

LANCER®

IBD CB Series 22"/25"/30"



Operation Manual

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ABOUT THIS MANUAL

This booklet is an integral and essential part of the product. Please carefully read the guidelines and warnings contained herein as they are intended to provide the user with essential information for the continued safe use and maintenance of the product. In addition, it provides **GUIDANCE ONLY** to the user on the correct services and site location of the unit.

The installation and relocation, if necessary, of this product must be carried out by qualified personnel with up-to-date safety and hygiene knowledge and practical experience, in accordance with current regulations.

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BEFORE GETTING STARTED

Each unit is tested under operating conditions and is thoroughly inspected before shipment. At the time of shipment, the carrier accepts responsibility for the unit. Upon receiving the unit, carefully inspect the carton for visible damage. If damage exists, have the carrier note the damage on the freight bill and file a claim with carrier. Responsibility for damage to the dispenser lies with the carrier.

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READ ALL SAFETY INSTRUCTIONS BEFORE USING THIS UNIT.

This manual contains important safety information and all applicable safety precautions must be observed. To reduce the risk of fire, electric shock, damage to the equipment or personal injury when using this unit all instructions/warnings on the product being used must be followed:

⚠ WARNING

Text following the Warning signal indicates a hazardous situation, which if not avoided, will result in death or serious injury. Be sure to read all Warning statements before proceeding with the installation.

⚠ CAUTION

Text following the Caution signal indicates a hazardous situation, which if not avoided, could result in death or serious injury. Be sure to read the Caution statements before proceeding with the installation.

⚠ ATTENTION

Text following the Attention signal addresses a situation that if not followed could potentially damage the equipment. Be sure to read the Attention statements before proceeding.

NOTE

Text following the Note signal provides you with information that may help you more effectively perform the installation procedures within this manual. Disregarding information will not cause damage or injury, however it may limit the performance of the dispenser.

IMPORTANT SAFETY INSTRUCTIONS

Intended Use

- The dispenser is for indoor use only
- This appliance is intended to be used in commercial applications such as restaurants or similar.
- This appliance should not be used by children or infirm persons without supervision.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Cleaning and user maintenance shall not be performed by children without supervision.
- This unit is not a toy and children should be advised not to play with the appliance.
- The min/max ambient operating temperature for the dispenser is 40°F to 105°F (4°C to 41°C).
- Do not operate unit below minimum ambient operation conditions.
- Should freezing occur, cease operation of the unit and contact authorized service technician.
- The maximum tilt for safe operation is 5°.
- This appliance must be installed and serviced by a professional.

Carbon Dioxide (CO₂)

- **WARNING:** Carbon Dioxide (CO₂) is a colorless, noncombustible gas with a light pungent odor. High percentages of CO₂ may displace oxygen in the blood.
- **WARNING:** Prolonged exposure to CO₂ can be harmful. Personnel exposed to high concentrations of CO₂ gas will experience tremors which are followed by a loss of consciousness and suffocation.
- **WARNING:** If a CO₂ gas leak is suspected, immediately ventilate the contaminated area before attempting to repair the leak.
- **WARNING:** Strict attention must be observed in the prevention of CO₂ gas leaks in the entire CO₂ and soft drink system.

Power

- Follow all local electrical codes when making connections.
- Check the dispenser name plate label, located behind the splash plate, for the correct electrical requirements of unit. **DO NOT** plug into a wall electrical outlet unless the current shown on the serial number plate agrees with local current available.
- Each dispenser must have a separate electrical circuit.
- **DO NOT** use extension cords with this unit.
- **DO NOT** 'gang' together with other electrical devices on the same outlet.
- **WARNING:** Always disconnect electrical power to the unit to prevent personal injury before attempting any internal maintenance.
- The resettable breaker switch should not be used as a substitute for unplugging the dispenser from the power source to service the unit.
- Only qualified personnel should service internal components of electrical control housing.
- **WARNING:** Make sure that all water lines are tight and units are dry before making any electrical connections
- If this dispenser is installed in an area that is susceptible to ±10% variation of the nominal line voltage, consider installing a surge protector or similar protection device.

Water Notice

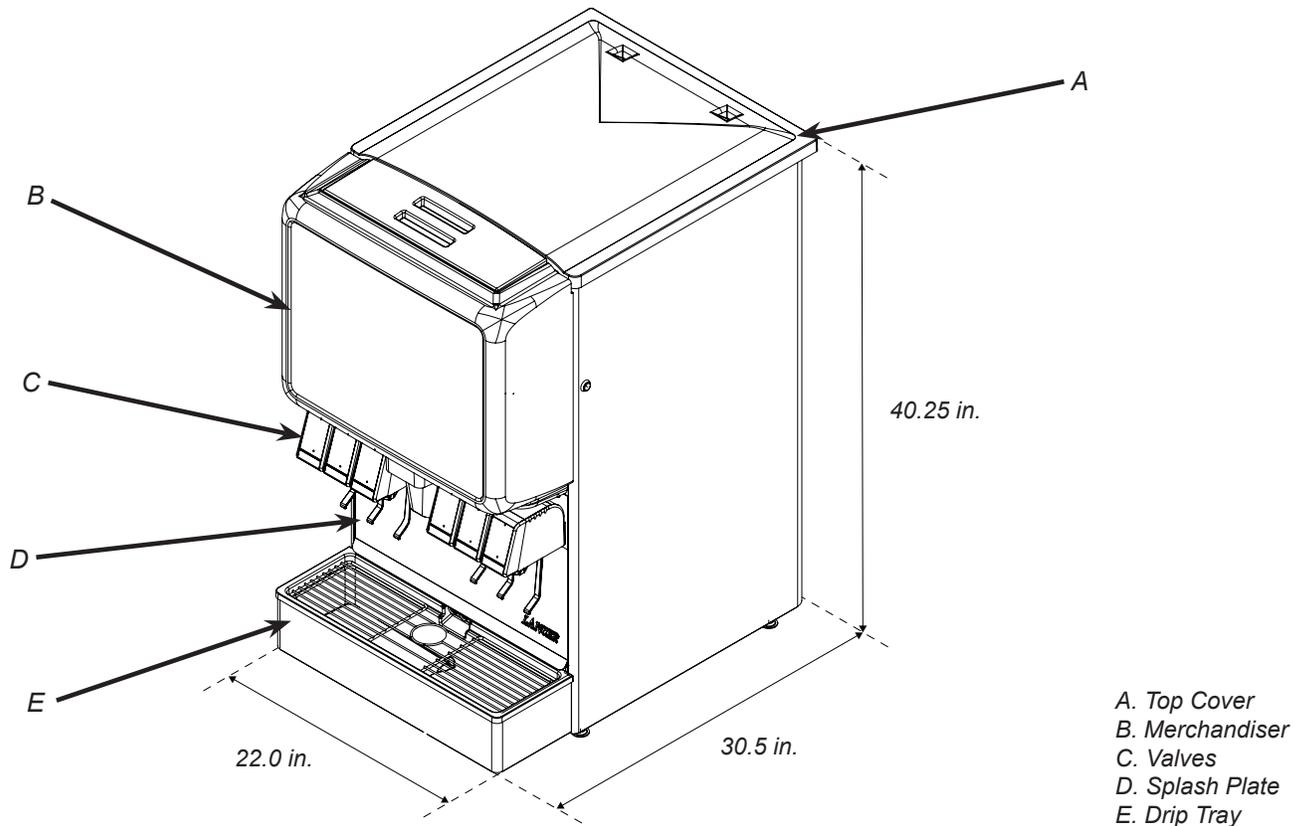
- Provide an adequate, potable water supply. Water pipe connections and fixtures directly connected to a potable water supply must be sized, installed, and maintained according to federal, state, and local codes.
- The water supply line must be at least a 3/8 inches (9.525 mm) pipe with a minimum of 25 PSI (0.172 MPA) line pressure, but not exceeding a maximum of 50 PSI (0.345 MPA). Water pressure exceeding 50 PSI (0.345 MPA) must be reduced to 50 PSI (0.345 MPA).
- Use a filter in the water line to avoid equipment damage and beverage off-taste. Check the water filter periodically, as required by local conditions.
- **CAUTION:** The water supply must be protected by means of an air gap, a backflow prevention device (located upstream of the CO₂ injection system) or another approved method to comply with NSF standards. A leaking inlet water check valve will allow carbonated water to flow back through the pump when it is shut off and contaminate the water supply.
- **CAUTION:** Ensure the backflow prevention device complies with ASSE and local standards. It is the responsibility of the installer to ensure compliance.

⚠ Automatic Agitation

- Units are equipped with an automatic agitation system and will activate unexpectedly.
- **CAUTION:** Do not place hands or foreign objects in the ice bin tank. Unplug the dispenser during servicing, cleaning, and sanitizing.
- **CAUTION:** To avoid personal injury, do not attempt to lift the dispenser without assistance. For heavier dispensers, use a mechanical lift.

SPECIFICATIONS AND FEATURES

IBD CB Series 22"



DIMENSIONS

Width: 22.0 inches (559 mm)
Depth: 30.5 inches (775 mm)
Height: 40.25 inches (1022 mm)

WEIGHT

Shipping: 310 lbs (141 kg)
Empty (without Ice): 280 lbs (127 kg)
Ice Capacity: 200 lbs (91 kg)

ELECTRICAL

115 VAC / 60 Hz / 3.6 Amps
230 VAC / 50-60 Hz / 1.5 Amps

PLAIN WATER SUPPLY

Min Flowing Pressure: 75 PSIG (0.516 MPA)

CARBONATED WATER SUPPLY

Min Flowing Pressure: 25 PSI (0.172 MPA)
Max Static Pressure: 50 PSI (0.345 MPA)

CARBON DIOXIDE (CO₂) SUPPLY

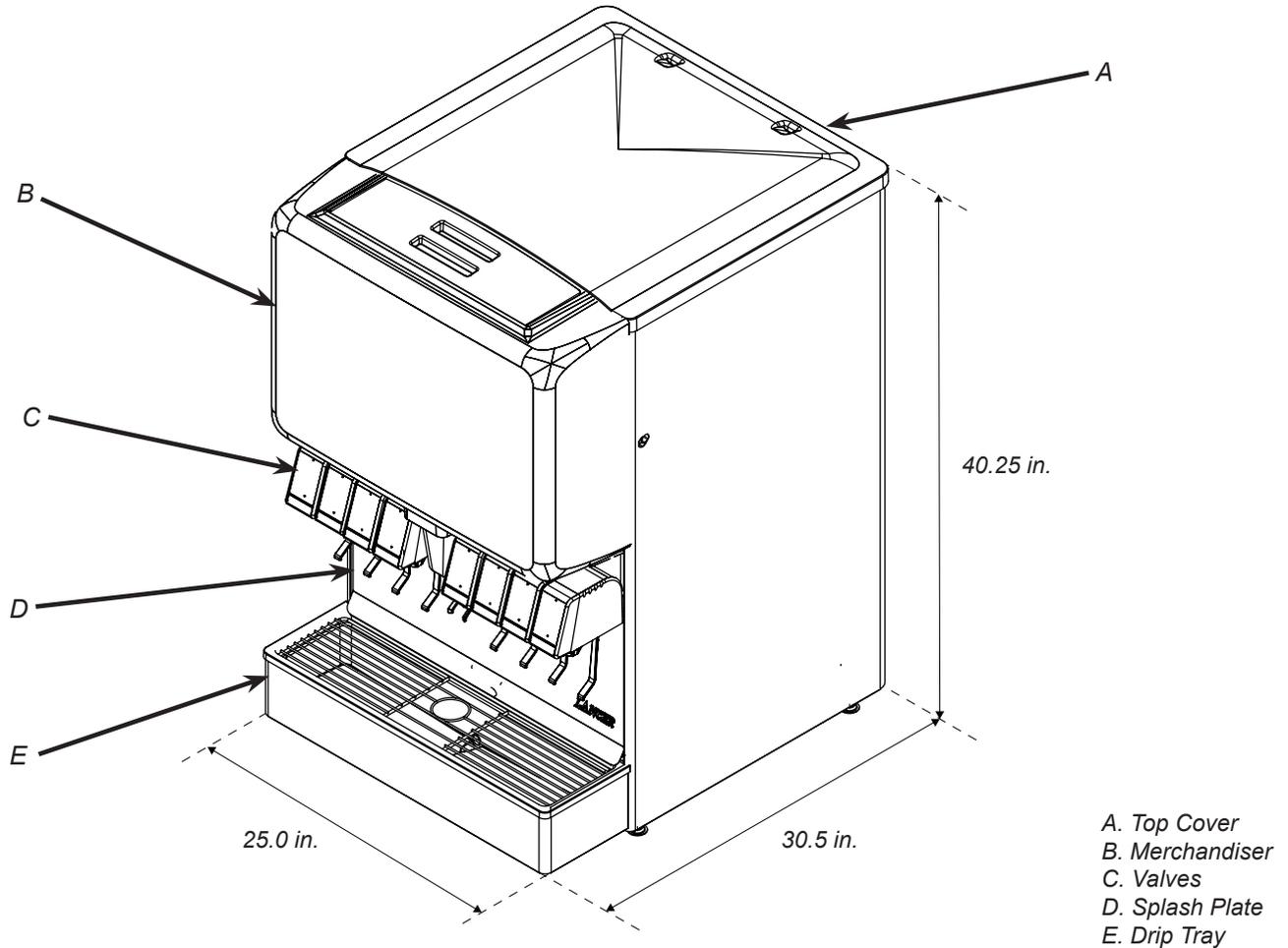
Min Pressure: 70 PSIG (0.483 MPA)
Max Pressure: 80 PSIG (0.552 MPA)

FITTINGS

Carbonator Inlet: 1/2 inch barb
Plain Water Inlet: 3/8 inch barb
Brand Syrup Inlets: 3/8 inch barb
CO₂ Inlet: 3/8 inch barb

This unit emits a sound pressure level below 70 dB

IBD CB Series 25"



DIMENSIONS

Width: 25.0 inches (635 mm)
Depth: 30.5 inches (775 mm)
Height: 40.25 inches (1022 mm)

WEIGHT

Shipping: 331 lbs (150 kg)
Empty (without Ice): 295 lbs (134 kg)
Ice Capacity: 234 lbs (106 kg)

ELECTRICAL

115 VAC / 60 Hz / 3.6 Amps
230 VAC / 50-60 Hz / 1.5 Amps

PLAIN WATER SUPPLY

Min Flowing Pressure: 75 PSIG (0.516 MPA)

CARBONATED WATER SUPPLY

Min Flowing Pressure: 25 PSI (0.172 MPA)
Max Static Pressure: 50 PSI (0.345 MPA)

CARBON DIOXIDE (CO₂) SUPPLY

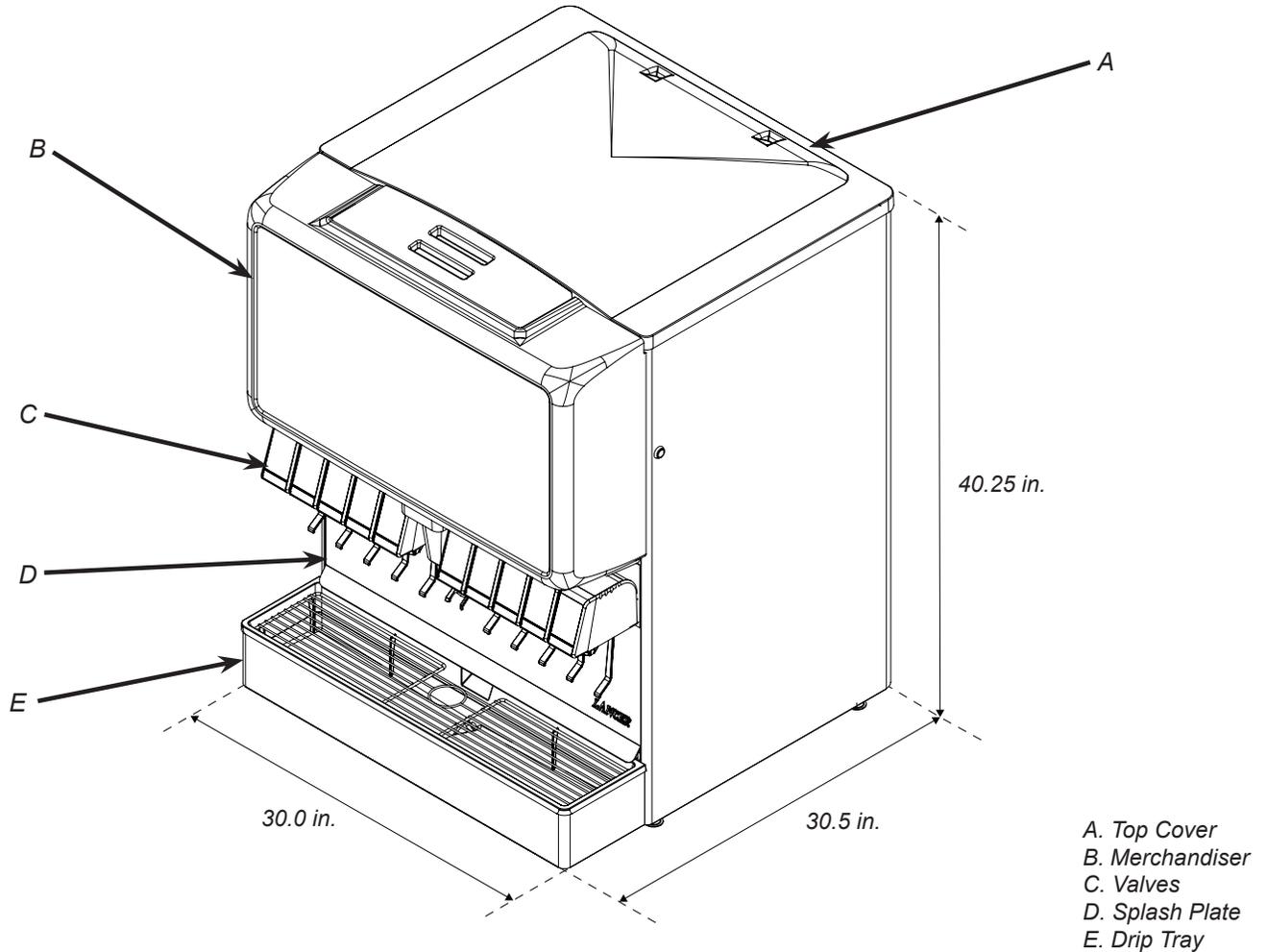
Min Pressure: 70 PSIG (0.483 MPA)
Max Pressure: 80 PSIG (0.552 MPA)

FITTINGS

Carbonator Inlet: 1/2 inch barb
Plain Water Inlet: 3/8 inch barb
Brand Syrup Inlets: 3/8 inch barb
CO₂ Inlet: 3/8 inch barb

This unit emits a sound pressure level below 70 dB

IBD CB Series 30"



DIMENSIONS

Width: 30 inches (762 mm)
Depth: 30.5 inches (775 mm)
Height: 40.25 inches (1022 mm)

WEIGHT

Shipping: 365 lbs (161 kg)
Empty (without Ice): 320 lbs (145 kg)
Ice Capacity: 290 lbs (132 kg)

ELECTRICAL

115 VAC / 60 Hz / 3.6 Amps
230 VAC / 50-60 Hz / 1.5 Amps

PLAIN WATER SUPPLY

Min Flowing Pressure: 75 PSIG (0.516 MPA)

CARBONATED WATER SUPPLY

Min Flowing Pressure: 25 PSI (0.172 MPA)
Max Static Pressure: 50 PSI (0.345 MPA)

CARBON DIOXIDE (CO₂) SUPPLY

Min Pressure: 70 PSIG (0.483 MPA)
Max Pressure: 80 PSIG (0.552 MPA)

FITTINGS

Carbonator Inlet: 1/2 inch barb
Plain Water Inlet: 3/8 inch barb
Brand Syrup Inlets: 3/8 inch barb
CO₂ Inlet: 3/8 inch barb

This unit emits a sound pressure level below 70 dB

Features of the IBD CB Series 22"/25"/30"

Cold Carbonation Capability

- Water is pre-chilled in the cold plate before entering the carbonator tank.
- This allows it to absorb CO₂ more effectively inside the tank.

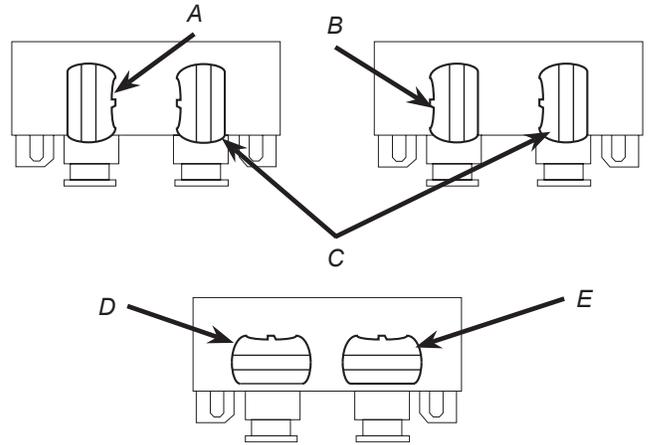
Three-Way Adjustable Back Blocks

- Allows for flexibility between carbonated or plain water drinks on the valves of your choice.
- To set adjustable back blocks, turn the shut-off stem to the desired location, refer to the image below:

NOTE

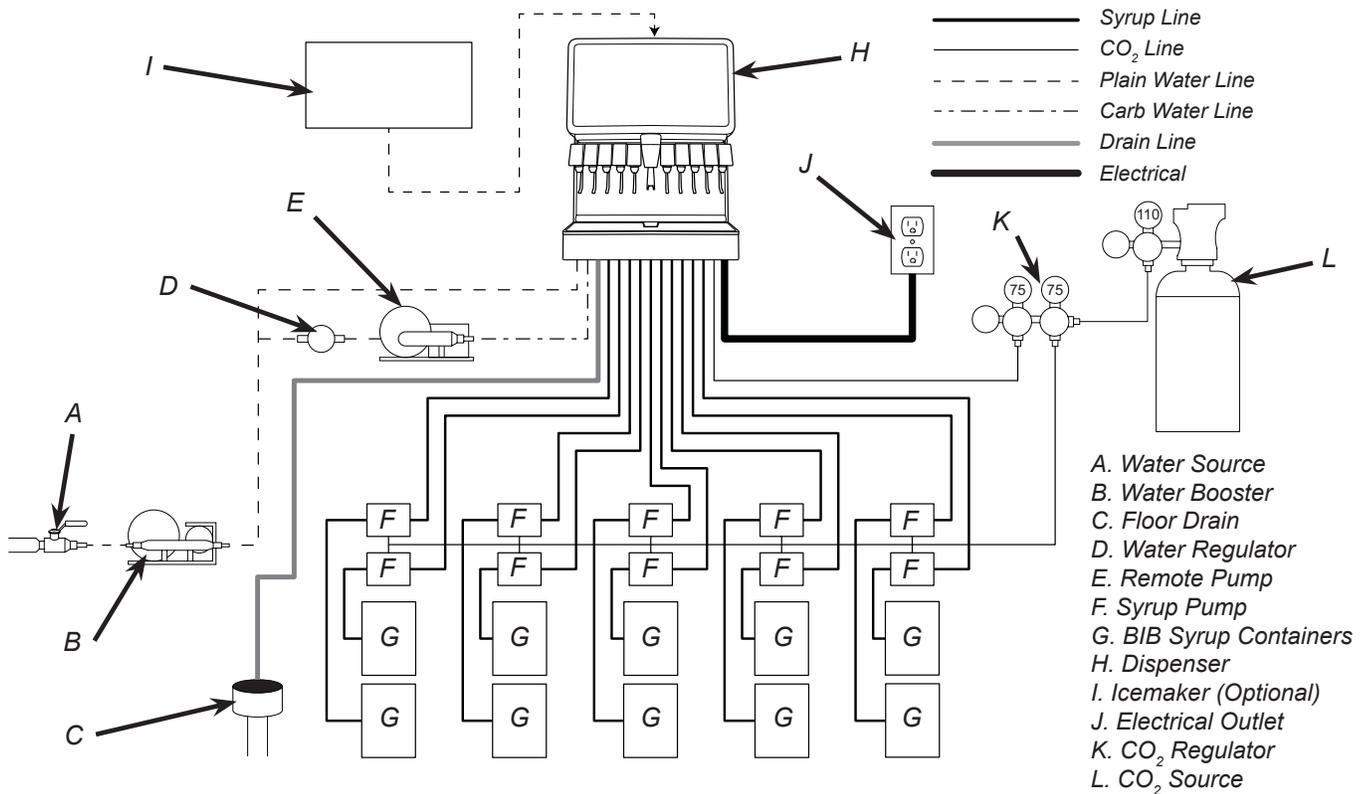
There is 100% flexibility on the 22", 6 valve and the 30" 8 valve dispensers.

The 30", 10 valve and the 25" 8 valve dispensers have space restrictions, so the two center valves are plumbed only for carbonated watered drinks and are non-adjustable.

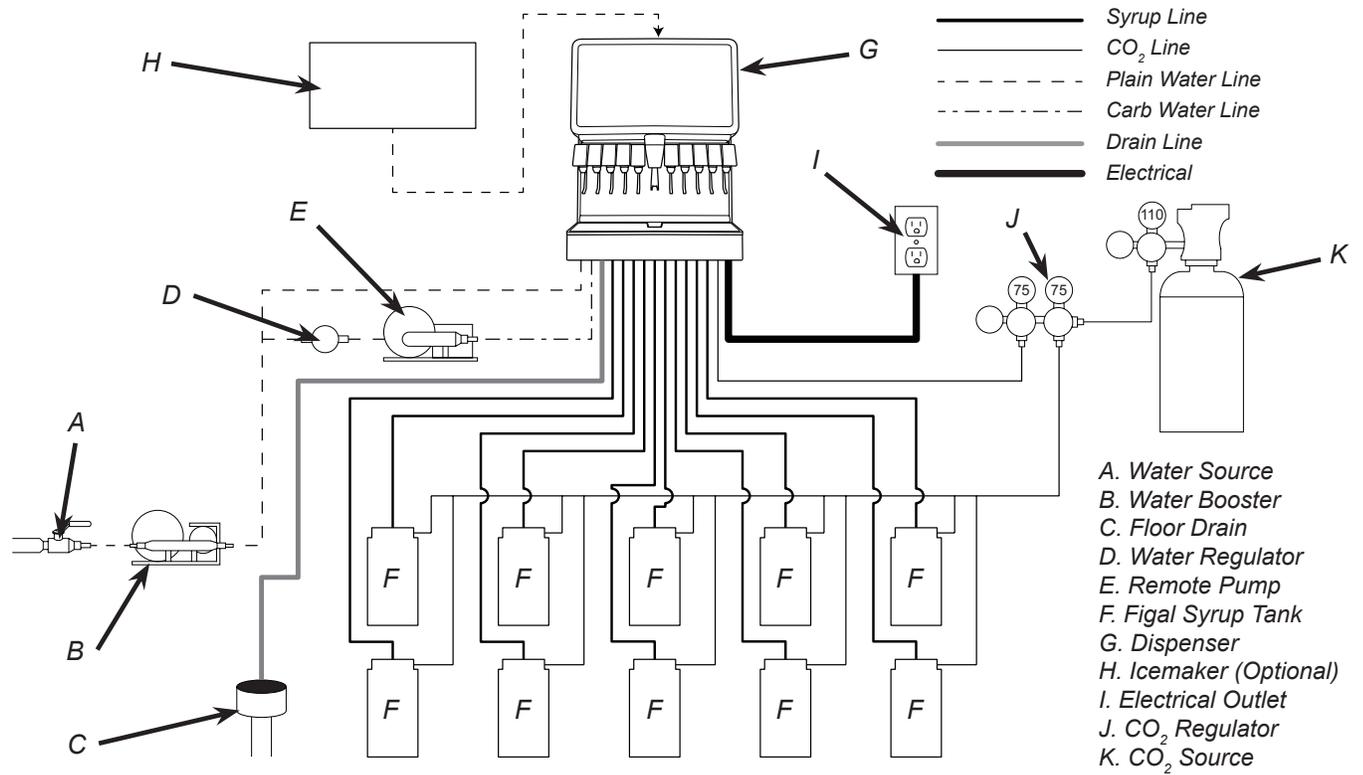


- A. Plain Water ON
- B. Carb Water ON
- C. Syrup ON
- D. Water Closed
- E. Syrup Closed

General System Overview - Remote Syrup Pumps



General System Overview - Figal Syrup Tanks



PRE-INSTALLATION CHECKLIST

TOOLS REQUIRED:

- Oetiker Pliers
- Tubing Cutters
- Wrench
- Slotted Screwdriver
- Phillips Screwdriver
- Drill

BIB SYSTEM:

- BIB Rack
- BIB Syrup Boxes
- BIB Regulator Set
- BIB Connectors

POST MIX ACCESSORIES:

- High Pressure CO₂ Regulator
- Low Pressure CO₂ Regulator Manifold
- CO₂ Supply
- Chain for CO₂ Tank
- Beverage Dispenser
- Beverage Tubing
- Oetiker Clamp Fittings
- Water Booster (Lancer PN: 82-3401 or MC-163172)
- Water Regulator (supplied with unit)

CONSIDER THE FOLLOWING BEFORE INSTALLATION:

- Location of Water Supply Lines
- Location of Drain
- Location of Electrical Outlet
- Location of Heating and Air Conditioning Ducts
- Do you have enough space to install the dispenser?
- Is countertop level?
- Can the countertop support the weight of the dispenser? (Include the weight of an ice machine plus weight of ice, if necessary)
- Is dispenser located away from direct sunlight or overhead lighting?

INSTALLATION

Read This Manual

This manual was developed by Lancer Corporation as a reference guide for the owner/operator and installer of this dispenser. Read this manual before installation and operation of this dispenser. See pages 20-23 for troubleshooting or service assistance. If the service cannot be corrected please call your Service Agent or Lancer Customer Service. Always have your model and serial number available when you call.

Unpacking the Dispenser

1. Set shipping carton upright on the floor then cut package banding straps and remove.
2. Open top of carton and remove interior packaging.
3. Lift carton up and off of the unit.
4. Remove plywood shipping base from unit by moving unit so that one side is off the counter top or table allowing access to screws on the bottom of the plywood shipping base.

NOTE

If unit is to be transported, it is advisable to leave the unit secured to the plywood shipping base.

5. Remove accessory kit and loose parts from ice compartment.

NOTE

Inspect unit for concealed damage. If evident, notify delivering carrier and file a claim against the same.

6. If leg kit has been provided, assemble legs by tilting unit.

⚠ ATTENTION

DO NOT LAY UNIT ON ITS SIDE OR BACK

Selecting/Preparing a Counter Location

NOTE

The dispenser should only be installed in a location where it can be overseen by trained personnel

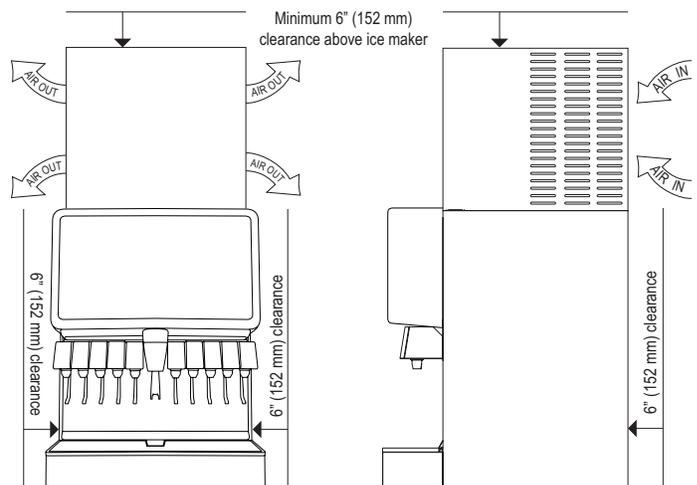
1. Select a level, well ventilated location that is in close proximity to a properly grounded electrical outlet, within five (5) feet (1.5 m) of a drain, a water supply that meets the requirements shown in the Specifications section found on pages 4-6, away from direct sunlight or overhead lighting, and has sufficient clearance for air circulation.
2. Sufficient clearance must be provided, if an ice maker is not installed, to allow filling ice compartment from a five gallon bucket (a minimum of 16 inches is recommended).
3. The selected location should be able to support the weight of the dispenser, ice and possibly an icemaker being installed after counter cut out is made. Total weight (with icemaker) for this unit could exceed 800 pounds (363.6kg).

NOTE

Lancer does **NOT** recommend the use of shaved or flake ice in the dispenser.

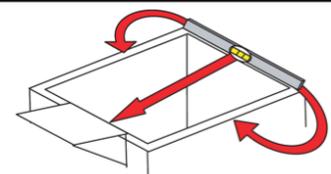
4. Unit may be installed directly on countertop or on legs. If installed directly on the counter, unit must be sealed to the countertop with an FDA approved sealant. If an icemaker is to be mounted on top of dispenser, do not install dispenser on legs.

5. Select a location for the remote pump deck, syrup pumps, CO₂ tank, syrup containers, and water filter (recommended). Please see General System Overview on page 5 for reference.
6. Using Counter Cutout Template provided, cut out required opening for the water, syrup, and CO₂ lines in the designated dispenser location.



Leveling the Dispenser:

In order to facilitate proper dispenser drainage, 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. For optimum performance place the unit at a 0° tilt. The maximum tilt is 5°.



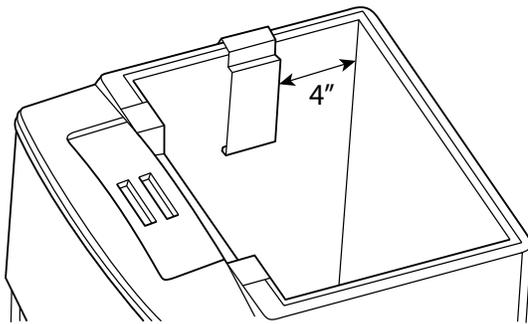
Installing an Icemaker (if necessary)

⚠ ATTENTION

When installing an icemaker on the dispenser, use a bin thermostat to control the ice level (see below). This will prevent damage to the dispensing mechanism. The bracket for mounting a thermostat is located in the ice bin. During the automatic agitation cycle and while dispensing ice, ensure there is adequate space between the top of the ice level and the bottom of the icemaker so the ice can move without obstruction. Contact your icemaker manufacturer for information on a suitable bin thermostat.

1. Install the icemaker per manufacturer specifications. Points of consideration include drainage, ventilation, and drop zones.
2. An adapter plate is required when installing an icemaker. Contact your Sales Representative or Lancer Customer Service for more information.

Attach Bin Stat Bracket As Shown



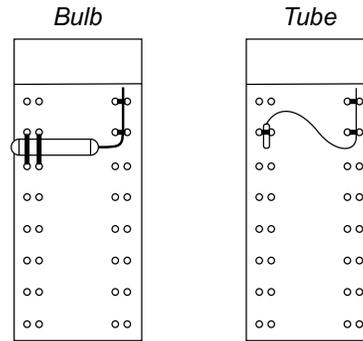
3. A bin thermostat is required in order to control the level of ice in the dispenser (Refer to ATTENTION). Contact your icemaker manufacturer to obtain the correct bin thermostat.
4. Bin thermostat should be a minimum of 2" below the top edge of the dispenser. The preferred location of the bin thermostat is on the left side wall.

⚠ ATTENTION

Failure to use an ice bin thermostat will not only void your IBD's warranty but will result in the inability to control the level of ice in the ice bin which can cause damage to your dispenser.

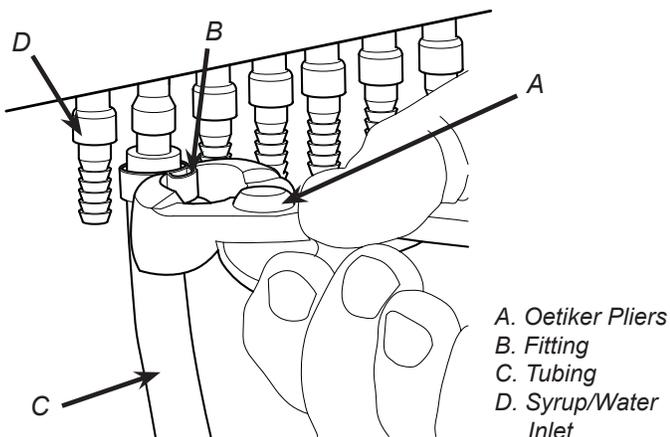
5. Ensure the icemaker is installed properly to allow for removal of the Merchandiser.
6. Ensure manual fill is accessible.
7. Clean and maintain icemaker per manufacturer's instructions.

Recommended Bin Stat Attachment

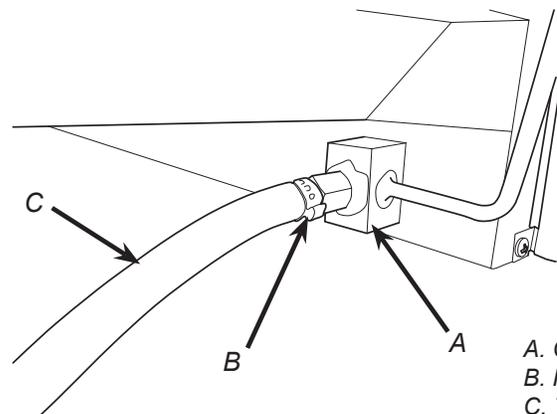


Dispenser Installation

1. Remove the cup rest, drip tray, splash plate, merchandiser, and top cover from the unit.
2. Route appropriate tubing from the water source to the plain water inlet at the front of the unit and connect tubing to inlet using the oetiker pliers and fittings, (see Plumbing Diagrams on the front of the unit or on pages 26-27 for reference).
3. Connect tubing to water source then flush water lines to check for leaks.
4. Route appropriate tubing from the remote pump deck to the carbonated water inlet and connect tubing to inlet.
5. Route appropriate tubing from the syrup pump location to the syrup inlets and connect tubing to all syrup inlets.
6. Route appropriate tubing from the CO₂ source location to the CO₂ inlet on the unit and connect tubing to inlet.



A. Oetiker Pliers
B. Fitting
C. Tubing
D. Syrup/Water Inlet



A. CO₂ Inlet
B. Fitting
C. Tubing

- Route the power supply cord to a grounded electrical outlet of the proper voltage and amperage rating.

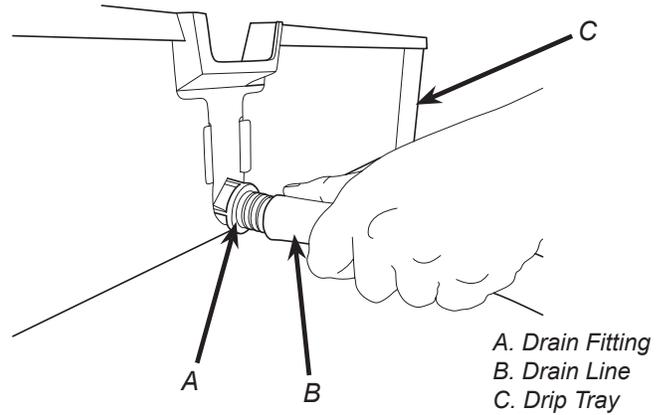
⚠ WARNING

DO NOT PLUG UNIT INTO GROUNDED ELECTRICAL OUTLET AT THIS TIME. Make sure that all water lines are tight and unit is dry before making any electrical connections

- Route drain hose from designated open type drain to fitting on Drip Tray and connect hose to fitting.
- Reattach Drip Tray/Cup Rest to unit.

⚠ CAUTION

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.

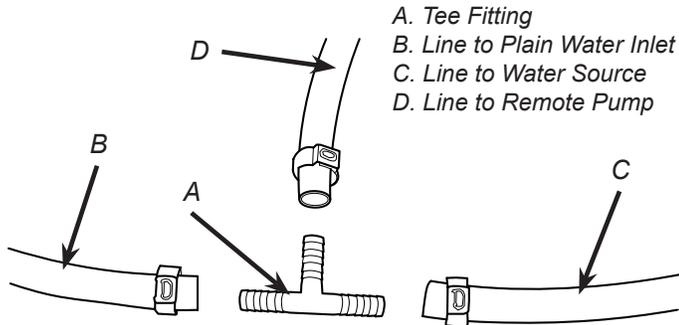


⚠ ATTENTION

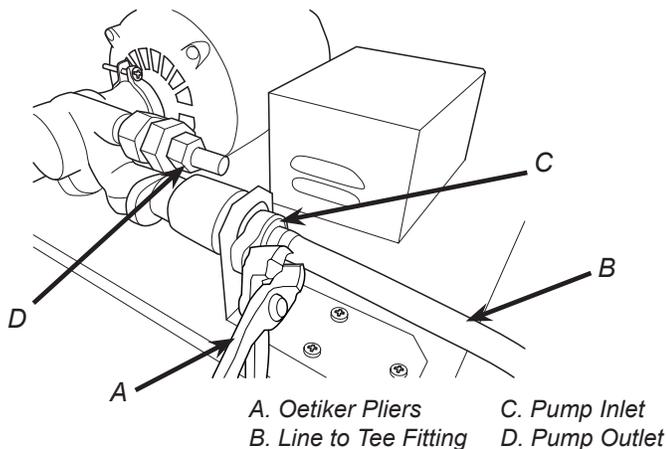
Pouring hot water into drain may cause the Drain Tube to collapse. Allow only luke warm or cold water to enter Drain Tube. Pouring coffee tea and similar substances into drain may cause the Drain Tube to become clogged with coffee or tea grounds, or other solid particles.

Remote Pump Installation

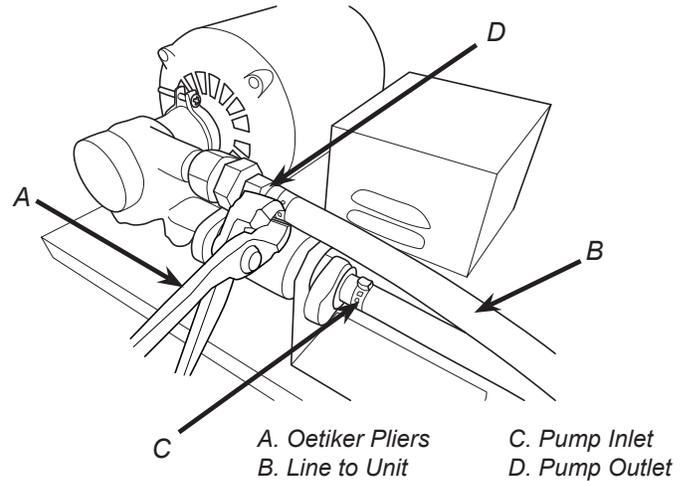
- If necessary, install water booster (Lancer PN MC-163172) between water supply and the unit.
- Using tubing cutters, cut water line and install tee fitting, then route appropriate tubing from the remote pump location to the tee fitting at water line.



- Connect line from tee fitting at water line to the remote pump deck inlet regulator.



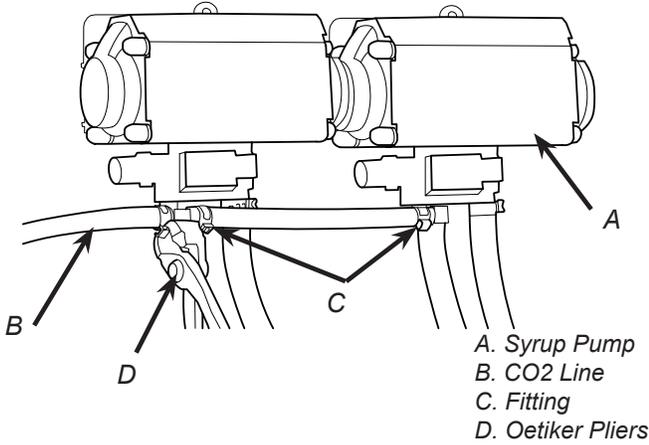
- Complete the carbonated water line connection, installed in the previous section, between the remote pump deck and carbonated water inlet on the unit.



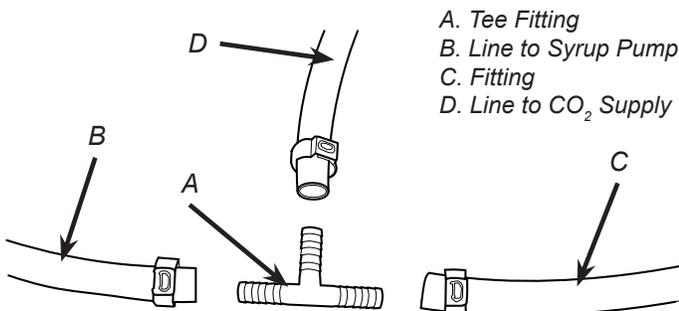
- Install a shut-off valve in the water line feeding the deck. If a separate water line is run for plain water, ensure that it also has a shut-off valve.

Installing Remote Syrup Pumps - Bag In Box

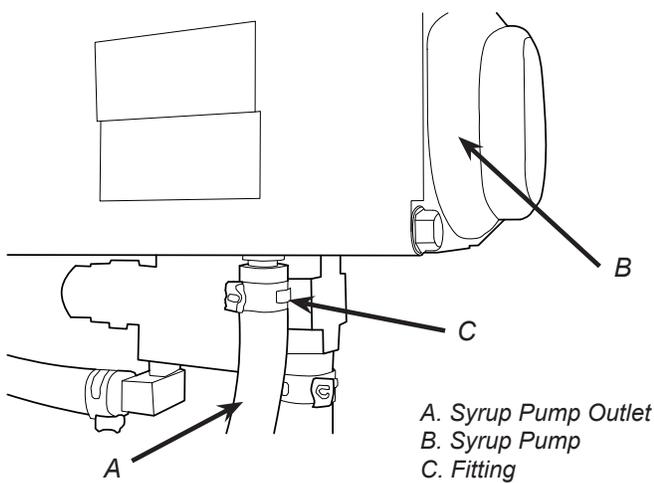
1. Install BIB rack and remote pumps according to manufacturers' instructions.
2. Once pumps and BIB rack are installed, measure and cut tubing to length between the pump CO₂ inlets, then connect tubing to all pumps.



3. Using tubing cutters, cut any pump CO₂ supply line and install tee fitting, then route appropriate tubing from the CO₂ supply to the tee fitting at syrup pumps.

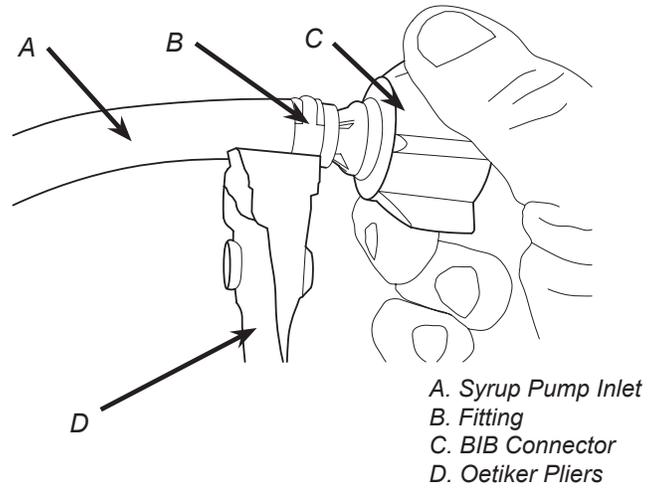


4. Connect tubing from dispenser syrup inlet to the syrup pump outlet fitting. Repeat for each syrup line/pump. Repeat Steps 1-5 for all flavor injector lines.

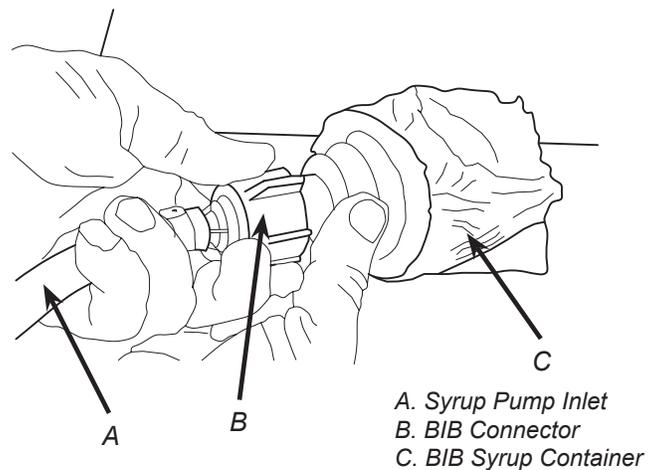


5. Install BIB (bag in box) connectors onto the syrup pump inlet tubing.

⚠ ATTENTION
Use proper connector for syrup manufacturer

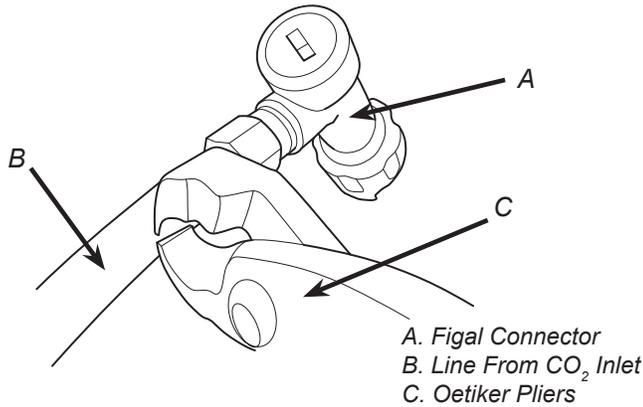


6. Connect syrup BIBs to connectors. Repeat for each syrup line/pump and each flavor injector line/pump.

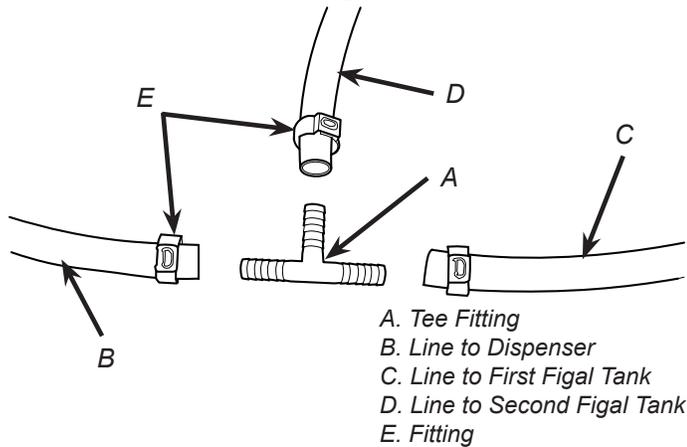


Connecting to Syrup Supply - Figal Syrup Tank

1. Connect tubing routed from CO₂ inlet in dispenser to figal syrup tank CO₂ inlet.

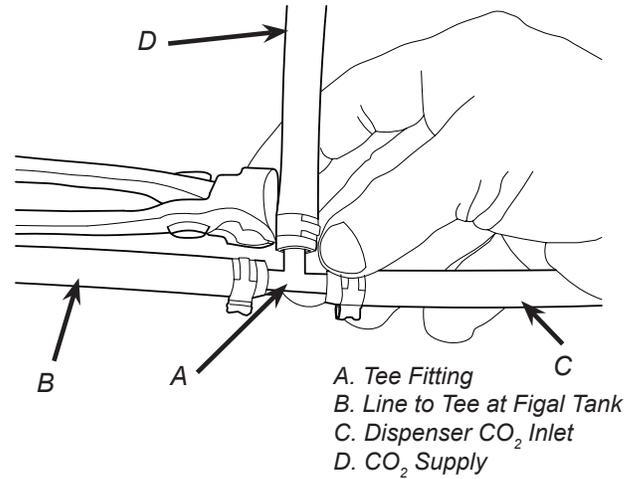


2. Using tubing cutters, cut line from CO₂ inlet to figal syrup tank and install tee fitting, then route appropriate tubing from second figal syrup CO₂ inlet to tee fitting.

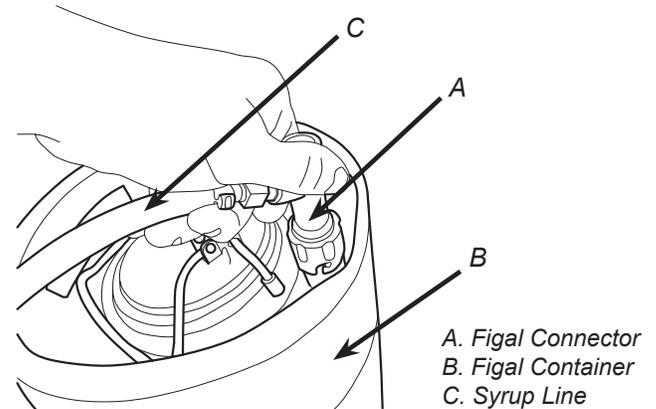


3. Repeat step 2 for remaining figal syrup tanks.
4. Cut tubing from dispenser CO₂ inlet to tee fitting at figal syrup tanks and install another tee fitting.

5. Route appropriate tubing from CO₂ supply to tee fitting between dispenser CO₂ inlet and figal syrup tanks and connect tubing to tee fitting.



6. Connect tubing from dispenser syrup inlet to the figal syrup outlet fitting. Repeat for each syrup line/tank.

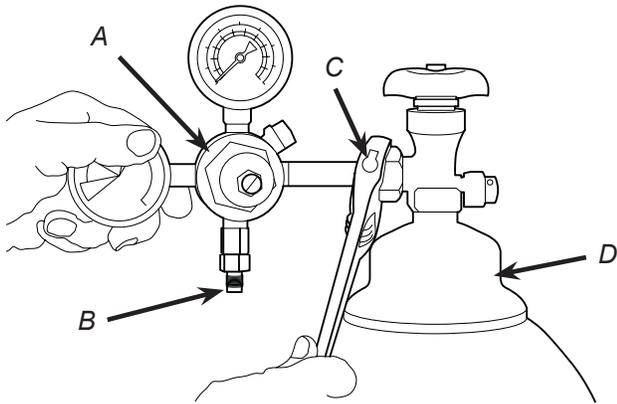


Installing CO₂ Supply

1. Connect high pressure CO₂ regulator assembly to CO₂ cylinder or bulk system.

⚠ ATTENTION

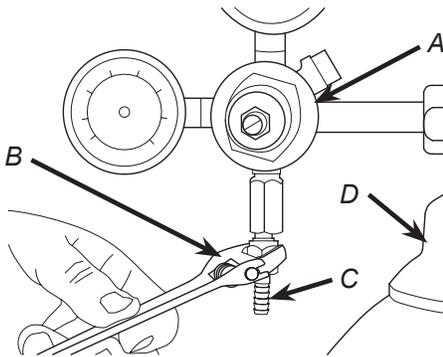
Before installing regulator, assure that a seal (washer or o-ring) is present in regulator attachment nut.



- Thread regulator nut on to tank, then tighten nut with wrench

A. CO₂ Regulator
B. Outlet
C. Wrench
D. CO₂ Supply

2. Connect a 1/4" nut, stem and seal to CO₂ regulator outlet.

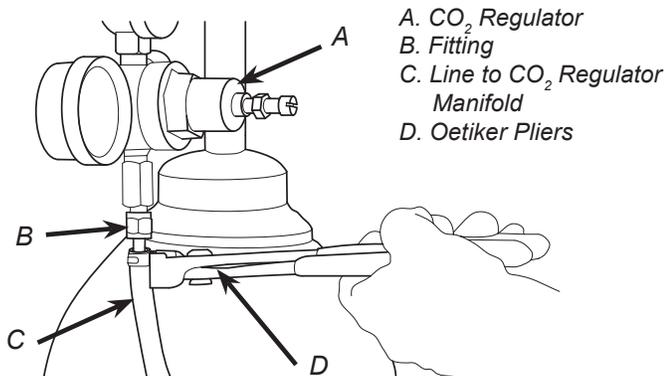


A. CO₂ Regulator
B. Wrench
C. 1/4" nut, Stem
D. CO₂ Supply

3. Route appropriate tubing from the low pressure CO₂ regulator manifold location to the 1/4" nut, stem on the high pressure CO₂ regulator attached to source and connect tubing.

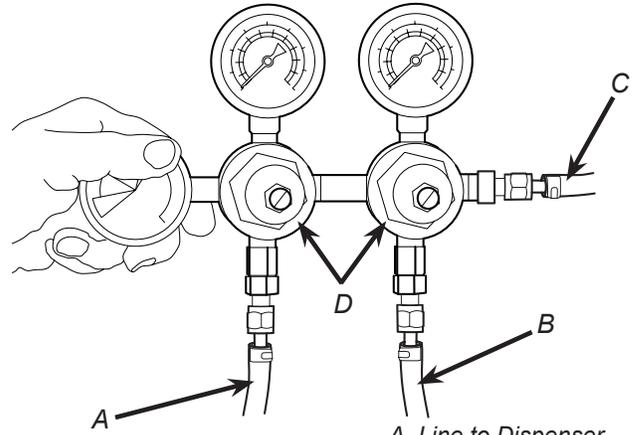
⚠ ATTENTION

A dedicated CO₂ regulator is required to supply the CO₂ inlet at the unit as well as to all syrup pumps.



A. CO₂ Regulator
B. Fitting
C. Line to CO₂ Regulator Manifold
D. Oetiker Pliers

4. Connect tubing routed from the CO₂ inlet at the unit to one of the low pressure CO₂ regulator manifold outlets.
5. Connect tubing routed from the tee at the syrup pumps to the second outlet of the low pressure CO₂ regulator manifold.

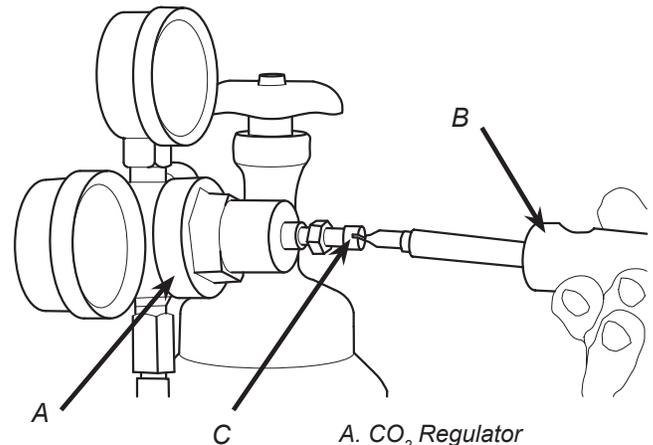


A. Line to Dispenser
B. Line to Syrup Pumps
C. Line to CO₂ Regulator
D. CO₂ Regulator Manifold

6. Using a wrench, loosen lock nut on the regulator adjustment screw of the high pressure CO₂ regulator connected to the source, then using a screwdriver back out lock nut screw all the way.

⚠ WARNING

DO NOT TURN ON CO₂ SUPPLY AT THIS TIME

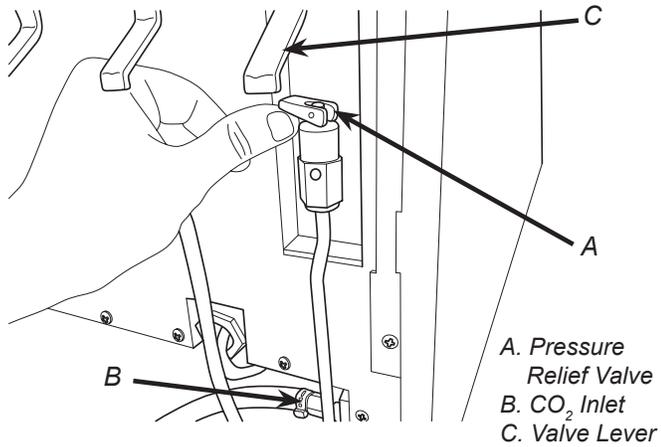


A. CO₂ Regulator
B. Screwdriver
C. Regulator Adjustment Screw

7. Repeat Step 6 for both low pressure CO₂ regulators on the regulator manifold routed to the unit and the syrup pumps.

Dispenser Setup

1. Turn on water source.
2. Open the pressure relief valve located on the front of the unit, by flipping up on the valve cap lever. Hold open until water flows from the relief valve then close (flip down) the relief valve.



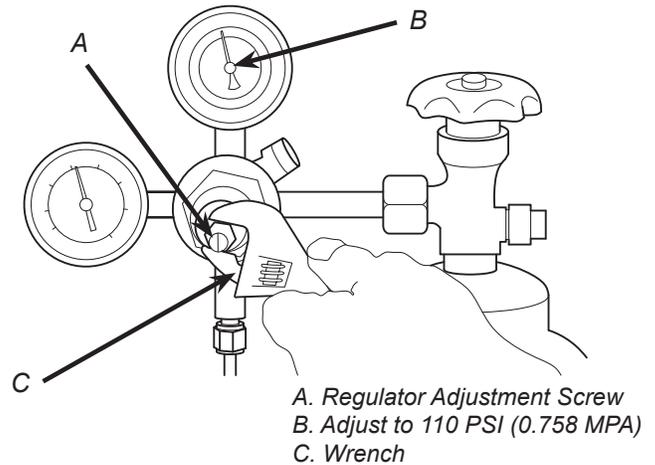
3. Verify all Bag-In-Box contains syrup and check all connections for leaks.
4. Place enough ice in the ice bin to fill approximately 1/2 of the bin before plugging in the unit.
5. Connect unit power cord to grounded electrical outlet.

⚠ WARNING

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.

6. Test the motor operation by pushing the ice chute lever until agitator motor begins to turn.
7. Activate each valve to ensure a good flow of water is achieved.
8. Ensure pump deck is turned OFF before turning on CO₂.

9. Turn on CO₂ at the source then, using a screwdriver, adjust the high pressure regulator at the source to 110 PSI (0.758 MPA) then tighten locknut with wrench.



10. Adjust both of the low pressure regulators on the regulator manifold to 75 PSI (0.517 MPA) then tighten locknut with wrench.
11. Activate each valve until gas-out.
12. Plug in the remote carbonator pump deck, if not already done so, and turn the switch to the ON position.
13. Activate each valve until the carbonator pump comes on. Release the button, allow carbonator to fill and stop. Repeat this process until a steady flow of carbonated water is achieved.

NOTE

The pump deck has a 3 minute timeout feature. If the timeout occurs, turn the deck OFF then ON by flipping the switch on the control box.

NOTE

To check for CO₂ leaks, close the valve on the CO₂ cylinder and observe if the pressure to the system drops with the cylinder valve closed for five minutes. Open the cylinder valve after check.

14. Activate each valve to purge air from the syrup lines.

Adjust Water Flow Rate & Syrup/Water Ratio

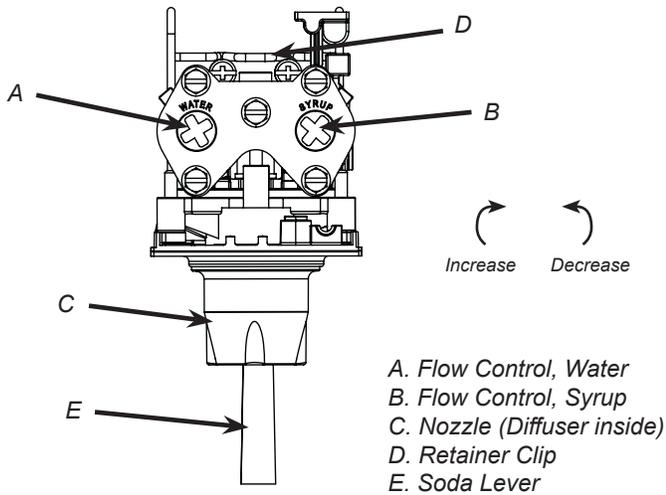
NOTE

Ensure there is ice on the cold plate and the lines are cold before attempting to set the flow rates on the valves. The drink temperature should be no higher than 40°F (4.4°C) when flow rates are set.

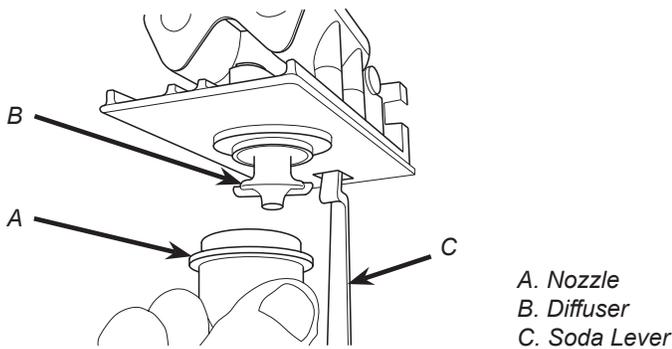
NOTE

For units with flavor injector lines, it is required to remove the merchandiser to gain access to valves.

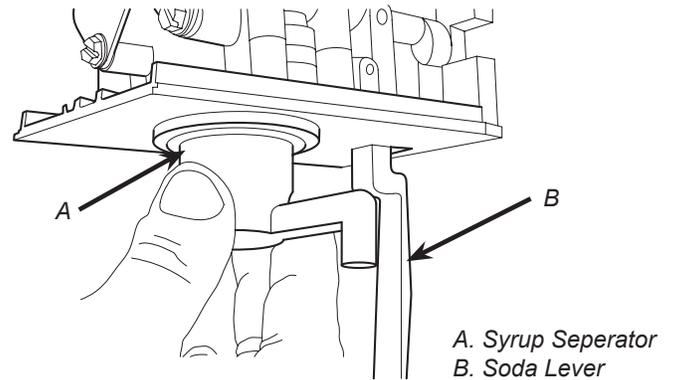
1. Remove valve cover from first valve.
2. Close syrup shut-off at mounting block for first valve, (see page 5 for reference).
3. Using a Lancer ratio cup verify water flow rate (5 oz. in 4 sec.). Use a screwdriver to adjust if needed.



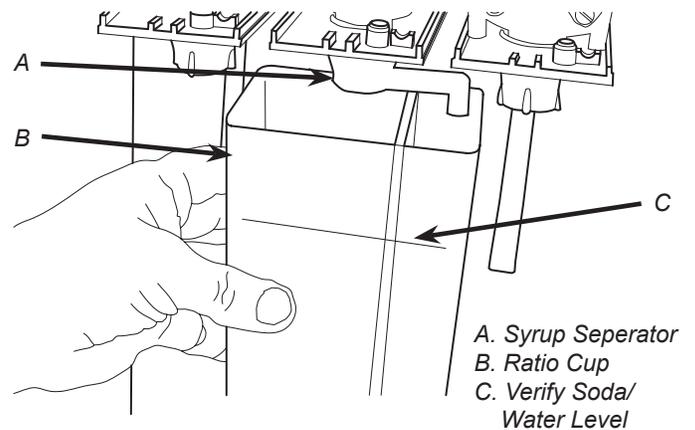
4. Remove nozzle by twisting counter clockwise and pulling down, then remove diffuser by pulling down.



5. Install Lancer (yellow) syrup separator (PN 54-0031) in place of nozzle.



6. Re-open syrup shut-off at mounting block.
7. Activate valve to purge syrup until steady flow is achieved.
8. Using a Lancer brix cup, activate the valve and capture a sample. Verify that the syrup level is even with the water level. Use a screwdriver to adjust if needed.



9. Remove syrup separator and reinstall nozzle. Replace valve cover.
10. Repeat steps 1-8 for each valve.
11. Re-install merchandiser, splash plate, and top cover.

CLEANING AND SANITIZING

General Information

- Lancer equipment (new or reconditioned) is shipped from the factory cleaned and sanitized in accordance with NSF guidelines. 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 procedures provided herein pertain to the Lancer equipment identified by this manual. If other equipment is being cleaned, follow the guidelines established by the manufacturer for that equipment.

- Cleaning should be accomplished only by trained personnel. Sanitary gloves are to be used during cleaning operations. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

⚠ ATTENTION

- Use sanitary gloves when cleaning the unit and observe all applicable safety precautions.
- **DO NOT** use a water jet to clean or sanitize the unit.
- **DO NOT** disconnect water lines when cleaning and sanitizing syrup lines, to avoid contamination.
- **DO NOT** use strong bleaches or detergents; These can discolor and 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 can damage the dispenser.
- **DO NOT** spill sanitizing solution on any circuit boards. Insure all sanitizing solution is removed from the system.

Cleaning and Sanitizing Solutions

Cleaning Solution

Mix a mild, non-abrasive detergent (e.g. Sodium Laureth Sulfate, dish soap) with clean, potable water at a temperature of 90°F to 110°F (32°C to 43°C). 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. Ensure rinsing is thorough, using clean, potable water at a temperature of 90°F to 110°F. Extended lengths of product lines may require additional cleaning solution.

Other Supplies Needed:

1. Clean cloth towels
2. Bucket
3. Extra nozzle
4. Sanitary gloves
5. Small brush (PN 22-0017)

Sanitizing Solution

Prepare the sanitizing solution in accordance with the manufacturer's written recommendations and safety guidelines. The type and concentration of sanitizing agent recommended in the instructions by the manufacturer shall comply with 40 CFR §180.940. The solution must provide 200 parts per million (PPM) chlorine (e.g. Sodium Hypochlorite or bleach) and a minimum of five gallons of sanitizing solution should be prepared.

Daily Cleaning

1. Using the cleaning solution, clean top cover and all exterior stainless steel surfaces.
2. Clean exterior of dispensing valves and ice chute.
3. Remove cup rest then clean the drip tray and cup rest. Replace cup rest and drip tray when finished.
4. Wipe clean all splash areas using a damp cloth soaked in cleaning solution.
5. Clean beverage nozzles as specified by the section "Cleaning and Sanitizing Nozzles" on page 19.

Ice Bin Cleaning - Start-Up and Monthly

NOTE

Refer to the Automatic Agitation Warning on page 4.

1. Disconnect power to the dispenser
2. Remove Top Cover.
3. Melt out any remaining ice from the bin.
4. Remove Agitator Pin from Agitator Shaft. Slide Agitator Shaft rearward out Hub and pull out of rear Bearing to remove.
5. Remove Ice Shroud by lifting and rotating out from beneath the auger.
6. Use the Cleaning Solution, and a clean cloth or soft brush, to clean all removable parts, sides of the Ice Bin, Auger, and surface of the aluminum casting.
7. Using the Cleaning Solution and the sponge brush provided, clean all interior surfaces of the ice chute and the ice chute feed through.
8. Repeat Step 6 for all exterior surfaces of the dispenser.
9. Using hot water, thoroughly rinse away the cleaning solution.
10. Wearing sanitary gloves, soak and clean cloth towel in Sanitizing Solution and wash all surfaces of removable parts, sides of the Ice Bin, Auger, and surface of the aluminum casting.
11. Using the Sanitizing Solution and the sponge brush provided, clean all interior surfaces of the ice chute and the ice chute feed through.
12. Repeat Step 10 for all exterior surfaces of the dispenser.
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.

Cleaning and Sanitizing Syrup Lines - Bag in Box

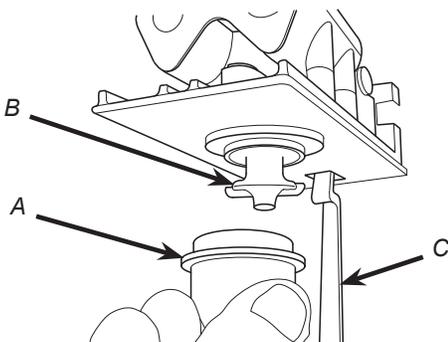
1. Disconnect syrup lines from BIB's
2. Place syrup lines, with BIB connectors, in a bucket of warm water.
3. Activate each valve to fill the lines with warm water and flush out syrup remaining in the lines.
4. Prepare Cleaning Solution described above.
5. Place syrup lines, with BIB connectors, into cleaning solution.
6. Activate each valve until lines are filled with cleaning solution then let stand for ten (10) minutes.
7. Flush out cleaning solution from the syrup lines using clean, warm water.
8. Prepare Sanitizing Solution described above.
9. Place syrup lines into sanitizing solution and activate each valve to fill lines with sanitizer. Let sit for ten (10) minutes.
10. Reconnect syrup lines to BIB's and draw drinks to flush solution from the dispenser.
11. Taste the drink to verify that there is no off-taste. If off-taste is found, flush syrup system again.

CAUTION

Following sanitization, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.

Cleaning and Sanitizing Nozzles

1. Disconnect power, so as to not activate valve while cleaning.
2. Remove nozzle by twisting counter clockwise and pulling down.
3. Remove diffuser by pulling down.
4. Rinse nozzle and diffuser with warm water.
5. Wash nozzle and diffuser with cleaning solution then immerse in sanitizing solution and let sit for fifteen (15) minutes.
6. Set nozzle and diffuser aside and let air dry. **DO NOT** rinse with water after sanitizing.
7. Reconnect diffuser and nozzle.
8. Connect power.
9. Taste the drink to verify that there is no off-taste. If off-taste is found, flush syrup system again.



CAUTION

Following sanitization, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.

Ice Chute Cleaning

NOTE

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. Remove Ice Chute Lever, then remove Splash Plate Assembly by lifting it up and out from the dispenser face.

NOTE

Always remove the ice chute lever before removing the splash plate.

4. Remove the Ice Chute Assembly base by removing the four (4) screws that attach it to the unit.
5. Prepare the Cleaning Solution.
6. Soak the Ice Chute Assembly in the solution.
7. Rinse and dry the Ice Chute Assembly thoroughly.
8. Reinstall the Ice Chute Assembly.
9. Reinstall Merchandiser and Splash Plate.
10. Reconnect power to the dispenser.

TROUBLESHOOTING

TROUBLE	CAUSE	REMEDY
No product when switch is activated.	<ol style="list-style-type: none"> 1. Malfunctioning switch assembly. 2. No power to dispenser. 3. Malfunctioning power supply. 4. Malfunctioning PCB board. 	<ol style="list-style-type: none"> 1. Replace switch assembly. 2. Check internal breaker and incoming power. 3. Check voltage to power supply. Check fuses. 4. Replace PCB board.
No product when switch is activated.	<ol style="list-style-type: none"> 1. Keyswitch is off or keyswitch harness is disconnected. 2. Malfunctioning switch assembly. 3. Malfunctioning VersaPour valve. 	<ol style="list-style-type: none"> 1. Turn keyswitch on and/or reconnect keyswitch harness. 2. Replace switch assembly. 3. Replace module.
Push chute; no response.	<ol style="list-style-type: none"> 1. Dispenser not connected to power source. 2. Wiring harness not plugged in. 3. PC board defective. 4. Malfunctioning power supply. 	<ol style="list-style-type: none"> 1. Connect dispenser to power source. 2. Plug in wiring harness. 3. Replace PC board. 4. Check voltage to power supply. Check fuses.
Push chute, ice door opens but motor does not run.	<ol style="list-style-type: none"> 1. Wiring harness not plugged in. 2. PC board defective. 3. Motor defective. 	<ol style="list-style-type: none"> 1. Plug in wiring harness. 2. Replace PC board. 3. Replace motor.
Push chute, motor runs but ice door does not open.	<ol style="list-style-type: none"> 1. Solenoid not connected to PC board. 2. Solenoid defective. 3. PC board defective. 	<ol style="list-style-type: none"> 1. Connect solenoid to PC board. 2. Replace solenoid. 3. Replace PC board.
Push chute, ice door opens, motor runs, but ice does not dispense, or ice is of poor quality.	<ol style="list-style-type: none"> 1. Dispenser is out of ice. 2. Agitator pin is missing or damaged. 3. Poor ice quality. 4. Key not installed on agitation shaft. 	<ol style="list-style-type: none"> 1. Fill dispenser with ice. 2. Replace agitator pin. 3. Service ice machine. 4. Install key on agitation shaft.

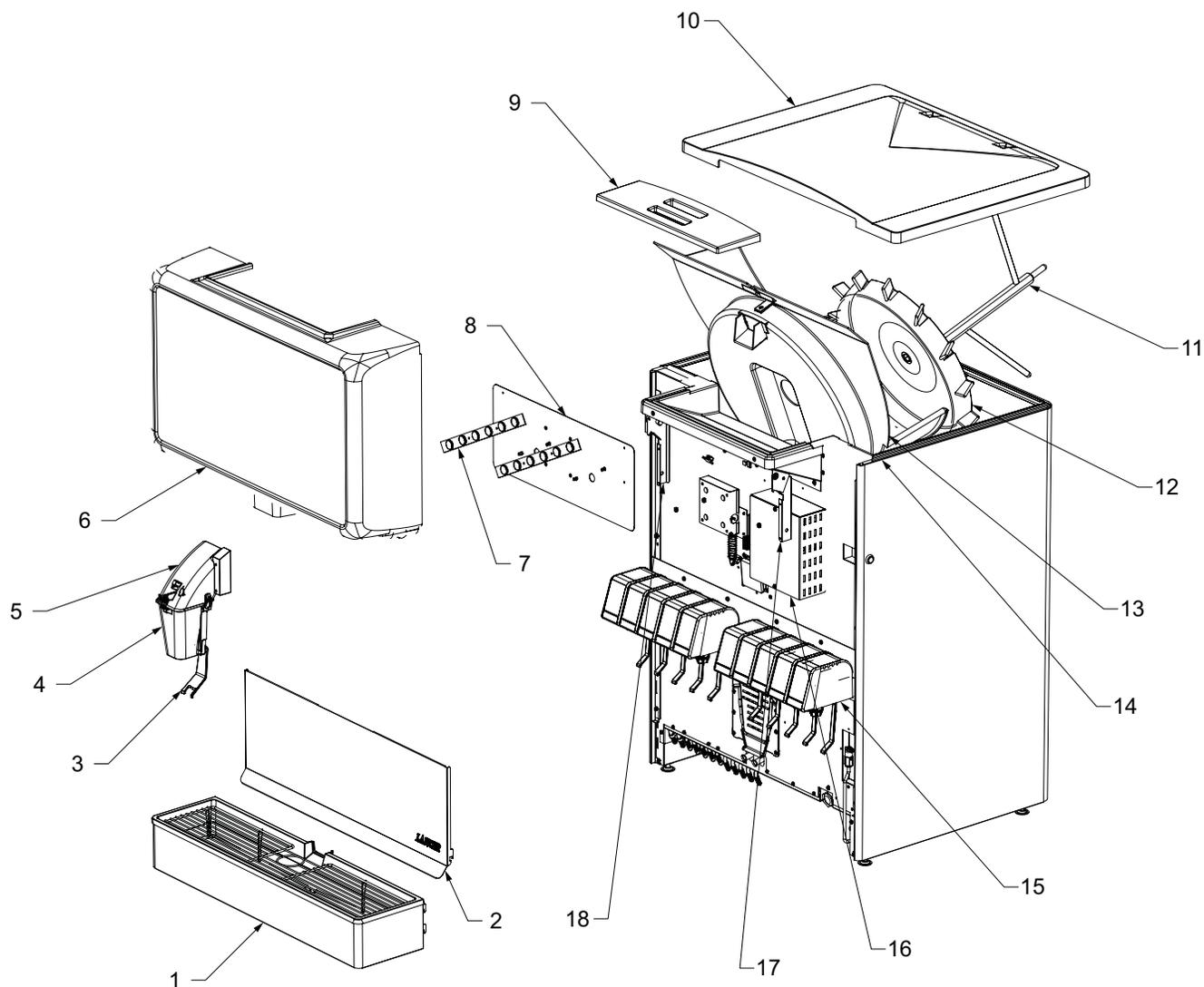
TROUBLE	CAUSE	REMEDY
Water in ice bin.	1. Coldplate drain is obstructed.	1. Remove splash plate and drip tray to obtain access to drain tubes and clear accordingly.
Water leakage around nozzle.	1. Damaged or improperly installed o-ring on nozzle.	1. If damaged, replace. If improperly installed, adjust.
Miscellaneous leakage.	1. Gap between parts. 2. Damaged or improperly installed o-rings.	1. Tighten appropriate retaining screws. 2. Replace or adjust appropriate o-rings.
Noisy/cavitating carbonator pump.	1. Insufficient incoming water supply pressure.	1. Verify incoming supply water pressure to carbonator pump is min. of 25 PSI (0.172 MPA), max. of 50 PSI (0.345 MPA).
Insufficient soda flow (carbonated drinks).	1. Insufficient CO ₂ supply pressure. 2. Shutoff on mounting block is not fully open. 3. Foreign debris in soda flow control.	1. Verify incoming CO ₂ pressure is between 70 PSIG (0.483 MPA) and 80 PSIG (0.552 MPA) 2. Open shutoff fully. 3. Remove soda flow control from valve and clean out any foreign material to ensure smooth spool movement.
Insufficient water flow (plain water drinks).	1. Insufficient incoming supply pressure. 2. Shutoff on mounting block not fully open. 3. Foreign debris in water flow control. 4. Water filtration problem.	1. Verify incoming supply water pressure to plain water inlet is a minimum of 50 PSI (0.345 MPA) and a maximum of 100 PSI (0.689 MPA). 2. Open shutoff fully. 3. Remove water flow control from valve and clean out any foreign material to ensure smooth spool movement. 4. Service water system as required.
Erratic ratio.	1. Incoming water and/or syrup supply not at minimum flowing pressure. 2. Foreign debris in water and/or syrup flow control. 3. CO ₂ regulator malfunction.	1. Check pressure and adjust. 2. Remove flow control from suspected valve and clean out any foreign material to ensure smooth spool movement. 3. Repair or replace CO ₂ regulator.
Insufficient syrup flow.	1. Insufficient CO ₂ pressure to BIB pumps. 2. Shutoff on mounting block not fully open. 3. Foreign debris in syrup flow control. 4. Defective BIB pump.	1. Adjust CO ₂ pressure to BIB pumps to 80 PSI (0.552 MPA) (min. 70 PSI (0.483 MPA)). Do not exceed manufacturer's recommendations. 2. Open shutoff fully. 3. Remove syrup flow control from valve and clean out any foreign material to ensure smooth spool movement. 4. Replace pump.
Valve will not shut off.	1. Debris in paddle arms. 2. Solenoid plunger sticking.	1. Activate valve a few times to free debris. Clean out any foreign material. 2. Replace solenoid coil.
Water continually leaking at connections.	1. Loose water connections. 2. Flare seal washer leaks.	1. Tighten water connections. 2. Replace flare seal washer.

TROUBLE	CAUSE	REMEDY
Water only dispensed, no syrup. Or syrup only dispensed, no water.	<ol style="list-style-type: none"> 1. Syrup BIB empty. 2. Water or syrup shutoff on mounting block not fully open. 3. Improper or inadequate water or syrup supply. 4. CO₂ pressure to syrup pump too low. 5. Stalled or inoperative BIB pump. 6. Kinked line. 7. CO₂ regulator malfunction. 	<ol style="list-style-type: none"> 1. Replace syrup BIB as required. 2. Open shutoff completely. 3. Remove valve from mounting block & open shutoffs slightly. Check water & syrup supply. If no supply, check unit for other problems. Ensure BIB connection is engaged. 4. Check the CO₂ pressure to the pump to ensure it is between 70-80 PSI (0.483-0.552 MPA). 5. Check CO₂ pressure and/or replace pump. 6. Remove kink or replace line. 7. Repair or replace CO₂ regulator as required.
Syrup only dispensed. No water, but CO ₂ gas dispensed with syrup.	<ol style="list-style-type: none"> 1. Improper water flow to dispenser. 2. Carbonator pump motor has timed out. 3. Liquid level probe not connected properly to PCB. 4. Defective PCB assembly. 5. Defective liquid level probe. 6. Weak or defective carbonator pump. 	<ol style="list-style-type: none"> 1. Check for water flow to dispenser. 2. Reset by turning the unit OFF, then ON by using the circuit breaker on the power supply or momentarily unplugging unit. 3. Check connections of liquid level probe to PCB assembly. 4. Replace PCB assembly. 5. Replace liquid level probe. 6. Replace pump.
Excessive foaming.	<ol style="list-style-type: none"> 1. No ice in bin. 2. Incoming water or syrup temperature too high. 3. CO₂ pressure too high. 4. Water flow rate too high. 5. Nozzle and diffuser not clean. 6. Air in BIB lines. 	<ol style="list-style-type: none"> 1. Fill bin with ice and allow coldplate to re-stabilize. 2. Correct prior to dispenser. 3. Adjust CO₂ pressure downward, but not less than 70 PSI (0.483 MPA). 4. Re-adjust and reset ratio. 5. Remove and clean. 6. Bleed air from BIB lines.

TROUBLE	CAUSE	REMEDY
BIB pump does not operate when dispensing valve is opened.	<ol style="list-style-type: none"> 1. Out of CO₂, CO₂ not turned on, or low CO₂ pressure. 2. Out of syrup. 3. BIB connector not tight. 4. Kinks in syrup or gas lines. 	<ol style="list-style-type: none"> 1. Replace CO₂ supply, turn on CO₂ supply, or adjust CO₂ pressure to 70-80 PSI (0.483-0.552 MPA). 2. Replace syrup supply. 3. Fasten connector tightly. 4. Straighten or replace lines.
BIB pump operating, but no flow.	<ol style="list-style-type: none"> 1. Leak in syrup inlet or outlet line. 2. Defective BIB pump. 	<ol style="list-style-type: none"> 1. Replace line. 2. Replace BIB pump.
BIB pump continues to operate when bag is empty.	<ol style="list-style-type: none"> 1. Leak in suction line. 2. Leaking o-ring on pump inlet fitting. 3. Defective syrup BIB pump. 	<ol style="list-style-type: none"> 1. Check BIB connector, if still leaking then replace line. 2. Replace o-ring 3. Replace defective pump.
BIB pump fails to restart after bag replacement.	<ol style="list-style-type: none"> 1. BIB connector not on tightly. 2. BIB connector is stopped up. 3. Kinks in syrup line. 	<ol style="list-style-type: none"> 1. Tighten BIB connector. 2. Clean out or replace BIB connector. 3. Straighten or replace line.
BIB pump fails to stop when dispensing valve is closed.	<ol style="list-style-type: none"> 1. Leak in discharge line or fittings. 2. Empty BIB. 3. Air leak on inlet line or bag connector. 	<ol style="list-style-type: none"> 1. Repair or replace discharge line. 2. Replace BIB. 3. Repair or replace.
Low or no carbonation.	<ol style="list-style-type: none"> 1. Low or no CO₂. 2. Low water pressure. 3. Worn or defective carbonator pump. 4. Backflow preventer not allowing water to flow. 5. Probe malfunctioning. 6. PCB malfunctioning. 	<ol style="list-style-type: none"> 1. Check CO₂ supply. Adjust CO₂ pressure to 70 PSI (0.483 MPA). 2. Need water booster kit. 3. Replace carbonator pump. 4. Replace backflow preventer, noting the flow direction arrow from pump to coldplate. 5. Replace probe. 6. Replace PCB.

ILLUSTRATIONS AND PART LISTINGS

Main Unit Assembly - 22"/25"/30"

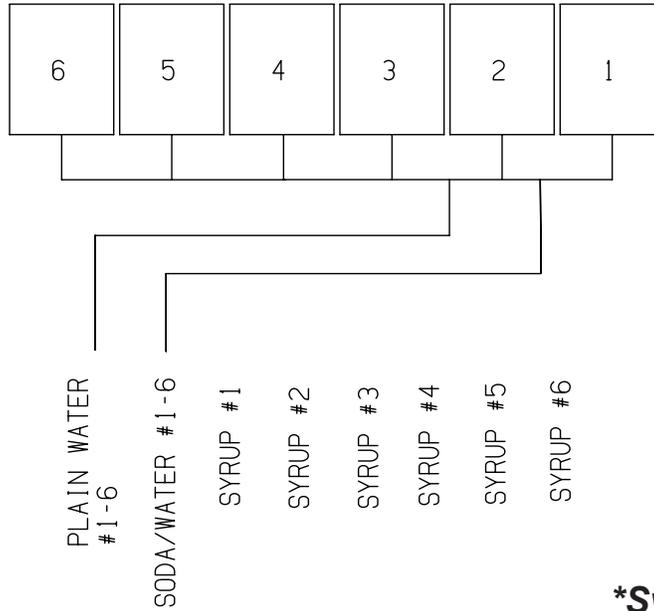


<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	82-3186/01-01	Drip Tray Assy, IBD25, Black
-	82-4042-01	Drip Tray Assy, IBD22, Black
-	82-4374-01	Drip Tray Assy, IBD30, Black
2	30-8625	Splash Plate, IBD25
-	30-8466	Splash Plate, IBD22
-	30-10141	Splash Plate, IBD30
3	05-0999/01	Lever, Chute, IBD
4	05-2905/01	Chute, Lower, ACIB
5	05-2257/01	Chute, Upper, IC
6	05-3361/01-01	Merchandiser Sub Assy, IBD25
-	05-3364/01-01	Merchandiser Sub Assy, IBD22
-	05-3357/01-01	Merchandiser Sub Assy, IBD30
7	64-5031-01/01	PCB Assy, Backlight
8	30-12198	Reflector, 21.5
9	05-1476/01-01	Lid, Front, IBD, Round, Black
10	05-1659-01	Lid, Back, IBD25, Black
-	05-1606-01	Lid, Back, IBD30, Black
-	05-1467/01-01	Lid, Back, IBD22, Black
11	23-1373	Agitator Assy, HEX
12	52-3556	Dispensing Wheel Assy
13	05-1310	Shroud, Dispensing Wheel
14	82-1618	Trim Assy
15	19-0359/03	LEV, SSL, W/O C, MB
16	30-5876	Cover, Electrical Box
17	30-8873	Bracket, Light, Right
18	30-8872	Bracket, Light, Left

Plumbing Diagram - 22"

LANGER

RECOMMENDED PLUMBING

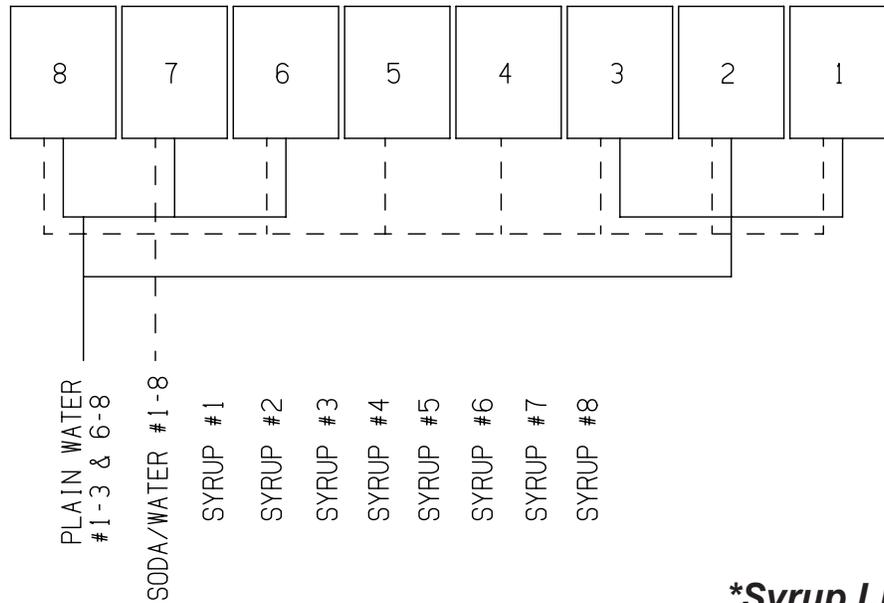


***Syrup Lines Not Shown**

Plumbing Diagram - 25"

LANGER

RECOMMENDED PLUMBING

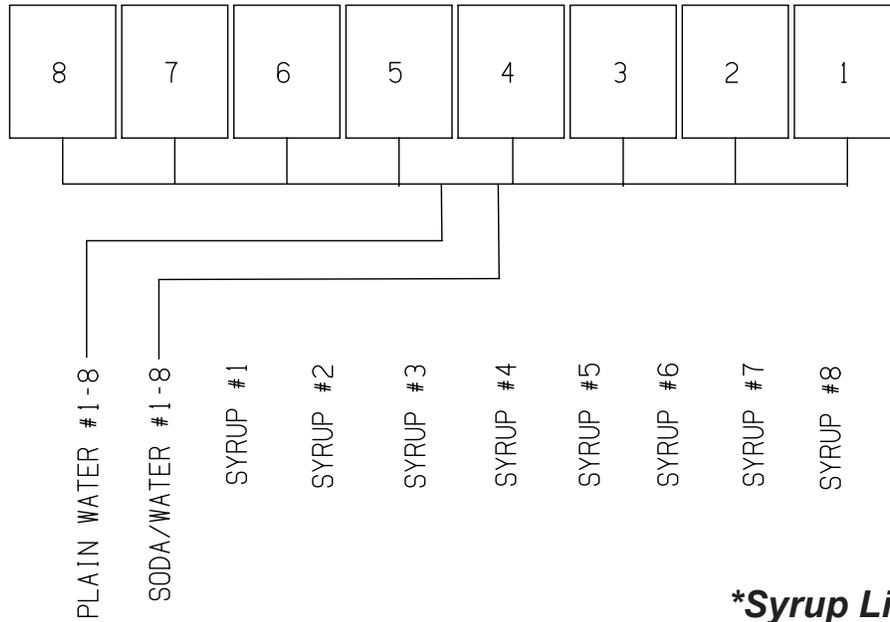


***Syrup Lines Not Shown**

Plumbing Diagram - 30" 8 Valve

LANCER

RECOMMENDED PLUMBING

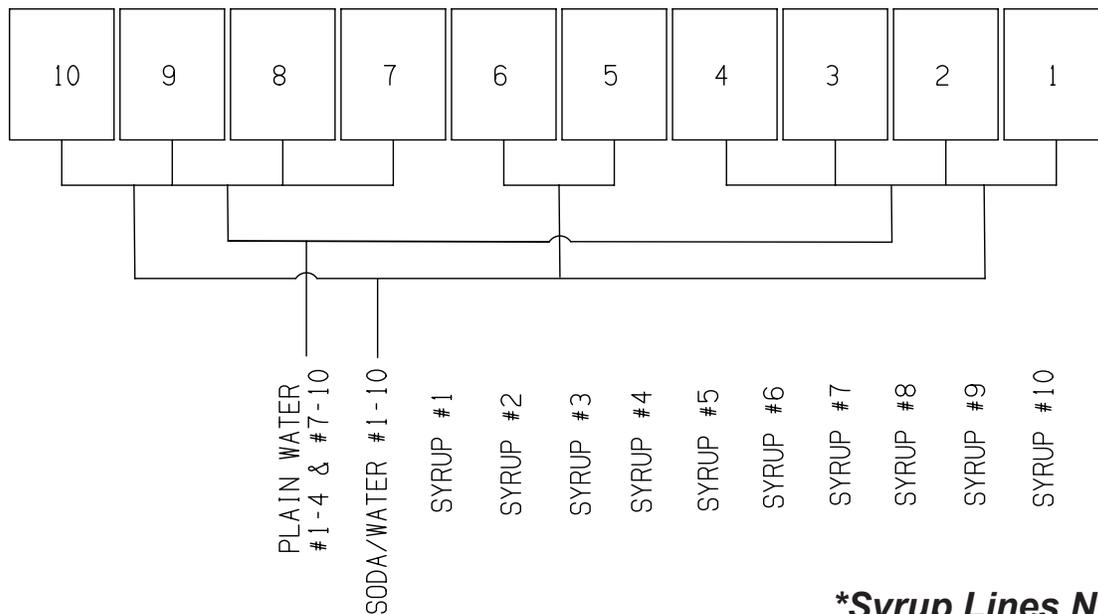


***Syrup Lines Not Shown**

Plumbing Diagram - 30" 10 Valve

LANCER

RECOMMENDED PLUMBING



***Syrup Lines Not Shown**

Wiring Diagram - 115 Volt

WIRING DIAGRAM FOR LANCER ICE DISPENSER WITH LOW ICE SENSING (TYP.)

- LED INDICATORS
- D3-ON WHEN ICE DISPENSE SWITCH IS CLOSED
 - D4-ON WHEN LID IS CLOSED
 - D5-ON WHEN +5VDC IS AVAILABLE
 - D6-ON WHEN +32VDC IS AVAILABLE
 - D7-FLASHES WHEN ICE IS LOW
 - D8-ON WHEN TRAP DOOR SOLENOID IS OPEN
 - D9-ON WHEN MOTOR IS ON

SWITCH NUMBER	5	6	7	8	AGITATION
	○	○	○	○	OFF TIME
	○	○	○	○	NO AGITATION
	○	○	○	×	10 MINUTES
	○	○	×	○	20 MINUTES
	○	○	×	×	30 MINUTES
	○	×	○	○	40 MINUTES
	○	×	×	○	50 MINUTES
	○	×	×	×	60 MINUTES
	○	×	×	×	70 MINUTES
	×	○	○	○	80 MINUTES
	×	○	○	×	90 MINUTES
	×	○	○	○	100 MINUTES
	×	○	×	○	110 MINUTES
	×	○	×	×	120 MINUTES
	×	○	×	○	130 MINUTES
	×	○	×	○	140 MINUTES
	×	○	×	×	150 MINUTES

SWITCH 1 : "LOW ICE" LED INDICATOR

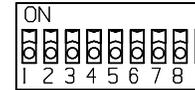
SWITCH 2 : "LOW ICE" ALARM

SWITCHES 3-4 : AGITATION "ON TIME"

SWITCHES 5-8 : AGITATION "OFF TIME"

SWITCH NUMBER	3	4	AGITATION
	○	○	ON TIME
	○	○	1 SECOND
	○	×	2 SECOND
	×	○	3 SECOND
	×	×	4 SECOND

X = ON
O = OFF

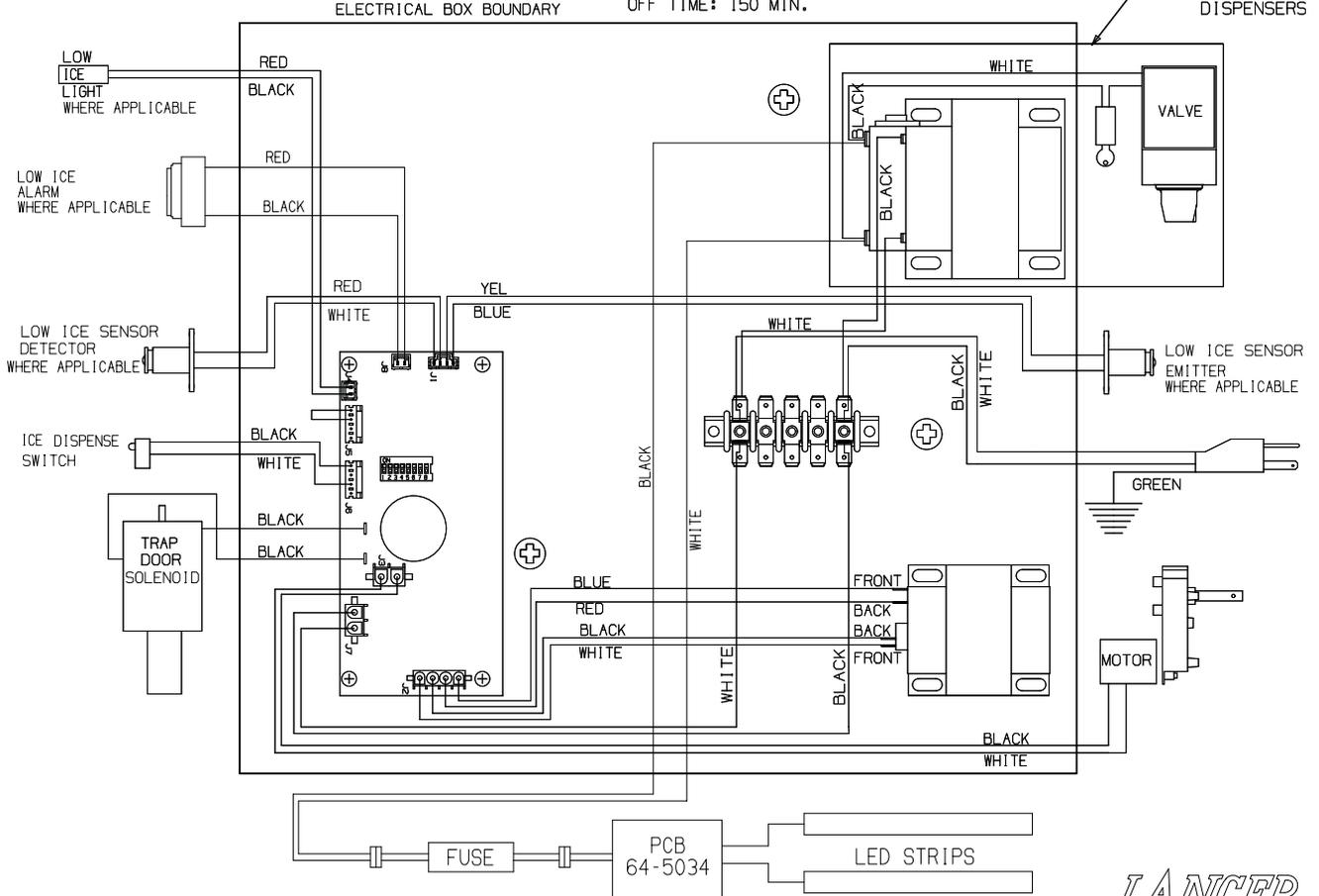


CUBE ICE SETTING:
AGITATION ON TIME: 2 SEC.
OFF TIME: 60 MIN.

SLIDE SWITCHES:
SLIDE SWITCH UP TO TURN "ON"
SLIDE SWITCH DOWN TO TURN "OFF"

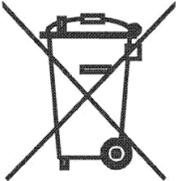
FOR PELLET CAPABLE DISPENSERS ONLY
PELLET ICE SETTING:
AGITATION ON TIME: 4 SEC.
OFF TIME: 150 MIN.

NOTE:
NOT USED
ON PREMIX
DISPENSERS



LANCER

Dispenser Disposal



To prevent possible harm to the environment from improper disposal, recycle the unit by locating an authorized recycler or contact the retailer where the product was purchased. Comply with local regulations regarding disposal of the refrigerant and insulation.

LANCER[®]

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