22”, 30” BEVARIETY™ ACIB ICE BEVERAGE DISPENSERS

MODELS MCY-22 & MCY-30

Installation and Service Manual

PN 28-0724/03
10/15/2020

LANCER
6655 Lancer Blvd.
San Antonio, Texas 78219

To order parts, call
Customer Service: 800-729-1500
Warranty/Technical Support: 800-729-1550
Email: custserv@lancerworldwide.com
www.lancerworldwide.com

ISO 9001:2000 Quality System Certified

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SAFETY

WARNING!

AUTOMATIC AGITATION

The dispenser is equipped with automatic agitation and will activate unexpectedly. Do not place hands or foreign objects in the ice storage compartment. Unplug the dispenser during servicing, cleaning, and sanitizing.

To avoid personal injury, do not attempt to lift the dispenser without assistance. For heavier dispensers, use a mechanical lift.

WARNING!

GROUNDING

The dispenser must be properly electrically grounded to avoid serious injury or fatal electrical shock. The power cord has a three-prong grounded plug. If a three-hole grounded electrical outlet is not available, use an approved method to ground the unit. Follow all local electrical codes when making connections. Each dispenser must have a separate electrical circuit. Do not use extension cords. Do not connect multiple electrical devices on the same outlet.

ALWAYS disconnect power to the dispenser before attempting any internal maintenance. Note: the keyswitch does not turn off power to the dispenser. It must be physically unplugged.

Only qualified personnel should service the internal components of the dispenser. Avoid any contact with water when plugging in the dispenser.

WARNING!

CARBON DIOXIDE

Carbon Dioxide (CO_2) is heavier than air and displaces oxygen. CO_2 is a colorless, noncombustible gas with a faintly pungent odor. High percentages of CO_2 may displace oxygen in the blood. Prolonged exposure to CO_2 can be harmful. Personnel exposed to high concentrations of CO_2 gas will experience tremors which are followed rapidly by a loss of consciousness and suffocation. Strict attention must be observed in the prevention of CO_2 gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, immediately ventilate the contaminated area before attempting to repair the leak.

The minimum/maximum ambient operating temperature for the dispenser is 40 to 90° F.

The dispenser is for indoor use only.

ICE

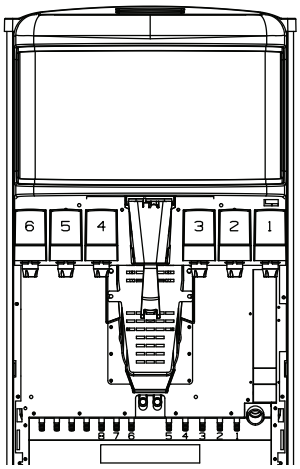
The Bevariety™ ACIB dispenser will operate only with cubed ice.

Overview

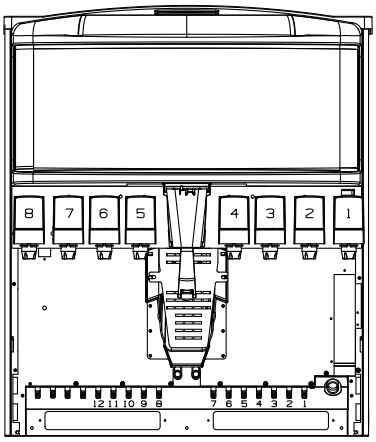
The Bevariety™ ice combo is a multi-brand, flavor shot capable beverage dispenser. It has a carbonator tank integrated into the cold plate so it provides true, cold carbonated, sparkling beverages.

Above Counter Ice Combo:

- •Available in 22”, 30”, and 44” wide models.
- •22” Six Valve
  - o Valves 1 and 6 are carb water only
  - o Valves 2-5 are non-carb water or carb water capable.
- •30” Eight Valve
  - o Valves 1, 2, 7 and 8 are carb water only
  - o Valves 3-6 are non-carb water or carb water capable.
- •44” model is two 22” units joined by a kit with optional MVU.



22”

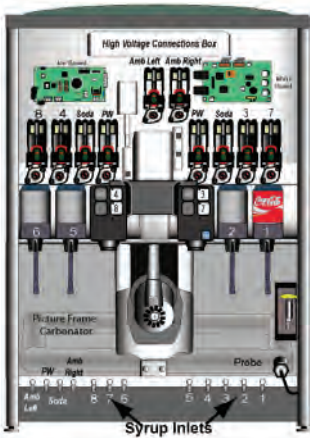


30”

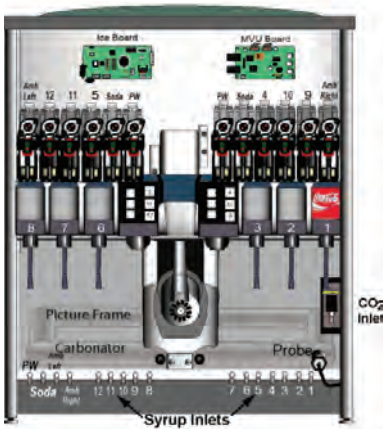
Features an optional multi-flavor valve unit (MVU):

- Capable of serving up to three additional brands on each side of the ice dispenser through the MVU valve.
- Can dispense up to three chilled products (30” only) or two chilled and one ambient product on each MVU pad.
- Capable of dispensing flavor shots.
- Replaces the two center LEVs.
- Provides additional carb or non-carb beverage flexibility via a carb/non-carb convertor located behind the backblock of the four center valve positions.

The 30” ACIB has two more LEV’s in addition to more cooling capacity and a larger ice bin.



22” With MVU



30” With MVU

Installation Overview

Installation Requirements:

The following parts and tooling should be used on all Bevariety™ dispensing systems:

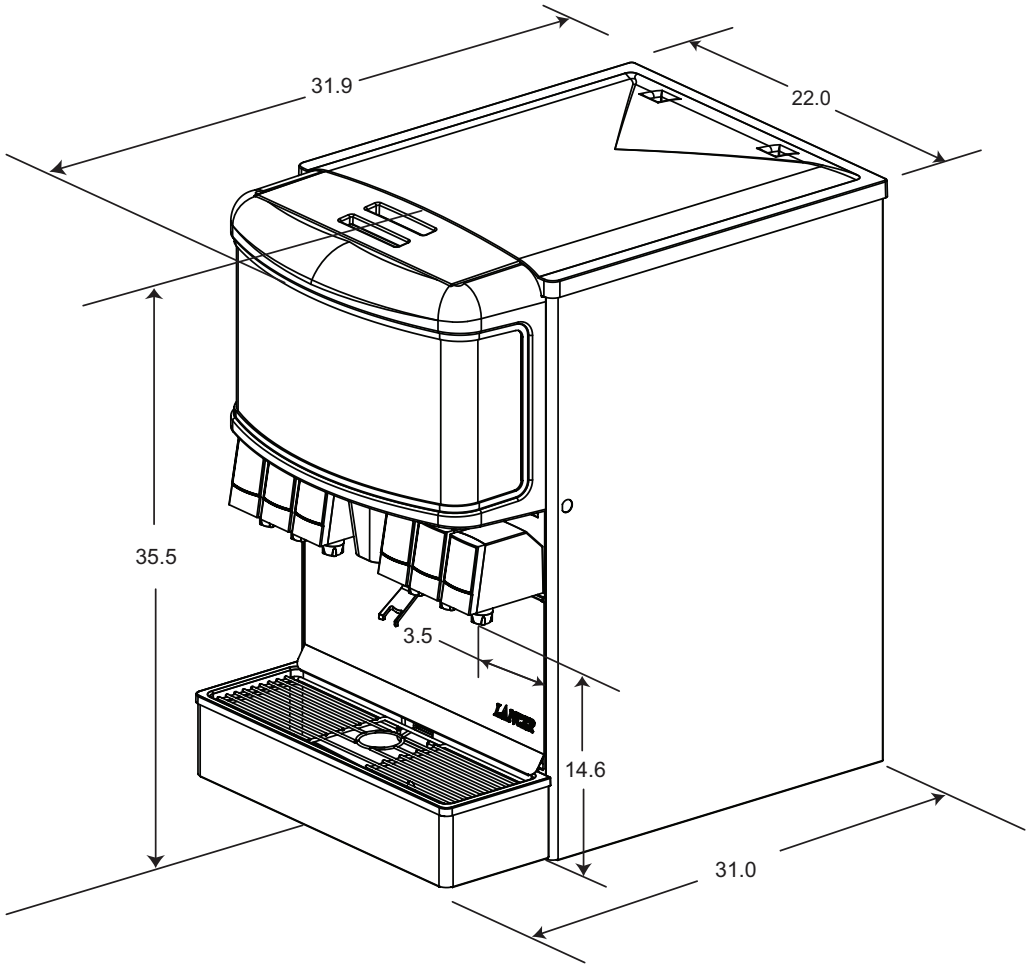
- TCCC-authorized flushable beverage tubing suitable to length and number of flavors
- 1/2” or 3/8” tubing on all water lines
- TCCC-authorized clamps and connectors
- TCCC-authorized tubing cutters and Oetiker pliers
- TCCC-authorized drain tubing
- Ratio cup
- MVU syrup separator
- Sanitizing agent for ice bin
- Brand decals for LEVs and MVU, if applicable
- 50 ml graduated cylinders for flavor shots (MVU option only)
- Pressure gauge to measure CO_2 pressure
- 5/32nds Allen wrench
- Level

Utility Requirements:

The unit requires each of the following utilities:

- 120 VAC, 20 amp dedicated circuits both the pump deck and dispenser
- 1/2” water supply line at the dispenser at 40-65 psig. Check water pressure at source. If pressure is below 40 psig with carbonator running, add a booster.
- Floor drain within 5 ft of unit
- 3/8” CO_2 supply line

22” BEVARIETY™ ACIB SPECIFICATIONS



DIMENSIONS
Width: 22 in (559 mm)
Depth: 31 in (787 mm) w/driptray
Height: 35.5 in (902 mm)

SPACE REQUIRED
Left Side: 1 in (25 mm)
Right side: 1 in (25 mm)
Back: 1 in (25 mm)
Top: 6 in (152 mm)
Optional legs: 4 in (102 mm)

ELECTRICAL
115VAC/60Hz, 3 AMPs

WEIGHT
Without ice: 270 lbs (122 kg)
Shipping: 292 lbs (132 kg)

ICE
Capacity: 150 lbs (68 kg)
Dispensable: 125 lbs (57 kg)

FITTINGS
Soda inlets: 3/8” barb
Syrup inlets: 3/8” barb

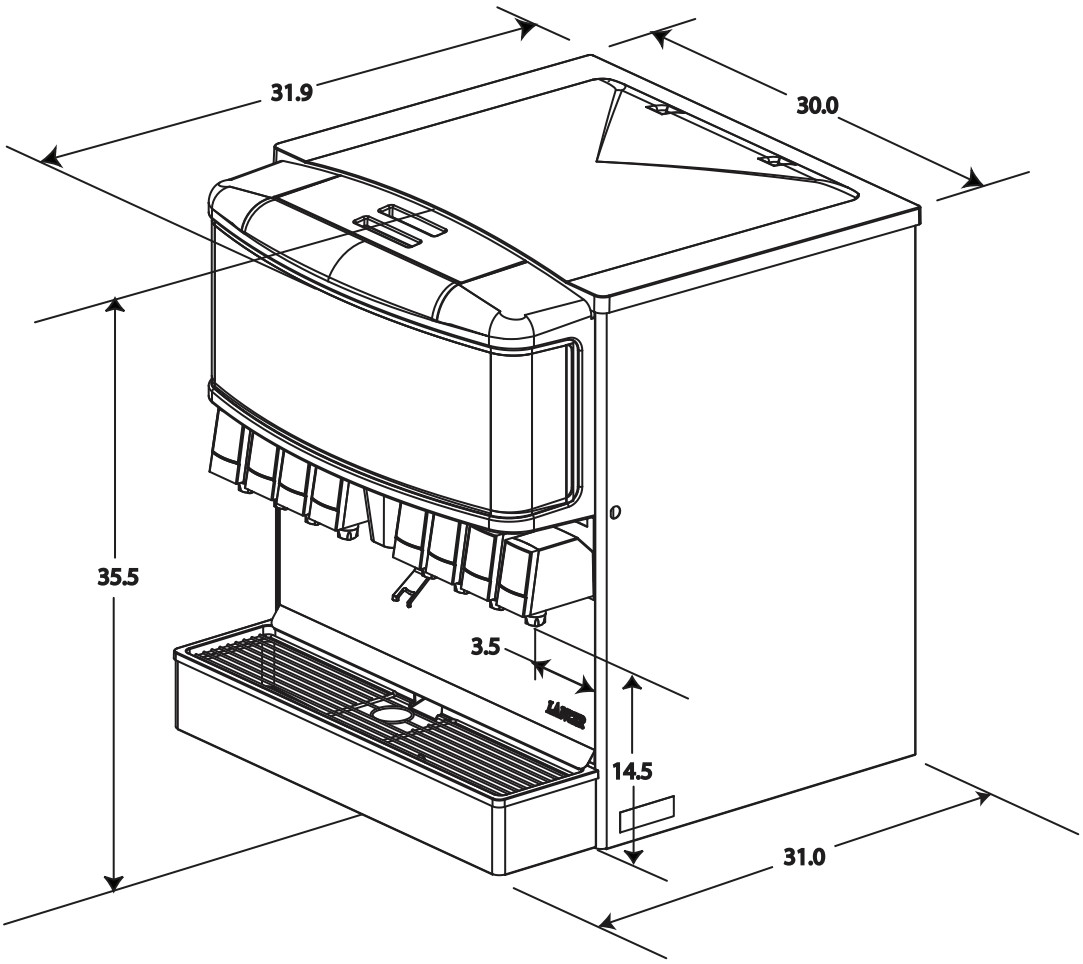
WATER
Filtered water: 50 PSI min (3.52 KG/cm2)

Min flowing pressure:
25 PSIG
(1.76 kg/ cm2, 1.72 BAR)

Max static pressure:
50 PSIG (3.52 kg/ cm2, 3.45 BAR)

CARBON DIOXIDE (CO_2)
Min pressure: 70 PSIG (4.92 kg/cm^2, 4.83 BAR)
Max pressure: 80 PSIG (5.62 kg/cm^2, 5.52 BAR)

30” BEVARIETY™ ACIB SPECIFICATIONS



DIMENSIONS
Width: 30 in (762 mm)
Depth: 31 in (787 mm) w/driptray
Height: 35.5 in (902 mm)

SPACE REQUIRED
Left Side: 1 in (25 mm)
Right side: 1 in (25 mm)
Back: 1 in (25 mm)
Top: 6 in (152 mm)
Optional legs: 4 in (102 mm)

ELECTRICAL
115VAC/60Hz, 3 AMPs

WEIGHT
Without ice: 327 lbs (148 kg)
Shipping: 356 lbs (161 kg)

ICE
Capacity: 250 lbs (113.6 kg)
Dispensable: 175 lbs (79.5 kg)

FITTINGS
Soda inlets: 3/8” barb
Syrup inlets: 3/8” barb

WATER
Filtered water: 50 PSI min (3.52 KG/cm2)

Min flowing pressure:
25 PSIG
(1.76 kg/ cm2, 1.72 BAR)

Max static pressure:
50 PSIG (3.52 kg/cm^2, 3.45 BAR)

CARBON DIOXIDE (CO_2)
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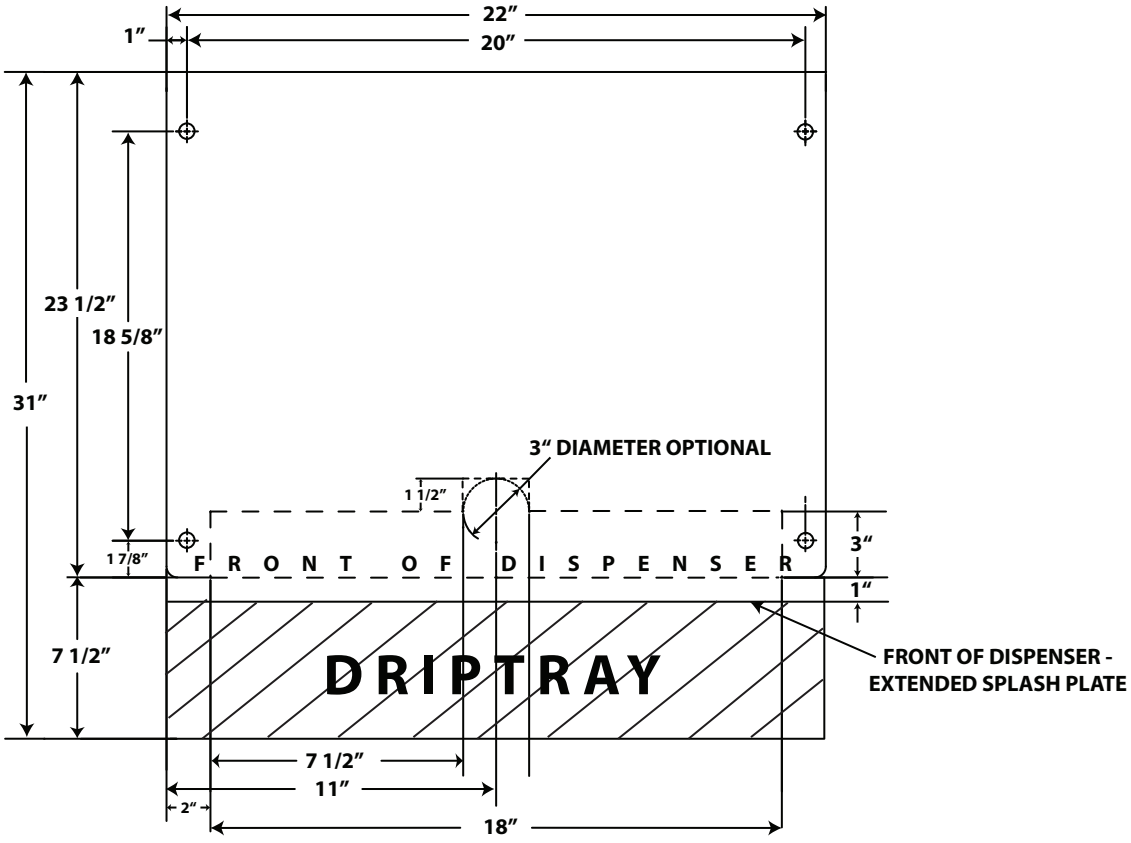
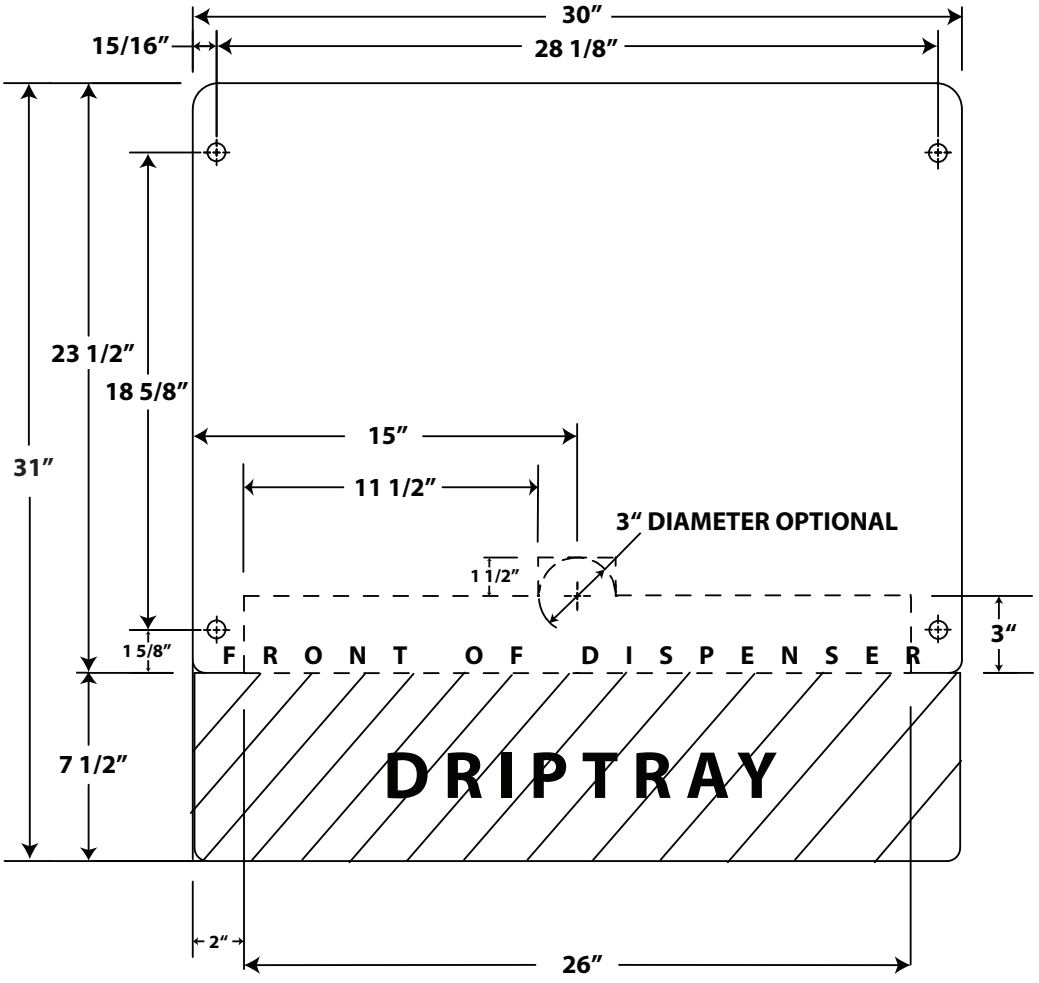
22” BEVARIETY™ ACIB COUNTER CUTOUT



CUT OUT DASHED AREA

OPTIONAL HOLES FOR FASTENING DISPENSER TO COUNTER WITH SCREWS

30” BEVARIETY™ ACIB COUNTER CUTOUT



– – – CUT OUT DASHED AREA

⊕ OPTIONAL HOLES FOR FASTENING DISPENSER TO COUNTER WITH SCREWS

BEVARIETY™ ACIB DISPENSER NUMBERING CONVENTION

85-204AA-B-C-XYZ	22” Dispenser
85-218AA-B-C-XYZ	30” Dispenser
85-208AA-B-C-XYZ	44” Dispenser

AA = Number of flavors
B = Merchandiser graphics designation
C = MVU option:
  0 - no MVU
  2 - MVU
X = Valve flow rate
Y = Valve Type
Z = Splash plate type

KIT PART NUMBERS:

82-4004	4” Heavy Duty Adjustable Let Kit (4 Legs)
82-4054	22” Drip Tray Kit
82-4055	44” Drip Tray Kit
82-4046	30” Drip Tray Kit
82-4007	44” Joining Kit, Hardee’s
82-3962	44” Joining Kit, Carl’s Jr

1. INSTALLATION

1.1 SELECTING A LOCATION

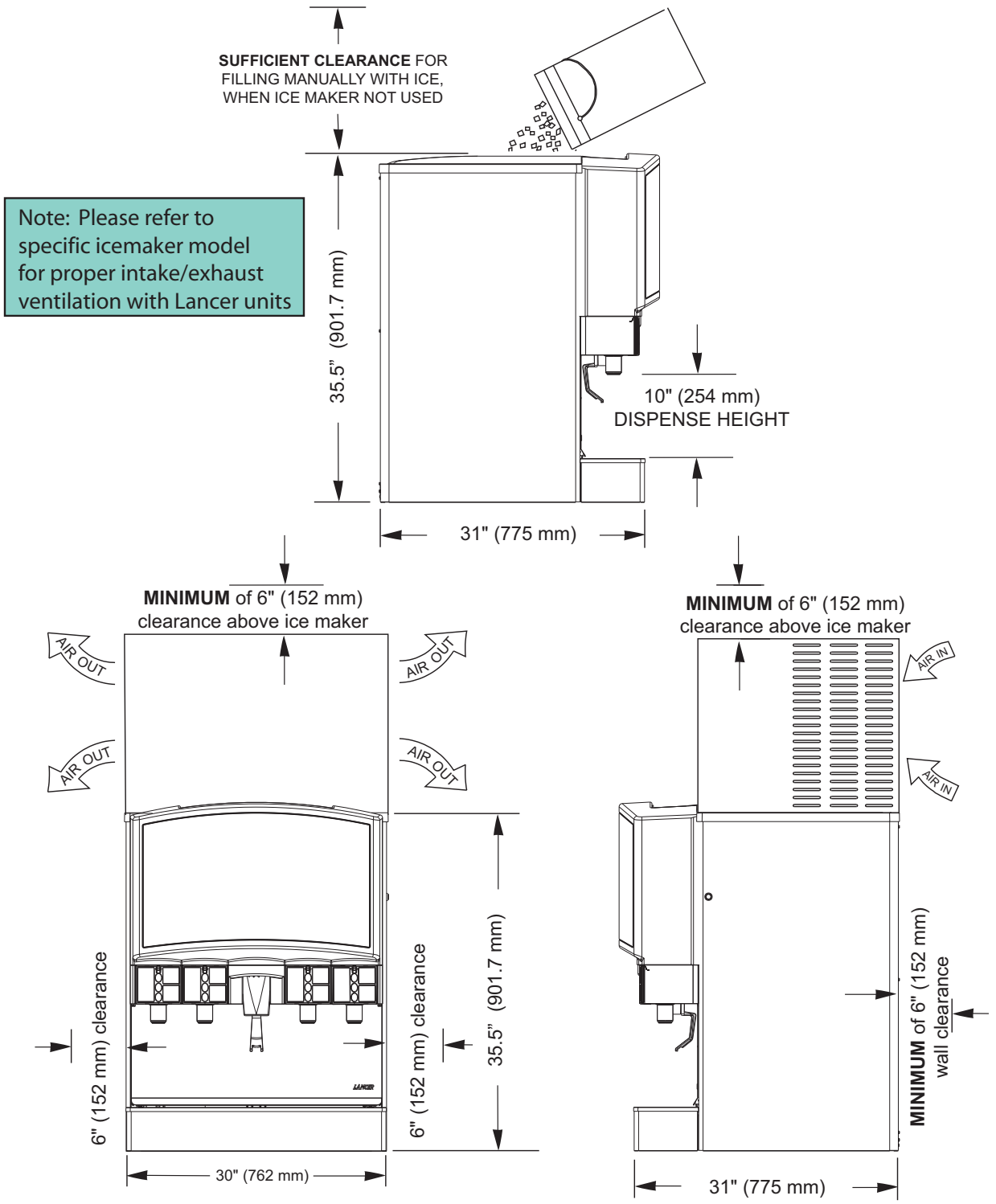
Make sure the location meets these requirements:

- Access to a grounded 110 Volt, 20 AMP electrical outlet.
- Convenient to an open drain with adequate room to route soda, water, and syrup lines.
- Sufficient clearance above the dispenser for servicing.
- Counter can support the weight of the dispenser, the weight of the ice, and if necessary, an icemaker. The total weight may exceed 800 pounds (363 kg).
- Sufficient clearance on the sides, top and back for ventilation and air circulation. Refer to your icemaker for specifications.
- If an icemaker is not top-mounted on the dispenser, make sure to provide sufficient clearance (a minimum of 16 inches (40.6 cm)) to allow filling the dispenser with ice from a five gallon (19 liter) container. See figure next page.
- Avoid direct sunlight and other heat sources.

1.2 THINGS TO CONSIDER

Unit may be installed directly on the countertop or on legs. If installed directly on the counter, the unit must be sealed to the countertop. If an icemaker is to be mounted on top of dispenser, do not install dispenser on legs. **NOTE:** Water pipe connections and fixtures directly connected to a potable water supply must be sized, installed, and maintained according to Federal, State, and Local laws.

- The water supply must be protected by means of an air gap, a backflow prevention device (located prior to the CO2 injection system) or another approved method to comply with NSF standards. A backflow prevention device must comply with ASSE and local standards. It is the responsibility of the installer to ensure compliance.
- Refer to specific icemaker model for proper air intake/exhaust ventilation with Lancer units.
- Install the icemaker per manufacturer specifications. Points of consideration include drainage, ventilation, and drop zones.
- An adapter plate is required when installing an icemaker. Contact your Sales Representative or Lancer Customer Service for more information.
- Ensure the icemaker is installed properly to allow for removal of the merchandiser.
- Ensure manual fill is accessible.
- Clean and maintain icemaker per manufacturer’s instructions.
- When installing an icemaker on an IBD unit, a bin thermostat or other means of controlling the ice level must be installed. Failure to do so could result in damage to the dispensing mechanism and void the warranty.
- During the automatic agitation cycle and/or while dispensing ice, there must be adequate room between the top of the ice level and the bottom of the icemaker so the ice can move without obstruction.
- Contact your icemaker supplier for information on a proper bin thermostat.
- Use of a water filtration system is recommended.
- Water filtration system must be maintained and inspected periodically.
- Location must ensure sufficient clearance on sides, top and back of unit for ventilation and air circulation of the icemaker. Additionally, if an icemaker is not top-mounted on the unit, sufficient clearance should be provided (a minimum of 16 inches (40.6 cm) is recommended) to allow filling the unit with ice from a five gallon (19 liter) container.

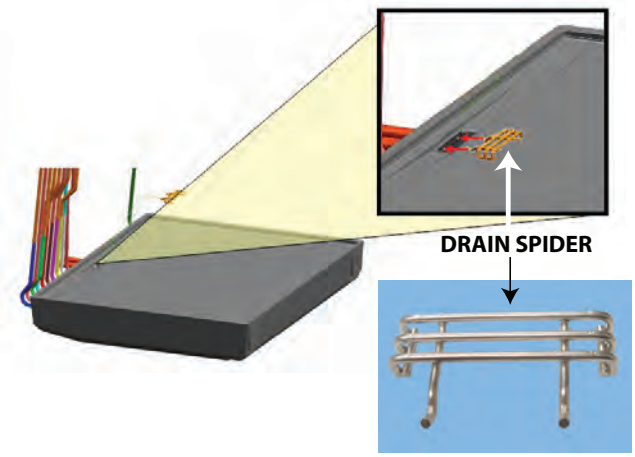

SUFFICIENT CLEARANCE FOR FILLING MANUALLY WITH ICE, WHEN ICE MAKER NOT USED
Note: Please refer to specific icemaker model for proper intake/exhaust ventilation with Lancer units
35.5" (901.7 mm)
10" (254 mm) DISPENSE HEIGHT
31" (775 mm)
MINIMUM of 6" (152 mm) clearance above ice maker
AIR OUT
AIR OUT
AIR OUT
AIR OUT
6" (152 mm) clearance
6" (152 mm) clearance
35.5" (901.7 mm)
30" (762 mm)
MINIMUM of 6" (152 mm) clearance above ice maker
AIR IN
AIR IN
MINIMUM of 6" (152 mm) wall clearance
31" (775 mm)

1.3 UNPACKING THE DISPENSER

1. Set shipping carton upright on the floor.
2. Cut band and remove.
3. Open top of carton and remove interior packing.
4. Lift carton up and off of the dispenser.
5. Remove wood shipping base from the bottom of the dispenser. (Support dispenser while removing shipping base.)

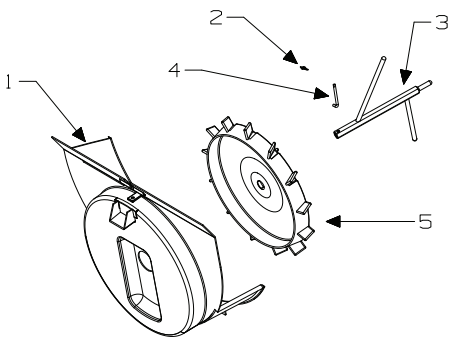
1.4 DRAIN SPIDER

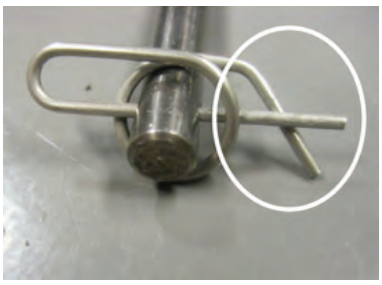
The Drain Spider is located directly in the center of the bin under the ice shroud. The coldplate has a cavity designed to hold the drain spider. During shipment or installation, the drain spider may become dislodged from its original position.



Prior to installing the dispenser, ensure the drain spider is in the correct position. This will prevent drain clog issues. Inspect the lower bin area and reach under the shroud to ensure the drain spider is secure in the coldplate cutout. If the spider is not in place, proceed with the following steps:

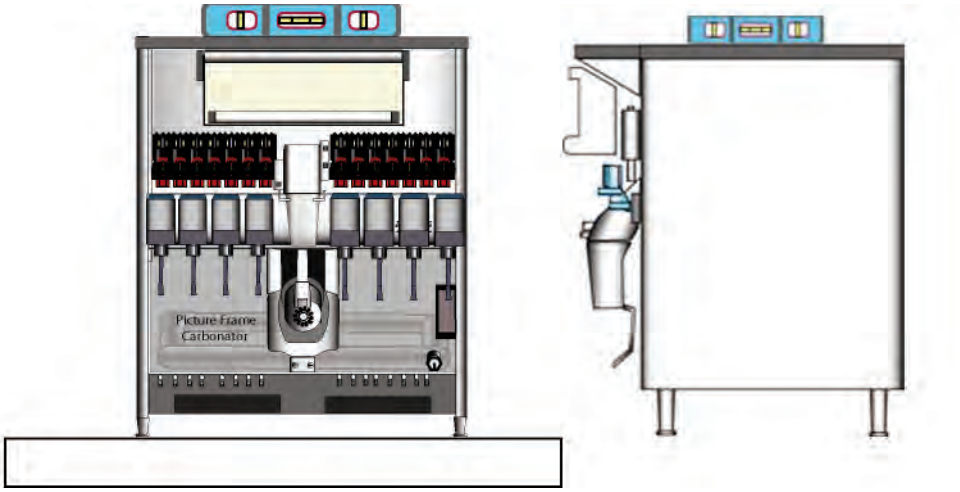
1. Remove clip (2) and pin (4) from agitator bar (3).
2. Remove agitator bar from paddle wheel (5).
3. Remove paddle wheel.
4. Remove ice shroud (1) by lifting back then out of the bin.
5. Locate the drain spider and reinstall in the coldplate cavity where the drain line exits (see figure above).
6. Reinstall all components. Ensure agitator clip is locked:





1.5 LEVELING THE DISPENSER

In order to facilitate proper dispenser drainage and carbonation, ensure that the dispenser is level, front to back and side to side. Place a level on the top of the rear edge of the dispenser. The bubble must settle between the level lines. Repeat this procedure for the remaining three sides. Level unit if necessary.



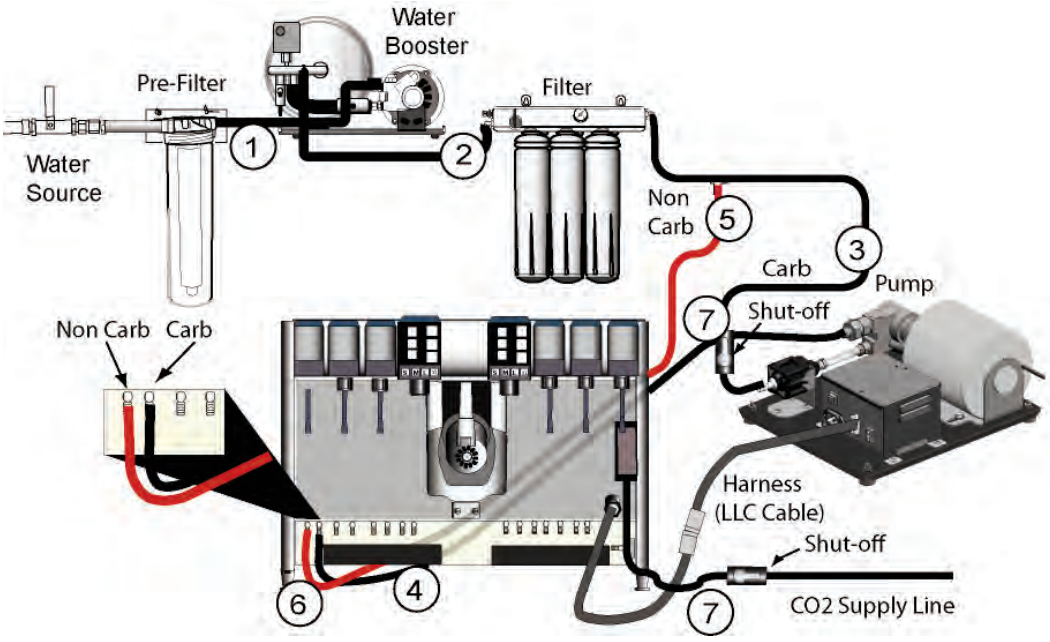
1.6 INSTALLING THE DISPENSER

1. Remove cup rest, drip tray (if used), splash plate, and top cover.
2. Remove cover plate at rear of unit if not a through-the-counter installation.
3. Connect soda and water supply lines to 3/8“ barb fittings at the front of the unit. **NOTE:** If the unit is not installed on legs, **all connections to the inlets on the cold plate will need to have 3/8” 90° splices** as the beverage tubing will kink if you try to run the tubing directly into the fittings on the cold plate.

1.7 CONNECTING WATER

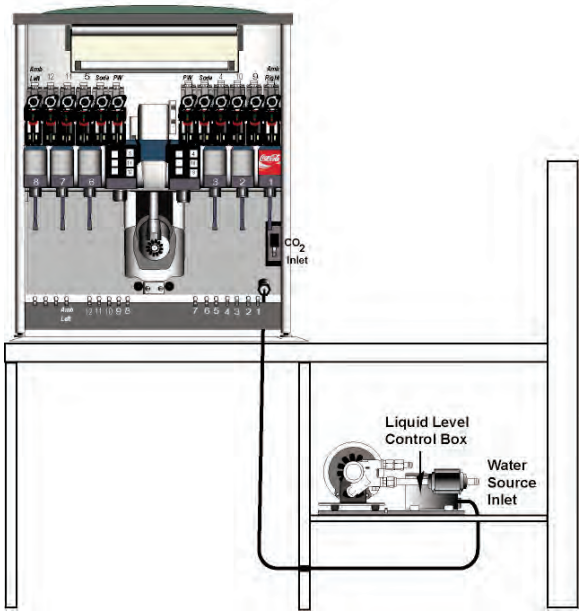
Connect water as follows using 1/2" black line:

1. From source to booster (if needed).
2. From booster to filter.
3. From filter to water regulator on pump platform.
4. From pump outlet to soda water inlet on dispenser. NOTE: The line from the pump to the dispenser can be 3/8”.
5. Splice “T” into line within 1 to 2 feet of water source (after booster and filters) in back room if possible.
6. Connect plain water line to dispenser. NOTE: Run 1/2" line within 1 or 2 feet of dispenser. Splice down to 3/8” to connect to dispenser.
7. Install shut-offs on water line prior to carbonator pump and CO2 line prior to dispenser. **NOTE:** All water lines should be black.



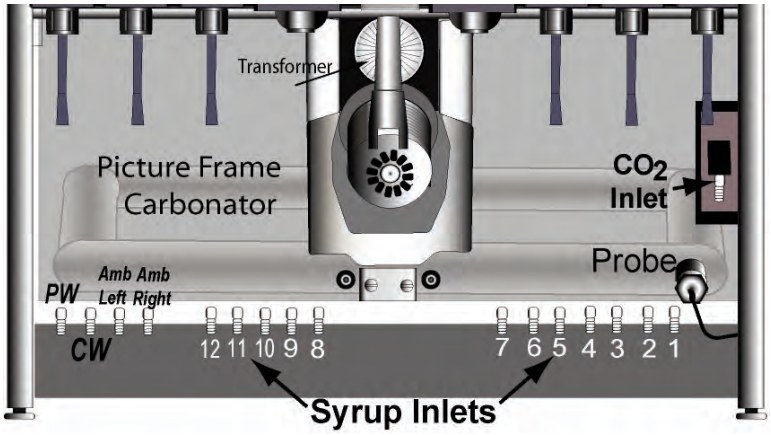
1.8 INSTALLING THE CARBONATOR PUMP

1. Check water pressure and volume. Water pressure should be at least 40 lbs with carbonator running.
2. Install carbonator pump within eight feet of cold plate and within six feet of an electrical plug. It should be at installed at least six inches off the floor (recommend installing on a shelf).
3. Connect liquid level control to probe using harness provided. Ensure that quick connects are fastened tightly together.
   NOTE: Failure to connect pump platform to probe may cause the pump motor to run continuously causing the motor to overheat. If this happens, unplug unit, wait five minutes, and make all connections.



1.9 CONNECTING CO_2 LINES

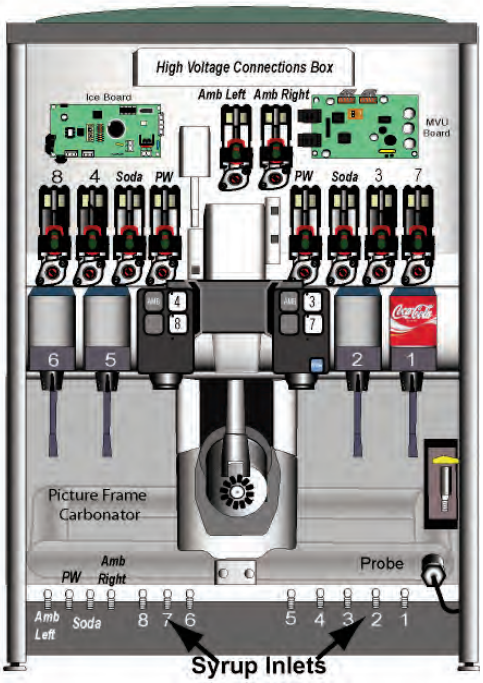
1. Place the CO_2 cylinder with the CO_2 regulator in a serviceable location. Locate the 3/8” barb CO_2 Inlet Fitting at the front of the unit:



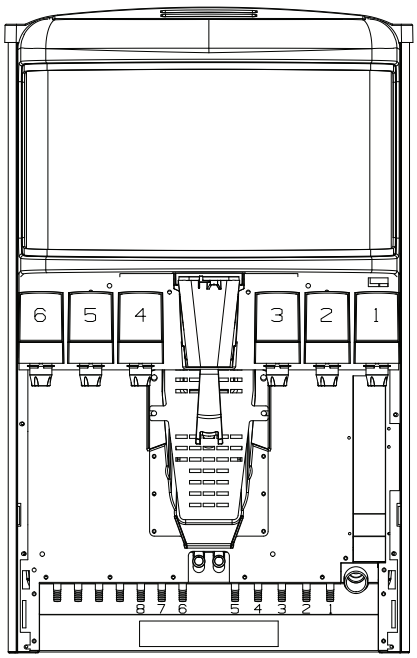
2. Route the CO_2 supply line (75 PSI) to the 3/8” barb fitting at the front of the unit and connect.
3. Install shutoff valve in CO_2 line prior to CO_2 inlet fitting.

1.10 CONNECTING SYRUP LINES

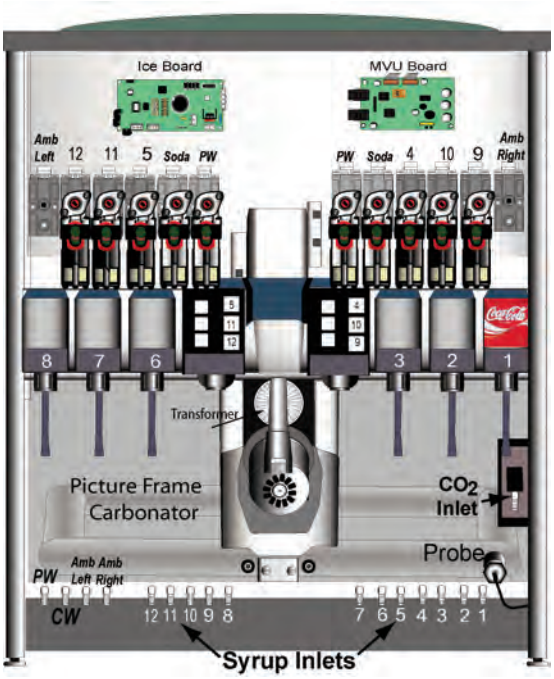
1. Using the illustrations as guides, connect syrup lines to appropriate inlets as illustrated beginning with inlet number one on the right side of the dispenser.
   NOTE 1: Refer to project plan for brand line-up.
   NOTE 2: 90° fittings should be used on all installations where dispenser sits directly on counter.



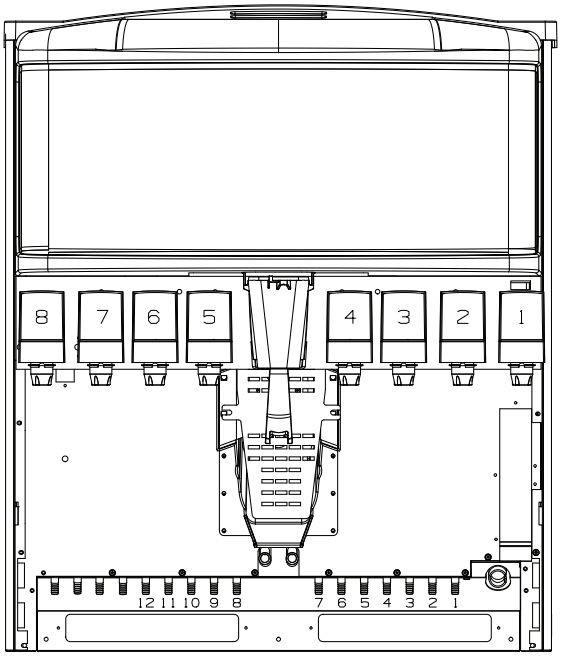
22” With MVU



22” Without MVU



30” With MVU



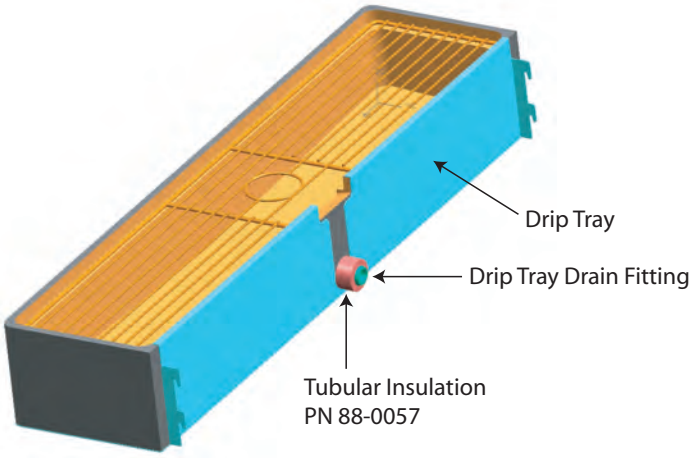
30” Without MVU

2. Connect remaining syrup lines to the left side of the dispenser. On the 30” unit, syrups 9-12 and the ambient syrups are only used if an MVU is present. Syrups 7-8 and the ambient syrups on the 22” unit are only used if an MVU is present.

1.11 CONTINUING THE INSTALLATION

Confirm that all configurable valves are set to the correct carb/non-carb option. Refer to section 4.18 for the procedure. The configurable valves are valves 2-5 on the 22” without an MVU and valves 3-6 on the 30” without an MVU.

1. Install tubular insulation onto the drip tray drain fitting. Insulation should sit flush against the back of the drip tray. Insulation has a 5/8” ID with a 3/8” wall and is 3/4” thick:

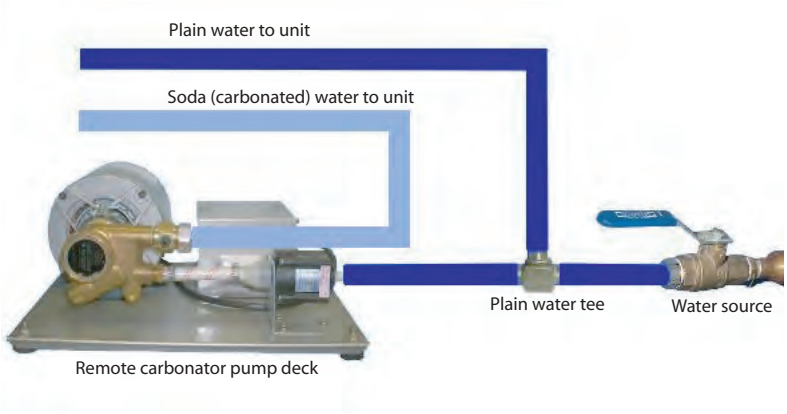


2. Extend hose to open drain.
3. Install drip tray onto base unit.

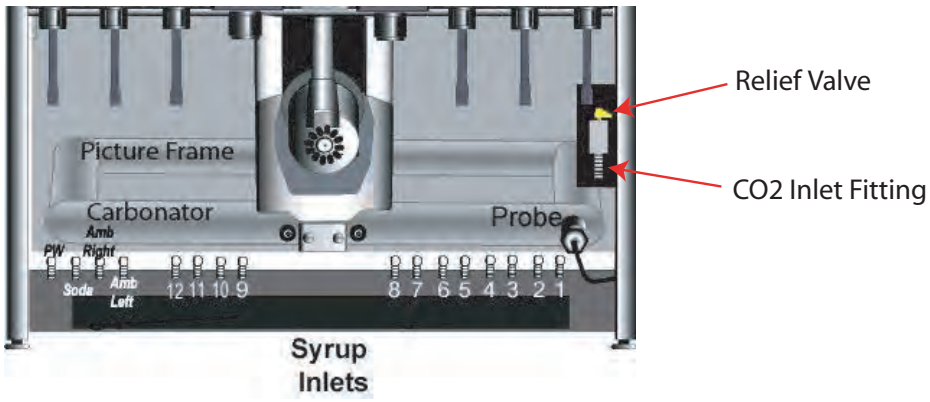
4. Drain line must be insulated with a closed cell insulation. Insulation must cover the entire length of the drain hose, including fittings. The drain should be installed in such a manner that water does not collect in sags or other low points, as condensation will form.
5. Install cup rest.
6. Connect power cord to grounded electrical outlet.
7. Test motor operation by pushing ice chute.
8. Clean and sanitize dispenser (see Section 2).

1.11 STARTUP PROCEDURES

1. Turn on water to carbonator pump:



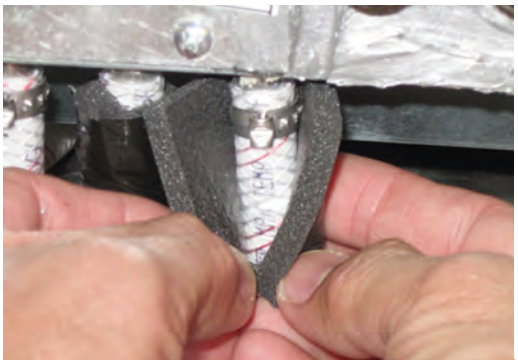
2. Open the relief valve on the carbonator to purge air from the system. Keep open until water comes out of relief valve.



3. Close relief valve.
4. Activate all valves until a flow of plain water is established from each valve.
5. Turn on CO2 at source and ensure the high pressure regulator is set at 75 PSIG.
6. Empty the carbonator tank by activating a valve until no water comes out.
7. Plug in the carbonator pump motor. The pump will cycle for 5.5 seconds, shut down, and start again. It will run for additional 5.5 second intervals until the water level reaches the probe.
8. Activate the carbonated water valves so that the carbonator pump cycles several times and a healthy flow of carbonated water is established.

1.12 CONDENSATION INSULATION INSTALLATION

1. Remove cup rest and drip tray.
2. Wrap the Inlet Tube Insulation Tape around the syrup inlet tubing. Start by placing the insulation behind the syrup inlet and wrap around to the front. Secure the insulation by using approximately 2” of duct tape on the overlap joint as show. Repeat this step for each syrup inlet (except the ambient tube inlets).



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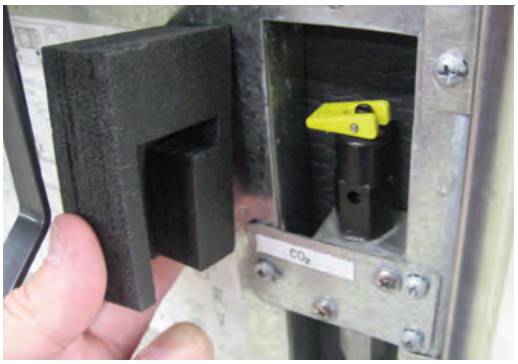
3. Position the Upper CO_2 Recess Cover over the relief valve and press into place as show. The foam should be flush with the sheet metal mounting plate.



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4. Place the Probe Nut Insulation on the probe cord. Slide the Probe Nut Insulation into the opening of the plastic nut. The Probe Nut Insulation should be flush with the front of the plastic nut.

5. Slide the probe cord through the Carbonator Probe Insulation slit. Press the Carbonator Probe Insulation into the front of the plastic nut until it is flat against the sheet metal surface.

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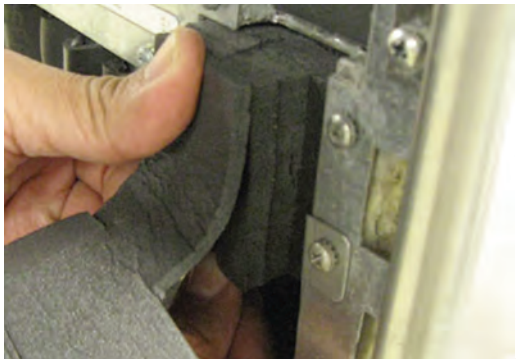
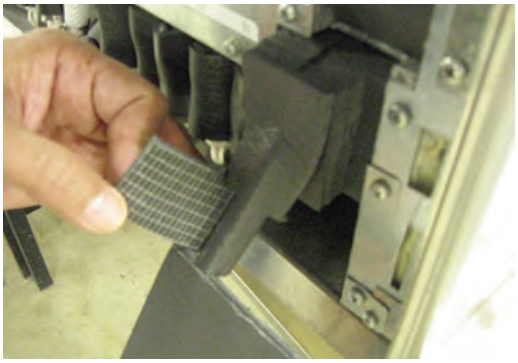
6. Remove the protective backing from the Probe Cord Wrap. Place on front of Carbonator Probe Insulation while bending the probe cord down. Wrap the middle section of Probe Cord Wrap around the carbonator probe cord.





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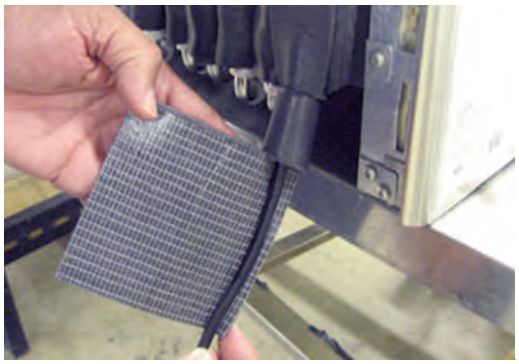
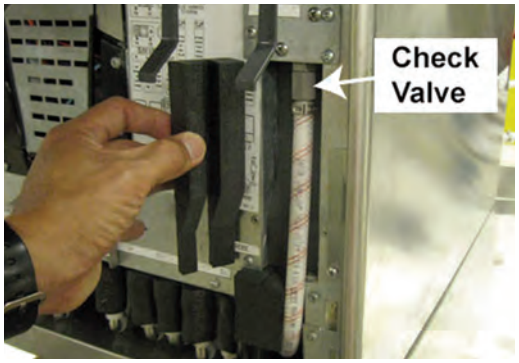
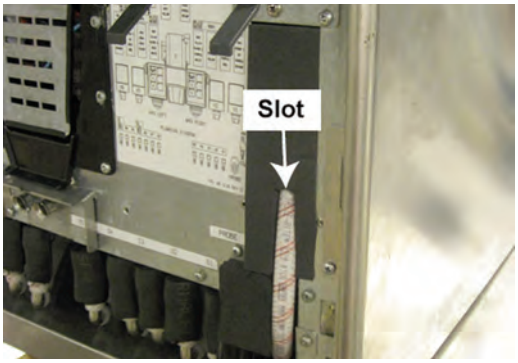
7. Wrap the bottom section around the Carbonator Probe Cord. The second picture is a view of the complete Carbonator Probe Cord Insulation.



8. Position the Lower CO_2 Recess Foam Insulation over the check valve with the slot on the bottom side. Press into place as shown. The foam should be flush with the sheet metal mounting plate.





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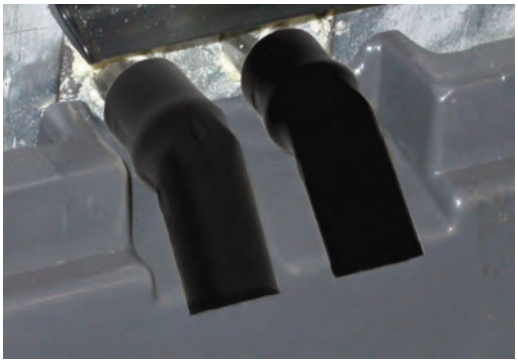
9. Clean area around drain tubes. Slightly pinch elbow fitting to form oval.

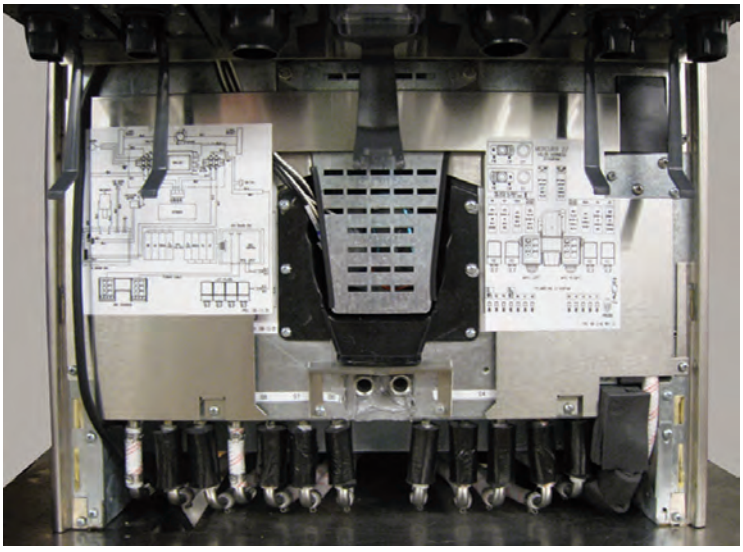
---

10. Slide elbow fitting over flared end of drain tube. Push elbow fitting back over tube until flare reaches angle point.

11. Rotate elbow fitting so that exhaust points downward. Install second elbow fitting onto open drain tube. Reinstall splash plate and cup rest upon completion.



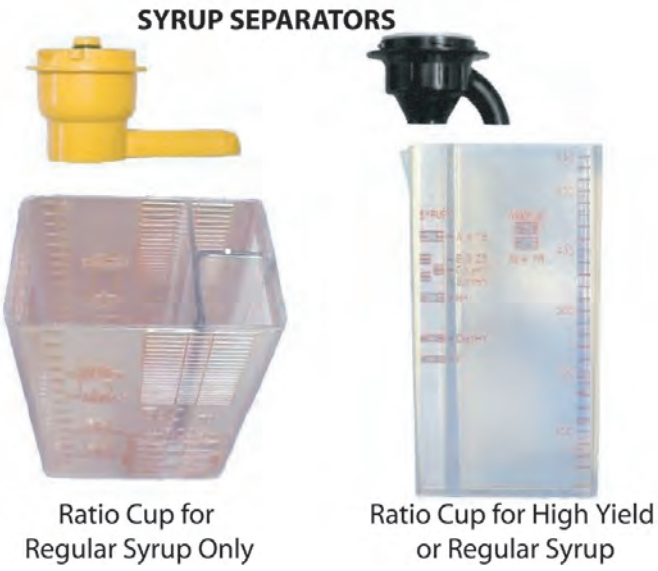
Completed Condensation Insulation Installation:



12. Reinstall the splash plate, drip tray and cup rest.

1.13 FINISHING THE DISPENSER INSTALLATION

1. Connect BIB connectors to BIBs.
2. Set the low pressure regulator to 65 PSIG.
3. Activate all valves to purge air from the syrup lines.
4. Fill unit approximately half full with ice. Push chute and check for ice delivery.
5. Finish filling unit with ice.
6. Install top cover.
7. Set ratio for beverage dispensing valves according to manufacturer's instructions.



2. CLEANING AND SANITIZING

2.1 GENERAL INFORMATION

Lancer equipment (new or reconditioned) is shipped from the factory cleaned and sanitized in accordance with NSF guidelines. This equipment must be cleaned and sanitized after installation is complete, and the operator of the equipment must provide continuous maintenance as required by this manual and/or state and local health department guidelines to ensure proper operation and sanitation requirements are maintained.

NOTE: The cleaning and sanitizing procedures provided herein pertain to the Lancer equipment identified by this manual. If other equipment is being cleaned, follow the guidelines established for that equipment.

• Cleaning and sanitizing should be performed by trained personnel only. Use sanitary gloves during cleaning and sanitizing operations. Observe applicable safety precautions. Follow instruction warnings.
• Do not disconnect water lines when cleaning and sanitizing syrup lines to avoid contamination.
• Do NOT use strong bleaches or detergents. They tend to discolor and/or corrode various materials.
• Do NOT use metal scrapers, sharp objects, steel wool, scouring pads, abrasives, or solvents on the dispenser.
• Do NOT use hot water above 140°F (60°C). This may damage certain materials.

2.2 REQUIRED CLEANING SUPPLIES

1. CLEANING SOLUTION: Mix a mild, non-abrasive detergent with clean, potable water at a temperature of 90 to 110 degrees F. The mixture ratio is one ounce of cleaner to two gallons of water. Prepare a minimum of five gallons of cleaning solution. Do not use abrasive cleaners or solvents because they can cause

permanent damage to the unit. Rinsing must be thorough, using clean, potable water at a temperature of 90 to 110° F. **Note:** Extended lengths of product lines may require that an additional volume of cleaning solution be prepared.

2. Sanitizing solutions should be prepared in accordance with the manufacturer's written recommendations and safety guidelines. The solution must provide 200 parts per million (PPM) available chlorine. A minimum of five gallons of sanitizing solution should be prepared. Any sanitizing solution may be used as long as it is prepared in accordance with the manufacturer's written recommendations and safety guidelines, and provides 200 parts per million (PPM) available chlorine. Sanitizing solution is to be purged from line and equipment by flushing with product only until there is no after taste. Do not rinse with water. **Note:** Please note that a fresh water rinse cannot follow sanitization of equipment. Purge only with the end use product until there is no after taste in the product. This is an NSF requirement. Extended lengths of product lines may require that an additional volume of sanitizing solution be prepared.

3. Other Cleaning Supplies:

- Clean cloth towels
- Bucket
- Small brush (PN 22-0017) - included with installation kit
- Extra nozzle
- Sanitary gloves

2.3 DAILY CLEANING

Using cleaning solution, clean top cover and all exterior stainless steel surfaces. Clean exterior of dispensing valves and ice chute. Remove cup rest. Clean drip tray and cup rest, and replace cup rest. Wipe clean all splash areas using a damp cloth soaked in cleaning solution.

1. Carefully remove the nozzle housings by turning counterclockwise and pulling down from the nozzle body.
2. Wash the nozzle housings in warm soapy water and rinse with clean warm water.
3. Wet a clean cloth in warm soapy water.
4. While the nozzle housing is removed, wipe down the perimeter and end of the nozzle body.
5. With a clean cloth, remove any soapy residue on the nozzle body.
6. Make certain that the nozzle housing rubber seal is not torn or otherwise damaged. If necessary, replace with Lancer PN 05-2699.
7. Wet the inner surface of the nozzle housing with water and reinstall the nozzle housing by sliding it over the nozzle body and turning clockwise to lock in position.

2.4 ICE CHUTE CLEANING

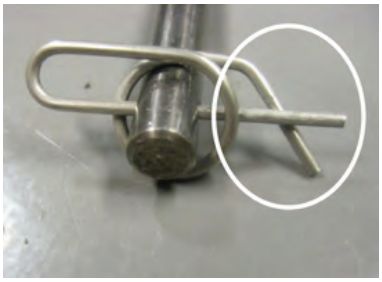
It is recommended to perform this procedure monthly, or more often if desired. Use the cleaning solution described above. An alternate solution of one part water to one part vinegar may be used to remove water spots and calcium deposits.

1. Turn off power to the dispenser.
2. Remove merchandiser.
3. Unhook the spring from the upper ice chute by pulling up and out.
4. Remove the lower chute by carefully spreading apart the arms of the lower chute.

5. Mix the cleaning solution. Put a portion of the solution into a spray bottle. Soak the lower chute in the remaining solution.
6. Spray the upper chute with the cleaning solution.
7. With a soft sponge, clean the inside of the upper and lower chutes.
8. Rinse the lower chute thoroughly.
9. Dry the lower chute thoroughly.
10. Empty the cleaning solution from the spray bottle, then refill with plain water. Rinse the upper chute thoroughly.
11. Dry the upper chute.
12. Reinstall the lower ice chute onto the upper chute, then reinstall the spring.
13. Reinstall merchandiser.
14. Reconnect power to the dispenser.

2.5 ICE BIN CLEANING - PERFORM AT START UP AND MONTHLY

1. Disconnect dispenser from power source.
2. Remove top cover.
3. Remove agitator pin from agitator shaft (see photo below). Slide agitator shaft rearward out of motor shaft and pull out of rear bearing to remove.
4. Remove dispensing wheel from motor shaft by sliding rearward.
5. Remove dispensing wheel shroud.
6. Remove splash plate assembly by lifting it up and out from the dispenser face.
7. Using cleaning solution described in Section 2.2 and a clean cloth or soft brush, clean all removable parts, sides of ice bin, ice chute, and surface of aluminum casting.
8. Repeat Step 7 for all exterior surfaces of the dispenser.
9. Using hot water, thoroughly rinse away the cleaning solution.
10. Wearing sanitary gloves, soak a clean cloth towel in sanitizing solution described in Section 2.2, and wash all surfaces of removable parts, sides of ice bin, ice chute, and surface of aluminum casting.
11. Using hot water, thoroughly rinse away the cleaning solution.
12. Repeat Step 10 for all metal and plastic surfaces (but not labels) of the dispenser exterior.
13. Wearing sanitary gloves, reassemble all removable parts. Ensure agitator clip is locked:



14. Fill unit with ice and replace top cover.
15. Reconnect dispenser to power source.

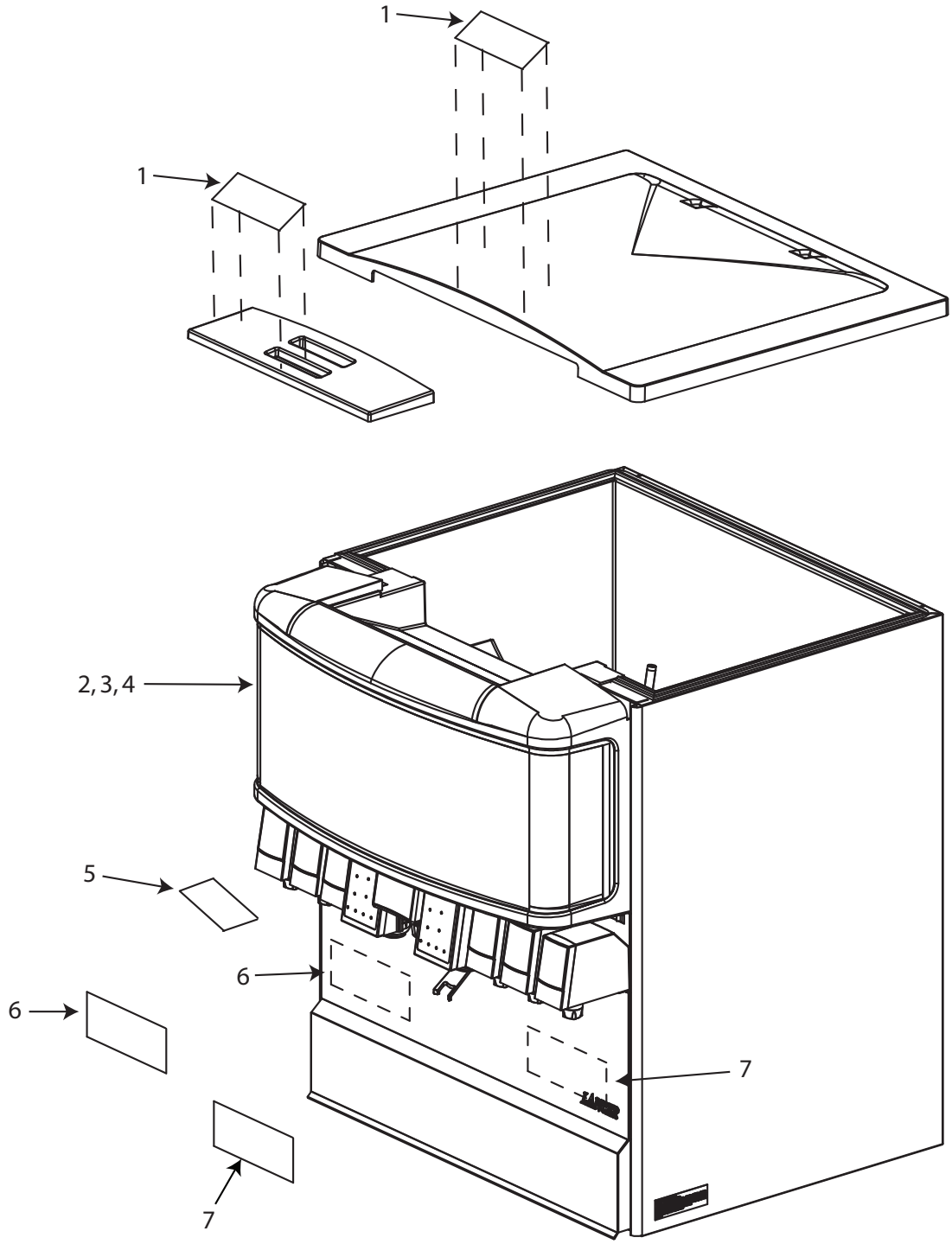
2.6 CLEANING AND SANITIZING BEVERAGE COMPONENTS - BAG-IN-BOX SYSTEMS – PERFORM EVERY SIX MONTHS

NOTE: Extended lengths of product lines may require more time for flushing and rinsing lines than stated below.

1. Disconnect syrup quick disconnect coupling from syrup packages and connect coupling to a bag valve removed from an empty Bag-in-Box (BIB) package.
2. Place syrup inlet line in a clean container filled with clean, potable, room temperature water.
3. Activate valve until water is dispensed. Flush and rinse line and fittings for a minimum of 60 seconds to remove all traces of residual product.
4. Following the instructions as described in 2.2 above, mix appropriate amount of cleaning solution in a clean container. Place syrup inlet line in container filled with cleaning solution.
5. Activate valve and draw cleaning solution through lines for a minimum of sixty seconds. This will ensure line is flushed and filled with cleaning solution. Allow line to stand for at least 30 minutes.
6. Place syrup inlet line in a clean container filled with clean, potable, water at a temperature of 90° to 110°F.
7. Activate valve to flush and rinse line and fittings for a minimum of sixty seconds to remove all traces of cleaning solution. Continue rinsing until testing with phenolpthalein shows that the rinse water is free of residual detergent.
8. Following the instructions as described in 2.2 above, mix appropriate amount of sanitizing solution in a clean container. Place syrup inlet line in container filled with sanitizing solution.
9. Activate valve and draw sanitizing solution through line for a minimum of 60 seconds. This will ensure line is flushed and filled with sanitizing solution. Allow line to stand for at least 30 minutes.
10. Remove bag valve from quick disconnect coupling and reconnect syrup inlet line to syrup package. Ready unit for operation.
11. Draw drinks to refill lines and to flush the chlorine sanitizing solution from the dispenser. **NOTE:** Please note that a fresh water rinse cannot follow sanitization of equipment. Purge only with the end use product until there is no after taste in the product. This is an NSF requirement.
12. Test dispenser in normal manner for proper operation. Taste dispensed product to ensure there is no off-taste. If off-taste is found, additional flushing of syrup system may be required.
13. Repeat cleaning, rinsing, and sanitizing procedures for each valve and circuit.

3. Illustrations and Parts Listings

3.1 Decals and Labels



3.1 Decals and Labels

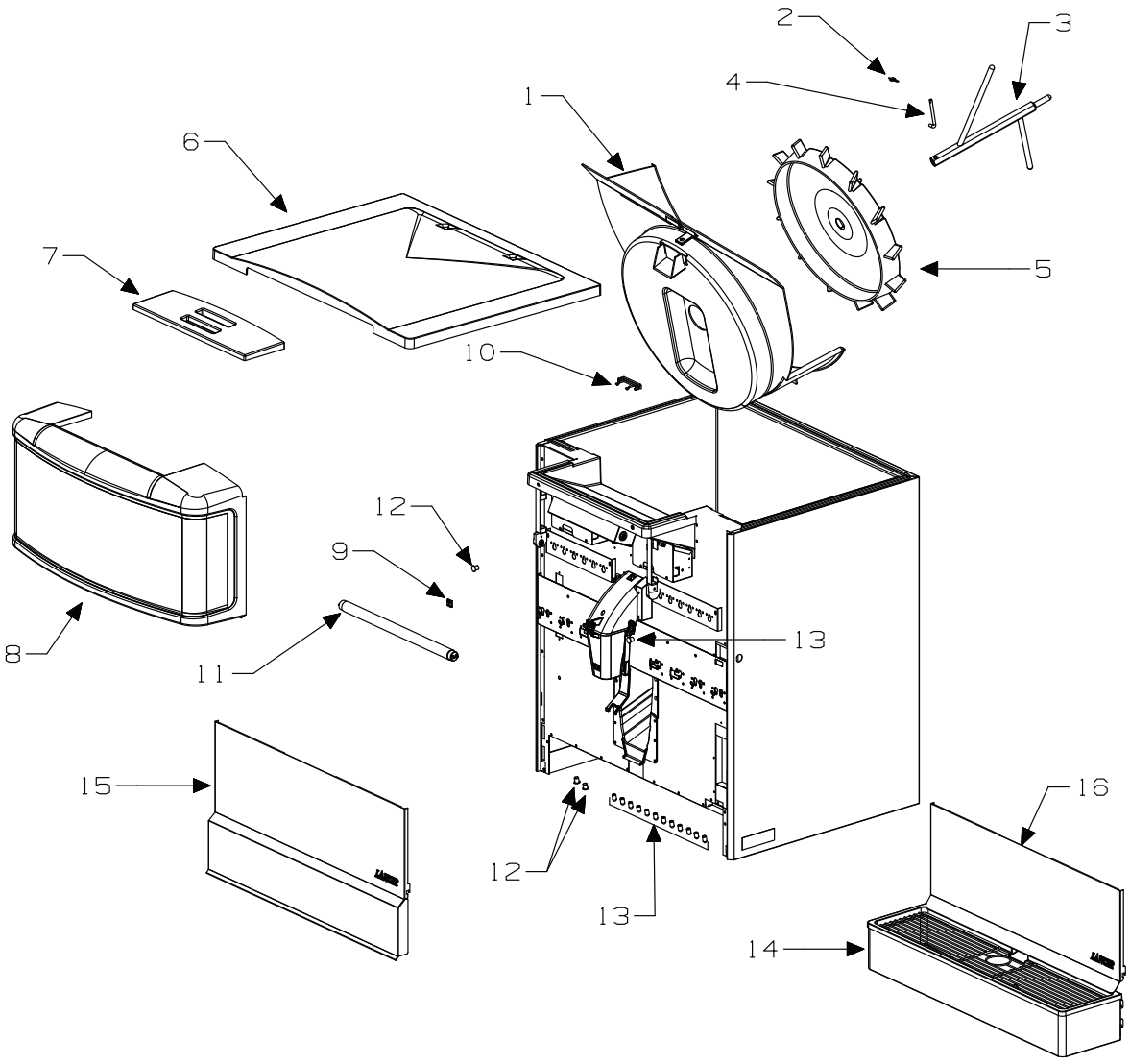
22” BEVARIETY™ ACIB ACIB

Item	Part No.	Description
1	06-1139	Label, Warning, Lid, IBD
2	06-2057	Panel, Graphic, IBD22, Round
3	27-0069	Diffuser Lens, IBD22
4	27-0063	Lens Merch, IBD22, Round
5	06-1184	Label, Cleaning, Merchandiser
6	06-3135	Label, Wiring Diagram 22” Bevariety™ ACIB
7	06-3136	Label, Plumbing Diagram 22” Bevariety™ ACIB

30” BEVARIETY™ ACIB ACIB

Item	Part No.	Description
1	06-1139	Label, Warning, Lid, IBD
2	06-2072	Panel, Graphic, IBD30, Round
3	27-0070	Diffuser Lens, IBD30
4	27-0064	Clear Lens, IBD30
5	06-1184	Label, Cleaning, Merchandiser
6	06-3122	Label, Wiring Diag. 30” Bevariety™ ACIB
7	06-3123	Label, Plumbing Diagram 30” Bevariety™ ACIB

3.2 Final Assembly, Post-Mix IBD and Ice Dispenser



3.2 Final Assembly, Post-Mix IBD and Ice Dispenser

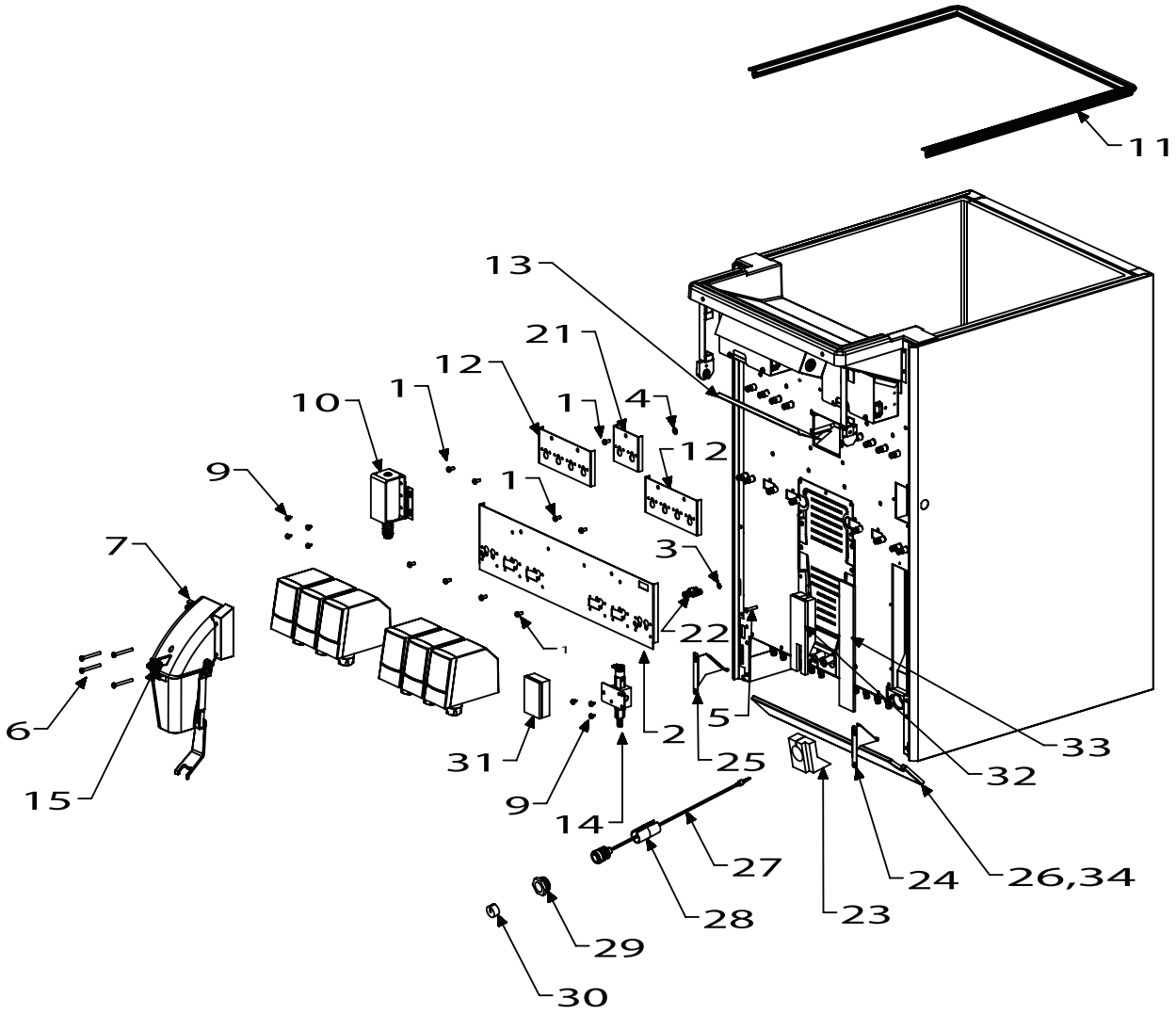
22” BEVARIETY™ ACIB ACIB

Item	Part No.	Description
1	05-2753	Shroud, Dispensing Wheel, IBD 22”
2	03-0368	Retainer, RUE-14-S
3	23-1373	Agitator Assy, HEX, IBD (115V)
4	10-0762	Pin, Agitator, IBD, Single Retainer
5	82-3556	Dispensing Wheel Assy, HEX, IBD (115V)
6	05-2733	Lid, Back, 22” Bevariety™ ACIB
7	05-1476	Lid, Front, IBD, Round
8	82-3986	Merchandiser Assy, 22” Bevariety™ ACIB
9	03-0300	Wire Clip, Adhesive
10	23-1395	Drain Assy, Wire, FS8
11	12-0146	Lamp, 18 Inch, 15W, T8
12	04-1562	Cap, Fitting, Protective
13	04-0559	Cap, Protective, Vinyl, VC-375-8
14	82-4042	Drip Tray Assy, 22” Bevariety™ ACIB
15	82-4027	Splash Plate Assy, Ext, Insul, 22”
16	30-0142	Splash Plate, 22” Bevariety™ ACIB

30” BEVARIETY™ ACIB ACIB

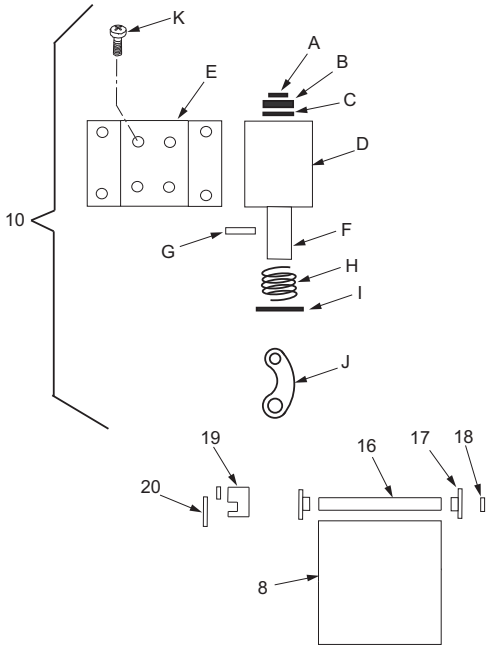
Item	Part No.	Description
1	05-1310	Wheel Shroud, IBD30
2	03-0368	Retainer, RUE-14-S
3	23-1373	Agitator Assy, HEX, IBD (115V)
4	10-0762	Pin, Agitator, IBD, Single Retainer
5	82-3556	Dispensing Wheel Assy, HEX, IBD (115V)
6	05-2730	Lid, Back, 30” Bevariety™ ACIB
7	05-1476	Lid, Front, IBD, Round
8	82-3985	Merchandiser Assy, 30” Bevariety™ ACIB
9	03-0300	Wire Clip, Adhesive
10	23-1347	Drain Assy, Wire, FS16
11	12-0146	Lamp, 18 Inch, 15W, T8
12	04-1562	Cap, Fitting, Protective
13	04-0559	Cap, Protective, Vinyl, VC-375-8
14	82-4041	Drip Tray Assy, 30” Bevariety™ ACIB
15	82-4028	Splash Plate Assy, Ext, Insul, 30”
16	30-10141	Splash Plate, 30” Bevariety™ ACIB

3.3 22” Bevariety™ ACIB Faucet Plate and Ice Chute Sub-Assembly, Post-Mix, IBD

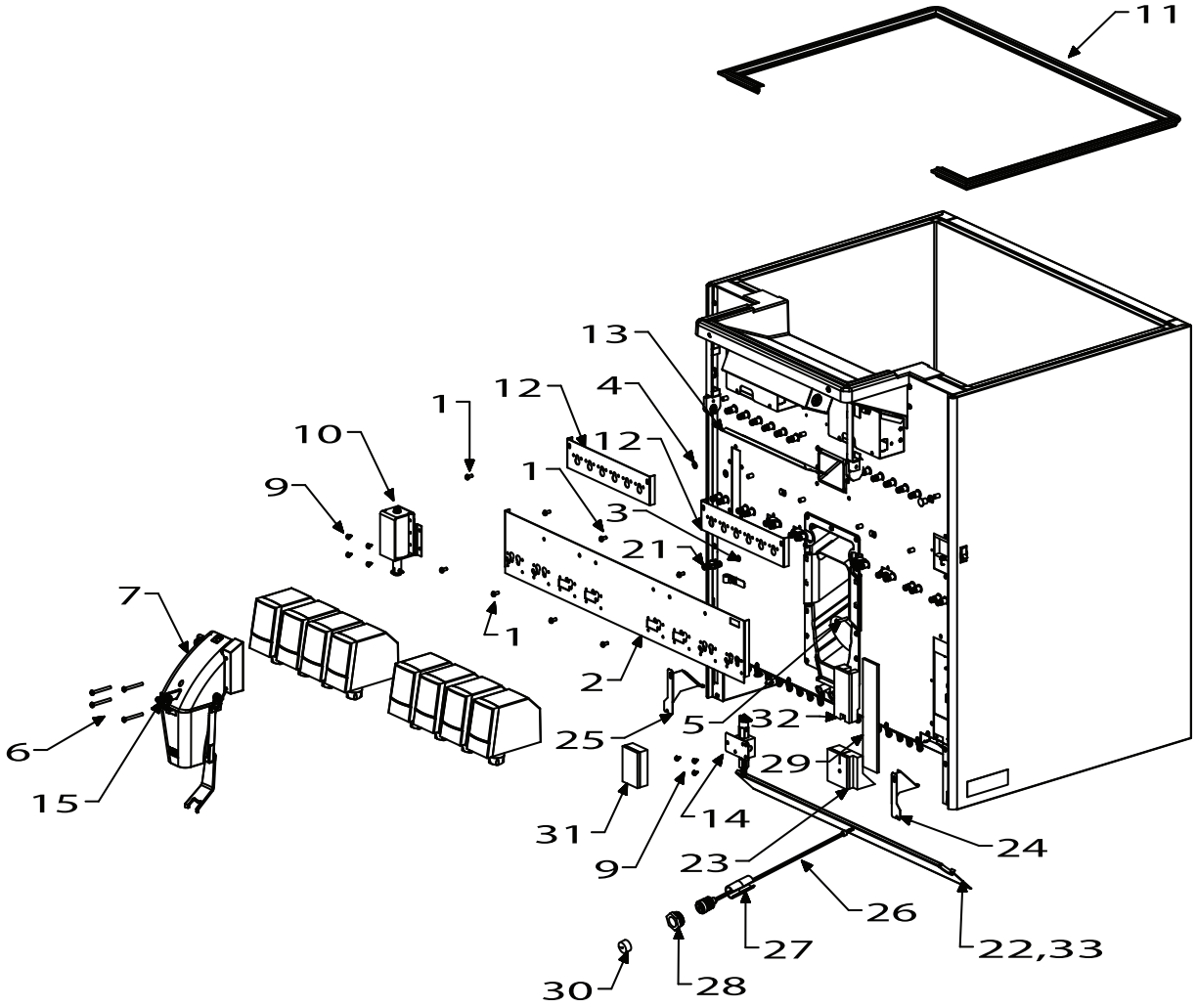


3.3 22” Bevariety™ ACIB Faucet Plate and Ice Chute Sub-Assembly, Post-Mix, IBD

Item	Part No.	Description
1	04-0308	Screw, 10 - 32 X 0.438
2	82-3968	Faucet Plate Assy, 22” Bevariety™ ACIB
3	02-0005	O-Ring, 2-010
4	06-0877	Label, Ground
5	04-1089	Screw, 10 - 32 X 1.000, RH, PH/SL
6	04-0553	Screw, 10 - 24 X 1.75, LG.
7	82-3987	Ice Chute Assy, Bevariety™ ACIB
8	05-0928	Trap Door, IBD
9	04-0504	Screw, 8 - 18 X 0.375, PHD
10	82-1566	Solenoid Assy, IBD
A	03-0086	Ring, Retaining (5304-18)
B	04-0328	Washer, Rubber
C	04-0327	Washer, Flat
D	12-0195	Solenoid, D-90
E	30-5165	Bracket, Solenoid
F	23-1029	Plunger Assy
G	10-0496	Pin, Solenoid Assy
H	03-0110	Spring, Solenoid
I	03-0111	Ring, Retaining (5133-62)
J	10-0353	Linkage, Door, IBD
K	04-0320	Screw, 8 - 32 X 0.187, PHD
11	82-1551	Trim Assy, 22”, IBD
12	30-10174	Faucet Plate, MVU, 22”
13	30-10221	Cover, Electrical, Housing, Ballast
14	82-3965	CO_2 Final Assy, Bevariety™ ACIB 30”
15	12-0244	Ice Door Switch
16	10-0732	Shaft, Ice Chute Door
17	05-0359	Bushing, Shaft
18	03-0113	Ring, Retaining (5144-12)
19	05-0546	Lever, Door,
20	03-0205	Ring, Retaining (5304-25)
21	30-10219	Faucet Plate, MVU, 22”
22	01-2682	Fitting, Converter
23	50-0521	Insulation, Carb Probe, 22” Merc
24	30-10425	Bracket, RH, Inlet Foam, 22” Merc
25	30-10426	Bracket, LH, Inlet Foam, 22” Merc
26	30-10387	Bracket, Insulation, 22” Merc
27	52-3075	Carbonator Probe
28	05-2715	Spacer
29	01-2214	Nut
30	50-0533	Insulation, Probe Nut
31	50-0522	Insulation, Upper CO2,
32	50-0524	Insulation, Lower CO2,
33	50-0525	Insulation, Back, CO2, Bevariety™ ACIB
34	50-0539	Insulation, Inlet, 22”

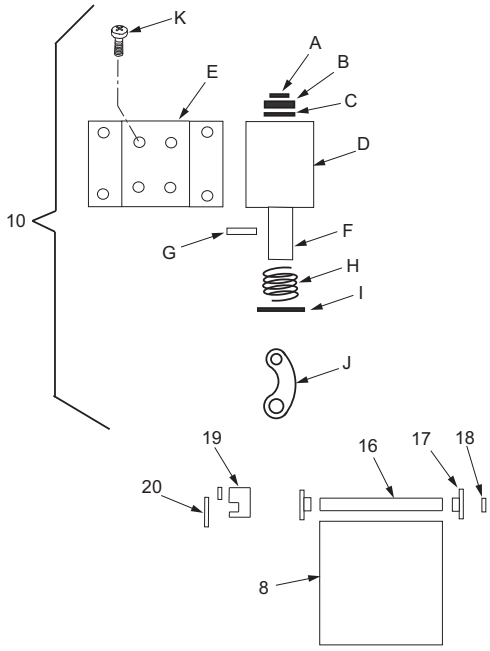


3.4 30” Bevariety™ ACIB Faucet Plate and Ice Chute Sub-Assembly, Post-Mix, IBD

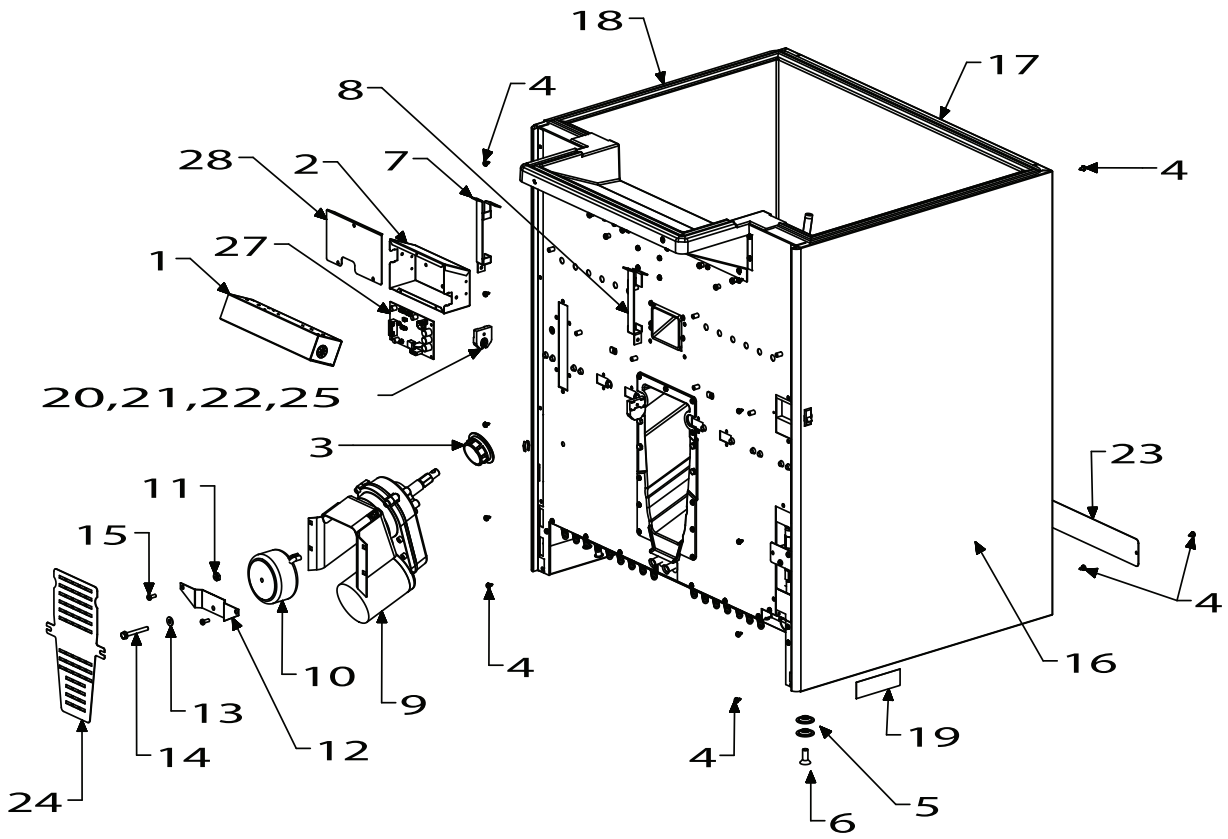


3.4 30” Bevariety™ ACIB Faucet Plate and Ice Chute Sub-Assembly, Post-Mix, IBD

Item	Part No.	Description
1	04-0308	Screw, 10 - 32 X 0.438
2	82-3943	Faucet Plate Assy LEV®, Bevariety™ ACIB
3	02-0005	O-Ring, 2-010
4	06-0877	Label, Ground
5	04-1089	Screw, 10 - 32 X 1.000, RH, PH/SL
6	04-0553	Screw, 10 - 24 X 1.75, LG.
7	82-3987	Ice Chute Assy, Bevariety™ ACIB
8	05-0928	Trap Door, IBD
9	04-0504	Screw, 8 - 18 X 0.375, PHD
10	82-1566	Solenoid Assy, IBD
A	03-0086	Ring, Retaining (5304-18)
B	04-0328	Washer, Rubber
C	04-0327	Washer, Flat
D	12-0195	Solenoid, D-90
E	30-5165	Bracket, Solenoid
F	23-1029	Plunger Assy
G	10-0496	Pin, Solenoid Assy
H	03-0110	Spring, Solenoid
I	03-0111	Ring, Retaining (5133-62)
J	10-0353	Linkage, Door, IBD
K	04-0320	Screw, 8 - 32 X 0.187, PHD
11	82-1618	Trim Assy, IBD30, Round
12	30-10132	Faucet Plate, MVU, 30” Bevariety™ ACIB
13	30-10221	Cover, Electrical, Housing, Ballast
14	82-3965	CO2 Final Assy, Bevariety™ ACIB 30”
15	12-0244	Ice Door Switch
16	10-0732	Shaft, Ice Chute Door
17	05-0359	Bushing, Shaft
18	03-0113	Ring, Retaining (5144-12)
19	05-0546	Lever, Door,
20	03-0205	Ring, Retaining (5304-25)
21	01-2682	Fitting, Converter
22	30-10381	Bracket, Insulation, 30” Merc
23	50-0529	Foam, Insulation, Carb Probe, 30” Merc
24	30-10427	Bracket, RH, Inlet, 30” Merc
25	30-10428	Bracket, LH, Inlet, 30” Merc
26	52-3075	Carbonator Probe
27	05-2715	Spacer
28	01-2214	Nut
29	50-0538	Foam, Insulation, CO2, 30” Merc
30	50-0533	Insulation, Probe Nut
31	50-0522	Insulation, Upper CO2, Bevariety™ ACIB
32	50-0531	Foam, Insulation, Lower CO2, 30” Bevariety™ ACIB
33	50-0540	Insulation, Inlet, 30”



3.5 Electrical Box and Gear Motor Sub-Assembly, Post-Mix, IBD

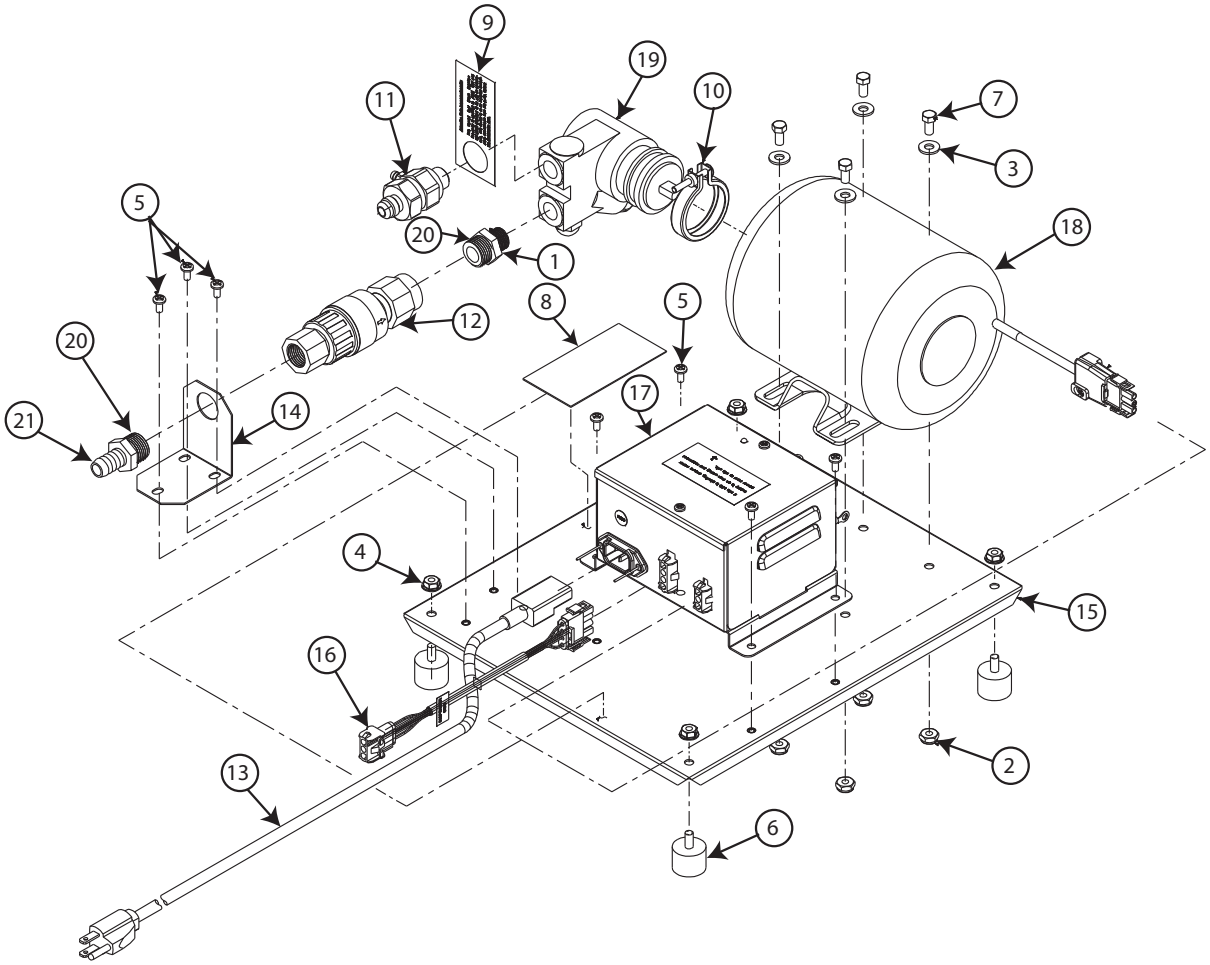


3.5 Electrical Box and Gear Motor Sub-Assembly, Post-Mix, IBD

22” and 30” Bevariety™ ACIB

Item	Part No.	Description
1	52-3180	Elec Assy, Ballast, Bevariety™ ACIB
2	30-10200	Electrical Hsg, Bevariety™ ACIB
3	02-0406	Seal, Shaft, Motor IBD
4	04-0061	Scr, 8-18 x .500, PHD w/ELW, PH
5	07-0211	Washer, Shipping Base
6	04-1453	Screw, 3/8 - 16 x 1.50 FHD
7	30-6153	Bracket, Left, Light, IBD
8	30-6152	Bracket, Right, Light, IBD
9	82-3688	Drive Assy, Motor, Hex
10	25-0094	Transformer, Toroidal, 155VA, 22VAC
11	04-0032	Nut, Nylock, 1/4-20, SS
12	30-10246	Bracket, Transformer, Merc
13	04-0033	Washer, FLT 1/4 x .065 x .281 ID x .625 OD
14	04-0726	Scr, 1/4 - 20 x 2.50, HEXHD, Zinc
15	04-1552	Screw, 10 - 24 x 1/2, PHD, PH, 18-8, SS
16	30-10323	Wrapper, Ext, Right Side, Bevariety™ ACIB
17	30-10218	Wrapper, Rear, 22” Bevariety™ ACIB
	30-10256	Wrapper, Ext, Back, 30” Merc
18	30-10255	Wrapper, Ext, Left Side, Bevariety™ ACIB
19	06-1580	Label, Patent
20	52-3192	Lead Assy, Lamp, Black, Bevariety™ ACIB
21	11-0295	Socket, 660W/600V Max
22	52-3191	Lead Assy, Lamp, WHT, Bevariety™ ACIB
23	30-6149	22” Cover, Cutout, Wrapper IBD
	30-7113	30” Cover, Cutout, Wrapper IBD
24	30-6147	Cover Motor, IBD
25	04-0238	Screw, 8-32 x 0.250 PH, MS, SS
26	52-1527	Power Cord Assy, 115V, IBD (not shown)
27	64-1436	PCB, Ice Dispenser
28	30-10202	Cover, Electrical Box

3.6 Remote Pump Assembly



3.6 Remote Pump Assembly

Item	Part No.	Description
1	01-2700	Adapter, Plastic, 1/2x3/8 Fitting
2	04-0032/01	Nut, Nylock, 1/4-20
3	04-0033/01	Washer, Flat, 1/4 x .062
4	04-0034	Nut, Lock, 1/4-20
5	04-0236	Screw, 10/21 x .375
6	04-0247	Isolator, 1/4-20
7	04-0520/01	Screw, 1/4-20 x .500
8	06-0075-1	Nameplate, Vinyl
9	06-3087	Label, Check Valve
10	07-0582	Clamp, Pump/Motor, SS
11	17-0611	Check Valve, Vented
12	18-0310	Regulator, Water
13	21-0752	Power Cord
14	30-10368	Bracket, Pressure Valve
15	30-10369	Plate, Base Pump
16	52-3062	Harness, Extension, 8 FT
17	82-3808	Enclosure Assy
18	82-3913	Motor Assy, Remote
19	86-0001	Pump, Procon, Brass
20	15-0035	Tape, Teflon
21	01-2701	Adapter, PL

4. LEV INSTALLATION

4.1 RECEIVING

Each unit is completely tested under operating conditions and thoroughly inspected before shipment. At time of shipment, the carrier accepts the unit and any claim for damage must be made with the carrier. Upon receiving units from the delivering carrier, carefully inspect carton for visible indication(s) of damage. If damage exists, have carrier note same on bill of lading and file a claim with the carrier.

4.2 REMOVAL OF EXISTING VALVE

1. Turn off carbonated water supply to dispenser to depressurize the system.
2. Turn off all syrup supplies to dispenser.
3. Operate each valve to ensure complete depressurization of water and syrup in the system.
4. Remove existing valve and mounting block. Reuse the mounting block screws.

4.3 INSTALLATION OF LEV® VALVE

WARNING!

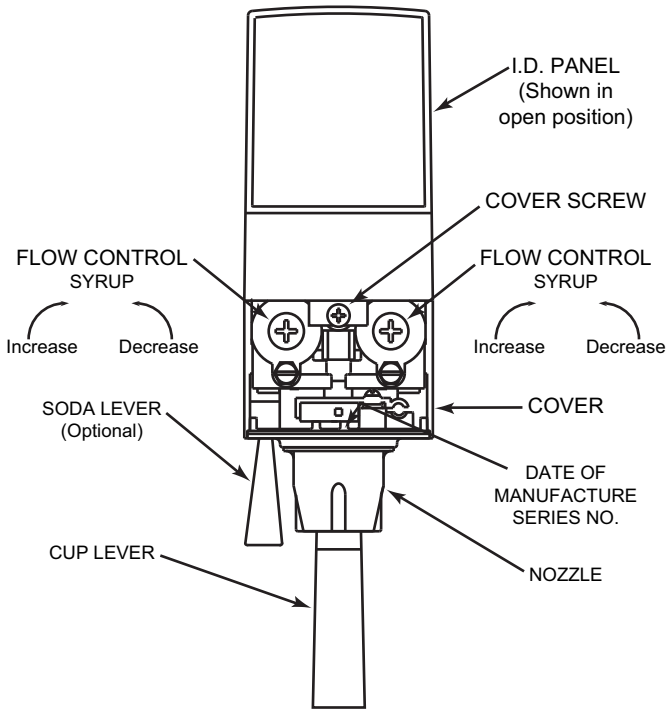
If dispenser is connected to electrical power, the unit must be properly grounded to avoid possible fatal electrical shock or serious bodily injury.

1. Slide I.D. panel up to expose cover mounting screw.
2. Loosen cover mounting screw (do not remove) and remove cover.
3. Turn both stems on mounting block to the CLOSED position.
4. Lift up wire retainer and remove mounting block from valve.
5. Replace the inlet water and syrup o-rings on dispenser valve fittings.
6. Lubricate o-rings on the fittings and mounting block with water or an FDA-approved lubricant.
7. If syrup-out light is furnished with valve, run light wires through mounting block and valve plate. Connect wiring to pressure switch in product line (24 VAC power supply required).
8. Install mounting block to valve plate using four mounting screws removed from existing mounting block.
9. Install valve on mounting block. Push wire retainer down. This will lock valve to mounting block. (White stems must be in closed position.)
10. Turn on carbonator water supply and syrup supply to dispenser.
11. Turn both white stems on mounting block to the OPEN position. Top of stem will lock wire retainer in position.
12. If electric version, reconnect to 24 VAC power supply.
13. Operate the valve momentarily to ensure flow of carbonated water and syrup. **Note:** Model 100 valves are factory preset for a flow rate of 3.0 ounces per second; an adjustment may be required. Model 145 valves are factory preset for a flow rate of 4.5 ounces per second; an adjustment may be required.
14. Adjust water flow to correct flow rate.
15. Adjust ratio (°Brix) to correct setting (see following instructions).
16. Install cover on valve and tighten cover mounting screw.
17. Slide down I.D. panel.

4.4 ADJUSTING WATER FLOW

The water flow for the Model 100 may be adjusted from 1.25 oz/sec (37 ml/sec) to 2.50 oz/sec (74 ml/sec). The water flow for the Model 145 may be adjusted from 2.0 oz/sec (59.2 ml/sec) to 4.50 oz/sec (133.2 ml/sec). The restricted flow adjustment plug (Model 100) adjusts to a maximum flow of 2.0 oz/sec (59.2 ml/sec). The restricted flow adjustment plug (Model 145) adjusts to a maximum flow of 3.3 oz/sec (97.7 ml/sec).

1. Slide up I.D. panel until flow control adjustments are exposed.
2. Remove nozzle by twisting counter clockwise and pulling down.
3. Remove diffuser by pulling down.
4. Install Lancer syrup separator (yellow) (PN 54-0031 for Model 100 valves) or Lancer syrup separator (smoke) (PN 54-0201 for Model 145 valves) in place of the nozzle.
5. Activate valve to fill separator syrup tube.
6. Hold a Lancer °Brix cup under syrup separator. Dispense water and syrup into cup for two seconds. Divide number of ounces (ml) of water in cup by two to determine water flow rate per second.
7. To obtain desired water flow rate, use a screwdriver to adjust water flow control.



4.5 ADJUSTING WATER TO SYRUP °BRIX

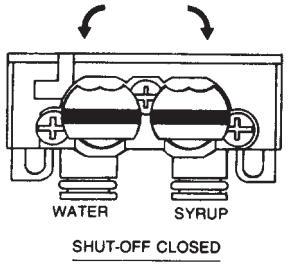
For the Model 100, the syrup flow may be adjusted from 0.25 oz/sec (7.4 ml/sec) to 0.50 oz/sec (14.8 ml/sec). For the Model 145, the syrup flow may be adjusted from 0.50 oz/sec (14.8 ml/sec) to 0.90 oz/sec (26.6 ml/sec).

1. Hold the ratio cup under the syrup separator and activate valve. Check °Brix.
2. To obtain desired ratio, use screwdriver to adjust syrup flow control.
3. Remove syrup separator.
4. Install diffuser and nozzle.
5. Slide down I.D. panel.

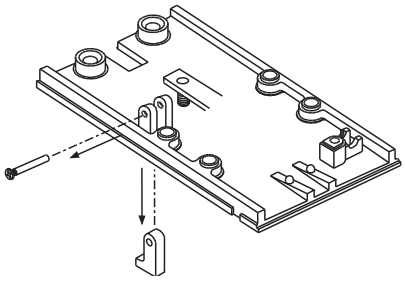
4.6 INSTALLATION OF SODA LEVER

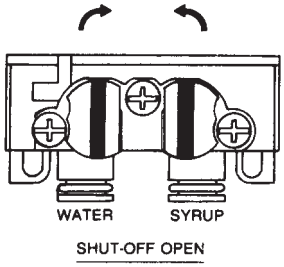
The soda lever may be field installed on any LMV® or LEV®.

1. Remove valve cover.
2. Turn both stems on mounting block to CLOSED position.
3. If LEV®, disconnect electric wiring harness.
4. Remove valve from mounting block.
5. Locate bottom plate plug in bottom plate on left side of nozzle (if necessary).

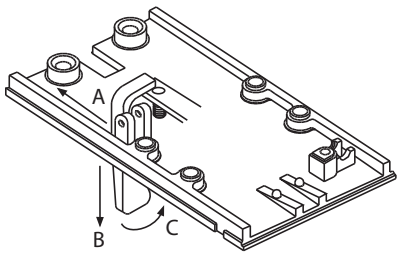


Mounting Block Stems in CLOSED Position





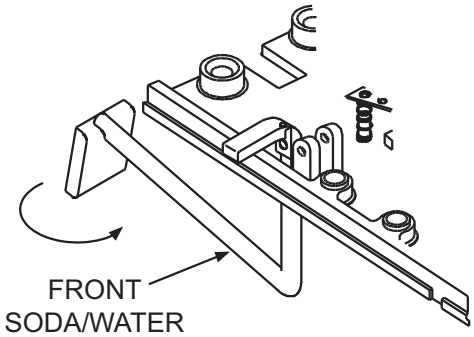
Mounting Block Stems in OPEN Position

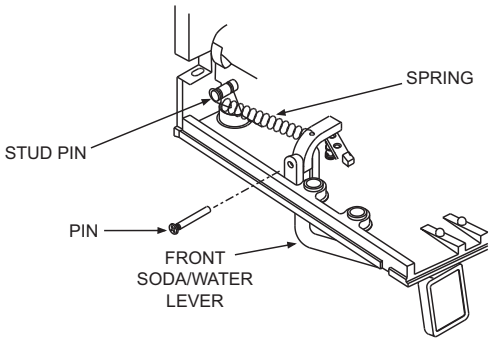


6. Pull out stainless steel pin and remove bottom plate plug. NOTE: If valve does not have pin, push bottom of plug to snap out of position.
7. Remove nozzle by twisting counter clockwise and pulling down.
8. Remove diffuser by pulling down.
9. Hold cup lever back and lay soda lever across bottom of valve with small leg extending through hole. Twist soda lever slightly and bring to upright position. Soda lever will slide between the vertical supports.
10. Release cup lever.
11. Line up holes in supports and soda lever and install stainless steel pin.
12. Install diffuser and nozzle.
13. Install valve on mounting block and latch wire retainer.
14. If LEV®, reconnect electric wire harness.
15. Turn both stems on mounting block to OPEN position (see Figure 3).
16. Push soda lever back and check for soda/water flow.
17. Install cover and tighten cover screw.
18. Slide down I.D. panel.

4.7 REMOVAL AND INSTALLATION OF FRONT SODA/WATER LEVER (Kit PN 82-1458)

1. Slide I.D. panel up to expose cover mounting screw.
2. Loosen cover mounting screw (do not remove) and remove cover.
3. Close stems on mounting block.
4. Operate valve to check for complete shutoff of water and syrup.
5. Lift up wire retainer and carefully remove valve from mounting block. If LEV®, disconnect wire harness.
6. Locate bottom plate plug or soda lever in bottom plate on left side of valve. For removal of either item, remove pin and retain for reinstallation. NOTE: If valve does not have pin, push bottom of plug to snap it out of position.
7. To remove existing soda lever, slide lever behind vertical supports. Carefully pull lever down, rotating it towards the back right corner of the bottom plate. Then slide lever out of the slot.
8. To install the front soda/water lever, first position the lever so that the contact pad faces towards the rear of the valve.
   a. Insert the front soda/water lever through the bottom plate and rotate the lever to the left until the contact pad is facing forward and the extension is positioned over the paddle arm on the left.
   b. To install spring, press stud pin into hole on upper body and fit one end of spring into outer groove of stud pin. Fit other end of spring into hole on top of front soda/water lever. Install pin.



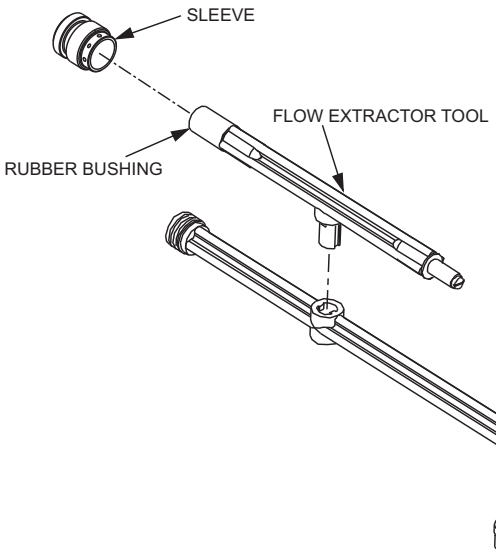


9. Install diffuser and nozzle.
10. Install valve on mounting block and latch wire retainer.
11. If LEV®, reconnect electric wire harness.
12. Push soda lever back and check for soda/water flow.
13. Attach appropriate label to push pad on front soda/water lever.
14. Install cover and tighten cover screw.
15. Slide down I.D. panel.

4.8 REMOVAL AND INSTALLATION OF FLOW CONTROLS

1. Slide I.D. panel up to expose cover mounting screw.
2. Loosen cover mounting screw (DO NOT REMOVE) and remove cover.
3. Close stems on mounting block.
4. Operate valve to check for complete shutoff of water and syrup.

5. Remove top screw and loosen bottom screw. Remove retainer.
6. Remove plug adjustment assembly by threading extractor tool (PN 52-1950) into the bonnet and pulling it out. This will expose the flow control.
7. Lift up wire retainer and carefully remove valve from mounting block. If electric, disconnect wire harness.
8. Tilt valve forward to remove spring and piston. **NOTE:** If piston is going to be reused, use caution when handling.
9. Replace valve to mounting block and push wire retainer down. This will provide a stable working condition.
10. To remove sleeve, use flow control extractor tool (PN 52-1950).
    a. Ensure rubber bushing is loose on handle.
    b. Push rubber bushing into sleeve.
    c. Turn clockwise to tighten bushing inside sleeve. NOTE: This will allow sleeve to be removed or installed.
    d. Turn counterclockwise to loosen bushing inside sleeve. This will allow tool to be removed from sleeve.



11. To replace sleeve, place sleeve on flow control extractor tool and insert in upper body.
12. Lubricate o-ring with water (or any FDA approved lubricant) and push sleeve to bottom.
13. Reassemble spool, spring, plug adjustment assembly, retainer and screws
14. Turn both shut offs on mounting block to the OPEN position.
15. Replace cover and tighten mounting screw.
16. Adjust water flow to correct flow rate.
17. Adjust ratio to correct setting.
18. Slide down I.D. panel.

4.9 DAILY CLEANING

Nozzle and diffuser must be cleaned daily.

1. Remove nozzle by twisting counter clockwise and pulling down.
2. Remove diffuser by pulling down.

3. Wash nozzle and diffuser with warm water. Ensure that cleaning solution is thoroughly rinsed from nozzle and diffuser. Residual solution will cause foaming and off taste in finished product.
4. Reinstall diffuser and nozzle. **NOTE:** Ensure compliance with the instructions of the dispenser manufacturer to properly clean and sanitize the nozzle and diffuser, and ensure no off-taste is present.

4.10 BI-WEEKLY SANITIZING

Nozzle and diffuser must be sanitized bi-weekly. Comply with the instructions of the dispenser manufacturer to properly sanitize the nozzle and diffuser, and ensure no off-taste is present.

4.11 SYRUP RATIO CUP

05-1436	Ratio Cup 4.75/5.25 to 1
05-0866	Ratio Cup 4.5/5.5 to 1
05-1282	Ratio Cup 5/5.5 to 1

4.12 TROUBLESHOOTING

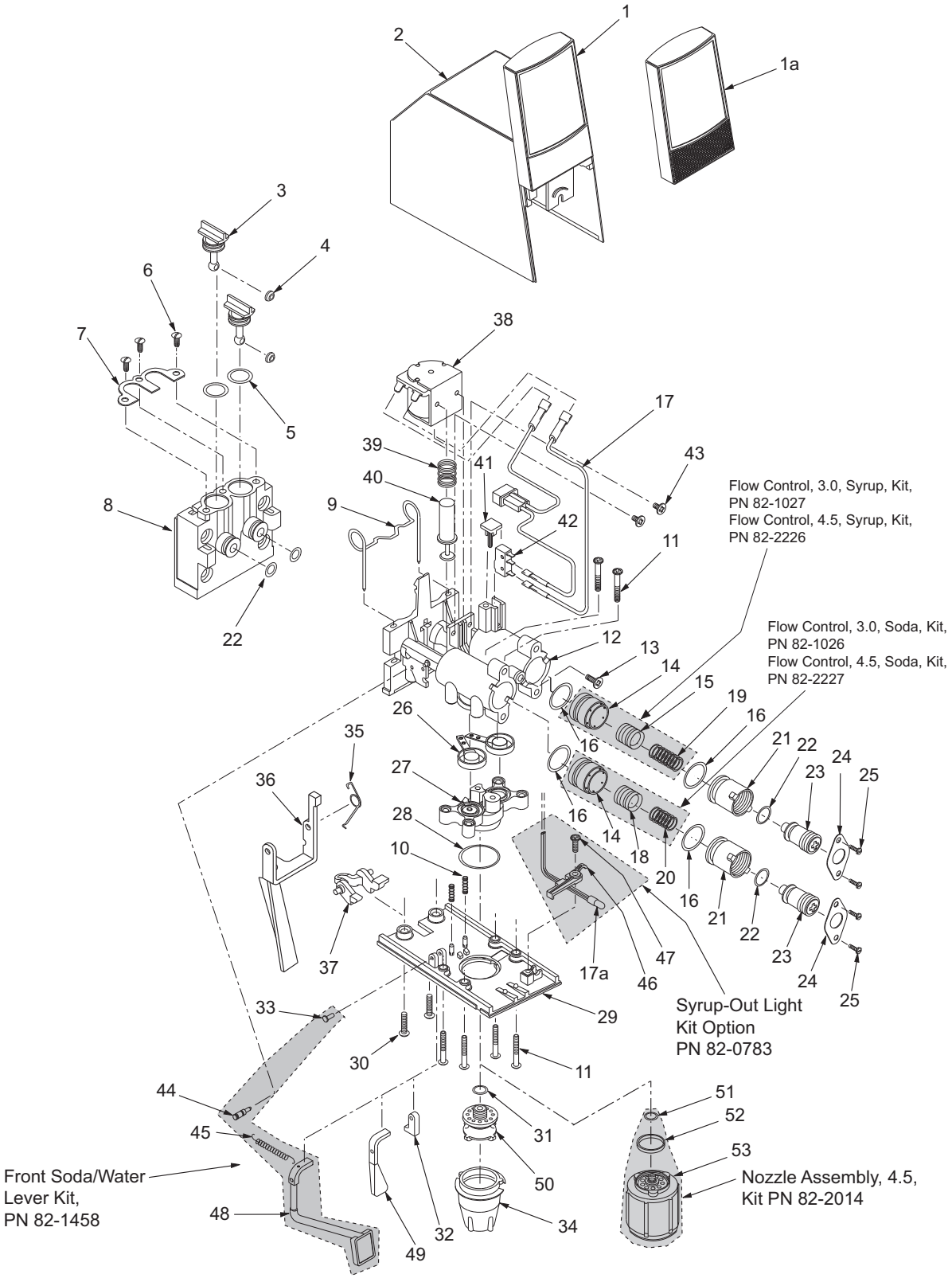
Issue	Cause	Remedy
1. Water leakage around nozzle.	1. O-ring is not properly installed above diffuser. 2. O-ring is damaged or missing.	1. Install or replace o-ring correctly. 2. Replace o-ring.
2. Leakage between upper and lower bodies.	1. One or more retaining screws loose. 2. Paddle arm assemblies are worn or damaged.	1. Tighten all size retaining screws. 2. Replace paddle arm assemblies.
3. Miscellaneous leakage.	1. Gap between parts. 2. Damaged, missing, or improperly installed o-rings.	1. Tighten appropriate retaining screws. 2. Replace appropriate o-rings.
4. Insufficient water flow.	1. Water flow pressure is too low or restricted. 2. Foreign debris in water flow controls.	1. Check incoming water from carbonator to ensure minimum flowing pressure. See specifications. Check stems on mounting block to ensure it is in fully OPEN position. 2. Remove water flow control from upper body and clean out any foreign materials to ensure smooth free piston movement.
5. Insufficient syrup flow.	1. Syrup flowing pressure is too low or restricted. 2. Foreign debris in syrup flow controls.	1. Check incoming syrup to ensure minimum flowing pressure. See specifications. Check shutoff on mounting block to ensure it is in fully OPEN position. 2. Remove syrup flow control from upper body and clean out any foreign materials to ensure smooth free piston movement.

Issue	Cause	Remedy
6. Erratic Ratio Brix	1. Incoming water and/or syrup supply not at sufficient flowing pressure. 2. Foreign debris in water and/or syrup flow controls.	1. Check incoming water and syrup supply to ensure sufficient flowing pressure. 2. Remove flow controls and clean out any foreign materials to ensure smooth free piston movements.
7. No product dispensed.	1. Water and syrup shutoffs are not fully OPEN. 2. If LEV, ensure cup lever arm or I.D. Panel actuator is actuating switch. 3. If LEV, electric current not reaching valve. 4. Improper or inadequate water or syrup supply. 5. If LEV, valve is not functioning correctly.	1. Check stems on mounting block to ensure they are in fully OPEN position. 2. If not, repair or replace. 3. Check electric current supplied to valve. See specifications. If current is adequate, check solenoid coil and switch. Replace if necessary. 4. Remove valve from mounting block and open stems slightly. Check to ensure proper water and syrup supply. If no supply, check dispenser for freeze-up or other problems. 5. Check manual operation of valve to ensure proper function.
8. Water only dispensed, no syrup; or syrup only dispensed, no water.	1. Water or syrup stem on mounting block not fully OPEN. 2. Improper or inadequate water or syrup supply.	1. Check stems on mounting block to ensure they are in full OPEN position. 2. Remove valve from mounting block and open stems lightly to check for proper syrup and water supply. If not supply, check dispenser for freeze-up or other problems.

Issue	Cause	Remedy
9. Valve will not shut off.	1. Cup lever may be sticking or binding. 2. If LEV, switch not actuating properly. 3. If LEV, solenoid armature not returning to bottom position. 4. Debris or damage or paddle arms.	1. Correct or replace lever. 2. Check switch for free actuation. 3. Replace defective solenoid armature or spring. 4. Remove debris and/or replace damaged paddle arms.
10. Excessive foaming.	1. Incoming water or syrup temperature too high. 2. Water flow rate too high. 3. Nozzle and diffuser not clean. 4. Nozzle and diffuser not properly installed. 5. CO_2 pressure too high.	1. Correct at dispenser. 2. Re-adjust and reset Brix. 3. Remove and clean. 4. Remove and install properly. 5. Check for proper pressure setting.
11. No syrup-out light (if equipped).	1. Burned out or malfunctioning lamp.	1. Replace harness.

Notes

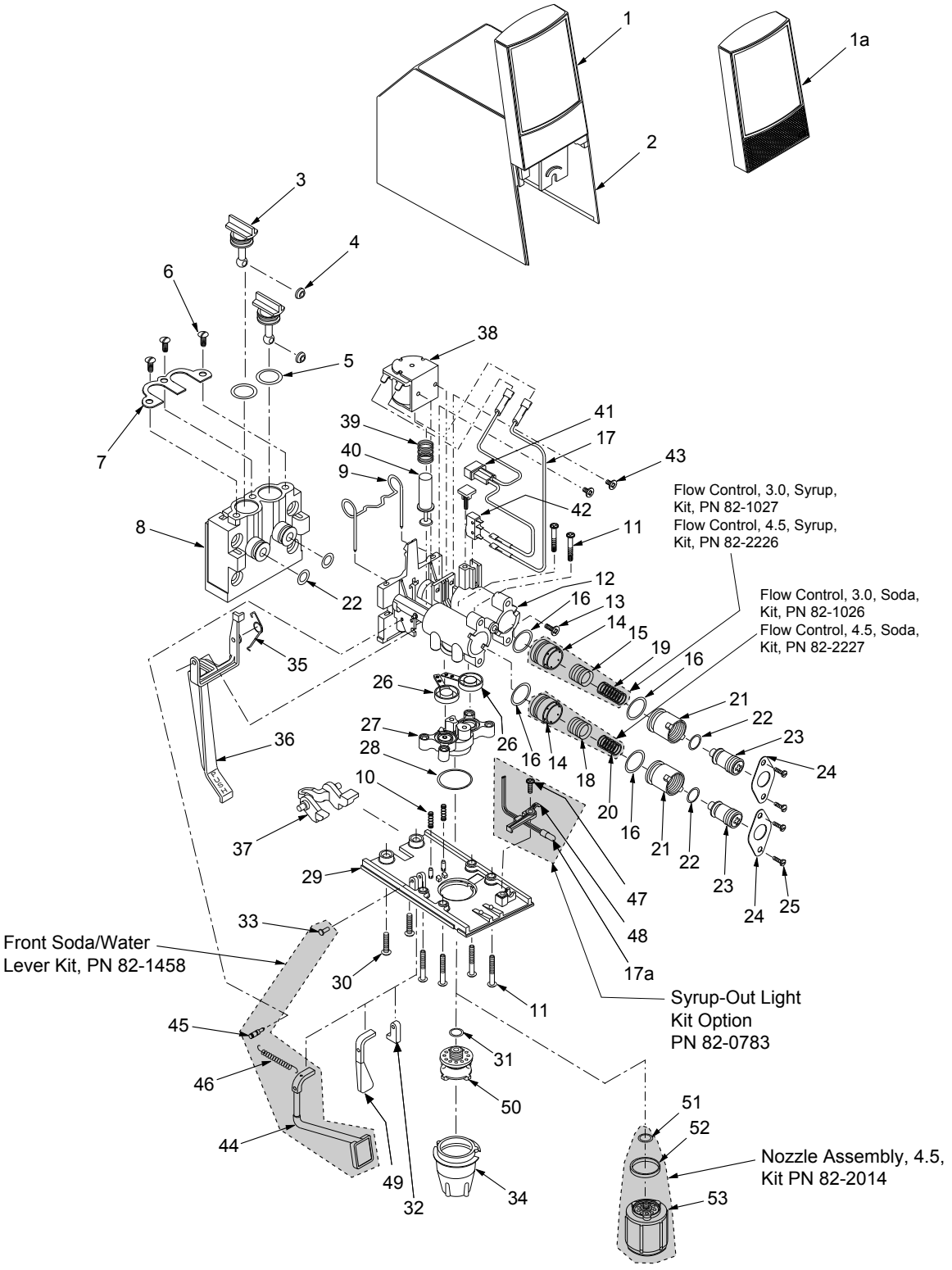
4.13 LEV® Model 100, 3.0 oz/sec and Model 145L, 4.5 oz/sec



4.13 LEV® Model 100, 3.0 oz/sec and Model 145L, 4.5 oz/sec

ITEM	PART NO.	DESCRIPTION
1	05-0287	I.D. Panel
1a	54-0057	I.D. Panel (Syrup-Out)
2	54-0029	Cover Sub Assy
–	54-0030	Cover Assy (Item No. 1-2)
–	54-0059	Cover Assy (Item No. 1a-2)
3	05-0266	Stem, Valve, Mounting Block
4	05-0267	Washer
5	02-0047	O-Ring
6	04-0269	Screw
7	03-0087	Retainer, Stem, Valve, Mounting Block
8	05-0265	Mounting Block
–	82-0274	Block Assy, Mounting (Item No. 3-8, 22)
9	03-0233	Retainer, Valve, 1-Piece
10	03-0143	Spring, Pin, ***LEV***®
11	04-0270	Screw
12	54-0189	Body Assy, Upper
13	04-0302	Screw
14	81-0274	Sleeve, Syrup/Water, 3.0
-	81-0382	Sleeve, Syrup/Soda, 4.5
15	81-0273	Piston, Syrup, 3.0
-	81-0383	Piston, Syrup, 4.5
16	02-0132	O-Ring
17	52-0622	Wire Harness
17a	52-0902	Wire Harness (Syrup-Out)
18	81-0275	Piston, Soda, 3.0
-	81-0384	Piston, Soda, 4.5
19	03-0169	Spring, Syrup, Flow Control, ***LEV***®
20	03-0171	Spring, Soda, Flow Control, ***LEV***®
21	05-0262	Bonnet, Flow Control
22	02-0126	O-Ring
23	05-1919	Plug, Adjustment, Flow Control, White
–	82-0527/01	Plug, Adjustment Assy, White (Item No. 16, 21-23)
24	03-0088	Retainer, Flow Control
25	04-0267	Screw
26	82-2929	Arm, Paddle, Assy
27	54-0046	Body Assy, Lower, 3.0
-	54-0188	Body Assy, Lower, 4.5
28	02-0408	O-Ring, Nozzle, Red, 3.0 (Used in Valves produced through September 1998)
29	05-0232	Plate, Bottom, 3.0
-	05-1108	Plate, Bottom, 4.5
30	04-0310	Screw
31	02-0133	O-Ring (Used in Valves produced through September 1998)
32	05-0281	Plug, Bottom Plate
33	04-0775	Pin, Lever, Soda
34	05-0233	Nozzle, 3.0 (Used in Valves produced through September 1998)
-	05-1463	Nozzle, 3.0 (Used in Valves produced in September 1998 and later)
35	03-0081	Lever, Spring, Electric
36	05-0231	Lever, Electric
37	05-0238	Yoke, Electric
38	52-0288	Coil Assy,***LEV***®
39	03-0125	Spring, Solenoid, ***LEV***®
40	10-0117	Armature, ***LEV***®
41	05-0935	Plug, Retainer, Micro-Switch
42	26-0265	Micro-Switch
43	04-0486	Screw
44	04-0724	Pin, Stud
45	03-0238	Spring, Front Soda/Water Lever
46	05-0490	Holder
47	04-0470	Screw
48	09-0120	Lever, Front, Soda/Water
49	05-0274	Lever, Soda, 3.0
50	54-0028	Diffuser Assy, 3.0 (Used in Valves produced through September 1998)
-	05-1593	Diffuser Assy, 3.0 (Used in Valves produced in September 1998 and later)
51	02-0133	O-Ring
52	02-0421	Seal, Nozzle, 4.5
53	54-0183	Nozzle Assy, 4.5

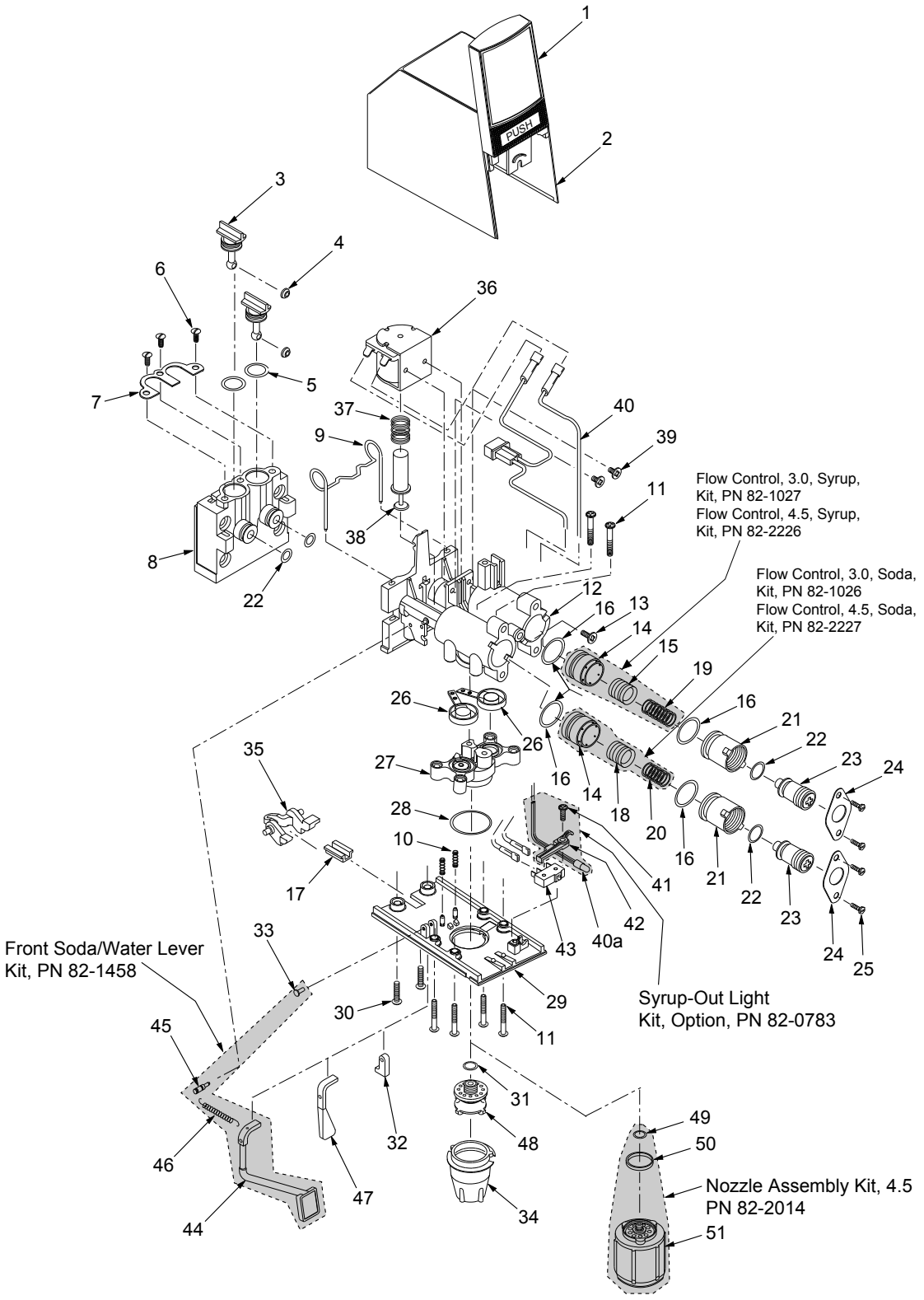
4.14 LEV® With Self-Serve Lever (Model 100SSL, 3.0 oz/sec and Model 145SSL, 4.5 oz/sec)



4.14 LEV® With Self-Serve Lever (Model 100SSL, 3.0 oz/sec and Model 145SSL, 4.5 oz/sec)

ITEM	PART NO.	DESCRIPTION
1	05-0287	I.D. Panel
1a	54-0057	I.D. Panel (Syrup-Out)
2	54-0029	Cover Sub Assy
–	54-0030	Cover Assy (Item No. 1-2)
–	54-0059	Cover Assy (Item No. 1a-2)
3	05-0266	Stem, Valve, Mounting Block
4	05-0267	Washer
5	02-0047	O-Ring
6	04-0269	Screw
7	03-0087	Retainer, Stem, Valve, Mounting Block
8	05-0265	Mounting Block
–	82-0274	Block Assy, Mounting (Item No. 3-8, 22)
9	03-0233	Retainer, Valve, 1-Piece
10	03-0143	Spring, Pin,***LEV***®
11	04-0270	Screw
12	54-0189	Body, Upper, Assy
13	04-0302	Screw
14	81-0274	Sleeve, Syrup/Water, 3.0
-	81-0382	Sleeve, Syrup/Soda, 4.5
15	81-0273	Piston, Syrup, 3.0
-	81-0383	Piston, Syrup, 4.5
16	02-0132	O-Ring
17	52-0622	Wire Harness
17a	52-0902	Wire Harness (Syrup-Out)
18	81-0275	Piston, Soda, 3.0
-	81-0384	Piston, Soda, 4.5
19	03-0169	Spring, Syrup, Flow Control, ***LEV***®
20	03-0171	Spring, Soda, Flow Control, ***LEV***®
21	05-0262	Bonnet, Flow Control
22	02-0126	O-Ring
23	05-1919	Plug, Adjustment, Flow Control, White
–	82-0527/01	Plug, Adjustment Assy, White (Item No. 16, 21-23)
24	03-0088	Retainer, Flow Control
25	04-0267	Screw
26	82-2929	Arm, Paddle, Assy
27	54-0046	Body Assy, Lower, 3.0
-	54-0188	Body Assy, Lower, 4.5
28	02-0408	O-Ring, Nozzle, Red, 3.0 (Used in Valves produced through September 1998)
29	05-0232	Plate, Bottom, 3.0
-	05-1108	Plate, Bottom, 4.5
30	04-0310	Screw
31	02-0133	O-Ring (Used in Valves produced through September 1998)
32	05-0281	Plug, Bottom Plate
33	04-0775	Pin, Lever, Soda
34	05-0233	Nozzle, 3.0 (Used in Valves produced through September 1998)
-	05-1463	Nozzle, 3.0 (Used in Valves produced in September 1998 and later)
35	03-0081	Lever, Spring, Electric
36	54-0165	Lever, Self-Serve
37	05-0238	Yoke, Electric
38	52-0288	Coil Assy
39	03-0125	Spring, Solenoid
40	10-0117	Armature
41	05-0935	Plug, Retainer, Micro-Switch
42	26-0265	Micro-Switch
43	04-0486	Screw
44	09-0120	Lever, Front Soda/Water
45	04-0724	Pin, Stud
46	03-0238	Spring, Front Soda/Water Lever
47	04-0470	Screw
48	05-0490	Holder
49	05-0274	Lever, Soda, 3.0
50	54-0028	Diffuser Assy, 3.0 (Used in Valves produced through September 1998)
-	05-1593	Diffuser Assy, 3.0 (Used in Valves produced in September 1998 and later)
51	02-0133	O-Ring
52	05-0421	Seal, Nozzle, 4.5
53	54-0183	Nozzle Assy, 4.5

4.15 LEV® Pushbutton (Model 100P, 3.0 oz/sec and Model 145P, 4.5 oz/sec)



4.15 LEV® Pushbutton (Model 100P, 3.0 oz/sec and Model 145P, 4.5 oz/sec)

ITEM	PART NO.	DESCRIPTION
1	54-0140	I.D. Panel, Large Pushbutton
2	54-0029	Cover Sub Assy
–	54-0139	Cover Assy, Large (Pushbutton, Item No. 1-2)
3	05-0266	Stem, Valve, Mounting Block
4	05-0267	Washer
5	02-0047	O-Ring
6	04-0269	Screw
7	03-0087	Retainer, Stem, Valve, Mounting Block
8	05-0265	Mounting Block
–	82-0274	Block Assy, Mounting (Item No. 3-8, 22)
9	03-0233	Retainer, Valve, 1-Piece
10	03-0143	Spring, Pin
11	04-0270	Screw
12	54-0189	Body Assy, Upper
13	04-0302	Screw
14	81-0274	Sleeve, Syrup/Water, 3.0
-	81-0382	Sleeve, Syrup/Soda, 4.5
15	81-0273	Piston, Syrup, 3.0
-	81-0383	Piston, Syrup, 4.5
16	02-0132	O-Ring
17	05-0491	Filler
18	81-0275	Piston, Soda, 3.0
-	81-0384	Piston, Soda, 4.5
19	03-0169	Spring, Syrup, Flow Control, ***LEV***®
20	03-0171	Spring, Soda, Flow Control, ***LEV***®
21	05-0262	Bonnet, Flow Control
22	02-0126	O-Ring
23	05-1919	Plug, Adjustment, Flow Control, White
–	82-0527/01	Plug, Adjustment Assy, White
24	03-0088	Retainer, Flow Control
25	04-0267	Screw
26	82-2929	Arm, Paddle, Assy
27	54-0046	Body Assy, Lower, 3.0
-	54-0188	Body Assy, Lower, 4.5
28	02-0408	O-Ring, Nozzle, Red, 3.0 (Used in Valves produced through September 1998)
29	05-0232	Plate, Bottom, 3.0
-	05-1108	Plate, Bottom, 4.5
30	04-0310	Screw
31	02-0133	O-Ring (Used in Valves produced through September 1998)
32	05-0281	Plug, Bottom Plate
33	04-0775	Pin, Lever, Soda
34	05-0233	Nozzle, 3.0 (Used in Valves produced through September 1998)
-	05-1463	Nozzle, 3.0 (Used in Valves produced in September 1998 and later)

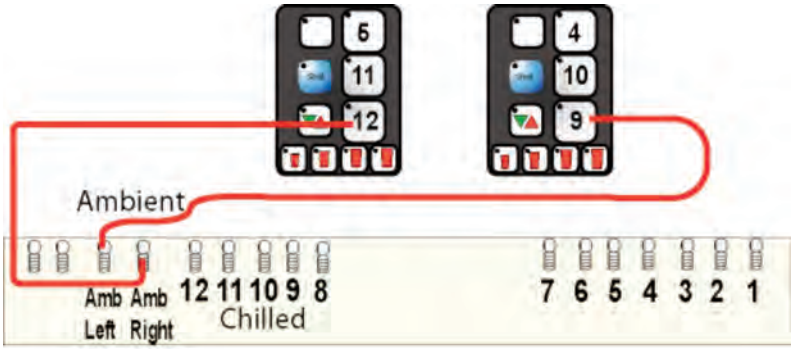
ITEM	PART NO.	DESCRIPTION
35	05-0238	Yoke, Electric
36	52-0288	Coil Assy, ***LEV***®
37	03-0125	Spring, Solenoid, ***LEV***®
38	10-0117	Armature, ***LEV***®
39	04-0486	Screw
40	52-0622	Wire Harness
40a	52-0902	Wire Harness (Syrup-Out)
41	04-0470	Screw
42	05-0490	Holder
43	26-0265	Micro-Switch
44	09-0120	Lever, Front Soda/Water
45	04-0724	Pin, Stud
46	03-0238	Spring, Front Soda/Water Lever
47	05-0274	Lever, Soda
48	54-0028	Diffuser Assy, 3.0 (Used in Valves produced through September 1998)
-	05-1593	Diffuser Assy, 3.0 (Used in Valves produced in September 1998 and later)
49	02-0133	O-Ring
50	02-0421	Seal, Nozzle, 4.5
51	54-0183	Nozzle Assy, 4.5

4.16 Chilled vs. Ambient Syrup on Positions 9 and 12

Buttons 9 and 12 on the 30” multi-valve units can be either ambient or chilled depending on how the syrup lines are connected.

LFCVs will need to be moved to ambient outlet locations.

If the use of ambient lines is required, it will be in your project plan. The unit comes plumbed for chilled syrups. The illustration shows the ambient plumbing inlets and the buttons that activate those circuits.



4.17 22 Inch Dispenser Connections

The 22 inch unit is very similar to the 30 inch model: 4 LEV’s are installed.

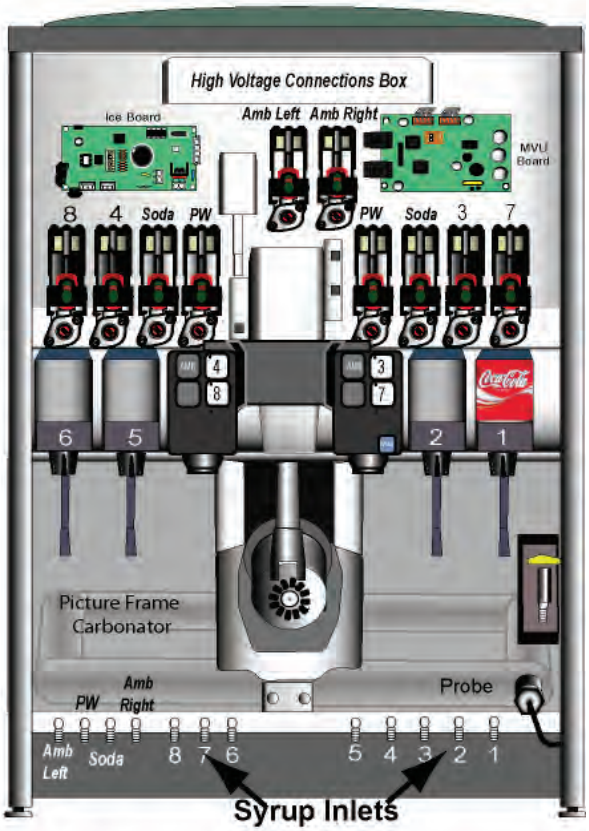
Positions 2 and 5 have the switchable converters installed behind the backblock.
- Should be set according to the project plan.

Certain customers will only use the top two pushbuttons on each side of the MVU.

10 total connection lines at the bottom of the dispenser:

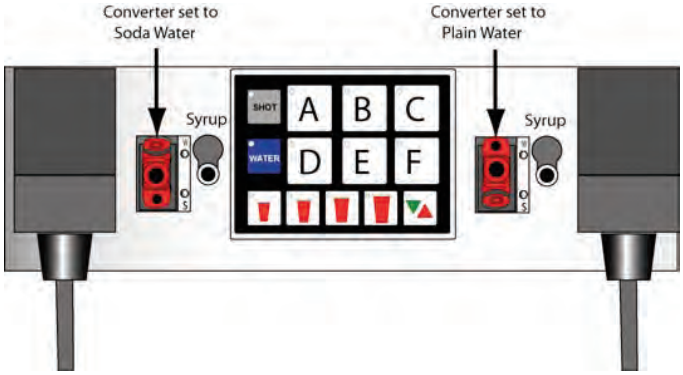
2 inlets are for ambient products only:
• Bottom left side of the dispenser.
• Plumbed to the two modules labeled Amb Left and Amb Right.

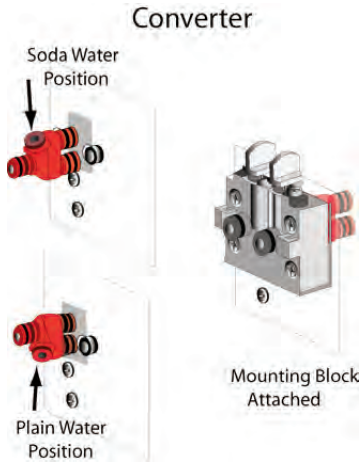
Transformer located above the auger motor:
• Can easily be removed by taking out the two retaining screws that secure it to the dispenser.
• You will need to remove the transformer to gain access to the auger motor.



4.18 Set Water to Soda or Plain

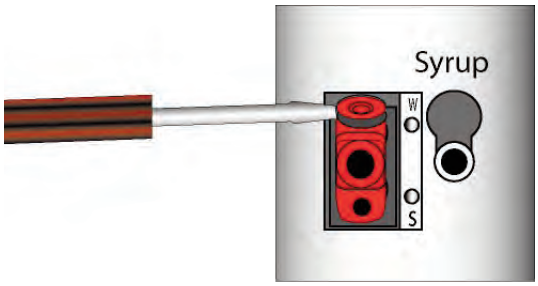
Valves 3 or 6 on a 30 inch ACIB (valves 2 or 5 on 22 inch ACIB) can be set to pour either carbonated or non-carbonated beverages by pulling out the converter, rotating it 180°, and reinserting it into the dispenser. The illustrations show both positions of the converter.





To change from plain to soda:

1. Shut off water, Syrup and CO_2.
2. Gas out dispenser.
3. Remove backblock.
4. Pry converter out with a small screwdriver as shown.
5. Reinstall converter in correct position.



NOTE: You must shut down both still and sparkling water supplies as well as the CO_2 line and syrup supply to change out the switchable backblock.

5. MVU

5.1 Beverage Dispensing

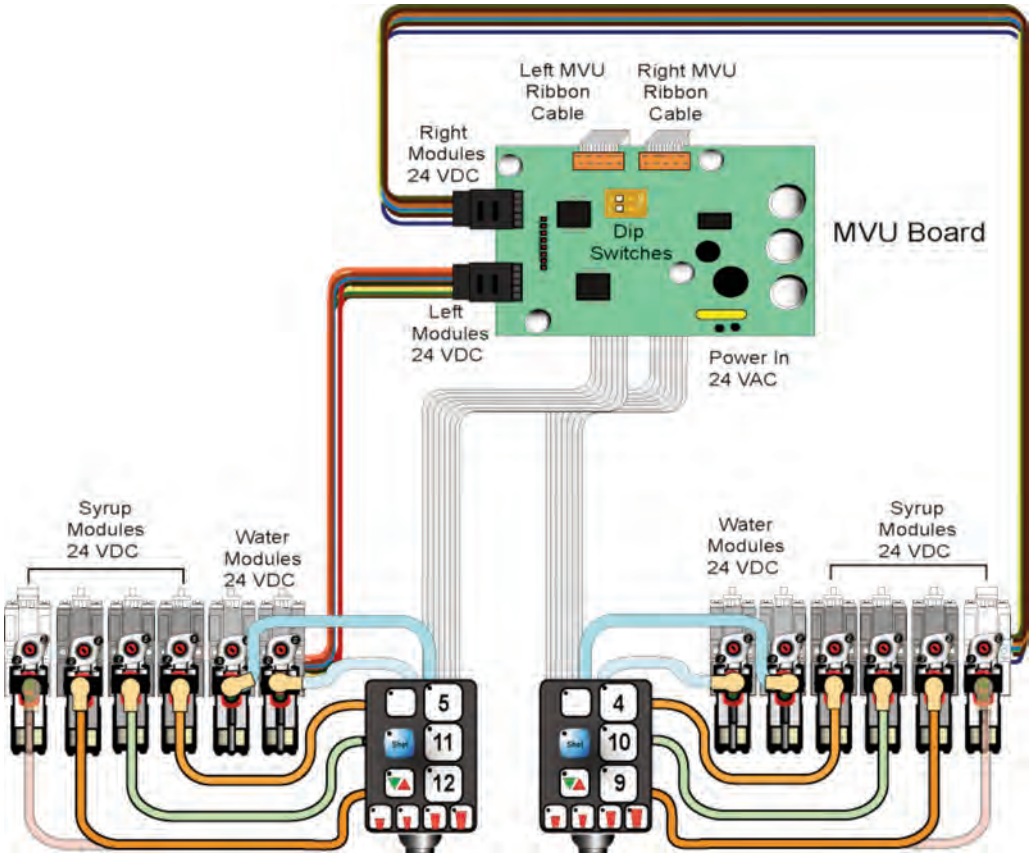
Beverages are dispensed either by standard LEV's or by Multi-Valve Units. The MVU consists of a touch pad that activates:

- Flavor shots
- Carbonated or non-carbonated drinks
- Portion controlled dispensing for crew serve
- PC board – operates on DC voltage (24 VDC) and controls all MVU functions
- Syrup and water modules
- 24 MDC solenoid with a ceramic flow control

Three different beverages can pour from each MVU panel enabling the machine to serve 12 total beverages, six from LEV's and six from the two MVU valves.

When a button is pressed for a beverage, it sends a signal by ribbon cable to the MVU board. The board activates the syrup and water modules dispensing a drink at the nozzle.

Note: For a flavor shot, the board only activates the syrup module.



5.2 Program Multi-Valve Unit (MVU)

Set MVU Buttons as Carbonated, Non-Carbonated, or Flavor Shot Only

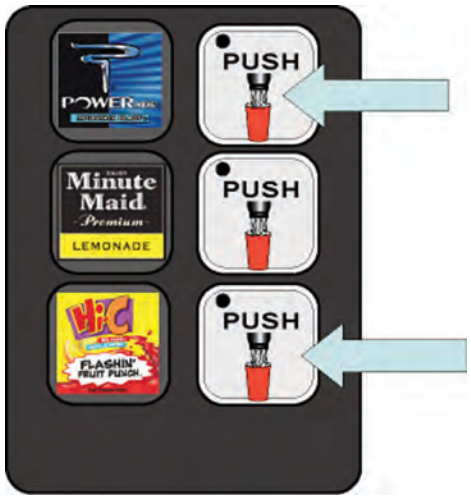
Refer to install guidelines for account specific brands.

Self-Serve

The MVU can be programmed to serve carbonated or non-carbonated beverages as well as a flavor shot from each of the beverage positions on the valve.

To enter the programming mode on the MVU and assign water type to each individual brand (Soda or Plain Water):

1. Press both top and bottom “PUSH” buttons at the same time on the MVU panel for 5 seconds. On some dispensers the top button may be hidden (no “PUSH” label present). In this case, the button can be used to enter the programming mode and the button should be set to No Water (Light Off). The light for the top hidden button will be visible when lit.



Lights on = Plain Water
Lights flashing slowly = Carb Water
Lights flashings quickly = Flavor Shot
Lights off = No Water

2. If the button light is off, press a “PUSH” button one time to change to a non-carb beverage.

LED will illuminate and stay on for non-carb beverages.

3. Press the same brand button again to change to a carbonated beverage (light will flash slowly).

4. Press the button one more time to change to flavor shot mode.
    a. The light will flash quickly and the water will be turned off.

5. Repeat this process for each brand on that side of the MVU.

6. Press the SAVE (Hidden on self serve) button to save the programming.

Note:
If no entries are made for 60 seconds while in programming mode, the PC board automatically saves the last changes to the programming; however, you can exit programming mode sooner by pressing the save button.

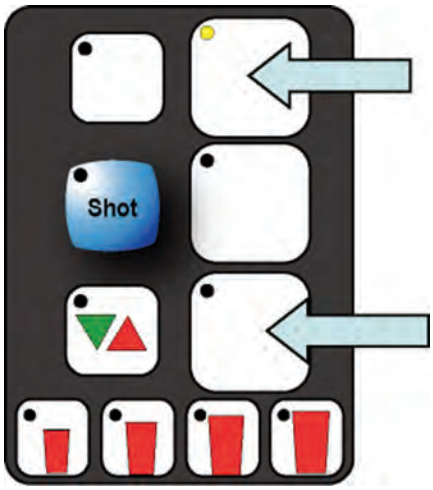
Note: You must program each side of the MVU separately using the steps outlined.

Crew-Serve
If equipped with Portion Controls, only three options are available:
Light on = Plain Water Mode
Light flashing = Soda Water Mode
Light off = Flavor Shot Mode

Set MVU for Flavor Shots (Portion Control Only)

1. Press both top and bottom brand buttons (at the same time) on the MVU panel for 5 seconds to get into programming mode.

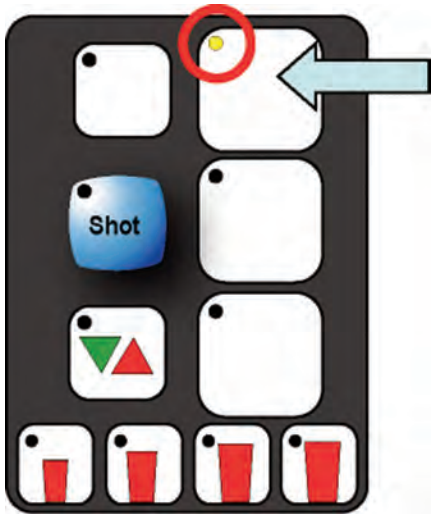
a. Lights will blink three times



Press the “Shot” button.

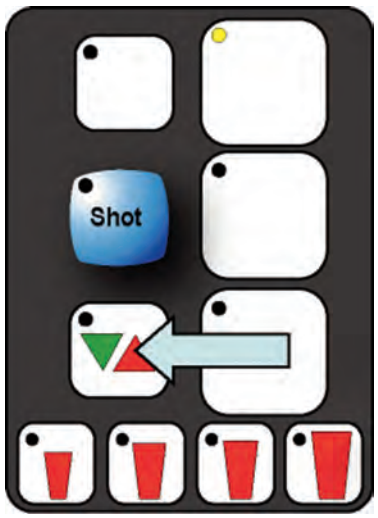
a. The “Shot” button will illuminate.
b. Brands enabled for shots will be illuminated.

3. Press the “Brand” button to turn the shot mode for that brand on or off.



4. Press the “Save” (Pour cancel button).

Note:
If no entries are made for 60 seconds while in programming mode, the PC board automatically saves the last changes to the programming; however, you can exit programming mode sooner by pressing the save button.



Flow Rate Check

Self Serve or Crew Serve

The dispenser's water flow rate can be checked/calibrated using the on-board computer as a timer.

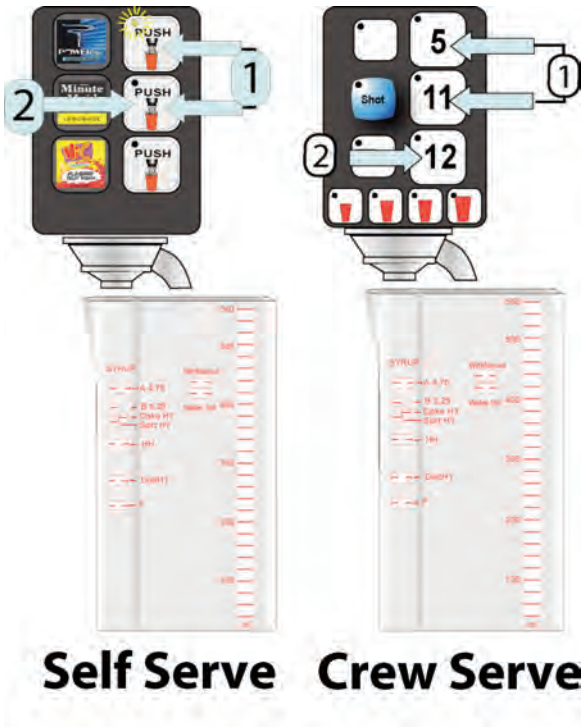
To check flow rate:

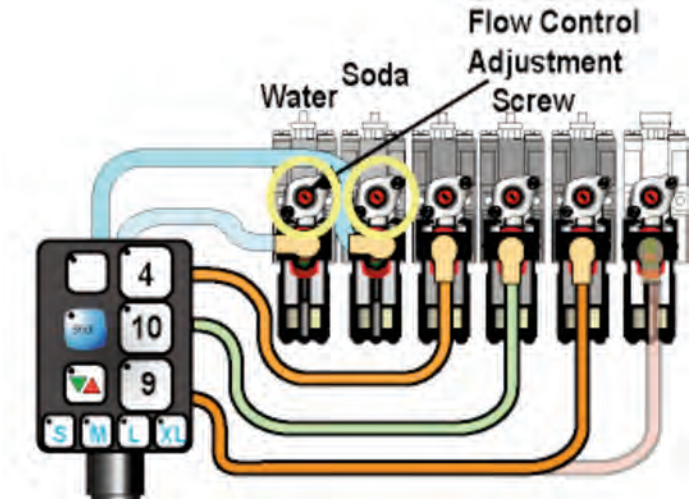
1. Press the top and middle brand buttons at the same time approximately 5 seconds.
   a. The pour cancel button will illuminate and the shot LED will blink 5 times.

   b. The Self-Serve format uses the same two buttons to check flow rate.

2. Place a ratio cup under the nozzle and press a brand button.
   - Water will pour for 4 seconds.

3. Check for 10 oz of water in the ration cup (3.0 LEV).
   - If above or below 10 oz., adjust the water/soda flow control and recheck.





Ratio MVU's

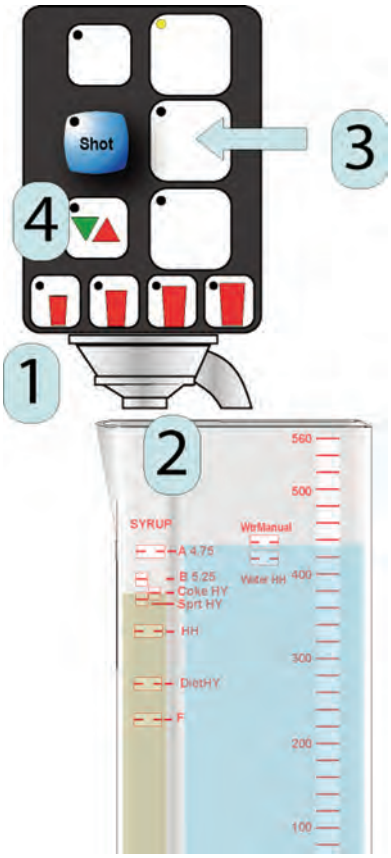
The LEV's can be ratioed using the handheld device; however, the handheld device will not work with the MVU valve. You must use the manual cup and a syrup separator designed for the MVU nozzle.

To ratio the MVU – Self Serve:

1. Attach the syrup separator and activate the valve to load the separator with syrup.

2. Position the ratio cup as shown.
   - The arm of the separator must be aimed at the large chamber.
   - The center of the separator must be aimed at the small chamber.

3. Push a brand button and fill the cup up to the appropriate syrup window.
   - If the ratio levels are correct, move to the next brand.
   - If levels are incorrect, adjust the flow controls.



To ratio the MVU – Crew Serve:

1. Attach the syrup separator and activate the valve to load the separator with syrup.

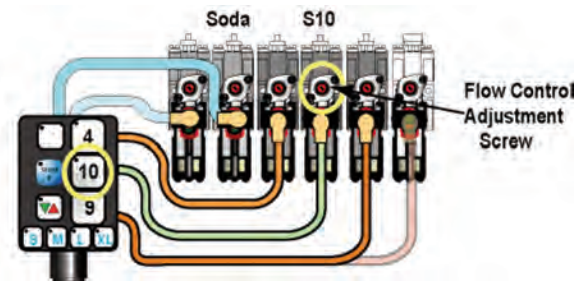
2. Position the ratio cup as shown.
   - The arm of the separator must be aimed at the large chamber.
   - The center of the separator must be aimed at the small chamber.

3. Push a brand button.

4. Press and hold the pour/cancel button until the syrup is in the appropriate syrup window.
   - If the ratio levels are correct, move to the next brand.
   - If levels are incorrect, adjust the flow controls.

If the ratio is off, adjust the appropriate syrup module.

In the illustration at right, adjust the flow control in position S10 if the syrup level is too high or too low on push button #10.

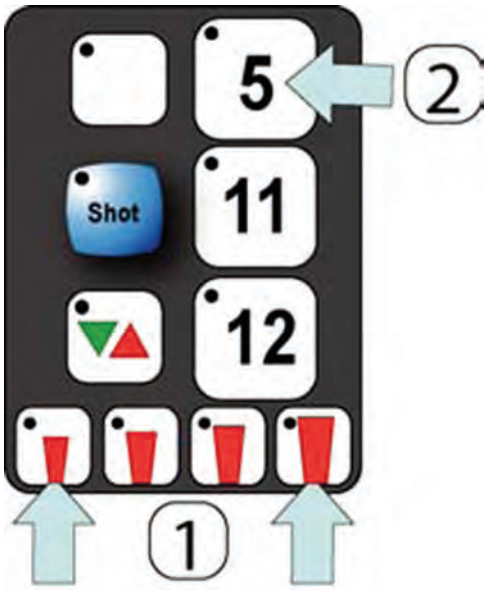


Portion Control Programming (MVU)

1. Press the S and XL at the same time for five seconds to enter portion setting mode.
   -The Pour/Cancel light will illuminate and the shot light will blink 2 times.

2. Press the brand button.
   -The selected brand's LED will illuminate.
   -Multiple brands can be set at the same time.

Example: Choose buttons 5 and 11.
- The first button illuminated will stay on and that brand will pour.
- The second button will flash indicating that the portion will be set for that brand as well.



Note:
The LED will blink twice and turn off if the brand has been programmed as a flavor shot only. You will need to reprogram the brand as a drink prior to setting the portion.

3. Fill cup with 1/3 full with ice and place a cup under the nozzle.

4. Push and hold a drink ”size” button until the cup is full.
   -Repeat this step for each of the other size cups.
   -Select other brands and repeat these steps for each of them.

5. Press the “Pour Cancel” button to save the programming and exit programming mode.

Note:
The most recent programming entries will be saved automatically after 60 seconds if no other buttons are pressed.

Check/Adjust Flavor Shots – Self Serve
Flavor shots should be adjusted so that approximately ten ml of syrup pours each time the button is pushed. To check dispensed amount:

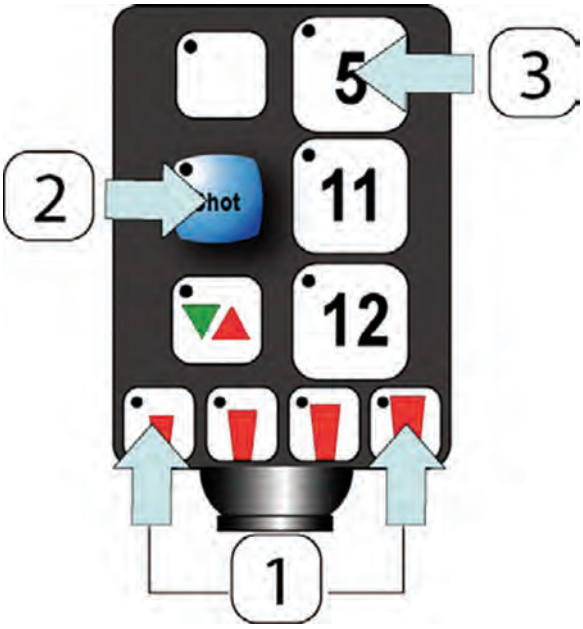
1. Use a 50 ml graduated cylinder.

2. Place the graduated cylinder under the nozzle.

3. Press the Flavor Shot button one time
   - Approximately ten ml should dispense. If more or less than ten ml, adjust the flow control.

Check/Adjust Flavor Shots – Crew Serve

Flavor shot portions can be adjusted using the MVU touchpad and a graduated cylinder. Refer to your project plan to determine shot size for your customer. To adjust flavor shots:



1. Press the small and extra large cup buttons at the same time.

-Hold for 5 seconds or until the pour/cancel button illuminates.

2. Press the shot button to activate the brands for shots.

3. Press a “Brand” button to activate for shot mode.
- The brand button will illuminate.

Note:
If brand is not enabled for shot mode, the LED light will blink twice and turn off.

4. Place a 50 ml graduated cylinder under the nozzle.
5. Press and hold XL portion button until the portion size is achieved.
   -Target is 30 ml (1 oz) of syrup for an XL portion.
   -Repeat steps 2 through 4 for each of the other brands.

Note:
The other size buttons are proportioned based on the amount poured in XL mode:

6. Press “Pour Cancel” button to save.

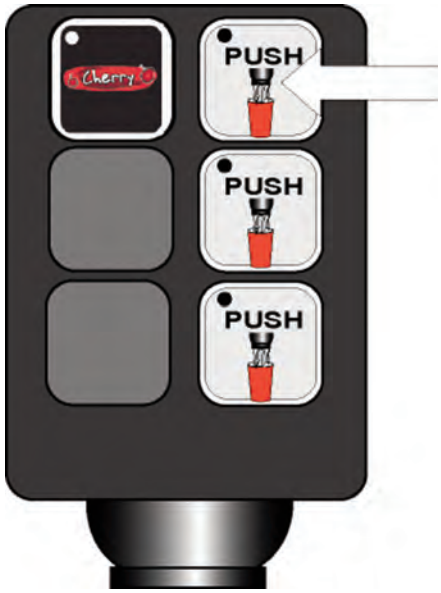
Note: You have 60 seconds to save the programming after all changes have been made or the programming will save automatically.

Dispenser Operation

Customer Self-Serve Beverage Dispensing

Flavor Shot Dispensing

1. Place cup under MVU nozzle.
2. Press and hold the “PUSH” button (next to the branded flavor shot).
   -10 ml will pour from the nozzle.
   -Press button again to add additional shot.



Beverage Dispensing

1. Place cup under MVU nozzle.
2. Press and hold the “PUSH” button for the brand until the cup is filled.
   -The beverage continues to pour until the button is released.

Note:
If the button is pressed continuously, it will time out and stop pouring after ten seconds.

Crew Serve Beverage Dispensing with Portion Control

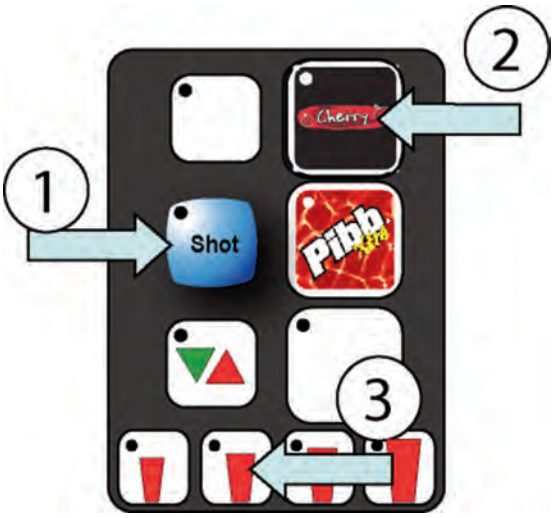
Normal dispense mode is active directly after start-up and when returning from programming mode. To operate the dispenser in crew serve mode:

Dispense Flavor Shot

1. Press the “Shot” button.
   - “Shot” LED will illuminate.
   - The “Shot” LED will stay illuminated (active) for 10 seconds.

2. Press brand button.
   - Button stays active for 10 seconds.
   - Press again to deactivate.

3. Press portion size button to dispense flavor shot.
   - Press “Pour/Cancel” to stop dispense mode.

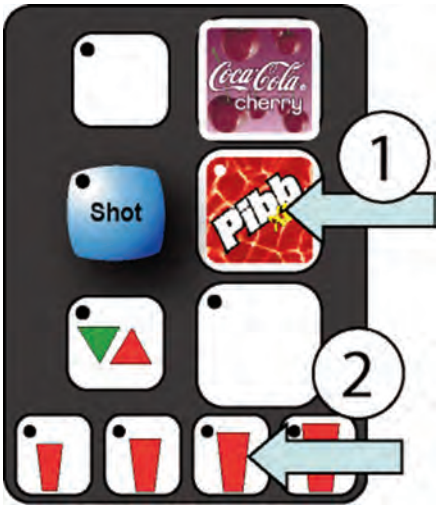


Dispense Beverage

1. Press the brand button.
   - Button stays active for 10 seconds or until another brand is pressed.

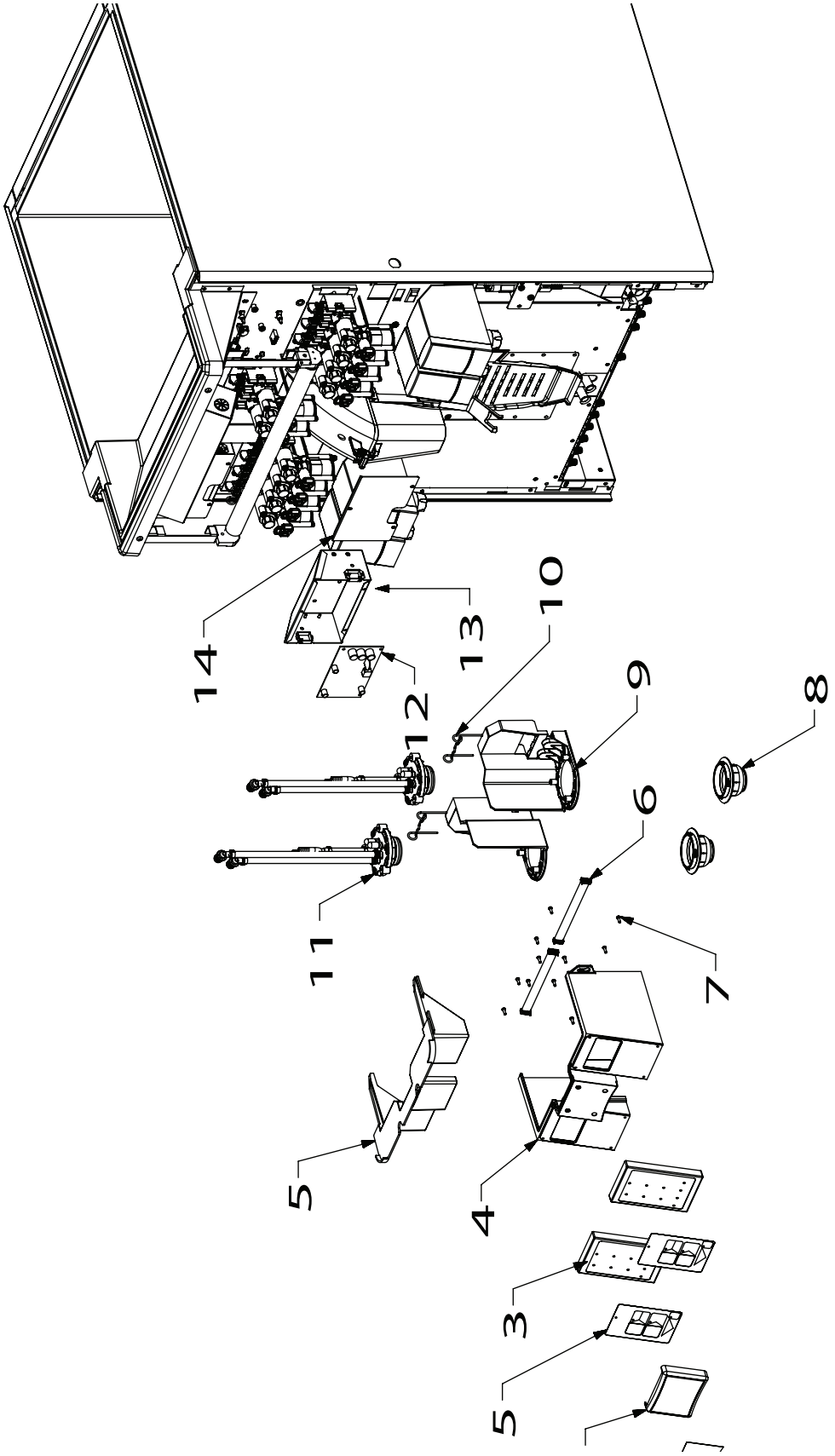
2. Press a portion control size button.
   - Beverage will pour.

Note:
Press a brand, then pour cancel to manually dispense a beverage.(Not illustrated)
   - Button stays active for 10 seconds or until another brand is pressed.
   - The beverage continues to pour until the button is released.



Notes

5.3 MVU Assembly



5.3 MVU Assembly

Item	Part No.	Description
1	06-3141	Label, MVU, Merchandiser
2	05-2711	Cover, Merchandiser, MVU
3	52-3176	Panel Assy, PCB, MVU
4	05-2710	Cover, Base, MVU
5	05-2761/01	Light Shield, MVU
6	52-3188	Harness, MVU, Ribbon
7	04-0571	Screw, 4-20 x .375
8	05-2699	Nozzle, Outer
9	05-2713	Bracket, Nozzle, Left
or		
	05-2714	Bracket, Nozzle, Right
10	03-0233	Retainer, LEV
11	49-0319	Sub-Assy, Nozzle, MVU
12	64-5011	PCB Assy, MVU Controller
13	30-10200	Electrical Housing, Bevariety™ ACIB
14	30-10202	Cover, Electrical Housing
15	06-3094	Crew Serve, 3 Flavor
	06-3095	Crew Serve, 3 Flavor, No Water
	06-3096	Self Serve, 3 Flavor,
	06-3097	Self Serve, 3 Flavor, No Water
	06-3115	Self Serve, 2 Flavor
	06-3116	Self Serve, 2 Flavor, No Water

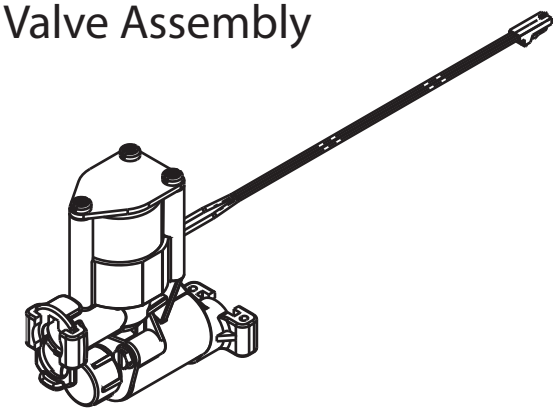
5.4 Lancer Flow Control Valve (LFCV) With MVU Only

LFCV Valve Assemblies

82-3820 LFCV, Bonus Injector

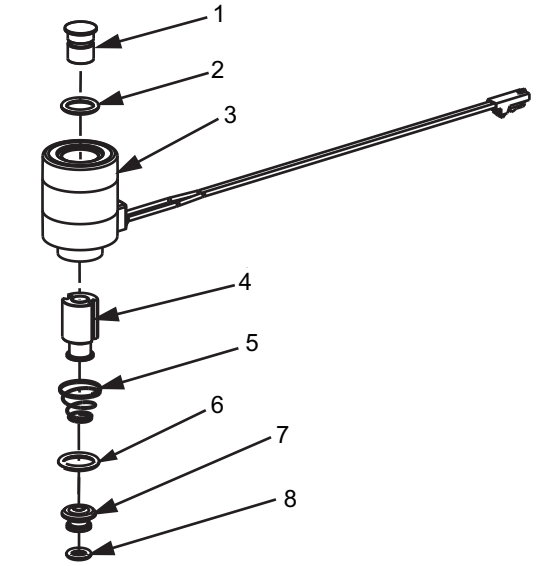
82-3823 LFCV, 3.0 - 4.5, Syrup Assy

82-3824 LFCV, 3.0 - 4.5, Soda/Water Assy



LFCV Spare Parts

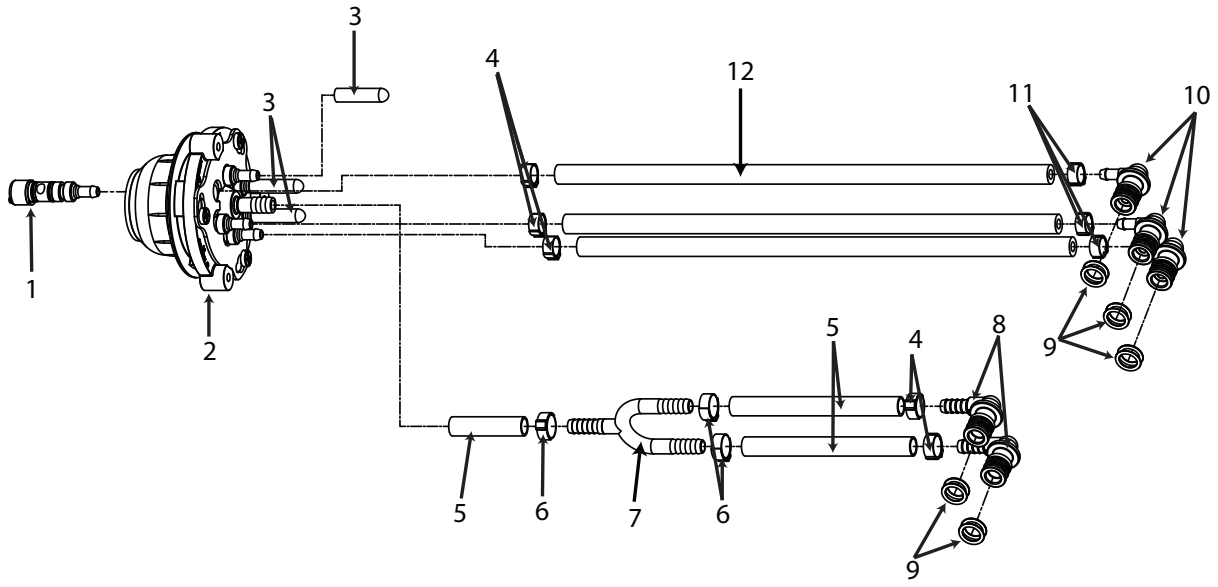
1	10-0430/05	Plug Nut
2	02-0538	O-Ring
3	12-0364/04-01	Coil, LFCV
4	23-1301/01	Core Seal Assy
5	03-0180/02	Spring, Core
6	02-0109	O-Ring
7	05-1745/02	Seat, LFCV
8	02-0133	O-Ring



LFCV Kit

82-4020 LFCV Rebuild Kit

5.5 Nozzle Assembly



Item	Part No.	Description
1	54-0466	Injector Assy, Syrup, Multiflavor Nozzle
2	54-0465	Nozzle Assy, Multiflavor Nozzle
3	04-1563	Cap, Multiflavor Nozzle, Vinyl, 1 x .206
4	07-0446	Clamp, Stpls, Oetkr
5	08-0105	Tubing, B44-4x, 1/4 ID X .063 Wall
6	07-0437	Clamp, Stpls, Otkr
7	01-2126	U-Bend, SS, 1/4 Barb
8	05-1866	Elbow, .5 Dole X .25 Barb, Pls
9	02-0089	O-Ring, 2-012, 97-0999
10	05-1385	Elbow, .5 Dole X .2
11	07-0443	Clamp, Stpls, Oetkr
12	08-0391	Tubing, B44-4x, .187 ID X .312 OD

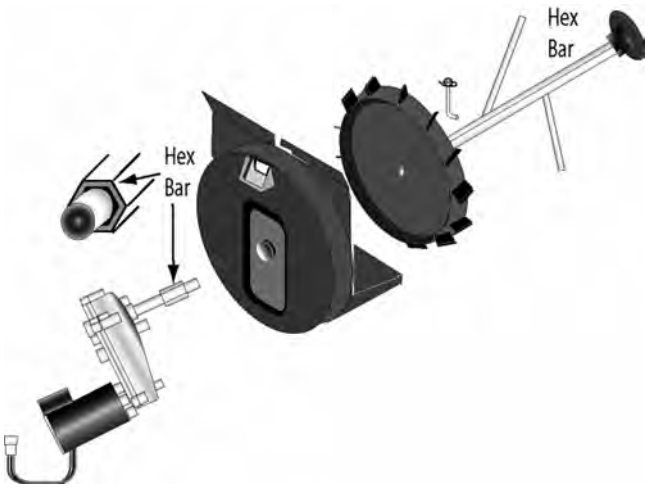
6. Service/Machine Operation

6.1 Ice Dispensing

Ice is stored in the ice hopper and a hex auger and motor drive shaft is turned by an auger motor periodically to stir the ice. In addition, the auger pushes ice to the cold plate and also to the dispense chute where it is directed into drinks

Note: The only ice recommended is cube ice from an ice machine. The ice used should be approximately 32° F.

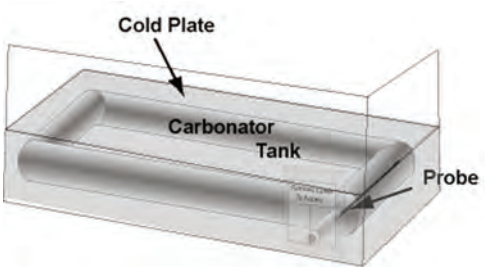
Types of ice to avoid:
Crushed ice, Pellets – Melts too quickly
Freezer ice – Can freeze both water and diet syrups. Can damage the auger and motor as well.

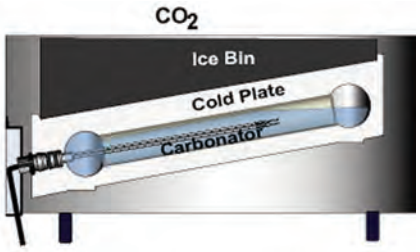


6.2 Beverage Cooling

The unit uses a basic aluminum cold plate with integrated picture frame carbonator tank. It works as long as two conditions are met:

1. Ice needs to be on the cold plate.
2. The drain should run freely.



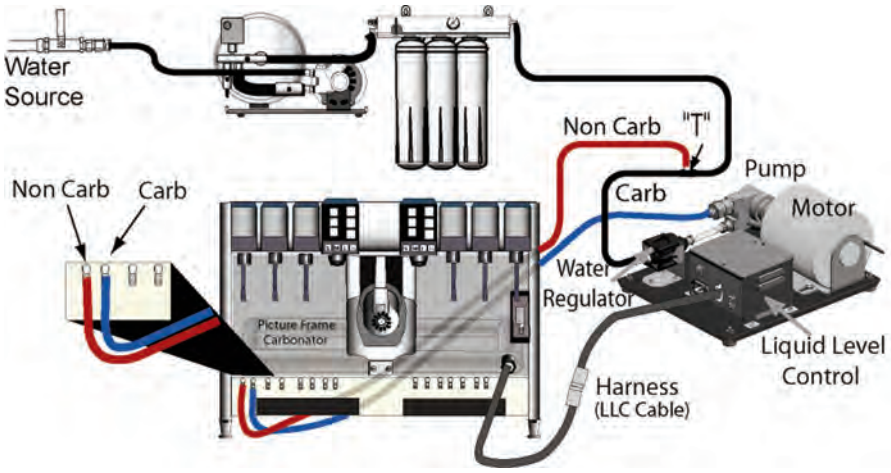


6.3 Water Carbonation

The water pump, located on the pump platform, pumps pressurized water to the cold plate.
The pump assembly consists of the following items:

- Pump
- Motor
- Liquid level control
- Water pressure regulator

The water is chilled in the cold plate prior to entering the picture frame carbonator tank. It is sprayed (atomized) into the carbonator tank through a small orifice where it absorbs CO2 and becomes soda water. **Note:** A water booster must be used on all applications where incoming supply is less than 40 psig.

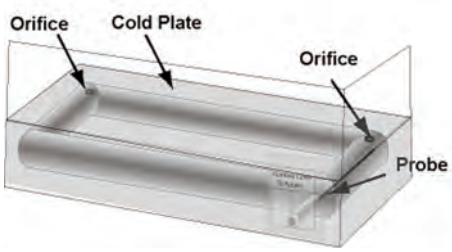


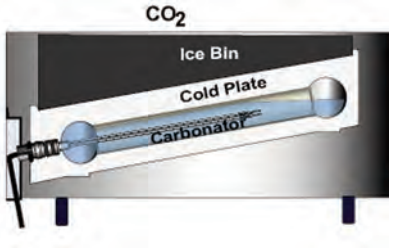
6.4 Carbonation System

The carbonating system consists of the following components:

• **Electrode** - When the water level in the carbonator tank falls below the tip, the liquid level control turns on the pump motor for 5.5 seconds. If the water level does not reach the tip, the motor continues to run in 5.5 second intervals until the water touches the tip. Once the water reaches the tip, the motor will stop running at the end of the 5.5 second interval. The black wire and the green (ground) wire complete the circuit inside the tank.

• **Picture Frame Carbonator Tank** (embedded in cold plate - 131 oz capacity)



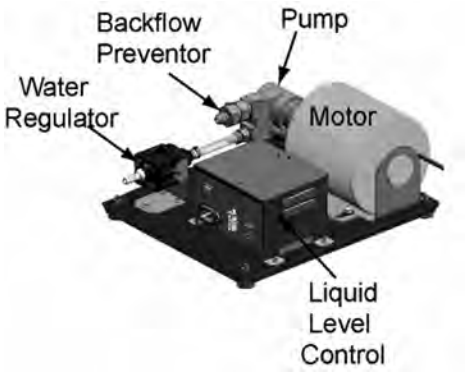


• **CO_2 Check Valve** - Prevents carbonated water from backing into the CO_2 system.
• **Backflow Preventor** - Prevents carbonated water from backing into building's water supply.
• **Relief Valve** - Vents the carbonator when pressure exceeds 240 psig.

Carbonator Pump - Consists of the following components:

• **Pump Motor** - Standard 1/3 hp motor
• **Water Pump** - Standard 100 GPH 250 psig bypass
• **Liquid Level Control** - Operates as a timer. When liquid level drops below the probe tip, the control turns on the carbonator pump motor for 5.5 seconds and then shuts off. The liquid level control will time out after 3 minutes of cycling on and off if probe fails. A light on the liquid level control will blink as well.

• **Water Pressure Regulator** – The water regulator restricts the incoming water pressure to 50 psig for water entering the carbonator tank. Since the CO_2 pressure is set to 75 psig, this creates more than enough pressure difference between the water and CO_2 gas to create soda water.



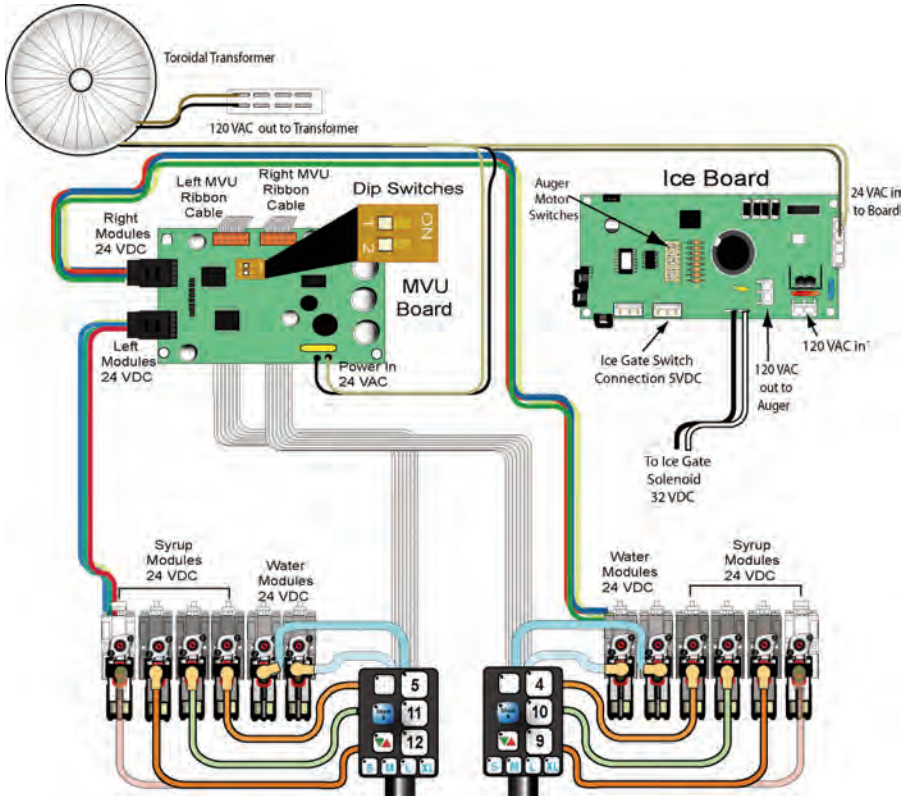
6.5 Electronics

The MVU flow control/solenoid (uses LEV flow controls), the ice gate, and the auger motor are all controlled by the unit's two pc boards.

There is one Toroidal transformer installed on the ACIB. The transformer converts 120 VAC to approximately 24 VAC for applications on both boards.

Power (120 VAC) is sourced from a terminal strip for both the transformer and the Ice Board. The Ice Board uses 120 VAC to power the auger motor. The ice board also converts 24 VAC from the transformer (rectifies) to DC for use with the ice gate solenoid and switch.

The MVU board controls all beverage dispensing functions. It receives 24 VAC from the transformer and rectifies it to 24 VDC to operate the MVU dispensing valves. A ribbon cable connects each touchpad to the board, and a wire harness is used for each MVU to power the syrup and water solenoids.



6.6 General Troubleshooting

Troubleshooting focuses on two key areas of the dispenser, the carbonation system and the electronics as the remainder of components such as LEV's, ice gate, auger, etc are standard on most new Ice Combo's.

Issue	Cause	Resolution
1. Push chute and nothing happens.	1. Dispenser not connected to power source. 2. Microswitch malfunctioning. 3. Wiring harness not plugged in.	1. Connect dispenser to power source. 2. Replace microswitch. 3. Plug in wiring harness.
2. Push chute, trap door opens but motor does not run.	1. Wiring harness not plugged in. 2. PC board malfunctioning. 3. Motor malfunctioning.	1. Plug in wiring harness. 2. Replace PC board. 3. Replace motor.
3. Push chute, motor runs but trap door does not open.	1. Solenoid not connected to PC board. 2. Solenoid malfunctioning.	1. Tighten appropriate retaining screws. 2. Replace appropriate o-rings.
4. Push chute, trap door opens, motor runs, but no ice dispenses.	1. Dispenser is out of ice. 2. Agitator pin is missing or damaged.	1. Fill unit with ice. 2. Replace agitator pin.
5. Valves do not operate.	1. Toggle switch is off. 2. Transformer tripped. 3. Unit not plugged in.	1. Turn toggle switch on. 2. Reset transformer. 3. Plug in unit.
6. Water in ice bin.	1. Coldplate drain is obstructed. 2. Drain hose is kinked.	1. Remove drain hose from fitting to obtain access to drain. 2. Replace drain hose.

6.7 Troubleshooting - Light Emitting Diodes (LEDs)

Light Emitting Diodes (LEDs) are provided on the PC Board to aid in troubleshooting electrical difficulties. Referring to the wiring diagram included in this manual (also affixed to the electrical box cover), the following information can be obtained from the LEDs.

1. LED D3
This light is on when the ice dispense switch is activated. If the chute is depressed and the light does not turn on, check to see if the wire harness is connected or if the dispense switch is defective.

2. LED D4
This light is used on units with lid interlock switches. This light should always be lit. If it is not, check the Lid Interlock Jumper (black wire with 4 pin white connector).

3. LED D5
This light is on when +5VDC is present at the circuit board. It should be lit whenever the unit is connected to a power source. If the light is off, check to see if the internal circuit breaker on the transformer has tripped. If it has tripped, it can be reset by depressing the switch on the top of the transformer.

4. LED D6
This light is on when +32VDC is present at the circuit board. It should be lit whenever the unit is connected to a power source. If the light is off, check to see if the internal circuit breaker on the transformer has tripped. If it has tripped, it can be reset by depressing the switch on the top of the transformer.

5. LED D7
This light flashes when there is no ice between the sensors in the ice bin. If the bin is empty and the light is not flashing, check all wiring harnesses.

6. LED D8
This light is on when the solenoid is activated. When the chute is depressed, this light should turn on. If it does not, check to see if the solenoid leads are connected to the PC board or damaged, check continuity of solenoid. Replace if defective.

7. LED D9
This light is on when the motor is activated. When the chute is depressed, this light should turn on. If it does not, check to see if the motor harness is connected to the PC board or damaged, check continuity of motor harness and motor. Replace if defective.

6.8 Carbonator Troubleshooting

Issue	Possible Cause	Resolution
CO_2 only dispensed at valve.	Carbonator motor will not start.	Unplug probe cable from the LLC. If motor starts, replace probe. If motor doesn't start, verify 120 VAC at load and line terminals of LLC. If you have 120 VAC on line and load, replace motor. If you have 120 VAC on line but not at load, replace LLC. No VAC at either, check service cord and source.
Water sprays out relief valve.	Carbonator cycles on and off continuously in five second intervals and times out after 30 continuous cycles.	Unplug probe cable from LLC cable and jumper the green and black wires with a conductor on the LLC side of the probe cable and plug in motor. If motor runs, inspect probe cable at LLC to ensure proper connection. Replace LLC if Black and Green wires are properly connected. If motor doesn't run, ensure the Black and Green wires are making contact in the connector. If they are, replace the probe.
Drinks foam excessively.	Warm drinks CO_2 pressure set too high. Dirty nozzles.	No ice on cold plate; refill bin. Adjust HP CO_2 pressure to 75 psig. Clean nozzles as necessary.

6.8 Carbonator Troubleshooting Continued

Issue	Possible Cause	Resolution
Drinks taste flat - too little carbonation.	Low or no CO_2 pressure. Procon pump worn, not atomizing water. Water pressure too high.	Set CO_2 pressure to 75 psig or replenish supply. Replace pump and/or motor. Check pressure at pump platform regulator outlet, replace regulator if over 50 psig.
Pump runs and times out after 30 cycles.	Probe is malfunctioning.	Unplug probe. Pump motor should run. If it does, replace probe. If it doesn't run, replace liquid level control.

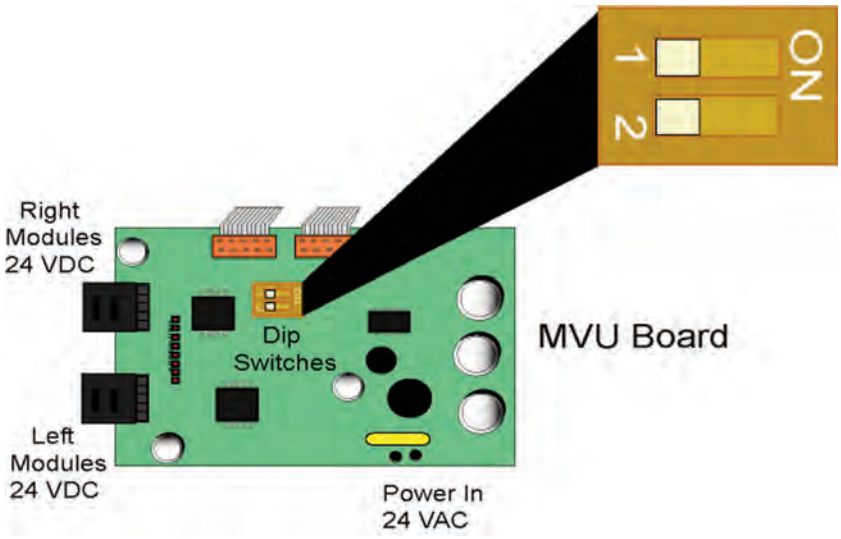
6.9 Electronics Troubleshooting

The electronic boards on the Bevariety™ dispenser have only a few connections and are they are relatively easy to service; however, you have little room to work with at the top of the beverage dispenser so it is best to remove the board from its standoff brackets if any connections need to be made. **Note:** Handle the boards with care as they damage easily.

Issue	Possible Cause	Resolution
No syrup or water on either MVU.	No power to MVU board. Malfunctioning MVU board.	Check for lights on the MVU and/or MVU board. If no lights, check for power from the transformer (24-28 VAC - load side). Reset if tripped. If 24 VAC coming to board and no lights showing, replace board.
Water only dispensing from one MVU location when button is pressed. BIB has been checked.	Broken wire on harness connecting to MVU or bad pin. Malfunctioning solenoid assembly. Malfunctioning board.	Unplug probe. Pump motor should run. If it does, replace probe. If it doesn't run, replace liquid level control.

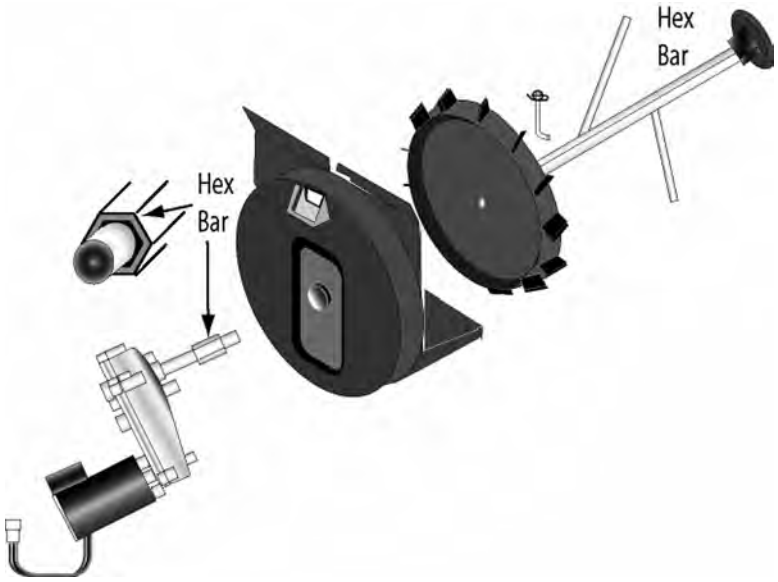
6.9 Electronics Troubleshooting Continued

Issue	Possible Cause	Resolution
Syrup only dispensing on MVU.	No water to MVU but water pouring at LEVs.	Check for 24 VDC at water solenoid. If 24 VDC present, repair solenoid assembly. If 24 VDC no present, troubleshoot board and wiring harness.
Portion control board not working.	MVU dip switch in wrong position.	Set switches to correct position.



6.10 Ice Delivery System

The unit comes equipped with the standard ice handling mechanism found on the 4500 series ACIB dispenser. Agitator/wheel assembly breaks up ice bridging and delivers ice to chute assembly. A snap action switch activated by the ice lever provides power to the auger motor. This is a DC controlled switch that interrupts the power to the board to activate the motor.



6.11 Ice Board Settings

Automatic Agitation
The dispenser is equipped with automatic agitation. It may activate unexpectedly. Do not place hands or foreign objects in the ice storage compartment. Unplug dispenser from the power source when it is being serviced, cleaned, or sanitized.

Each ice beverage dispenser is equipped with automatic agitation for the ice bin. The unit is shipped with timing set at two seconds ON every sixty minutes. Referring to the tables on the wiring diagram included in this manual (also affixed to the electrical box cover), the automatic agitation timing can be changed as follows. A set of DIP switches is provided to control the timing and low ice control.

1. DIP#3 & #4

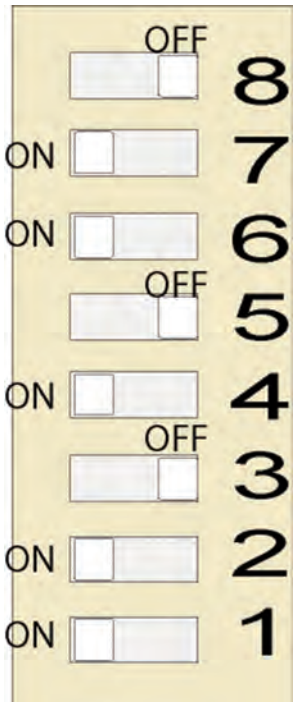
These switches control the ON time for automatic agitation. By referring to the table and setting the switches as shown, ON times from one (second to four seconds [in one second increments] can be obtained. EXAMPLE: For three seconds ON time, switch 3 should be in the ON position, and switch 4 should be in the OFF position. The unit is shipped with two seconds ON time.

2. DIP#5 through #8

These switches control the OFF time for automatic agitation. By referring to the table and setting the switches as shown, OFF times from ten minutes to 150 minutes (in ten minute increments) can be obtained. For example: For 40 minute OFF time, switch 5 should be in the OFF position, switch 6 should be in the ON position, switch 7 should be in the OFF position, and switch 8 should be in the OFF position. The unit is shipped with 60 minute OFF time. To turn the agitation completely off, set switches 5 through 8 all OFF.

The Ice board can be set to operate the auger motor up to four seconds agitation time with intervals from ten minutes up to every 150 minutes. It comes pre-set from the factory with one two-second rotation every 60 minutes. The switch codes on the PC board are as follows: (**Note:** switches illustrated are factory pre-set.)

Switch 1: Not used
Switch 2: Not used
Switches 3&4: Agitation Times (Shown at two-second setting)
Switches 5 – 8: Agitation Frequency (Shown at 60 minute setting)

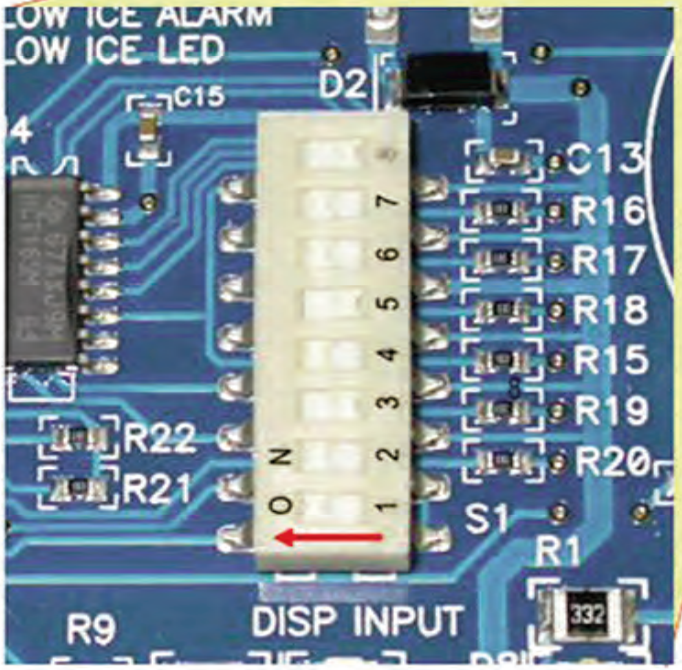


X = On
O = Off

Switch Number				Agitation Frequency
5	6	7	8	
O	O	O	O	No Agitation
O	O	O	X	10 minutes
O	O	X	O	20 minutes
O	O	X	X	30 minutes
O	X	O	O	40 minutes
O	X	O	X	50 minutes
O	X	X	O	60 minutes
O	X	X	X	70 minutes
X	O	O	O	80 minutes
X	O	O	X	90 minutes
X	O	X	O	100 minutes
X	O	X	X	110 minutes
X	X	0	O	120 minutes
X	X	O	X	130 minutes
X	X	X	O	140 minutes
X	X	X	X	150 minutes

Switch #		Agitation Time
3	4	
O	O	1 Second
O	X	2 Seconds
X	O	3 Seconds
X	X	4 Seconds

Switch 1	"Low Ice" LED Indicator
Switch 2	"Low Ice" Alarm
Switches 3-4	Agitation "On" Time
Switches 5-8	Agitation "Off" Time



Slide switch to left to turn on

X = On
O = Off

Swt. #		Agitation
3	4	On time
O	O	1 Second
O	X	2 Second
X	O	3 Second
X	X	4 Second

Cube Setting

Agitation On Time = 2 sec

Off Time = 60 min

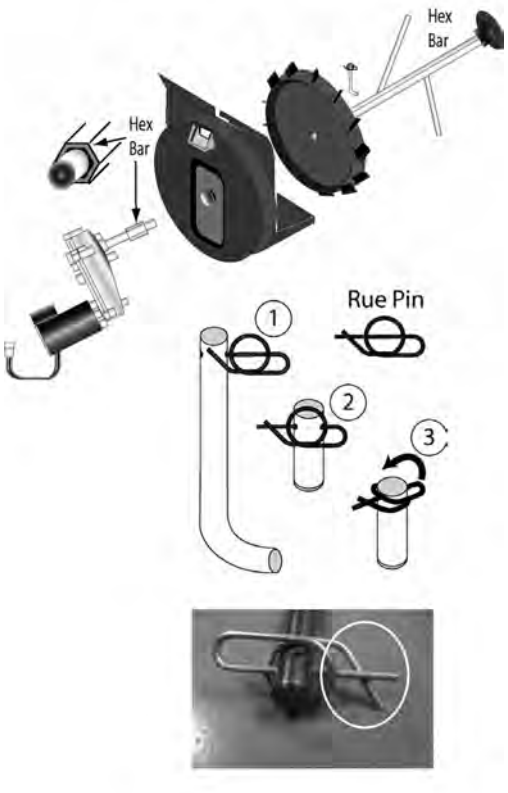
Switch #				Agitation
5	6	7	8	Off time
O	O	O	O	No Agitation
O	O	O	X	10 Minutes
O	O	X	O	20 Minutes
O	O	X	X	30 Minutes
O	X	O	O	40 Minutes
O	X	O	X	50 Minutes
O	X	X	O	60 Minutes
O	X	X	X	70 Minutes
X	O	O	O	80 Minutes
X	O	O	X	90 Minutes
X	O	X	O	100 Minutes
X	O	X	X	110 Minutes
X	X	O	O	120 Minutes
X	X	O	X	130 Minutes
X	X	X	O	140 Minutes
X	X	X	X	150 Minutes

6.12 Auger Motor Removal

Option 1: The auger motor/gear box can be
removed the traditional way by disconnecting the
auger from the motor. The steps are as follows:

1. Unplug the dispenser.
2. Remove Rue Pin from locking pin an pull locking pin out of auger.
3. Remove wires from switch.
4. Remove lower ice chute.
5. Spread ears on chute and pull down.
6. Remove splash panel.
7. Remove agitator motor cover plate (two screws).
8. Disconnect wire harness from auger motor.
9. Remove auger motor retaining bracket (four screws).
10. Pull out motor/gear box.

Reverse the steps to install a new motor/gear box.

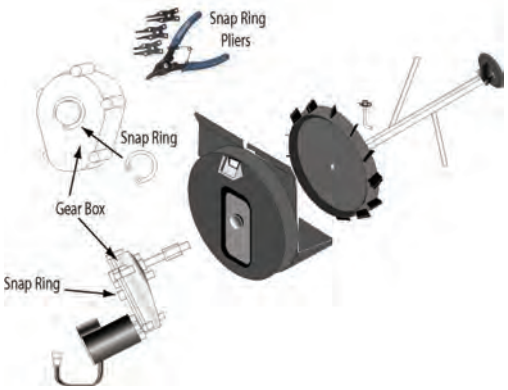


Note:
When reinstalling the motor, be sure to lock the rue pin (see diagram at right), and ensure that the shaft seal is in place.

Lock by moving bent end to opposite side of straight end. When locked, clip will appear as shown at right.

Option 2: The auger motor can be removed without entering the ice bin. This eliminates the need to remove any ice making equipment from the top of the dispenser or remove ice from the bin itself.

To replace the auger motor via the snap ring:

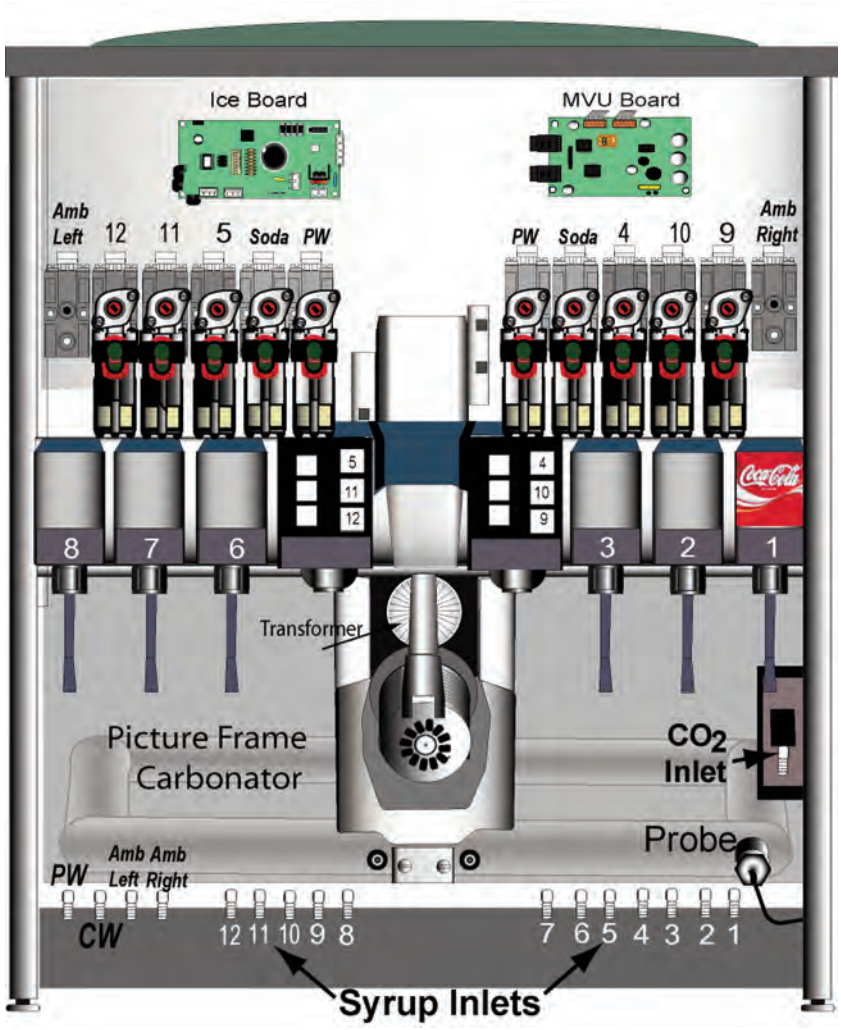


1. Unplug the dispenser.
2. Disconnect the wires to the ice chute lever switch.
3. Remove the ice chute by prying the ice chute pivot arms and pulling the lever/chute out from the bottom of the dispenser.
4. Remove the front splash panel.
5. Use a Phillips screwdriver to remove the two screws holding the agitator motor cover plate.
6. Unplug the agitator motor wiring harness.
7. Use a Phillips screwdriver to remove the screws from the auger motor retaining bracket.
8. Remove the snap ring securing the motor to the auger shaft using a snap ring pliers.
9. Pull motor out.
10. Insert new auger motor and install new snap ring using snap ring pliers.
11. Reinstall retaining bracket, plug in motor, install cover plate, splash plate, and ice chute.
12. Return unit to operation.

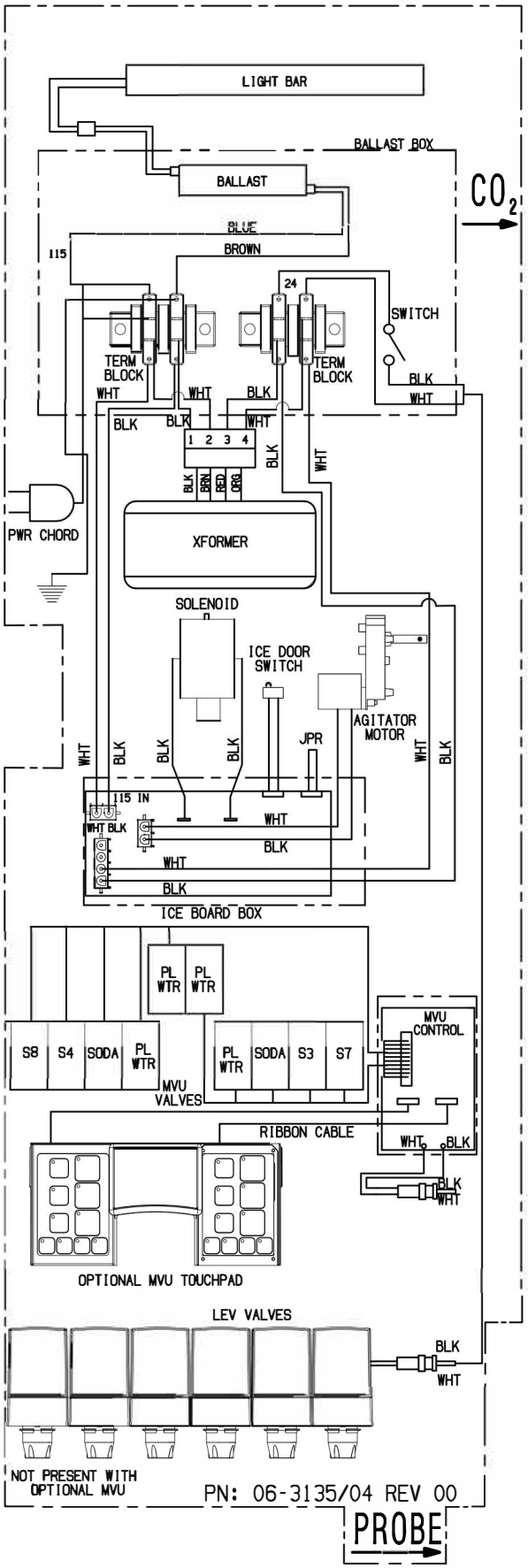
Note:
This process is very difficult as the motor shaft must be aligned with the auger.

Note:
Square key is loose on the motor shaft.

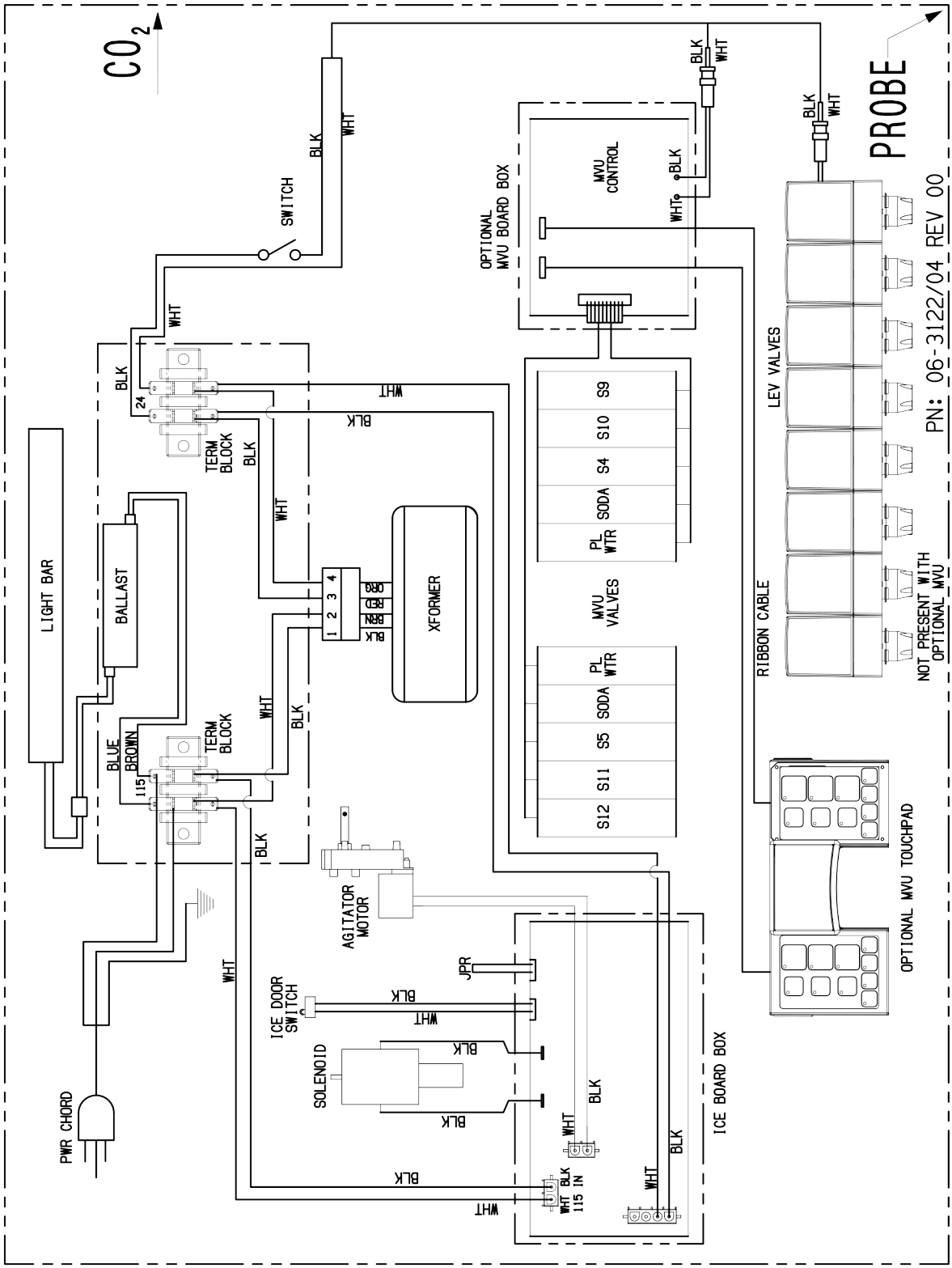
6.13 Dispenser Connections Valve Map Summary (CO_2, Water, and Syrup)



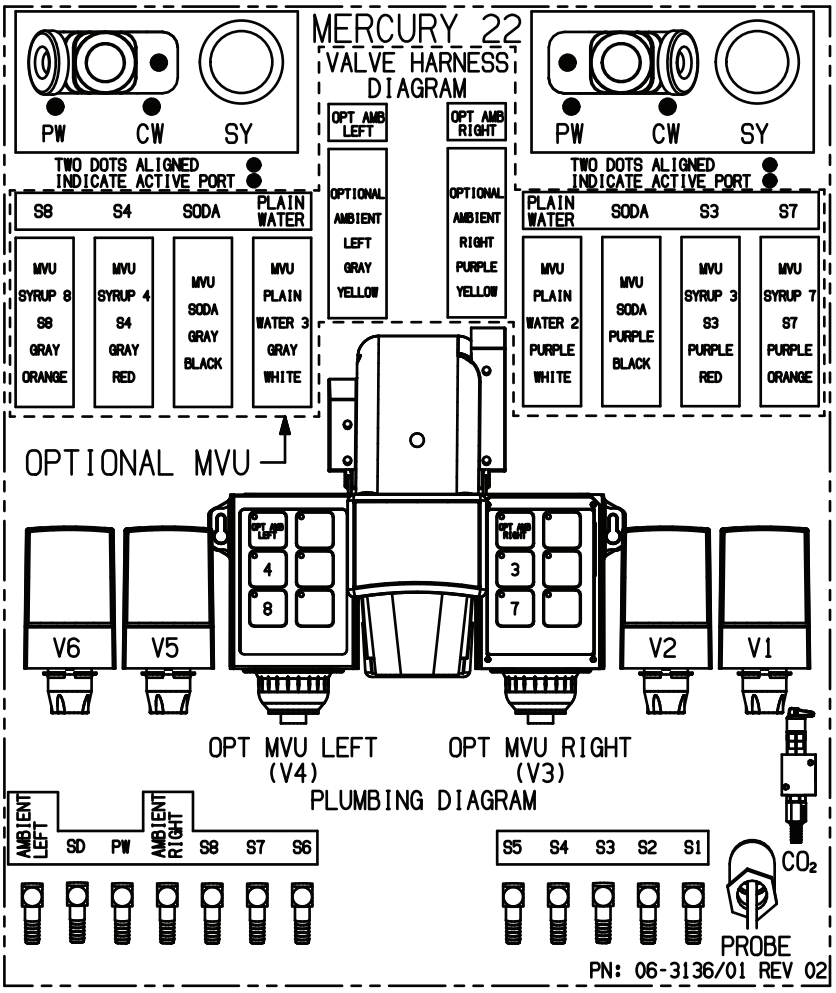
6.14 22” Bevariety™ ACIB Wiring Diagram - 115V/60Hz



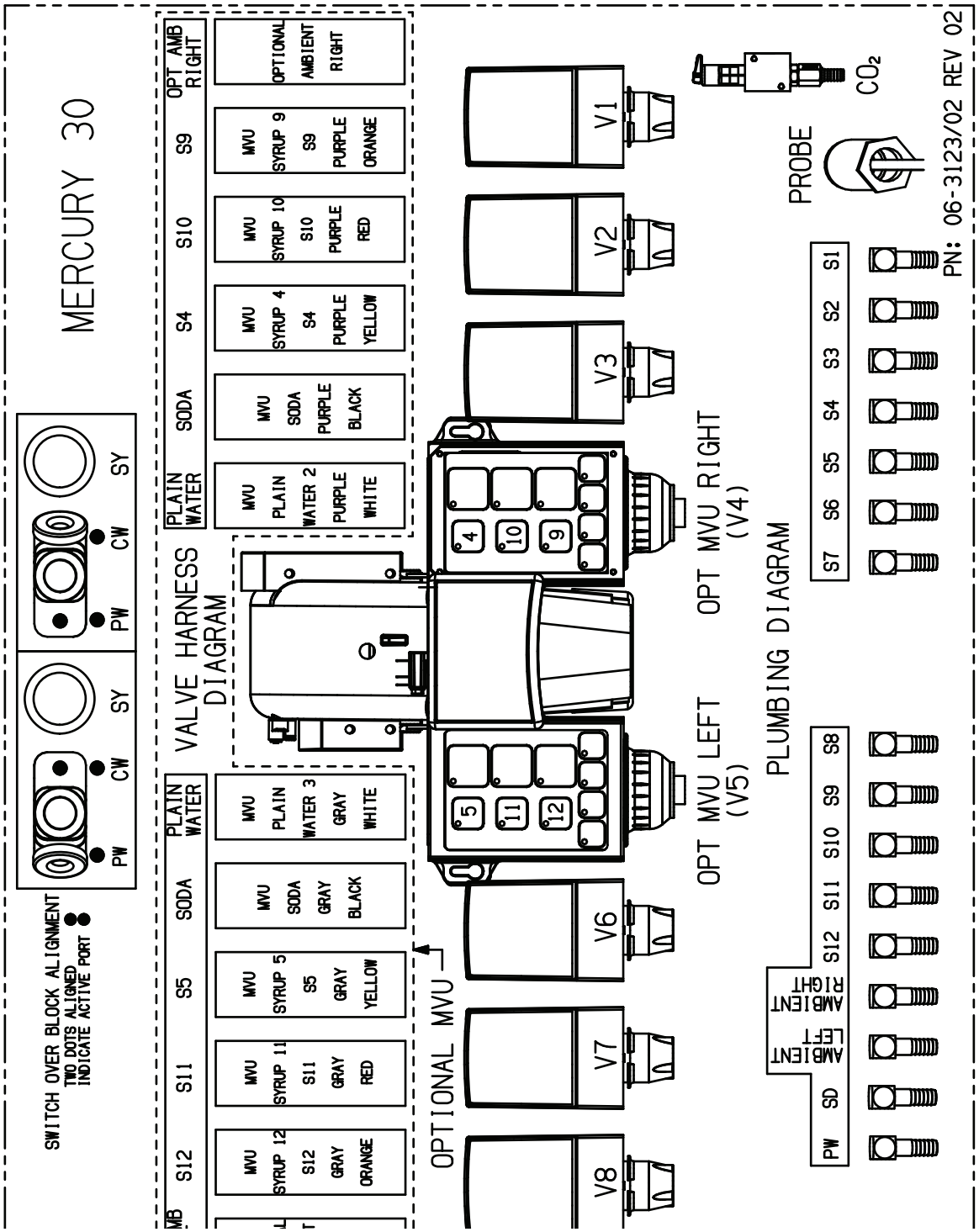
6.15 30” Bevariety™ ACIB Wiring Diagram - 115V/60Hz



6.16 22” Bevariety™ ACIB Wiring/Plumbing Diagram - 115V/60Hz



6.17 30” Bevariety™ ACIB Wiring/Plumbing Diagram - 115V/60Hz



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