose a control board, if brixing drinks for N1 (Nozzle 1) or N3 use the left control board, if brixing drinks for N3 or N6 use the right control board. Beverage dispense points are designated by a black nozzle.
2. Press the program button and hold for 3 seconds or until the LED displays 1. Press the program button again until 2 is displayed on the control board LED display.
3. Use a high yield brix cup with multiple ratios for the procedure, an example is illustrated below. Use of a funnel between the cup and nozzle will aid in the capture of the syrup during syrup brixing.



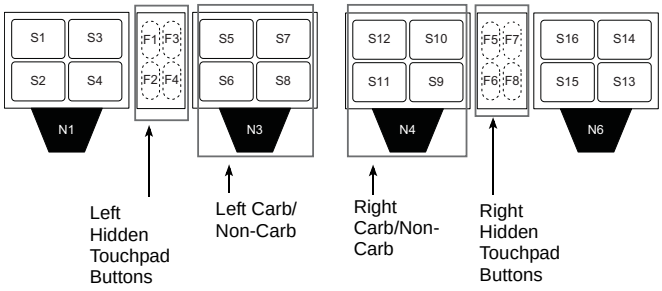
Funnel & High Yield Brix Cup

	LEFT BOARD	RIGHT BOARD
DISPENSE TYPE & VALVE NUMBER	C1 - VALVE 8	C3 - VALVE 4
	C2 - VALVE 11	C4 - VALVE 1
	NC2 - VALVE 11	NC3 - VALVE 4
	S1 - VALVE 8	S9 - VALVE 15
	S2 - VALVE 9	S10 - VALVE 3
	S3 - VALVE 9	S11 - VALVE 3
	S4 - VALVE 14	S12 - VALVE 7
	S5 - VALVE 14	S13 - VALVE 7
	S6 - VALVE 10	S14 - VALVE 2
	S7 - VALVE 10	S15 - VALVE 2
	S8 - VALVE 15	S16 - VALVE 1
	F1 - VALVE 13	F5 - VALVE 6
	F2 - VALVE 13	F6 - VALVE 6
	F3 - VALVE 12	F7 - VALVE 5
	F4 - VALVE 12	F8 - VALVE 5

C = CARB S = SYRUP F = FLAVOR SHOT
NC = NON-CARB

4. Locate the control board that corresponds with the valve(s) and/or dispense point you want to brix.

NOTE: The buttons for FRP units without flavor shots are located in the same area, but are hidden.

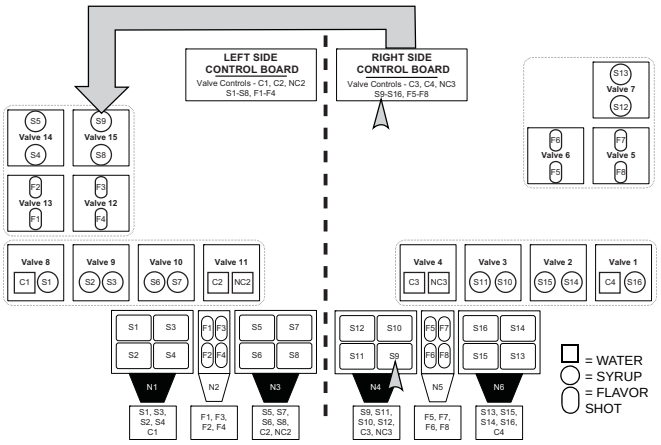


FRP-250 WITHOUT FLAVOR SHOTS

5. Press the program button and hold for 3 seconds or until the LED displays 1. Press the program button again until 2 is displayed on the control board LED display.

NOTE: Programming one board at a time will make it easier for you to identify the corresponding valves and dispense points. See the Programming section in this manual for more detail on all programming modes.

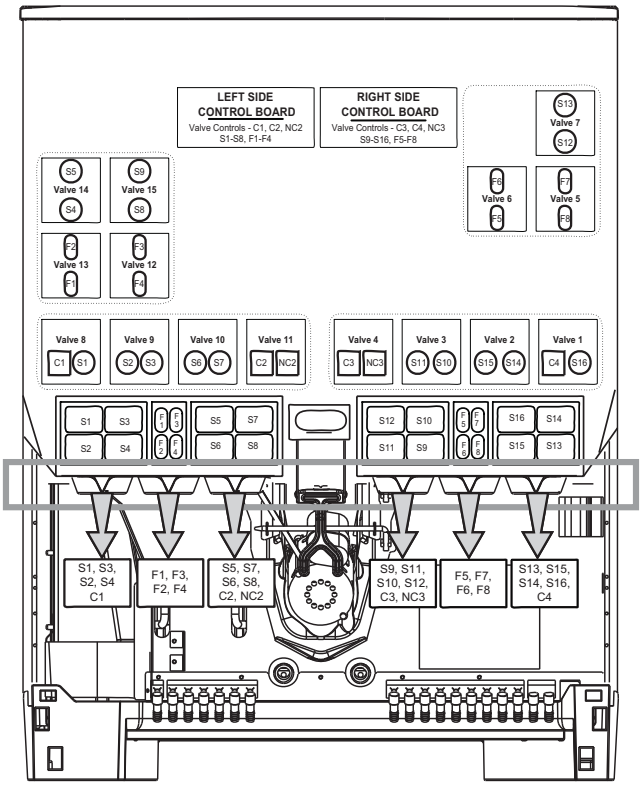
6. With a board in mode 2 you can now brix any water or syrup valve that corresponds to the board. Use the chart on the left to identify the valves and which board they correspond to, see the illustration on the next page for more assistance. Brixing information can also be found on the right hand side of the control board cover label. By using this label in combination with the plumbing label you will be able to identify each valve, water, and/or syrup combination.



S9 (Syrup 9) on Valve 15 is the only syrup that does not correspond to the side it is mounted to, both visually and functionally all other valves, touch pads, and dispense points correspond with the board on the same side to which they are attached.

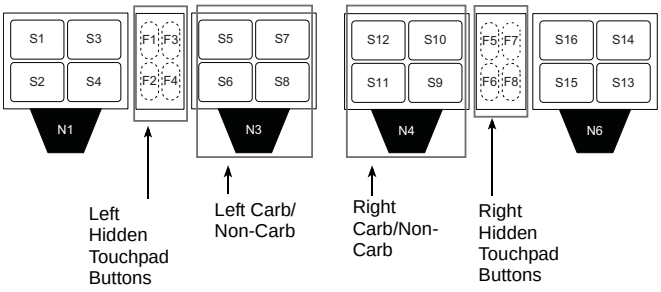
GENERAL BRIXING PROCESS

1. With the corresponding control board set to brix mode and displaying a 2 you may brix a beverage nozzle (N1, N3, N4, or N6). When brixing the syrup use of a funnel between the cup and nozzle will aid in the capture of the syrup. (See nozzle order below)



Nozzles from left to right: N1, N2, N3, N4, N5, N6.

2. To brix carbonated or non-carbonated water for a dispense point leave the nozzle in place and hold the brix cup with the water side of the cup under the nozzle area. Non-Carbonated water is only available at N3 (Nozzle 3) and N4.
3. By referencing the control box label and plumbing diagram press the flavor shot touch pad that corresponds with the water you wish to brix. If brixing the left side it will be one of the following; F1 (Flavor Shot 1), F2, or F3. When brixing the right side F5, F6, or F7 will be used. On non-flavor shot units the touch pads are located in the same area except they are hidden.



FRP-250 WITHOUT FLAVOR SHOTS

4. The correct volume should be 7 oz. during the fixed dispense in mode 2. If adjustment is needed to attain this volume, make adjustments corresponding valve as needed until volume is satisfactory.

NOTE: The touch pad mount can be tilted forward in order to give you better access to the valves.

5. For syrup brixing insert the funnel in the section of the brix cup that corresponds with the syrup you are brixing (refer to the brix cup label for correct High Yield Syrup Ratios). Place the cup/funnel under the nozzle area and press any brand touch pad area associated with that nozzle dispense point. For example S1 (Syrup 1), S2, S3, and S4 touch pad areas will be used to brix N1 (Nozzle 1).
6. Syrup will dispense for a fixed duration and should be even with the 7 oz. water mark on the cup
7. Check each syrup position and adjust syrup on the corresponding valve as necessary. A plumbing label is located on the foam front of the unit showing the position of each valve and syrup port. See the Plumbing Diagram page.
8. When finished, move on to another nozzle or if brixing is complete, return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0.
9. Replace the splash panel and merchandiser.

NOZZLE 1 (N1) WATER AND SYRUP BRIXING

1. With the left control board set to brix mode and displaying a 2 you can now brix the carbonated water for N1 (Nozzle 1) located at the far left hand side of the unit.
2. To brix the carbonated water for this dispense point leave the nozzle in place, hold the brix cup with the water side of the cup under N1 (Nozzle 1), and press the F1 (Flavor Shot 1) button. Water will dispense for a fixed duration.
3. The correct volume should be 7oz. (207.01 cc). If adjustment is needed to attain this volume, make adjustments to the left side of valve 8 (C1) adjustment screw as needed until flow rate is satisfactory.
4. For syrup brixing place the brix cup with the syrup side of the cup under the N1 and press the touch pad area for S1 (Syrup 1), S2, S3, or S4, and the corresponding syrup will dispense for a fixed duration (Refer to the brix cup label for correct High Yield Syrup Ratios).
5. Syrup should be even with the 7oz. (207.01 cc) water mark on the cup.
6. Check each syrup position and adjust syrup on the corresponding valve as necessary. A plumbing label is located on the foam front of the unit showing the position of each valve and syrup port. See the Plumbing Diagram page.
7. Move to another nozzle or if you are finished brixing return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0. Replace the splash panel and merchandiser.

NOZZLE 2 (N2) WATER AND SYRUP BRIXING

This is a flavor shot dispense point, designated so by it's blue nozzle, no brixing is needed. Either a 1 or 2 second dispense duration can be selected in program mode 1 from the left side control board. (See the Programming section for more information.)

NOZZLE 3 (N3) CARB/NON-CARB WATER & SYRUP BRIXING

1. With the left control board set to brix mode and displaying a 2 you can now brix carbonated or non-carbonated water for N3 (Nozzle 3). (See Programming Mode 1 to designate carb/non-carb)
2. To brix the carbonated water for this dispense point leave the nozzle in place, hold the brix cup with the water side of the cup under N3 (Nozzle 3), and press the F2 (Flavor Shot 2) button. Carbonated water will dispense for a fixed duration.
3. To brix the non-carbonated water for this dispense point leave the nozzle in place, hold the brix cup with the water side of the cup under N3 (Nozzle 3), and press the F3 (Flavor Shot 3) button. Water will dispense for a fixed duration.
4. The correct carb and non-carb volume should be 7oz. (207.01 cc). If adjustment is needed to attain this volume, make adjustments to the left side of valve 11 (C2) adjustment screw for carbonated water and the right side of valve 11 (NC2) adjustment screw for non-carbonated water as needed until flow rate is satisfactory.
5. For syrup brixing place the brix cup with the syrup side of the cup under the N3 (Nozzle 3) and press the touch pad area for S5 (Syrup 5), S6, S7, or S8 and the corresponding syrup will dispense for a fixed duration (Refer to the brix cup label for correct High Yield Syrup Ratios).
6. Syrup should be even with the 7oz. (207.01 cc) water mark on the cup.
7. Check each syrup position and adjust syrup on the corresponding valve as necessary. A plumbing label is located on the foam front of the unit showing the position of each valve and syrup port. See the Plumbing Diagram page.
8. Move to another nozzle or if you are finished brixing return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0. Replace the splash panel and merchandiser.

NOZZLE 4 (N4) CARB/NON-CARB WATER & SYRUP BRIXING

1. With the right control board set to brix mode and displaying a 2 you can now brix carbonated or non-carbonated water for Nozzle 4 (N4). (See Programming Mode 1 to designate carb/non-carb)
2. To brix the carbonated water for this dispense point leave the nozzle in place, hold the brix cup with the water side of the cup under N4 (Nozzle 4), and press the F6 (Flavor Shot 6) button. Water will dispense for a fixed duration.
3. To brix the non-carbonated water for this dispense point leave the nozzle in place, hold the brix cup with the water side of the cup under N4 (Nozzle 4), and press the F7 (Flavor Shot 7) button. Water will dispense for a fixed duration.
4. The correct carb and non-carb volume should be 7oz. (207.01 cc). If adjustment is needed to attain this volume, make adjustments to the left side of valve 11 (C3) adjustment screw for carbonated water and the right side of valve 4 (NC3) adjustment screw for non-carbonated water as needed until flow rate is satisfactory.

5. For syrup brixing place the brix cup with the syrup side of the cup under the N4 (Nozzle 4) and press the touch pad area for S9 (Syrup 9), S10, S11, or S12 and the corresponding syrup will dispense for a fixed duration (Refer to the brix cup label for correct High Yield Syrup Ratios).
6. Syrup should be even with the 7oz. (207.01 cc) water mark on the cup.
7. Check each syrup position and adjust syrup on the corresponding valve as necessary. A plumbing label is located on the foam front of the unit showing the position of each valve and syrup port. See the Plumbing Diagram page.
8. Move to another nozzle or if you are finished brixing return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0.Replace the splash panel and merchandiser.

NOZZLE 5 (N5) WATER AND SYRUP BRIXING

This is a flavor shot dispense point, designated so by it's blue nozzle, no brixing is needed. Either a 1 or 2 second dispense duration can be selected in program mode 1 from the right side control board. (See the Programming section for more information.)

NOZZLE 6 (N6) WATER AND SYRUP BRIXING

1. With the right control board set to brix mode and displaying a 2 you can now brix the carbonated water for N6 (Nozzle 1) located at the far right hand side of the unit).
2. To brix the carbonated water for this dispense point leave the nozzle in place, hold the brix cup with the water side of the cup under N6 (Nozzle 6), and press the F5 (Flavor Shot 5) button. Water will dispense for a fixed duration.
3. The correct volume should be 7oz. (207.01 cc). If adjustment is needed to attain this volume, make adjustments to the left side of valve 1 (C4) adjustment screw as needed until flow rate is satisfactory.
4. For syrup brixing place the brix cup with the syrup side of the cup under the N6 (Nozzle 6) and press the touch pad area for S13 (Syrup 13), S14, S15, or S16, and the corresponding syrup will dispense for a fixed duration (Refer to the brix cup label for correct High Yield Syrup Ratios).
5. Syrup should be even with the 7oz. (207.01 cc) water mark on the cup.
6. Check each syrup position and adjust syrup on the corresponding valve as necessary. A plumbing label is located on the foam front of the unit showing the position of each valve and syrup port. See the Plumbing Diagram page.
7. Move to another nozzle or if you are finished brixing return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0. Replace the splash panel and merchandiser.

Starting Your Beverage System & Dispenser

Upon completion of the beverage dispenser and / or system installation, all tubing, dispenser, and system components must be cleaned and sanitized prior to use.

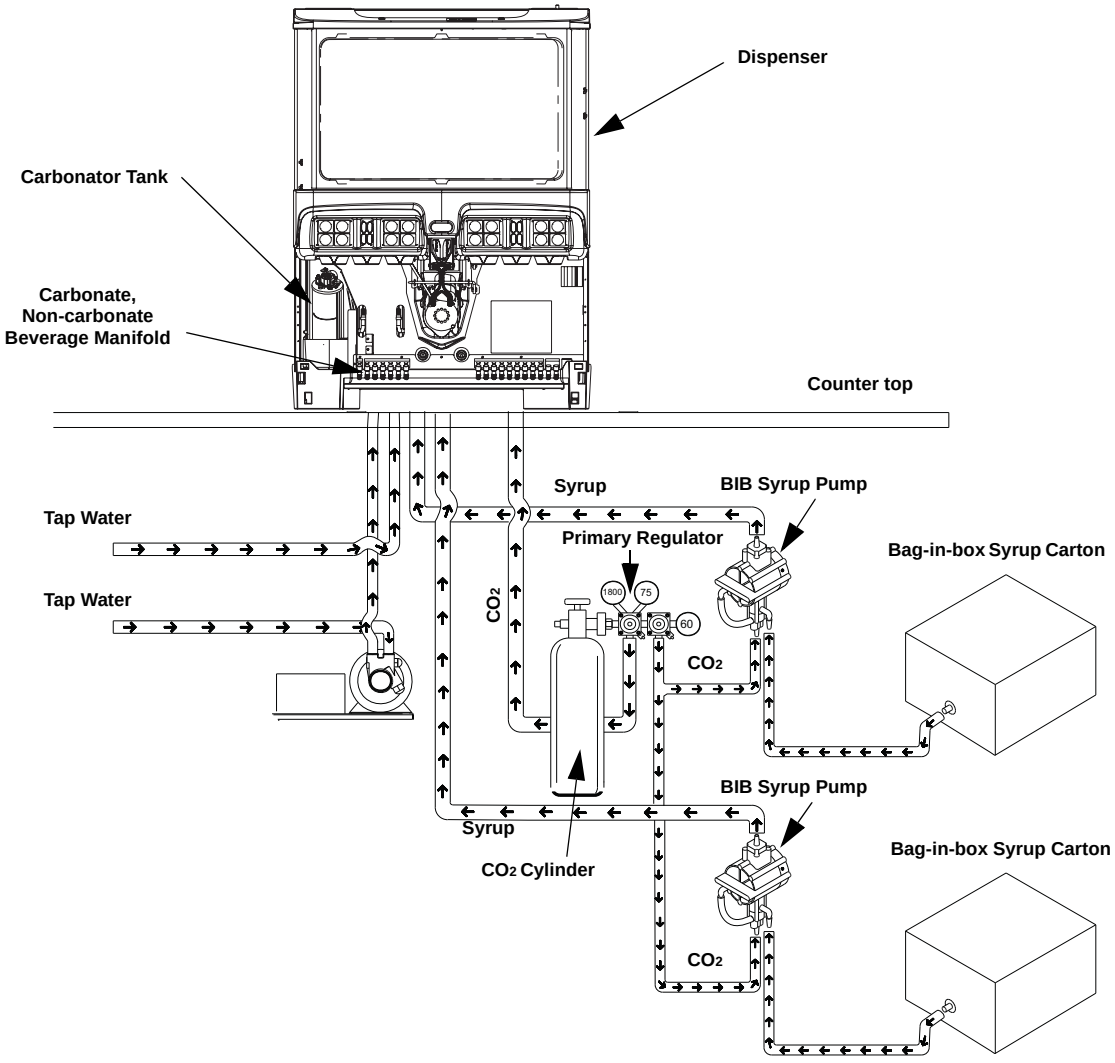
NOTE: At installation, equipment, dispensers, and tubing get moved through many environments, dirt, dust, chases, insulation, drywall, etc. It is an important procedure and best practice to address cleaning to deliver the best quality drink to your customer.

Important

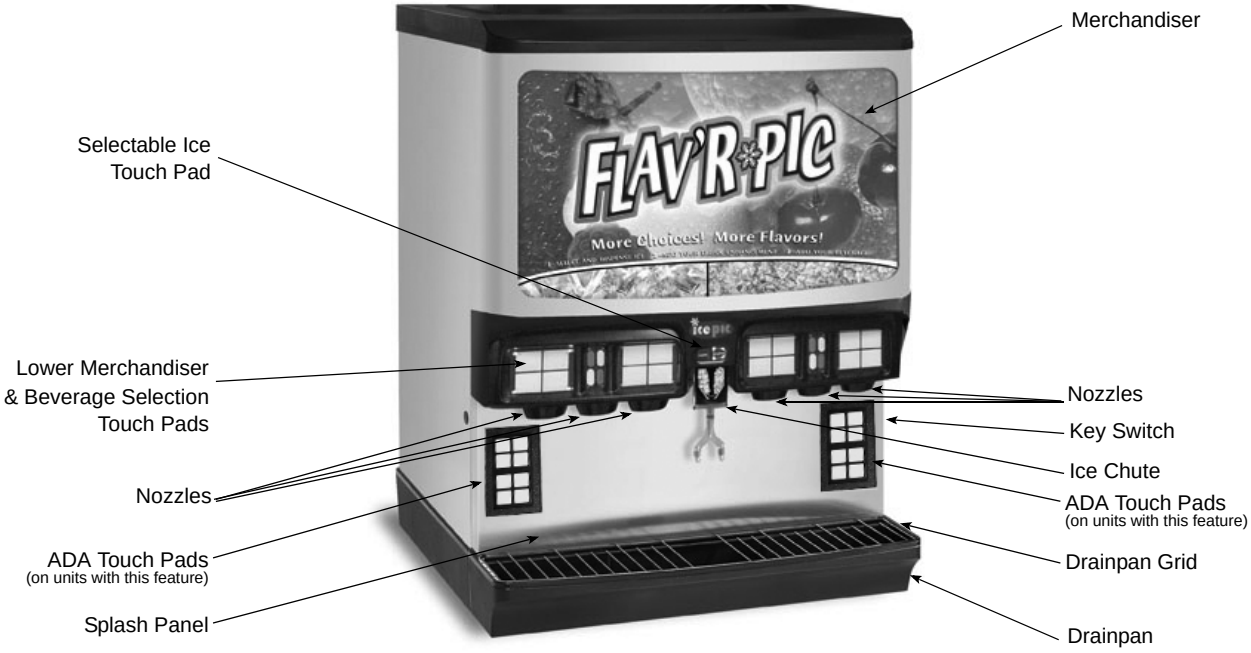
Clean and sanitize the water and syrup circuits according to instructions provided in this manual. Clean and sanitize the dispenser components according to instructions provided in this manual. Seal to counter top when no legs are used with the unit. Consult and use local health codes if a discrepancy occurs between this manual and your local health codes.

Section 3
Operation

General System Overview



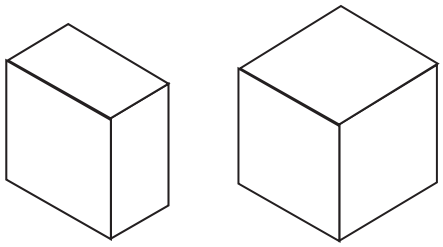
Typical Flav'R-Pic Series Internal Carbonation Beverage Dispensing System



Component Identification

Sequence of Operation

ICE RECOMMENDED FOR DISPENSING



Half Dice
3/8" x 1-1/8" x 7/8"
(1.0 x 2.9 x 2.2 cm)

Half Dice
3/8" x 1-1/8" x 7/8"
(1.0 x 2.9 x 2.2 cm)

Dispensers are designed to dispense hard, cube ice up to one-inch square. The ice shapes and sizes listed above are recommended for dispensing. Warm “Super Cooled” Ice Before Dispensing: “Super Cooled” ice is not recommended for dispensing. “Super cooled” ice is ice that has been stored in freezers below 32°F. Should it be necessary to temporarily use “super cooled” ice, allow the ice to warm at room temperature for 25 to 30 minutes before placing the ice in the dispenser.

Flake or “nugget” ice is NOT to be dispensed from the Flav'R-Pic. The Flav'R-Pic comes equipped with the selectable ice feature so you are able to choose between cubed or crushed ice making the addition of a flake/nugget icemaker unnecessary.

ICE STORAGE AND DISPENSING

As the customer presses the rocking chute, the arm at the top left rear of the chute pushes upward on the door lock. The door opens until it contacts the stops in the mounting brackets. The plastic arm on the ice chute also activates the lever of the ice dispensing switch. When activated, the micro switch starts the gear motor. The gear motor turns the paddle wheel and agitator arm.

The paddlewheel carries ice. Periodic agitation is standard on the 30" and larger dispensers. During periodic agitation, the paddle wheel and agitator turn for approximately three seconds every three and one half-hours. The door lock prevents ice from being dispensed during the agitation cycle.

BEVERAGE VALVES

Post-mix beverage valves are designed to precisely meter the flow of both water and syrup to obtain the proper mixing ratio. The syrup and soda water components of the post-mix beverage are mixed as they leave the beverage valve.

ROCKING CHUTE ICE DISPENSING

On units without the selectable ice option, as the customer presses the rocking chute, the arm at the top left rear of the chute pushes upward on the door lock. The door opens until it contacts the stops in the mounting brackets. The plastic arm on the ice chute also activates the lever of the ice dispensing switch. When activated, the micro switch starts the gear motor. The gear motor turns the paddle wheel and agitator bar.

SELECTABLE ICE SEQUENCE OF OPERATION

On units equipped with the selectable ice option, as a customer presses the ice chute or pushes the sanitary lever towards the unit with their cup, with “Crushed Ice” selected on the ice selection pad, the rocking chute door lifts and actuates micro switch which initiates the crushed ice dispensing process. The micro switch is activated when the lever is approximately 1/4 inch from reaching the splash panel of the unit. When activated, the micro switch starts the gear motor and ice crusher motor. The gear motor turns the paddle wheel and U-bar agitator. The paddle wheel carries ice to the crusher assembly. Once the ice reaches the crusher housing, four stationary blades and three rotating blades crush the ice and push it through the opening in the ice crusher housing. The crushed ice then falls through the opening into the ice chute, and into the customer’s cup. If the merchandiser is removed no power is available to the crusher or gear motor and no ice can be crushed and/or dispensed.

CARBONATION

The purpose of the carbonator is to take regular tap water at street water pressure (minimum 20 PSI, maximum 80 PSI, dynamic or flowing pressure) 1/2" water line and increase the water to beverage system pressure (usually 100 PSI). This water is then combined with the CO_2 gas. Because the water and gas are at the same pressure, the CO_2 will dissolve into the water. Chilling the mixture before dispensing will assist in locking the carbon dioxide into the water. After dispensing, the CO_2 may be unlocked from the liquid. The CO_2 will gradually leave the liquid due to pressure and temperature changes.

Components

The components of the carbonator are: water pump, an electric motor to operate the pump, carbonator tank where the water and CO_2 mix, and a water level control.

Operation

Carbon Dioxide (CO_2) leaves the storage tank and arrives at the carbonator tank through the gas inlet. Water supply enters the carbonator pump inlet at regular street water line pressure (minimum 20 PSI, maximum 80 PSI, dynamic or flowing pressure). The water pump increases the pressure of the water, which allows the water to flow into the carbonator tank. The CO_2 and the water mix together in the carbonator to produce the carbonated water that is then sent to the soda dispenser.

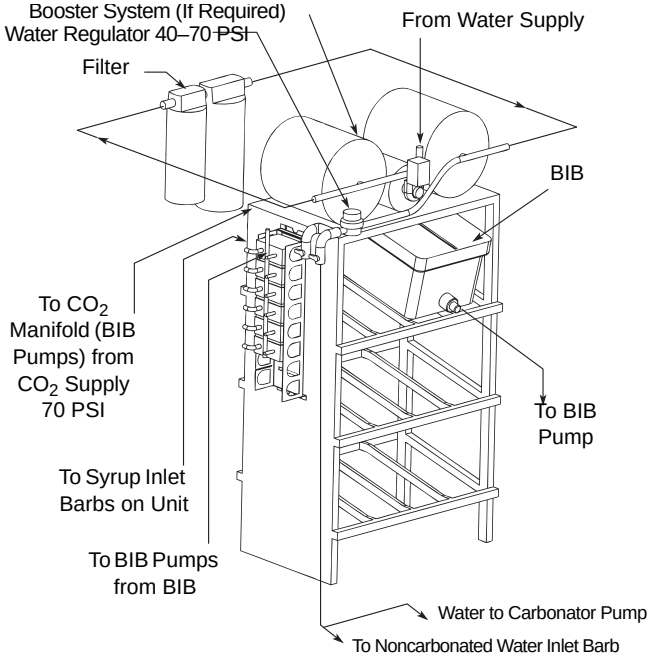
The agitation of the water and CO_2 together in the tank under high pressure creates the soda water. The quality of carbonation (percent of CO_2 mixed in the water) increases as the water temperature decreases and exposure time increases.

The water level in the carbonator tank is controlled by a water level control in the tank. This control turns the pump motor off and on to maintain a preset level of liquid in the tank. The water level control may be electronic probes or a mechanical float.

SYRUP DELIVERY SYSTEM

Your syrup location can vary depending on the volume of beverages served and ease of accessibility. Your beverage system may set in a back storage room or under the counter of the dispenser. Configurations are almost limitless. Check the temperatures expected for the storage location. Adverse temperatures can affect the storage and quality of beverage products. It is recommended the temperature of storage location should not fall below 40°F (4°C) or rise above 90°F (32°C).

BACK ROOM PACKAGE



1. **Incoming tap water** - should be at a minimum dynamic pressure of 40 psi and maximum static pressure of 70 psi.
2. **Carbonator Water pump motor -** Powers the water pump. The water pump motor is part of the carbonator pump deck.
3. **Carbonator Water pump -** Pumps tap water into the carbonator tank. The water pump is part of the carbonator. The incoming water for the carbonator must be first run through the pump before connecting to the proper cold plate inlet.
4. **Internal/External Carbonator tank -** Combines CO_2 gas and tap water to form carbonated water. The “carbonator” is the carbonator tank, water pump and water pump motor.
5. **CO_2 cylinder -** Holds highly pressurized carbon dioxide (CO_2). The CO_2 cylinder is a steel or aluminum cylinder tank. CO_2 gas flows through the primary pressure regulator.
6. **BIB pressure gauge -** Set for 75 psi. Indicates CO_2 pressure going to B-I-B pumps.
7. **Primary pressure regulator -** Lowers the CO_2 gas pressure, to 100 psi, so the CO_2 gas will be at the proper pressure to enter the carbonator regulator.
8. **Lowered outgoing pressure -** Set for 75 psi. Gauge indicates lowered outgoing pressure from the CO_2 cylinder after being routed through the primary pressure regulator at 100 psi.
9. **Secondary pressure regulator -** Lowers the CO_2 gas pressure before the CO_2 gas flows to the syrup pump. CO_2 pressure activates the syrup pump.
10. **Syrup pump -** Draws syrup out of the bag-in-box syrup package. Syrup flows through the syrup lines to the dispenser for chilling, then dispensing. There is a syrup pump for each bag-in-box syrup system.
11. **Bag-In-Box syrup cartons -** Box which contains a plastic bag, filled with syrup.

RACKING

Regardless if you are working on a B-I-B or Figal system, a place will be designated for placement of the product. A rack (or shelf) system affords systematic placement and complete usage of the beverage paid for. The B-I-B rack allows the boxes to lay properly for syrup dispersal. Please check with your B-I-B syrup supplier. Some boxes must be slightly tilted down, while others may be in virtually any position. The Figal tank rack keeps the newer and full tanks organized at one end of the beverage line with the partial tanks at the other.

B-I-B

The Bag-In-Box system refers to a plastic disposable bag. The B-I-B normally contains 5 gallons of syrup, however some locations offer 2-1/2 gallon B-I-B units. This plastic bag is then held inside a cardboard or other container. B-I-B systems are for post-mix applications only.

PUMPS

The syrup in a B-I-B system is delivered to the beverage system through gas operated pumps. These pumps extract the syrup out of the bags, forcing the syrup throughout the system.

AUTO BAG SELECTORS

These are used on higher volume B-I-B systems where two or more bags of the same product are connected to one pump and one system. An auto bag selector is essentially a valve that automatically changes from one bag (or series of bags) to another bag (or series of bags) of syrup as the bags empty, allowing a constant flow of product.

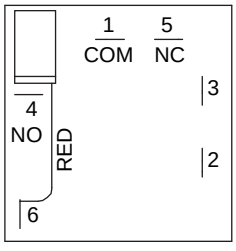
FRP-250 NON-ADJUSTABLE AGITATION TIMER

On units without selectable ice option, the timer is non-adjustable and is set to agitate the ice for 3 seconds every 3.5 hours. Activating the dispenser will reset the timer. After 3.5 hours of non-use, the timer will energize the dispenser motor.

The LED tells the technician in which mode the timer is operating. Rather than a jumper pin, this timer has a female spade connector that must be connected to terminal number 6.

When this jumper is in place, the LED will blink at one second intervals, this is the run mode.

When the jumper is open, the LED will flash every 0.4 second. This is the test mode and the timer will cycle every 55 seconds in test mode. If the timer is left in test mode, it will automatically reset to run mode.

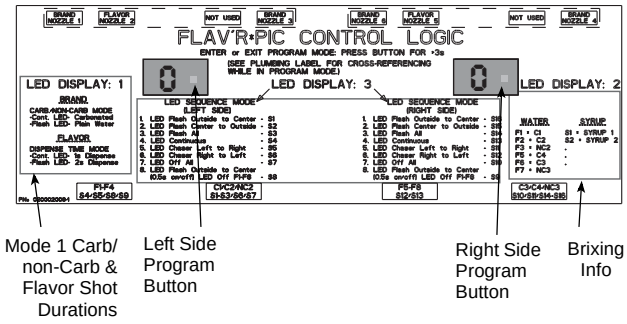


FRP-250SCI NON-ADJUSTABLE AGITATION

On units equipped with the selectable ice option, timed agitaion for Flav’R-Pic units is handled by the control board and is not adjustable.

NOTE: This timer is re-settable, timed agitation every 3.5 hours from last dispense or when the power supply is broken.

CONTROL BOX LABEL



The control box label is your programming reference sheet and control board identifier. Becoming familiar with this label will greatly assist you in programming, brixing and even trouble shooting the boards on the Flav'R-Pic unit if necessary. The illustration above tells you what each area of the label does. In each called out area there are abbreviated instructions for one of the three programming modes.

MODE 1 = carb/non-carb & Flavor shot INFO

MODE 2 = Brixing

MODE 3 = Touch pad LED Sequencing

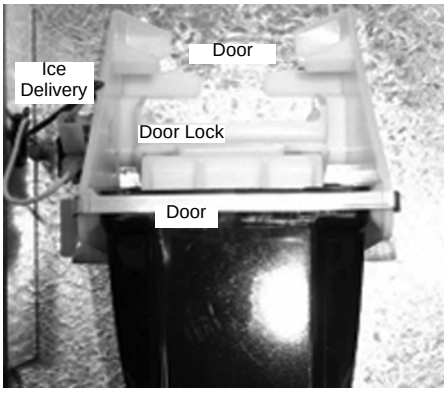
a program button is located just to the right of each numbered LED display. The one on the left controls the left control board and the one on the right controls the right control board. Holding either in for approximately 3 seconds will put the respective board into a programming mode. (See the Programming section for programming mode details.) For this label to make sense, especially when brixing, you will need to reference the plumbing label located on the foam front behind the splash panel and/or in the plumbing section of this manual. It is recommended to only program one board at a time.

Also located around the top and bottom edges on the control box label are the locations of the wire harnesses that are connected to the boards behind the box and the valve or touch pad connection they plug into.

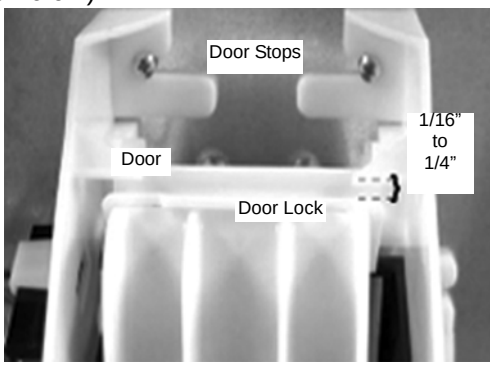
Operation Checks and Adjustments

FRP-250 (NON-ICE CRUSHING UNIT) ICE DELIVERY SWITCH ADJUSTMENT

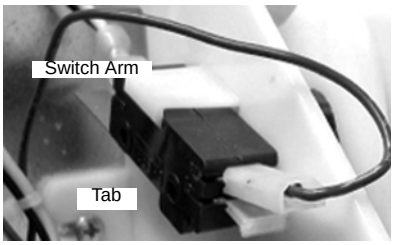
To properly adjust the switch, first unplug the power cord to the unit then remove the merchandiser. This will give you access to the ice delivery switch located on the left side of the rocking chute.



Begin by observing the chute by slowly pushing against the rocking chute. When the ice delivery switch clicks, measure the distance from the door stops on the rocking chute bracket to the door. The distance between the two must be no more than 1/4” (0.64 cm), but no less than 1/16” (0.16 cm).



The left side of the rocking chute has a tab that pushes up on the ice delivery switch. To adjust it, use needle nose pliers and bend the arm of the switch up or down in order to change the point where the tab makes contact with the switch arm.

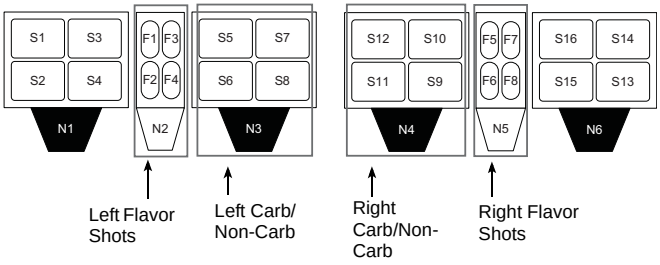


EXTERNAL BRIX MODE

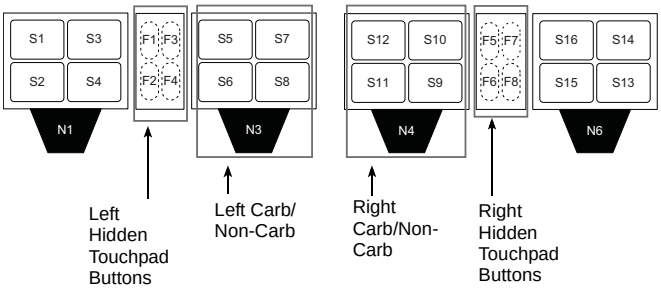
How to Check FRP Brix Externally

If your FRP-250 has a control board with the external brix check ability you will be able to put the unit into brix mode by doing the following:

1. Turn the key switch to the “OFF” position.
2. With the key switch still in the “OFF” position, press and hold the F1 touch pad button for the left side or F5 for the right while turning the key switch back to the “ON” position.
    - F1 = Left Side Brix Check
    - F5 = Right Side Brix Check



FRP-250 WITH FLAVOR SHOTS



FRP-250 WITHOUT FLAVOR SHOTS

NOTE: The buttons for FRP units without flavor shots are located in the same area, but are hidden.

3. You can now stop pressing on the F1 or F5 button and the 4 LEDs around the touch pad area should now be illuminated. If not illuminated you did not successfully go into external brix mode and need to try again, or the FRP unit is not equipped with this program mode.

In this setting when a corresponding touch pad is pressed water or syrup will be dispensed for a fixed duration in order to check your ratios using a brix cup.

4. In this mode you can now check the brix for any water or syrup valve that corresponds to the board. Use the illustration in Installation/Brixing or the Control board, Valve, Touch Pad Matrix to identify the valves and which board they correspond to. Brixing information can also be found on the unit, on the right hand side of the control board cover label. By using this label in combination with the plumbing label located on the foam front you will be able to identify each valve, water, and/or syrup combination.
5. When finished checking the brix return the unit to dispense mode by turning the keyswitch to the "OFF" position, waiting till the touch pad LEDs are not illuminated, then turn the keyswitch back to the "ON" position.

Important

If left in external brix mode for longer than 5 minutes it will automatically time out and return to dispense mode.

If brix adjustments are needed you will have to remove the merchandiser to make the mechanical adjustments. Please see *PROGRAM MODE 2* in this section for internal brixing instructions using the control board and the *SECTION 2 / Brixing Procedure* for detailed instructions on brixing the FRP-250.

CRUSHED OR CUBED DEFAULT

This selectable ice option will allow the unit to always default to either cube or crushed ice or remain at the last selection. This only applies to control boards 020000875 Rev 7 and up.

How to set default ice dispense setting

CUBE DEFAULT

1. Power on the unit by plugging in receptacle and holding the cube button at the same time, cube will flash 2 times. Unit will now change to cube 10 seconds after crush is selected and/or used.

CRUSH DEFAULT

2. Power on the unit by plugging in receptacle and holding the crushed button at the same time, crush will flash 2 times. Unit will now change to crush 10 seconds after cube is selected and/or used.

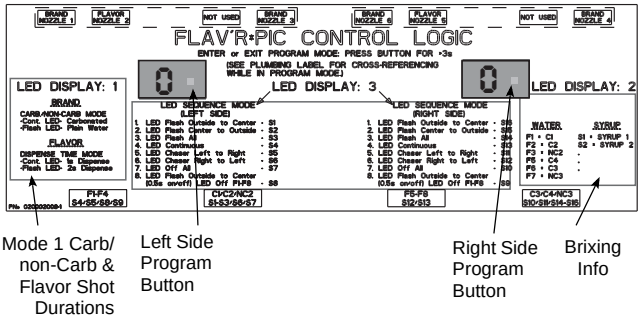
LAST SELECTION DEFAULT

3. Power on the unit by plugging in receptacle and holding cube and crush at the same time, cube and crush will flash 2 times. Unit will now remain in selection of last request.

NOTE: If power is lost to the unit and then powered up again the unit will retain the last setting and not return to factory settings.

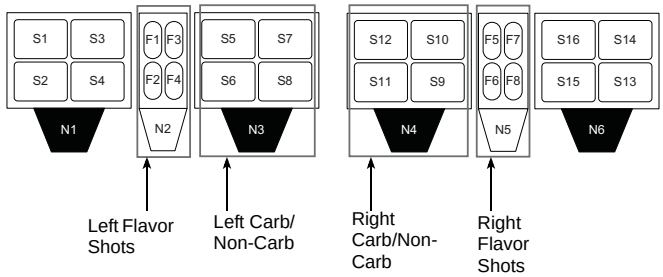
PROGRAM MODE 1

Carb/Non-Carb & Flavor Shot Duration Settings

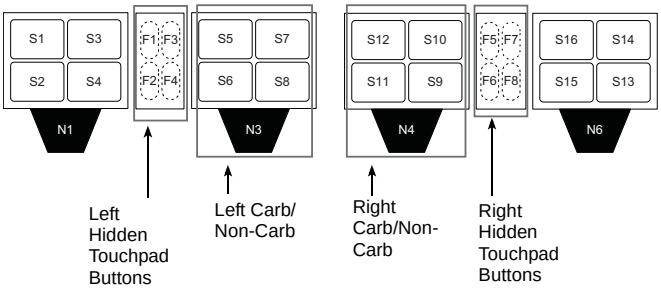


Mode 1 displayed above, allows you to select your carb/ non-carb settings for dispense points N3 (Nozzle 3) through the left control board and/or N4 (Nozzle 4) with the right control board. Only nozzles N3 and N4 have the option to be a non-carb drink, N1 and N6 are carbonated only. Mode 1 is also used to set a 1 or 2 second dispense duration for flavor shots on N2 and N5 using their corresponding control board.

N3 & N4 Carbonated or Non-Carbonated Drinks



FRP-250 WITH FLAVOR SHOTS



FRP-250 WITHOUT FLAVOR SHOTS

1. Choose a control board, if programing N3 (Nozzle 3) use the left control board, if programming N4 use the right control board. Beverage dispense points are designated by a black nozzle.
2. Press the program button and hold for 3 seconds or until the LED displays 1.
3. To set a carbonated drink for N3 (Nozzle 3) touch one of the following touch pads; S5, S6, S7, or S8 until the LEDs around the touch pad are constant.
4. To set a non-carbonated drink for N3 (Nozzle 3) touch one of the following touch pads; S5, S6, S7, or S8 until the LEDs around the touch pad are blinking.
   - •Constant LEDs = Carbonated
   - •Blinking LEDs = Non-Carbonated
5. Follow the same instructions for N4 (Nozzle 4) using the right control board and touch pads S9, S10, S11, or S12.
6. When you are finished press the program button to go to a different mode or save your settings and return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0.

Flavor Shot Dispense Duration

1. Choose a control board, if programing flavor shots for N2 (Nozzle 2) use the left control board, if programming shots for N5 use the right control board. Flavor shot dispense points are designated by a blue nozzle.
2. Press the program button and hold for 3 seconds or until the LED displays 1.
3. To set a 1 second shot for N2 (Nozzle 2) touch one of the following touch pads; F1, F2, F3, or F4 until the LEDs around the touch pad are constant.
4. To set a 2 second shot for N2 (Nozzle 2) touch one of the following touch pads; F1, F2, F3, or F4 until the LEDs around the touch pad are blinking.
   - •Constant LEDs = 1 second shot
   - •Blinking LEDs = 2 second shot
5. Follow the same instructions for N5 (Nozzle 5) using the right control board and touch pads F5, F6, F7, or F8.
6. When you are finished press the program button to go to a different mode or save your settings and return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0.

PROGRAM MODE 2

Brixing

Mode 2 displayed above, puts your Flav'R-Pic into brix mode. In this setting when a corresponding touch pad is pressed water or syrup will be dispensed for a fixed duration in order to set your ratios using a standard brix cup and making adjustments to the mechanical valves. Follow the steps below to put a board into brix mode.

1. Choose a control board, if brixing drinks for N1 (Nozzle 1) or N3 use the left control board, if brixing drinks for N3 or N6 use the right control board. Beverage dispense points are designated by a black nozzle.
2. Press the program button and hold for 3 seconds or until the LED displays 1. Press the program button again until 2 is displayed on the control board LED display.

NOTE: Programming one board at a time will make it easier for you to identify the corresponding valves and dispense points.

3. With the a board in mode 2 you can now brix any water or syrup valve that corresponds to the board. Use the illustration in Installation/Brixing or the Control board, Valve, Touch Pad Matrix to identify the valves and which board they correspond to. Brixing information can also be found on the unit, on the right hand side of the control board cover label. By using this label in combination with the plumbing label located on the foam front you will be able to identify each valve, water, and/or syrup combination.
4. Replace the nozzle when done then move on to another nozzle or if you are finished brixing return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0.

A brixing break down for each nozzle is available in the Installation/Brixing section of this manual.

PROGRAM MODE 3

Light Sequences

Mode 3 displayed above, allows you to set the light sequence for the touch pad LEDs. Follow the steps below to place the board into this mode and set sequences.

1. Choose a control board, if setting the light sequence for the touch pad area on the left use the left control board, if you are setting them for the right, use the right control board.
2. Press the program button and hold for 3 seconds or until the LED displays 1. Press the program button again until 3 is displayed on the control board LED display.
3. With the left control board in mode 3 you can now choose one of the touch pad LED lighting sequences by pressing one of the following touch pad areas;

   S1 = Flash outside to center
   S2 = Flash center to outside
   S3 = Flash all
   S4 = Continuously on all
   S5 = Chaser left to right
   S6 = Chaser right to left
   S7 = Off all
   S8 = Flash outside to center, Flavor Shot Off

NOTE: It is recommended that both boards be set to the same lighting sequence. If not the boards will not be able to sync and lighting behavior may become erratic.

4. With the right control board in mode 3 you can now choose one of the touch pad LED lighting sequences by pressing one of the following touch pad areas;

   S16 = Flash outside to center
   S15 = Flash center to outside
   S14 = Flash all
   S13 = Continuously on all
   S12 = Chaser left to right
   S11 = Chaser right to left
   S10 = Off all
   S9 = Flash outside to center, Flavor Shot Off

Important

When installed on a FRP without flavor shots the lighting sequence S8 & S9 should be used. All other units are set to S1 & S16 by default.

5. When done move on to another programming mode or if you are finished return the control board to the dispense mode by pressing the program button and holding for 3 seconds or until the LED displays 0.

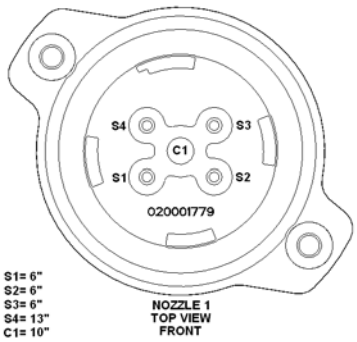
CONTROL BOARD TIME OUT

Important

If a control board is left in any program mode for longer than 5 minutes it will automatically time out and return to dispense mode 0. In order to enter back into a program mode you will need to press the program button and hold for 3 seconds or until the LED displays 1 again.

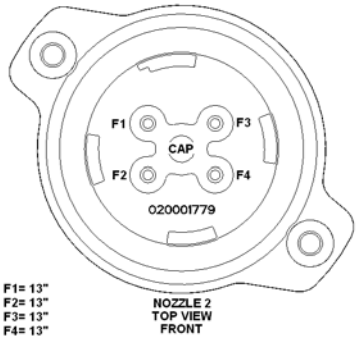
NOZZLES

FRP-250 & FRP-250SCI Tubing Layout



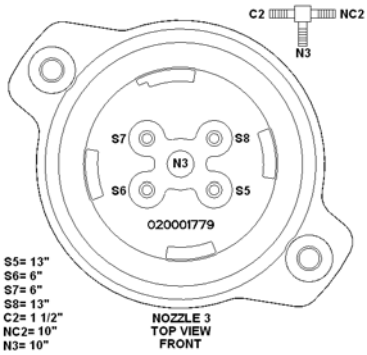
S1= 6"
S2= 6"
S3= 6"
S4= 13"
C1= 10"

NOZZLE 1
TOP VIEW
FRONT



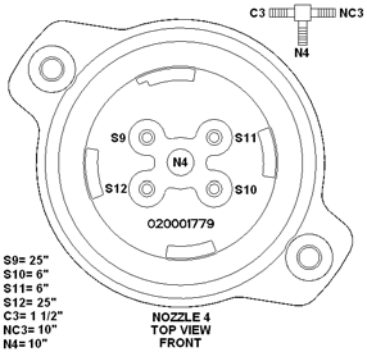
F1= 13"
F2= 13"
F3= 13"
F4= 13"

NOZZLE 2
TOP VIEW
FRONT



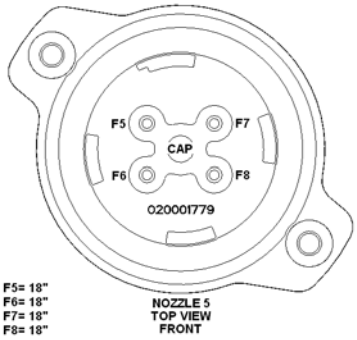
S5= 13"
S6= 6"
S7= 6"
S8= 13"
C2= 1 1/2"
NC2= 10"
N3= 10"

NOZZLE 3
TOP VIEW
FRONT



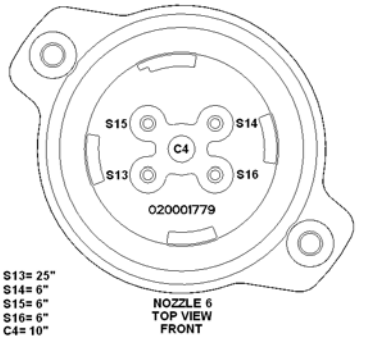
S9= 25"
S10= 6"
S11= 6"
S12= 25"
C3= 1 1/2"
NC3= 10"
N4= 10"

NOZZLE 4
TOP VIEW
FRONT



F5= 18"
F6= 18"
F7= 18"
F8= 18"

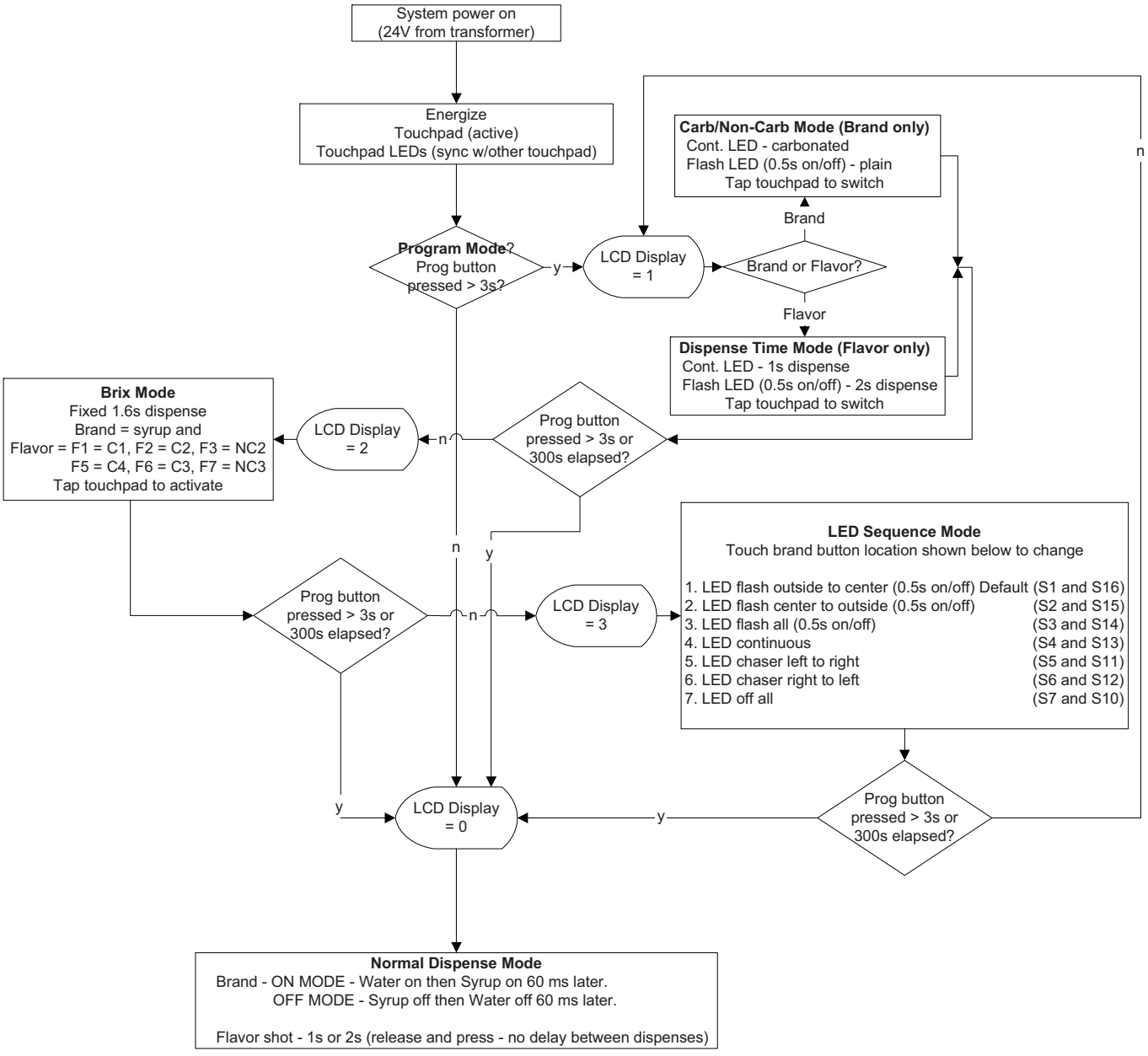
NOZZLE 5
TOP VIEW
FRONT



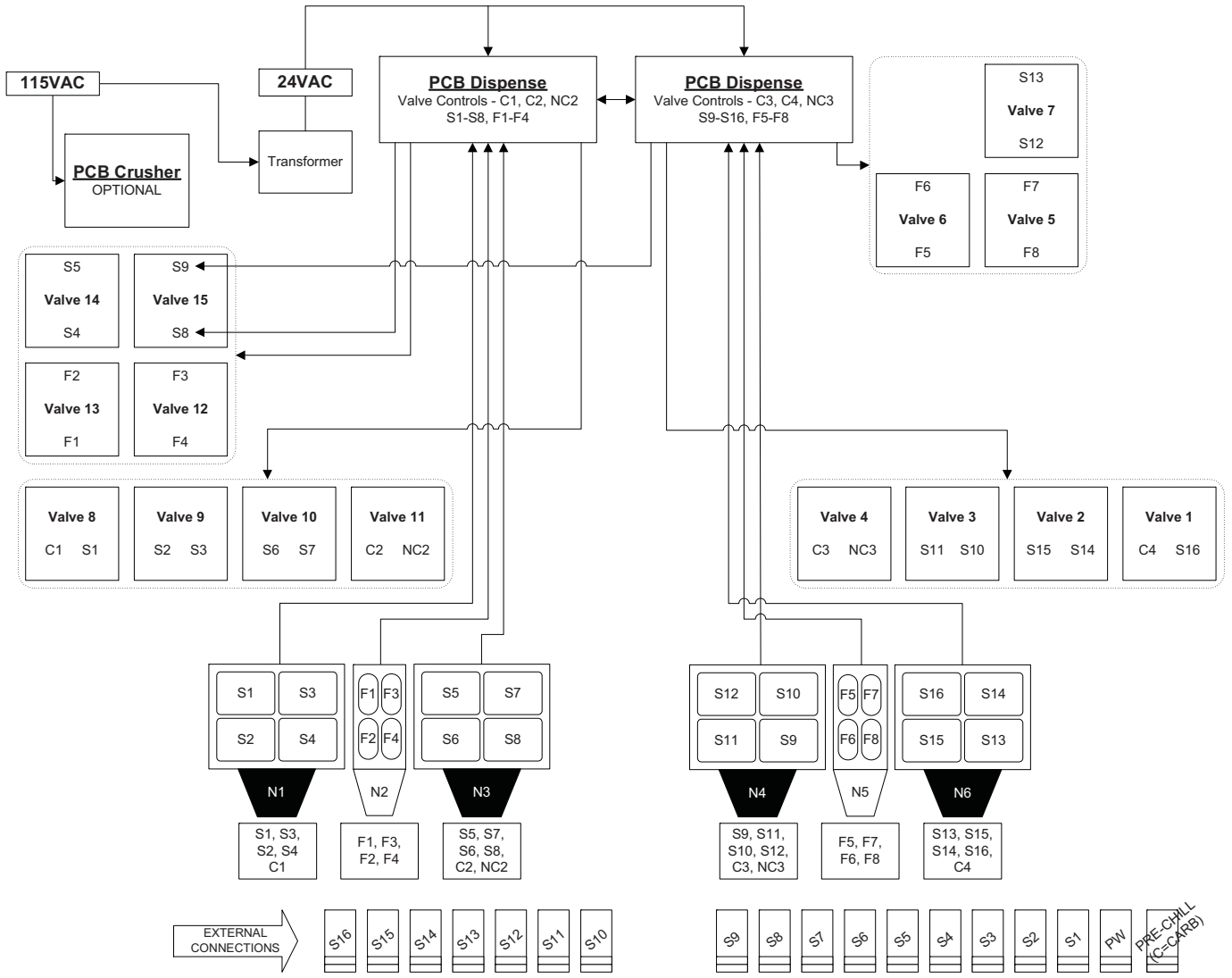
S13= 25"
S14= 6"
S15= 6"
S16= 6"
C4= 10"

NOZZLE 6
TOP VIEW
FRONT

Control Logic Matrix



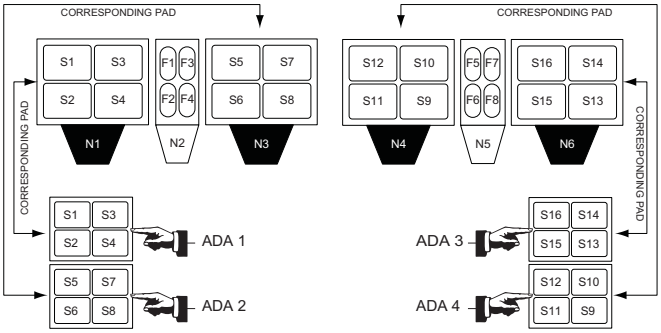
Control board, Valve, Touch pad Matrix



ADA TOUCH PADS

ADA touch pads on units with this option are located on both the right & left hand sides of the splash panel for handicapped accessibility to drink flavors.

ADA TOUCH PAD MATRIX



The ADA touch pads are configured to mimic the function of the main touch pads on the left and right sides of the unit located above the dispense nozzles.

ADA 1 = Nozzle 1 (N1)

ADA 2 = Nozzle 3 (N3)

ADA 3 = Nozzle 4 (N4)

ADA 4 = Nozzle 6 (N6)

See Illustration Above.

Section 4
Maintenance

Cleaning

DAILY CLEANING

All cleaning must meet your local health department regulations. The following cleaning instructions are provided as a guide.

> **⚠ Caution**
> Use only warm soapy water to clean the exterior of the tower. Do not use solvents or other cleaning agents. Do not pour hot coffee into the drain pan. Pouring hot coffee down the drain pan can eventually crack the drain pan, especially if the drain pan is cold or still contains ice.

> **⚠ Warning**
> **Electric Shock Hazard**
> Unplug unit before servicing or cleaning.

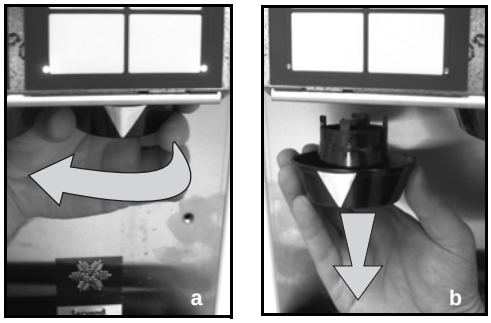
> **⚠ Warning**
> When using cleaning fluids or chemicals, rubber gloves and eye protection should be worn.

Clean the merchandiser, lower merchandiser, touch pads, splash panel, nozzles and exterior of unit:

1. Turn off the key switch located on either right or left side of the unit.
2. Lift the grid and remove it from the drain pan.
3. Using mild soap, warm water and a clean cloth, wipe the drain pan and splash panel. Then, rinse with clean, warm water. Allow plenty of warm (not hot) water to run down the drain of the drain pan, to remove syrup residue that can clog the drain opening.
4. Wash the grid, then rinse with clean water. Place the grid back in the drain pan.
5. Wash all exterior surfaces of the unit with warm water and a clean cloth. Wipe again with a clean, dry cloth.

Clean the dispensing nozzles:

6. Remove nozzles from each dispense point by (a) grasping it firmly & turning it clockwise about 1/4" then (b) pulling down.



7. Rinse nozzle with warm, clean water.
8. Clean nozzles with soapy water and a soft bristle brush.
9. Clean the underside of the nozzle area below the lower merchandiser with warm, soapy water. Rinse with clean damp towel then wipe again with a clean, dry cloth.
10. Replace nozzles by following step 6 in reverse (b, a).
11. Turn on the key switch.

MONTHLY CLEANING

> **⚠ Caution**
> Unplug unit before servicing or cleaning ice bin.
> Ice bin contains parts that can move at any time and will cause injury if hands are in the way.

> **⚠ Warning**
> When using cleaning fluids or chemicals, rubber gloves and eye protection must be worn.

Clean and sanitize the ice bin:

1. Unplug unit and remove all ice from the ice bin.
2. Mix a solution of mild detergent to clean the dispenser bin and components.
3. Wash the ice bin using a sponge and the mild detergent solution.
4. Using the mild detergent solution and a soft bristle brush or clean cloth, clean the following bin and selectable ice components;

Bin components:

- Entire bin
- Paddle wheel
- Paddle wheel area
- Agitator
- Paddle wheel pin
- Ice Chute
- Rear bushing
- Motor shaft
- Strip lids (where applicable)

Selectable Ice: ***(for units with this feature)***

- Decorative Chute
- Housing
- Housing Door
- Whole Ice Door
- Sanitary Lever
- Hub/Blade Assembly
- Drip Pan

5. Rinse all the parts in clean, running water.
6. Prepare 2 gallons of sanitizing solution by mixing 1/2 ounce of household bleach (that contains 5.25% sodium hypochlorite) with 2 gallons of 120°F water. The mixture should not exceed 100 PPM of chlorine. Or mix a solution of any approved sanitizer, following the directions for mixing and applying the sanitizer.
7. Sanitize the ice bin and cold plate with the sanitizing solution for at least 10 seconds.
8. Allow to air dry. Do not rinse.
9. Re-assemble all bin and selectable ice parts once dry and hand tighten all knurled fasteners.
10. Pour in fresh, sanitary ice and replace the plastic lid on the top of the dispenser.
11. Plug in the unit's electrical cord.
12. Check for proper ice dispensing.

CLEANING CHECKLIST

- Check CO_2 supply. If CO_2 supply is low, an arrow on the primary regulator gauge will point to a shaded area that reads "Low CO_2" or "Change CO_2 Cylinder."
- Check syrup supply.
- Clean drain pan, grid, and splash panel.
- Clean the nozzles.

Preventive Maintenance

Preventative maintenance is a vital part of keeping your dispenser in top condition. Following the guidelines below will assist you in continued trouble-free operation of your unit.

1. Conduct daily maintenance of the machine.
2. Perform monthly maintenance of the machine.
3. Perform periodic maintenance and sanitizing of beverage system.
4. Do not overfill the dispenser bin with ice.
5. Do not allow the dispenser to sit for prolonged periods of non use with ice in the bin.
6. Most ice dispenser service problems are caused by low usage of the ice dispenser.
7. Do not allow ice to remain in the bin more than a day in order to prevent ice from freezing together and/or stagnant ice.

Possible excess ice storage reasons:

- Storage capacity exceeds daily requirements.
- Low demand during the off season.
- Dispenser oversized with future growth in mind.

Lower ice storage to meet one day's needs. If you manually fill ice, fill only with the appropriate amount of ice. Fill the dispenser with fresh ice each morning. Do not fill the dispenser at night just before shut down. Ice cubes can freeze together if not dispensed.

Contact MBE at 1-800-367-4233 for more information about our ProActive Maintenance Program.

Disassembly

DISASSEMBLY FOR CLEANING AND MAINTENANCE

NOTE: Sanitize the ice dispenser at Initial Start-up in addition to monthly sanitizing. You will need a slotted screwdriver in order to disassemble.

Disassemble parts in the following order:

A. Merchandiser

B. Ice chute

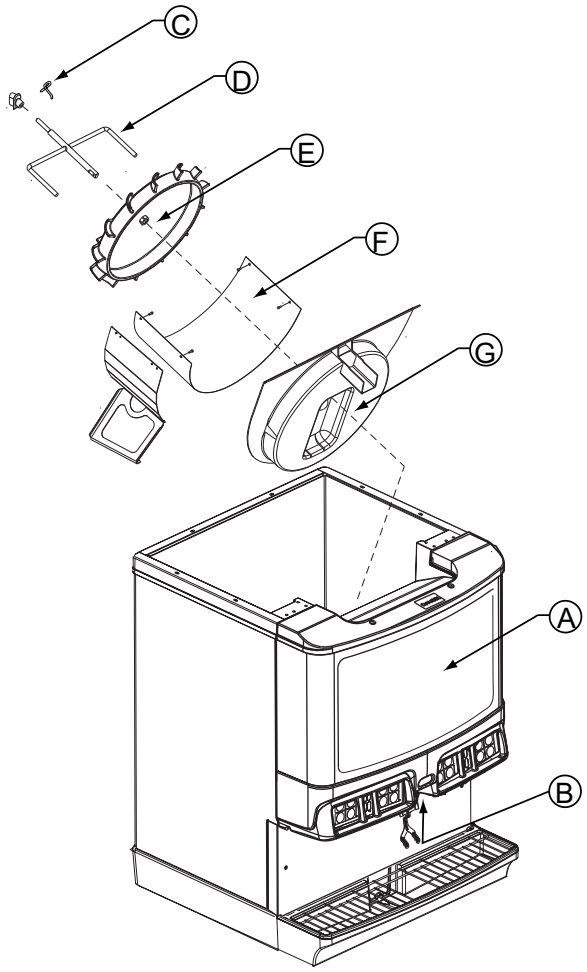
C. Hitch Clip Pin

D. Agitator

E. Paddle wheel

F. Bin liner

G. Paddle wheel area



Beverage/Ice Dispenser

Accessing a Dispenser Bin Top Mounted with a Manitowoc ice machine:

1. Remove the front panel of the ice machine.
2. Remove the ice deflection baffle. This will give you access to the dispenser bin.
3. If the Manitowoc ice machine is operating, wait for the sheet of ice to fall into the dispenser bin.

When the ice sheet falls into the dispenser bin, immediately place toggle switch of the ice machine to the OFF position. If the Manitowoc ice machine is NOT operating, place the toggle switch of the ice machine to the OFF position.

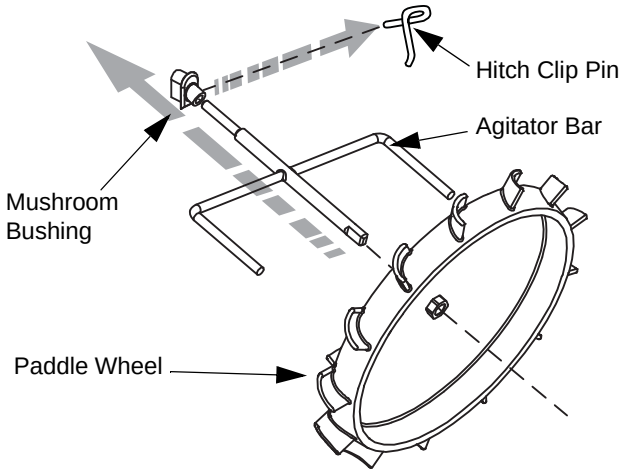
4. On models without a top mounted ice machine, remove the plastic lid from the top of the dispenser.
5. Remove all ice from the dispenser.
6. Disconnect electrical power to the dispenser.
7. Remove agitator arm and paddlewheel pin.

Front Serviceable Motor

a. With agitator arm in any position remove hitch clip pin from the mushroom bushing on the rear of the ice bin.

b. Push the agitator bar toward the bushing to remove it from the paddle wheel hub.

NOTE: If a top mount ice machine is installed, sliding the ice machine to one side will make bin component removal easier. If the ice machine is hard plumbed it will need to be disconnected.

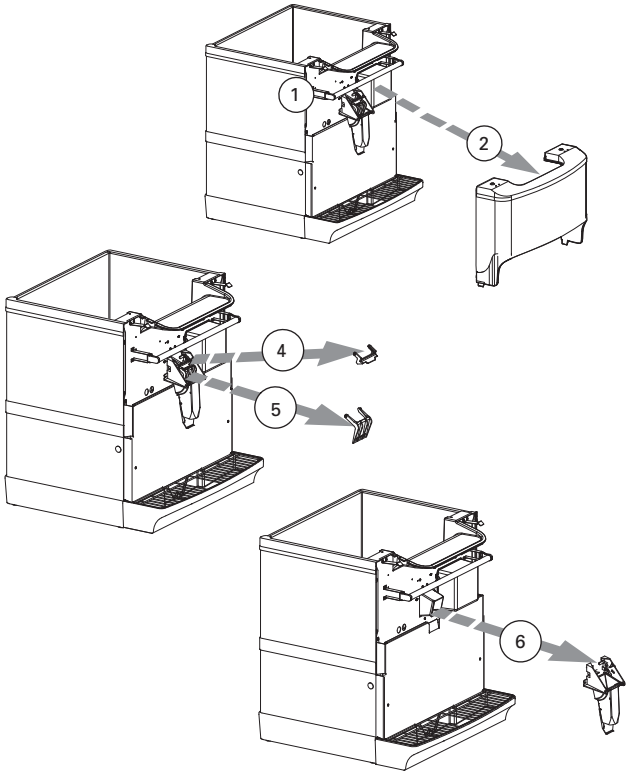


Front Serviceable

8. Remove paddle wheel, bin liner and paddle wheel area.
9. Move the front of the agitator to one side and slide the agitator forward until the rear of the agitator shaft is clear of the bushing.
10. Remove the agitator from the bin area.
11. Slide the paddle wheel from its shaft.
12. Loosen the four knurled fasteners that hold the bin liner in place.
13. Remove the bin liner.
14. Remove the paddle wheel area from the bin.
15. Discard the remaining ice in the bin.

FRP-250 (NON-CRUSHER) DISASSEMBLE THE ROCKING CHUTE

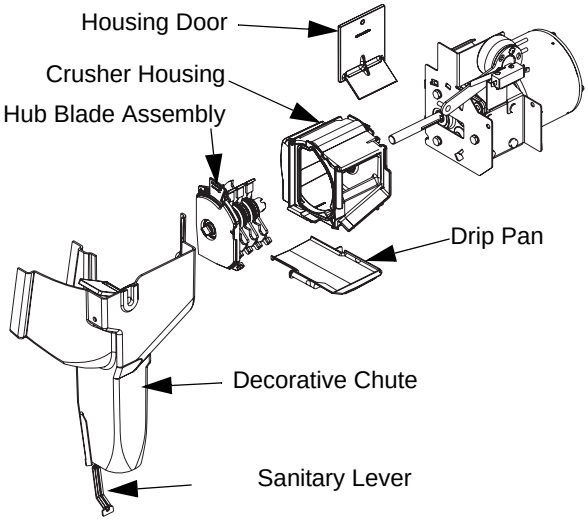
1. Loosen the two knurled fasteners that hold the merchandiser in place.
2. Remove the merchandiser.
3. Remove outer bracket.
4. Remove door lock.
5. Remove door.
6. Remove ice chute.



Ice Chute Removal

SELECTABLE ICE CRUSHER DISASSEMBLY

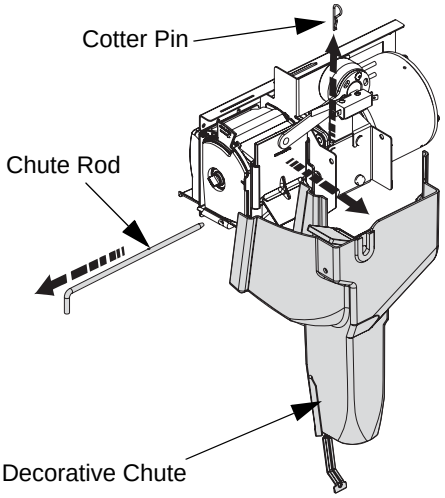
On units equipped with the selectable ice option, before servicing or cleaning any part of the Selectable Ice unit be sure to unplug it from its power source. In order to access the module and crusher you must first remove the merchandiser by taking out the two screws located at the top of the merchandiser. Once the screws are removed, rotate the top of the merchandiser towards you and then lift the merchandiser up to remove from unit.



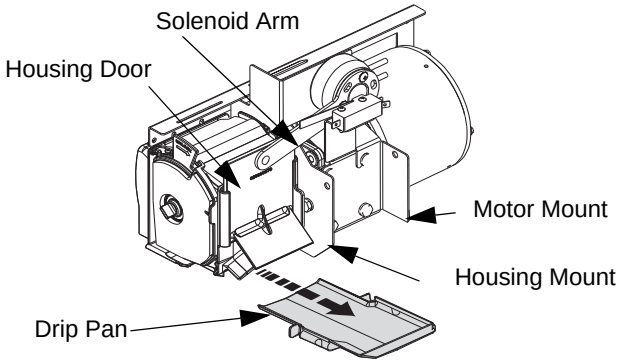
1. Unplug unit before cleaning or servicing the Crusher Assembly.
2. Remove the merchandiser by taking out the two screws located at the top of the merchandiser. Once the screws are removed rotate the top of the merchandiser towards you and then lift the merchandiser up to remove from unit.

NOTE: When the Merchandiser is removed an electrical safety switch disconnects power to the Ice Crusher assembly.

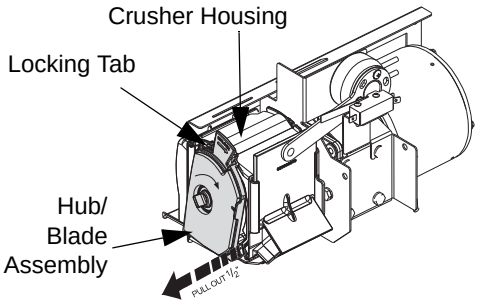
3. Remove the Ice Chute by pulling the cotter pin out on the right side of the chute rod and pulling the chute rod toward the left side of the dispenser.



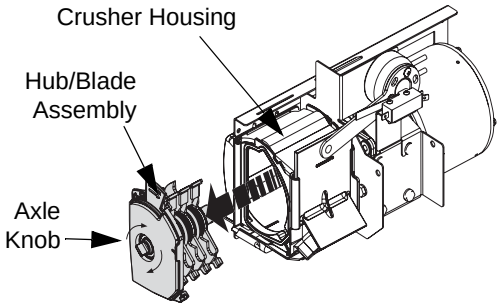
4. Remove the crushed ice and cube ice doors from the dispenser by lifting the solenoid arms up and pushing the doors back to disengage the door from the solenoid arm.



5. Remove the Crusher Drip Pan by pulling it forward.
6. Remove the ice crusher blade assembly from the crusher housing.
   A. Unlock the Crusher Hub/Blade assembly from the Crusher Housing by pushing locking tab in, and rotating the Hub/Blade assembly clockwise.



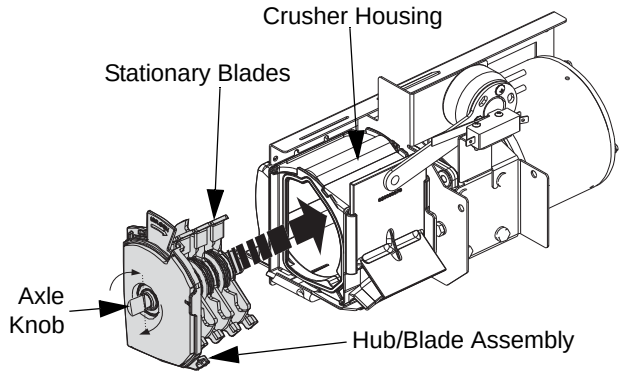
B. Pull the Hub/Blade assembly out of the housing approx. ½" to disengage the Crusher Axle from the motor shaft.



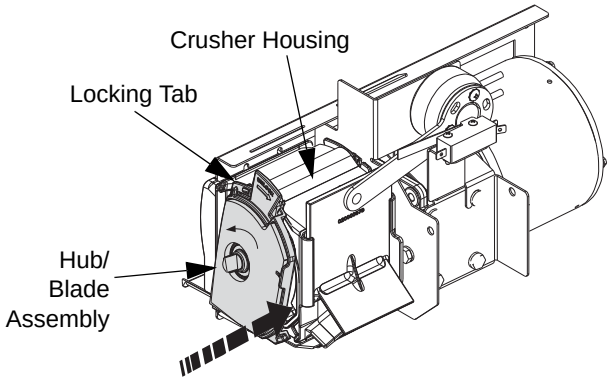
C. Rotate the knob on the Crusher Axle so it is in a vertical position. (This will assure the rotating blades will not interfere with pulling the Hub/Blade assembly from the housing.)

D. Now the Hub/Blade assembly will be free from the housing and you will be able to completely remove the Hub/Blade assembly from unit.

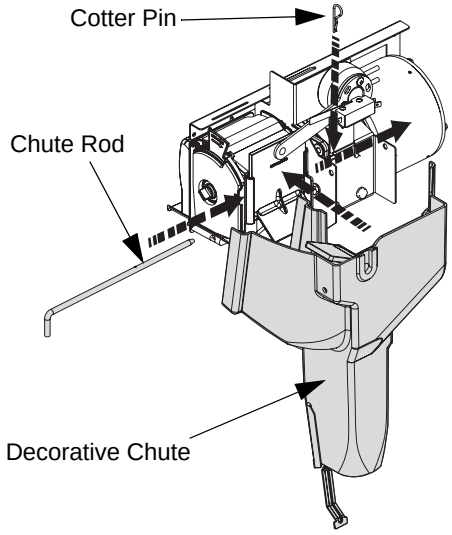
REASSEMBLE THE ICE CRUSHER ASSEMBLY



1. Insert the Hub/Blade assembly into the Ice Crusher Housing. When inserting the Hub/Blade assembly you must align the Stationary blades with the locating slots in the Ice Crusher Housing.
2. When inserting the Hub/Blade assembly into the Ice Crusher Housing you must also make sure the Axle Knob is in a vertical position. This will align the rotating blades with the Housing to assure a quick and easy installation.



3. Once all blades are in the Crusher Housing you will need to align the Crusher Axle with the motor shaft. You can do this by turning the Axle Knob and pushing the blade assembly toward the motor until the Hub/Blade assembly is flush with the end of the Crusher Housing.
4. To lock the Hub/Blade assembly into the housing, rotate the Crusher Hub/Blade assembly counter clockwise until the locking tab snaps into place and the Crusher Hub/Blade assembly is secure.
5. Replace the Crusher Drip Pan.

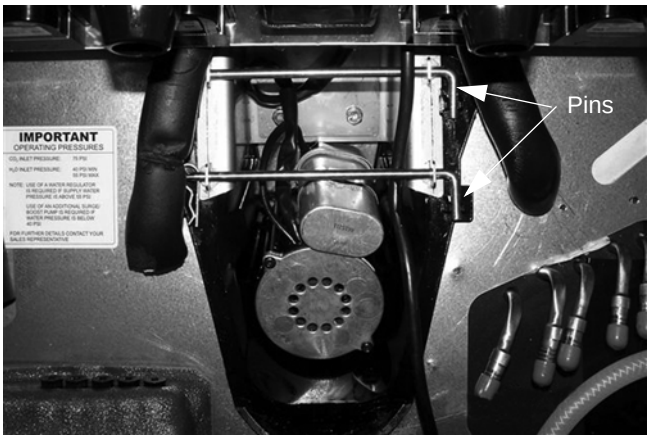


6. Reattach the Decorative Ice Chute by inserting the chute rod through the Decorative Chute, Housing Mount, and Motor Mount. Secure the Chute Rod by inserting the cotter pin through the rod on the right side of the chute.
7. Ensure the extension at the top of the Decorative Chute is behind the arm of the Activation Switch.

SERVICEABLE GEAR MOTOR REMOVAL

These instructions are provided as a guide for the removal of the gear motor. Depending on the model number of your dispenser, these instructions may vary slightly.

1. Unplug the dispenser.
2. Unplug the motor.



3. Remove motor mount pins.
4. Slide motor towards you.

5. Notice alignment of the chamfered edge of drive shaft.

6. New motor must have the same alignment (within 15 degrees).
7. To get correct alignment you can do one of two things:
   a. Turn drive shaft with an adjustable wrench, being careful not to damage the drive shaft.
   b. Plug in the unit, plug in the motor and use the ice dispense switch to move the drive shaft into correct alignment.
8. If you plugged in the unit to help with alignment of drive shaft now unplug the unit.
9. Slide motor up into housing, making sure that the tabs fit on the bracket.
10. Install motor mount pins.
11. Plug in motor.
12. Test unit.

Sanitizing

BEVERAGE SYSTEM CLEANING

⚠ Warning

Flush sanitizing solution from syrup system.

Residual sanitizing solution left in system could create a health hazard.

⚠ Warning

When using cleaning fluids or chemicals, rubber gloves and eye protection must be worn.

Sanitize the beverage system at initial start-up as well as regularly scheduled cleaning. The drain pan must be in place under soda valves, to carry away detergent and sanitizing agents that will be flushed through valves.

BAG-IN-BOX SYSTEM SANITATION

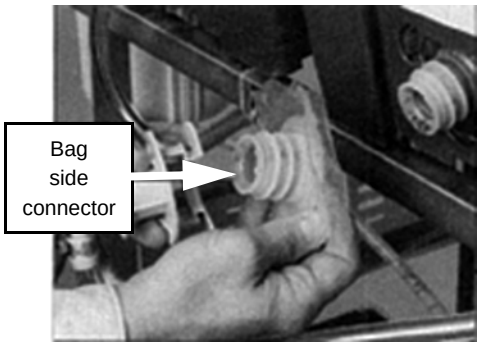
The procedure below is for the sanitation of one syrup circuit at a time. Repeat to sanitize additional circuits.

You will need the following items to clean and sanitize the Bag-in-Box (BIB) beverage system:

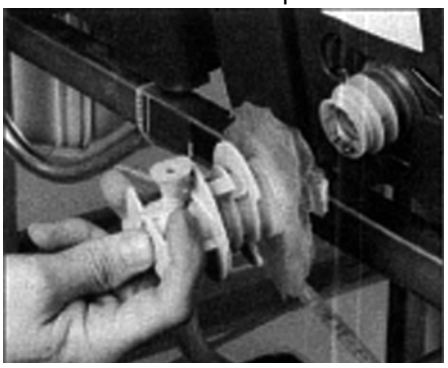
- Three (3) clean buckets
- Plastic brush or soft cloth
- Mild detergent
- Unscented bleach (5% Na CL O) or Commercial sanitizer
- Bag-In-Box bag connector

1. Prepare the following in the buckets:
   - Bucket 1 — warm to hot tap water for rinsing.
   - Bucket 2 — mild detergent and warm to hot water.
   - Bucket 3 — mix a solution of unscented bleach (5% Na CL O) or commercial sanitizer and warm to hot water. Mixture should supply 100 PPM available chlorine (1/4 oz. bleach to 1 gallon water).

2. Disconnect the “syrup-line side” of the BIB connector.



3. Rinse connector with warm tap water.



4. Connect syrup connector to BIB connector and immerse both into Bucket 1. A “bag-side” connector can be created by cutting the connector from an empty disposable syrup bag.

5. Draw rinse water through system until clean water is dispensed. Most beverage valves allow the syrup side to be manually activated by depressing the syrup pallet.
6. Connect Bucket 2 to system.
7. Draw detergent solution through system until solution is dispensed.
8. Repeat steps 2-7 until all syrup circuits contain detergent solution.
9. Allow detergent solution to remain in the system for 5 minutes.
10. Connect Bucket 3 to system.
11. Draw sanitizing solution through system until solution is dispensed.
12. Repeat step 11 until all syrup circuits contain sanitizer solution.
13. Allow sanitizer solution to remain in system for 15 minutes.
14. Remove nozzles and diffusers from beverage valves.
15. Scrub nozzles, diffusers and all removable valve parts (except electrical parts) with a plastic brush or a soft cloth and the detergent solution.
16. Soak nozzles, diffusers and removable valve parts (except electrical parts) in sanitizer for 15 minutes.
17. Replace nozzles, diffusers and valve parts.
18. Connect Bucket 1 to system.
19. Draw rinse water through system until no presence of sanitizer is detected.
20. Attach syrup connectors to BIBs.
21. Draw syrup through system until only syrup is dispensed.
22. Discard first 2 drinks.

FIGAL BEVERAGE SYSTEM

1. Prepare the following in three clean Figal tanks:
   - **Rinse tank** - fill with room temperature tap water.
   - **Detergent tank** - mix approved beverage system cleaner with warm water as directed.
   - **Sanitizing tank** - mix a solution of unscented bleach (5% Na CL O) or commercial sanitizer and warm to hot water. Mixture should supply 100 PPM available chlorine (1/4 oz. bleach to 1 gallon water).
2. Disconnect all product and water lines from product tanks and remove carbonator.
3. Locate the Figal syrup tank for the circuit to be sanitized. Remove both quick disconnects from the Figal syrup tank. Rinse quick disconnects in tap water.
4. Connect rinse tank to the syrup line. Draw clean rinse water through the valve until syrup is flushed from the system.
5. Connect detergent tank to the syrup line and draw detergent through the valve for two minutes. Then, allow remaining detergent to stay in the system for five minutes.
6. Connect rinse tank to the syrup line. Draw clean rinse water through the valve until detergent is flushed from the system.
7. Remove valve nozzle and diffuser as shown in Daily Cleaning instructions. Using a plastic brush or a soft cloth and warm water, scrub the nozzle, diffuser, bottom of the dispensing valve and cup lever, if applicable.
8. Place removable valve parts (EXCEPT solenoids) in sanitizing solution for 15 minutes.
9. Replace valve diffuser and nozzle on the beverage valve.
10. Connect sanitizer tank to the syrup line and draw sanitizer through the valve for two minutes. Allow sanitizer to remain in the system for a minimum of 15 minutes.
11. Reconnect syrup and carbonated water lines.
12. Draw syrup through the lines to rinse the system. Discard drinks until at least two cups of satisfactory tasting beverage are dispensed through the valve.

Shipping, Storage and Relocation

⚠ Caution

Before shipping, storing, or relocating this unit, syrup systems must be sanitized. After sanitizing, all liquids (sanitizing solution and water) must be purged from the unit. A freezing environment causes residual sanitizing solution or water remaining inside the unit to freeze, resulting in damage to internal components.

FRP-250 Graphic Medallion Removal & Installation

The graphic medallions on the FRP-250 are made out of a flexible duratran that can be removed/replaced from the front of the unit without the use of tools (back-lit merchandiser light box does not need to be removed from the unit).

MEDALLION REMOVAL

1. With Palm of hand slide graphic to the left to expose narrow seam on right edge.
2. In the newly exposed gap, peel the medallion out toward you and grasp the right edge of graphic while pulling / flexing it toward you to release the 3 upper and lower tabs.
3. Continue to pull graphic toward you while slightly moving it to the right to release the rest of the graphic from the left side of the merchandiser until the medallion is completely free from the merchandiser.

MEDALLION INSTALLATION

1. Facing the unit, start slightly off center to the right of the merchandiser medallion area by holding the graphic medallion with one hand on each side at about the 9 & 3 o'clock position. Slide / insert the 3 bottom tabs under the bottom edge of the merchandiser.
2. With the bottom tabs in place with push down on the top of the medallion flexing it into a slight "C" shape so the top 3 tabs can be inserted under the top edge of the merchandiser.
3. With the top tabs in place smooth the medallion out of the "C" shape and use the palm of you hand to seat the graphic under the left and right edges.

Section 5
Before Calling for Service

Checklist

If a problem arises during operation of your dispenser, follow the checklist below before calling service. Routine adjustments and maintenance procedures are not covered by the warranty.

Problem	Possible Cause	To Correct
Dispenser will not dispense ice (and NO SOUNDS are heard when machine is activated).	No power.	Check electrical connection.
	Loose wire in electrical system.	Thoroughly check all wire connections.
	Dispenser overloaded with ice.	Remove ice from dispenser until unit will operate.
	Motor not working.	Check thermally protected motor. Replace motor or capacitor if necessary.
Dispenser will not dispense ice (motor runs but no ice movement is heard in bin).	No ice in bin.	Fill dispenser with ice.
	Door not opening.	Check rocking chute mechanism or electric solenoid operation.
	Paddle wheel pin slipped from the paddle wheel.	Replace paddle wheel pin.
Excessive clustering or bridging of ice.	Loaded ice not broken up. (Caution: Super cooled ice is not covered by the Servend warranty.)	Break ice clusters before manually filling the dispenser. (See ice recommendations.)
	Excessive water spilling from the ice machine.	Adjust ice machine to eliminate water spillage.
	Poorly adjusted ice machine.	Adjust ice machine to eliminate large waffle shapes.
	Extremely low usage of the dispenser.	Lower the ice level in the bin.
Ice dispenses continuously.	Misaligned microswitch.	Adjust microswitch.
	Agitation timer set incorrectly.	Test agitation timer.
Thumping noise or irregular sound at a particular area of the dispenser.	Shaved ice clusters in the bin.	Remove clusters, discover why ice is shaving, and then repair.
Dispensing crushed ice or reduced dispensing speed.	Water spillage from ice machine into dispenser bin.	Adjust ice machine.
	Agitation timer. (FRP-250)	Test agitation timer.
	Bridge of ice sheet is too thick.	Adjust ice machine.
	Paddle wheel area broken or cracked.	Replace paddle wheel area.
	Ice clusters in bin.	Break up or remove clusters.
	Door not fully open.	Adjust door.
Door will not close.	Ice jammed in chute.	Adjust bridge in ice machine or, when manually filling, break up clusters.
	Door and/or door lock has come out of place.	Replace door and lock into proper position.
Mounting brackets for rocking chute have spread too far apart.	Stretched during removal for cleaning or maintenance.	Bend parts into shape.

SELECTABLE ICE TROUBLESHOOTING

Problem	Possible Cause	To Correct
DISPENSER DOES NOT DISPENSE CRUSHED ICE. Nothing is heard.	No power.	Check power source and power cord.
	Loose wire in electrical system.	Check wiring.
	Dispense switch faulty	Replace switch
	Crusher Motor Faulty.	Replace Motor/Gear Box.
	Dispenser Safety Switch Open.	Assure Merchandiser is installed correctly with the safety switch in the closed position.
Crusher motor hums but does not turn.	Blades obstructed.	Check for obstructions in ice crusher housing.
	Motor faulty	Replace Motor
	Faulty start relay/capacitor	Check relay/capacitor and replace if bad.
Crusher dispense door does not open.	Door solenoid faulty	Replace Solenoid
	Loose wiring to solenoid	Check wiring
Gear box on motor	Gear box on motor faulty.	Replace Ice Crusher Motor Assembly
	Crusher Axle broken	Replace Crusher Axle
Crusher Motor turns but Gear Motor for Paddle wheel/Agitator Bar does not turn.	Agitator Gear Motor faulty.	Replace Agitator Gear Motor.
	Loose wiring.	Check wiring
	Obstruction in Ice bin stopping motor	Check for obstruction
Nothing on dispenser works.	No power to dispenser	Check power source
	Dispenser Safety Switch opens	Assure Merchandiser is installed correctly with the safety switch in the closed position.
	Loose wiring	Check wiring.
Difficulty inserting Blade/Hub Assembly into Crusher housing	a. Stationary Blades not aligned with locating slots at top and bottom of crusher housing	See ""How to Disassemble for Maintenance"" section in this manual.
	b. Rotating Blades not in vertical position.	
	c. Check for ice in Crusher Housing.	
Crushed Ice dispenses continuously, or by itself.	Ice Dispense Switch Faulty	Adjust bridge in ice machine or, when manually filling, break up clusters.
No flashing lights on keypad, Fluorescent light was on, crusher and whole ice dispenser will not function, transformer breaker blown.	Water shorted out wiring harness on valves only.	Clean up water and reset transformer.

(For units with this feature)

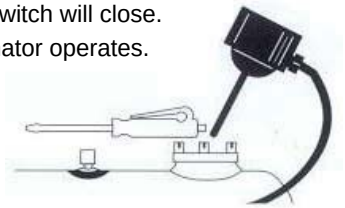
Drink Troubleshooting

Condition	Investigation	Check	Correction
Water only dispensing	No pressure	Regulator(s) out of adjustment	Check/adjust regulator(s).
		Out of CO_2	Install fresh tank.
		Defective regulator(s)	Check/repair/replace regulator(s).
		CO_2 line pinched, kinked or obstructed	Check/repair/replace CO_2 line.
Syrup and CO_2 only dispensing	Carbonator	No power	Check power supply. Plug in carbonator or reset breaker.
		Water supply	Make sure water is turned “on”.
			Replace water filter.
			Check/clean/replace pump strainer.
			Check/clean/repair water check valve.
			Check for frozen water line. **Internal carbonator unit only**.
		Defective carbonator	Check/repair/replace carbonator pump, motor, electrode or liquid level control.
Syrup and plain water only dispensing setting	No pressure	Out o f CO_2	Install fresh tank.
		HP regulator out of adjustment	Adjust HP regulator to the proper setting.
		Defective HP regulator	Check/repair/replace HP regulator.
		CO_2 line pinched, kinked or obstructed	Check/repair/replace CO_2 line.
One valve will not dispense anything	Is there power to the valve?	Broken wire or loose connection	Replace/repair wire or connector.
		Bad microswitch	Replace microswitch.
Beverage dispensed is too sweet	Is the ratio (brix) of the drink correct?	Flow control out of adjustment	Adjust the flow control.
		Insufficient soda flow due to low carbonator pressure	Adjust CO_2 pressure or change the tank.
		Low CO_2 pressure due to leaks	Repair CO_2 leaks.
		Obstruction in the water or soda line	Clean out the lines.
Beverage is not sweet enough	Is the ratio (brix) of the drink correct?	Flow control out of adjustment	Adjust the flow control.
		Soda flow too high	Reset CO_2 pressure or replace regulator if necessary.
		Obstruction in syrup line	Clean out the syrup line.
Drinks are foaming	Are system pressures correct?	Over carbonation	Check CO_2 supply. Reset pressure or replace regulator if necessary.
		Dirty lines/valves	Clean/sanitize entire system.
No water, syrup or gas dispensing	Is there power to the unit?	No power	Plug in unit or reset breaker.
		Power to control box	Replace fuse or control box.
	Is power coming through the key switch?	Key switch “off”	Turn switch “on”.
		Key switch defective	Replace key switch.
	Is there power to the key switch?	No power through the transformer	Reset/replace transformer.

Flavor Shot Troubleshooting

Problem	Possible Cause	Corrective Action
Flavor shot syrup does not dispense when flavor button is depressed.	Syrup supply depleted.	Replace syrup.
	CO_2 supply depleted.	Replace CO_2.
	BIB disconnect loose or packed with dried syrup residue.	Tighten and/ or clean BIB disconnect.
	CO_2 Regulator set to low.	Check CO_2 regulator for proper setting — 30 PSI (1 Bar) or according to line run.
	Kinked CO_2 or syrup line.	Check lines for kinks.
	BIB pump inoperative.	Check pumps, replace if needed.
	Valve solenoid inoperative.	Check wiring to valve, replace solenoid.
	Vinyl tubing off at nozzle or at solenoid.	Reconnect tubing.
	Vinyl tubing plugged with syrup at nozzle or at solenoid.	Clean tubing and nozzle.
	Board not in dispense mode.	Place control board into dispense mode “0”.
No power to control board.	Disconnected or loose wires.	Check connector to transformer and corresponding control board.
	No power to transformer.	Check power supply at transformer — 24 VAC.
Flavor syrup does not shut off.	Check for stuck solenoid	Replace solenoid if it continues to stick.

Pump Troubleshooting

Problem	Possible Cause	Corrective Action
Pump motor does not shut off	Problem with probe or probe harness.	1. Remove probe electronics. 2. Pass magnetic tip of screwdriver by lower end of tube extending from electronics package. 3. Reed switch will close. 4. Carbonator operates. 
Pump motor intermittent	Problem with probe or probe harness	
Pump motor does not pump	Water pressure from water source is not high enough	Verify water pressure leading into pump inlet is 40 psi minimum.

Continuing product improvements may necessitate change of specifications without notice.

Part Number 020003315 1/11

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