

**FOR QUALIFIED INSTALLER ONLY.** This basic Installation Sheet is an initial release. If a complete Operations Manual (for the unit being installed) is required or needed, please refer to the Lancer web site ([lancercorp.com](http://lancercorp.com)) for immediate access, or for your convenience, scan this QR code with a mobile device (app required) for immediate access. Contact Lancer Customer Service for assistance as required.



### ABOUT THIS MANUAL

This booklet is an integral and essential part of the product and should be handed over to the operator after the installation and preserved for any further consultation that may be necessary. Please read carefully 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.

### 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.

***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.***

## IMPORTANT SAFETY INSTRUCTIONS

### ⚠ Refrigerant Warning

The refrigeration system is under high pressure. Do not tamper with it. Contact qualified service personnel before disposal.

### ⚠ Intended Use

The dispenser is for indoor use only. This unit is not a toy. Children should not be supervised not to play with appliance. It 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. Cleaning and user maintenance shall not be performed by children without supervision. The min/max ambient operating temperature for the dispenser is 40°F to 75°F (4°C to 24°C). Do not operate unit below minimum ambient operation conditions. Should freezing occur, cease operation of the unit and contact authorized service technician. Service, cleaning and sanitizing should be accomplished only by trained personnel. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.



### **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 laws. 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) with the provided pressure regulator. 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. The water supply must be protected by means of an air gap, a backflow prevention device 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. Ensure the backflow prevention device complies with ASSE and local standards. It is the responsibility of the installer to ensure compliance.

### **Electrical Warning**

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. Follow all local electrical codes when making connections. 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. The keyswitch does not disable the line voltage to the transformer primary. 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. Make sure that all water lines are tight and units are dry before making any electrical connections!

### **Carbon Dioxide (CO<sub>2</sub>)**

- **WARNING:** Carbon Dioxide (CO<sub>2</sub>) is a colorless, noncombustible gas with a light pungent odor. High percentages of CO<sub>2</sub> may displace oxygen in the blood.
- **WARNING:** Prolonged exposure to CO<sub>2</sub> can be harmful. Personnel exposed to high concentrations of CO<sub>2</sub> gas will experience tremors which are followed by a loss of consciousness and suffocation.
- **WARNING:** If a CO<sub>2</sub> 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 CO<sub>2</sub> gas leaks in the entire CO<sub>2</sub> and soft drink system.

## SPECIFICATIONS

### DIMENSIONS

Width: 15.44 inches (392 mm)  
Depth: 27.19 inches (691 mm)  
Height: 22.61 inches (574 mm)

### WEIGHT

Shipping: 106 lbs (48.08 kg)  
Empty: 85 lbs (38.55 kg)  
Operating: 131 lbs (59.42 kg)

### ELECTRICAL

115 VAC / 60 Hz / 5.0 Amps

### PLAIN WATER SUPPLY

Min Flowing Pressure: 50 PSIG (0.345 MPA)

### CARBONATED WATER SUPPLY

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

***This unit emits a sound pressure level below 70 dB***

### CARBON DIOXIDE (CO<sub>2</sub>) SUPPLY

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

### FITTINGS

Plain Water Inlet: 3/8 inch barb  
Brand Syrup Inlets: 3/8 inch barb

## INSTALLATION

### READ THIS MANUAL

This manual was developed by the Lancer Corporation as a reference for the owner/operator and installer of this dispenser. Please read this guide before installation and operation of this dispenser. If service is required please call your Lancer Service Agent or Lancer Customer Service. Always have your model and serial number available when you call.

**Your Service Agent:** \_\_\_\_\_

**Service Agent Telephone Number:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Model Number:** \_\_\_\_\_

## Unpack the Dispenser

1. Cut package banding straps and remove.
2. Open the box and remove the parts tray.
3. Close the lid, then remove using the handle cutouts.
4. Remove accessory kit and loose parts.

### NOTE

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

5. 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.**

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

### ⚠ ATTENTION

**DO NOT LAY UNIT ON ITS SIDE OR BACK**

## Selecting/Preparing Counter Location

### NOTE

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

1. Select a location that is in close proximity to a properly grounded electrical outlet, within five (5) feet (1.5 m) of a drain, and a water supply that meets the requirements shown in the Specifications section found on page 4.
2. Select a location for the syrup pumps, CO<sub>2</sub> tank, syrup containers, and water filter (recommended). Please see General System Overview on page 5 for reference.
3. Condenser air is drawn in from the front and side vents located on the bonnet and discharged out the rear of the bonnet. A minimum of eight (8) inches (203 mm) of clearance must be maintained over the top of the unit and a minimum of four (4) inches (101.6 mm) clearance behind the unit to provide for proper air flow and circulation.

### ⚠ ATTENTION

**Failure to maintain specified clearance will cause the compressor to overheat and will result in compressor failure**

4. Cut the necessary holes in counter for mounting in the designated dispenser location, using the template provided.

### NOTE

**Lancer recommends placing counter cut-out toward the front of the unit's designated location due to the syrup and water inlets being located behind the splash plate in the front of the unit.**

## Dispenser Installation

### NOTE

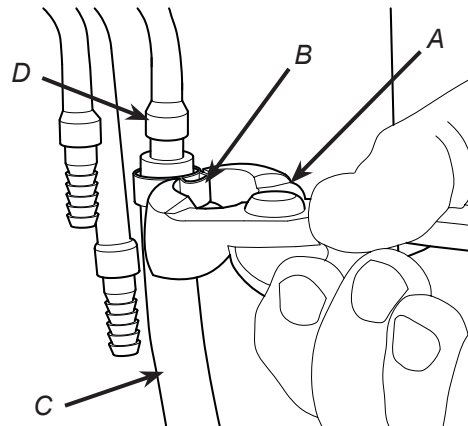
**The installation, and relocation if necessary, must be carried out by qualified personnel with up-to-date knowledge and practical experience, in accordance with current regulations.**

1. The dispenser is designed to be installed either permanently to counter or placed on a counter using the four (4) inch legs (included in the Lancer kit, PN 82-1704)

### NOTE

**NSF listed units must be sealed to the counter or have four (4) inch legs installed.**

2. When the dispenser is to be permanently bolted to the counter top, the dispenser base must be sealed to the counter top with a bead of clear silicone caulk or sealant which provides a smooth and easily cleanable bond to the counter.
3. Once the dispenser is installed to the counter or placed on the counter using legs provided, remove the splash plate, cup rest, and drip tray.
4. Remove the bonnet screw from the top of the unit, lift bonnet off of unit and set aside.
5. Route appropriate tubing from the designated syrup pump location through the counter cutout and drip tray opening in the front of the unit.
6. Connect tubing routed in previous step to syrup inlets using oetiker pliers and fittings. Repeat for all syrup connections.



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

7. Route appropriate tubing from the water source location to the water inlet at the front of the unit. Only connect tubing to water source.

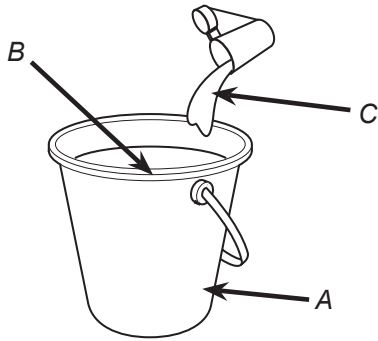
### ⚠ CRITICAL - to maximize performance

**Carefully read this before filling the water bath tank. In order to optimize the maximum performance of the dispenser, the following MUST be adhered to:**

8. Insert water line into a large bucket, and fill with approx. 5.4 gallons (20.4 L) of distilled water.
9. Add 1/8 oz (4 g) of baking soda to distilled water and stir.

**⚠ ATTENTION**

For proper function of the electronic ice bank control the total dissolved solids (TDS) measurements should be 300-500 ppm.



- A. Bucket
- B. Distilled Water (approx. 5.4 gal)
- C. Baking Soda (approx. 1/8 oz)

10. Using a conductivity meter, measure the electric conductivity of the distilled water mixture.

**⚠ ATTENTION**

The E.C. measurement of the distilled water mixture must be between 100 and 300 uS/cm. Below 100 uS/cm, the compressor will not work properly and above 300 uS/cm could cause the lines to freeze.

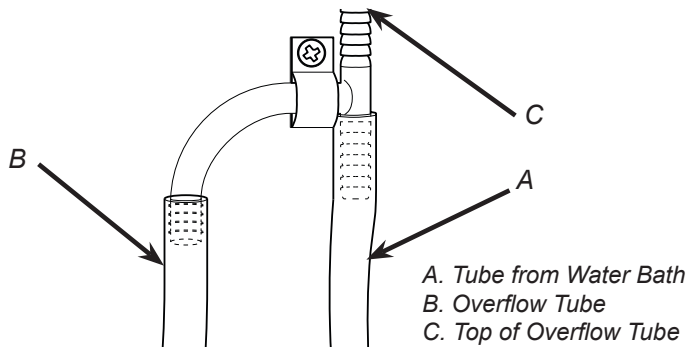
11. Remove yellow cap from the water bath fill hole on unit and insert a funnel into the fill hole.
12. Carefully pour the distilled water mixture into the water bath tank until water flows out of the overflow tube at the front of the unit. Then replace yellow cap (Repeat steps 6 - 7 if needed).

**⚠ ATTENTION**

The water bath compartment must be filled with water before plugging in the unit, otherwise the compressor fan may not operate properly. DO NOT use RO or purified water.

**NOTE**

Make sure the top of overflow tube is not covered so that the water from the water bath tank cannot escape.



13. Route water line through counter cutout and drip tray opening, then connect to plain water inlet.
14. Route proper drain line from the designated floor drain through the counter cutout and drip tray opening.

15. Connect drain tube to the drain fitting located on the bottom of the drip tray and secure drain tube with clamp.

**⚠ 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.

16. Re-install cup rest and splash plate.
17. Turn on water supply and check for leaks.
18. Plug power cord into designated grounded electrical outlet.

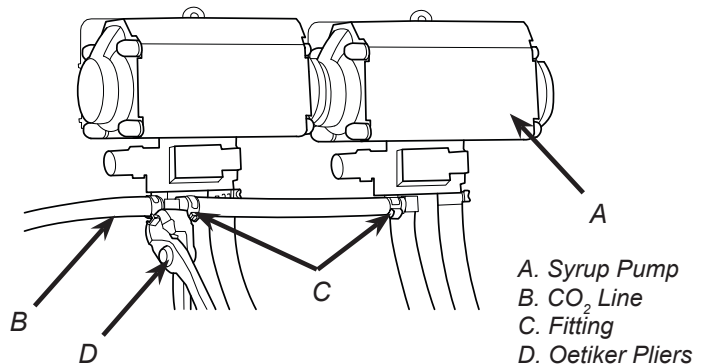
**⚠ WARNING**

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.

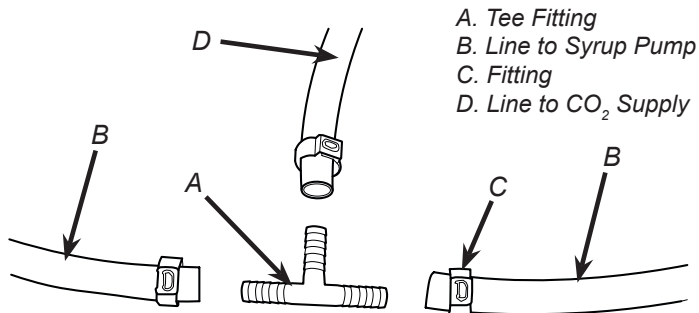
19. Turn on the power switch, at the top of the unit, to turn on the unit and begin building an ice bank.

## Installing Remote Syrup Pumps

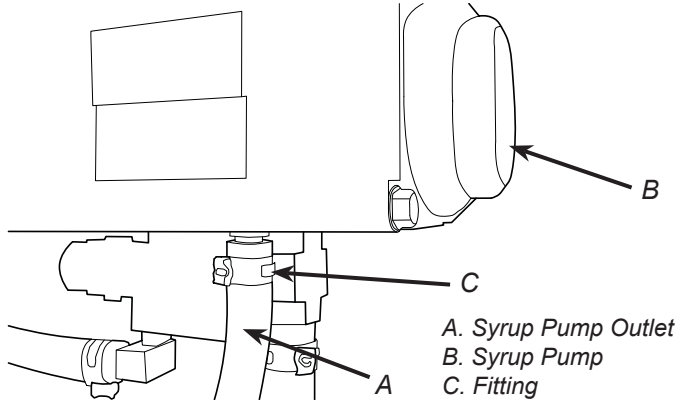
1. Install BIB rack and remote pumps according to manufacturers' instructions.
2. Once pumps and BIB rack are installed, measure and cut tubing to length between the pump CO<sub>2</sub> inlets, then connect tubing to all pumps.



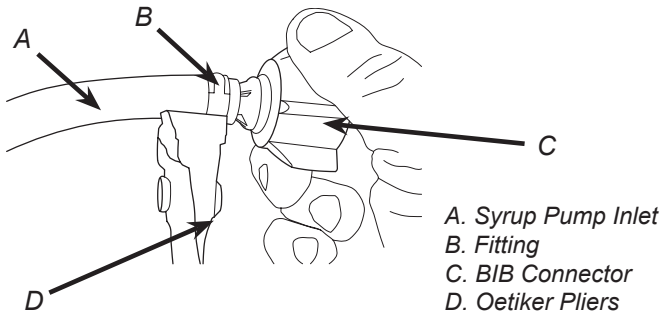
- Using tubing cutters, cut any pump CO<sub>2</sub> supply line and install tee fitting, then route appropriate tubing from the CO<sub>2</sub> supply to the tee fitting at syrup pumps.



- Connect tubing from dispenser syrup inlet to the syrup pump outlet fitting. Repeat for each syrup line/pump.



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



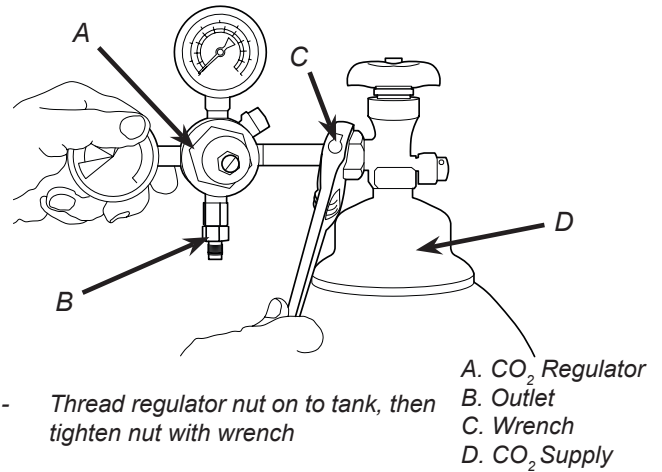
- Connect syrup BIBs to connectors. Repeat for each syrup line/pump.

## Installing CO<sub>2</sub> Supply

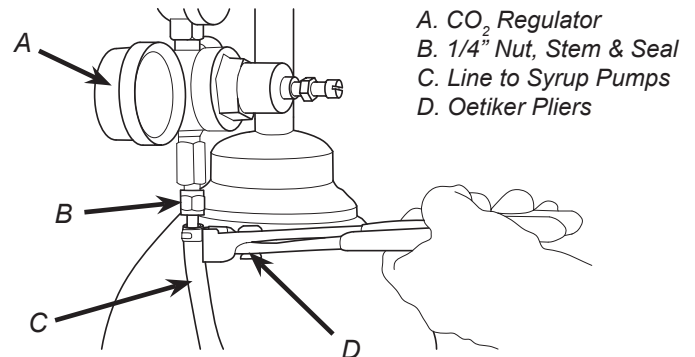
- Connect high pressure CO<sub>2</sub> regulator assembly to CO<sub>2</sub> cylinder or bulk system.

### ⚠ ATTENTION

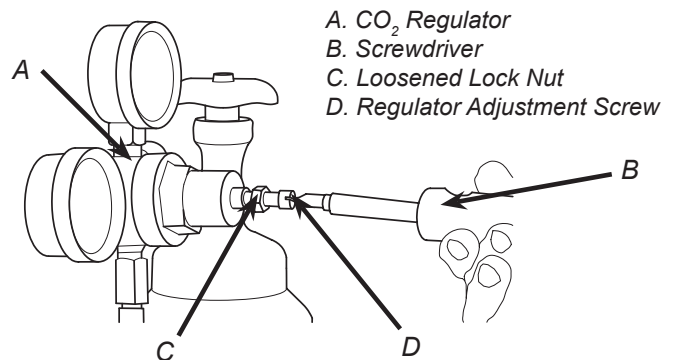
Before installing regulator, assure that a seal (washer or o-ring) is present in regulator attachment nut.



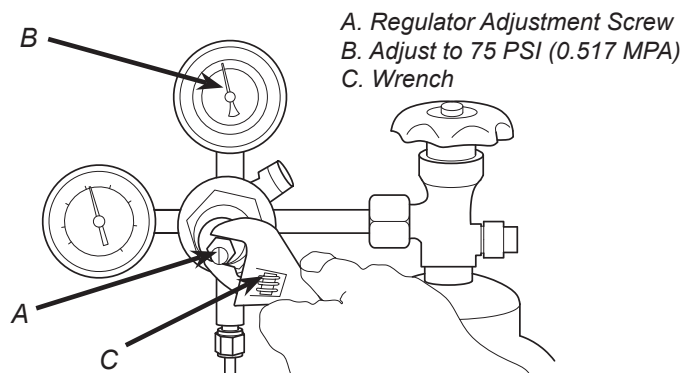
- Connect a 1/4" nut, stem and seal to CO<sub>2</sub> regulator outlet. Then connect tubing routed from tee at syrup pumps tanks.



- Using a wrench, loosen lock nut on regulator adjustment screw then using a screwdriver back out lock nut screw all the way.



- Turn on CO<sub>2</sub> and using a screwdriver, adjust regulator to 75 PSI (0.517 MPA) then tighten lock nut with wrench.





## Adjust Water Flow Rate & Syrup/Water Ratio

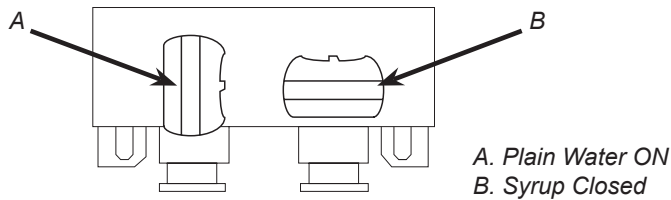
### NOTE

The water flow must be adjusted to 1.25 oz/sec (37 ml/sec) on all dispensing valves. Exceeding 2.0 oz/sec (74 ml/sec) may lead to gas-out.

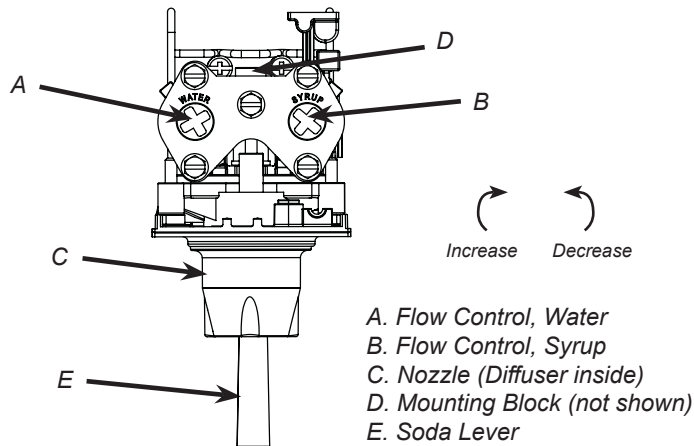
### NOTE

The refrigeration unit should have been running for at least one (1) hour before attempting to set flow rates on valves. The drink temperature should be no higher than 40°F (4.4°C) when flow rates are set. This is best done after the unit has already made an ice bank.

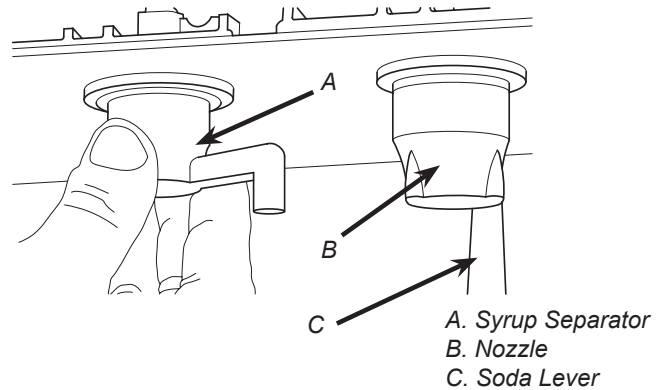
1. Set the back block to dispense plain water and close syrup shut-off at mounting block for first valve.



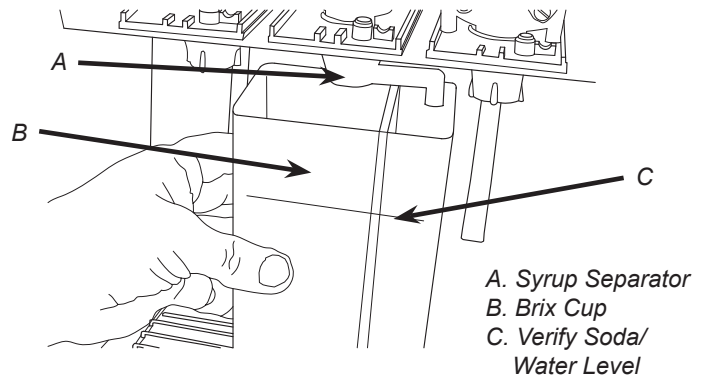
2. Using a Lancer ratio cup verify water flow rate (5 oz. in 4 sec.). Use a screwdriver to adjust if needed.



3. Remove nozzle by twisting counter clockwise and pulling down, then remove diffuser by pulling down.
4. Install Lancer (yellow) syrup separator (PN 54-0031) in place of nozzle.



5. Re-open syrup shut-off at mounting block.
6. Activate valve to purge syrup until steady flow is achieved.
7. Using Lancer ratio 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.



8. Repeat process for each valve.
9. Re-install the bonnet using the top bonnet screw.

## MAINTENANCE

### Scheduled Maintenance

#### Daily:

- Remove each nozzle and rinse well in warm water. **DO NOT** use soap or detergent. This will cause foaming and off taste in finished product.
- Remove cup rest and wash in warm soapy water.
- Pour warm soapy water into the drip tray and wipe with a clean cloth.
- With a clean cloth and warm water, wipe off all of the unit's exterior surfaces. **DO NOT USE ABRASIVE SOAPS OR STRONG DETERGENTS.**
- Replace the cup rest and nozzles.

#### Weekly:

- Taste each product for off tastes.
- Remove cup rest and splash plate to view water level tube indicator and replenish as required.

#### Monthly:

- Unplug the dispenser from the power source.
- Remove the bonnet and clean the dirt from the condenser using a soft brush.
- Replace the bonnet and plug in the unit.

#### Every Six Months:

- Clean and sanitize the unit using the appropriate procedures outlined in the Cleaning and Sanitizing section of this guide.

#### Yearly:

- Clean water bath interior, including evaporator coils and refrigeration components.
- Clean the entire exterior of the unit

# CLEANING AND SANITIZING

## ⚠ 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.

## 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.

## 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.

## Sanitizing Solution

Prepare sanitizing solutions in accordance with the manufacturer's written recommendations and safety guidelines. The solution must provide 100 parts per million (PPM) chlorine (e.g. Sodium Hypochlorite or bleach). 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 100 parts per million (PPM) chlorine.

## Integrity of Plastic Finish

While caring for your Delta-6, please note that there may be some cleaners that may compromise the integrity of the plastic finish. Most common cleaners such as Windex, Dawn, 409, etc. pose no threat to the plastic finish of the unit. However, certain cleaners with high levels of acetic acid, ethylbenzene, isopropylamine, etc., at certain temperatures, could cause aesthetic damage. Please refer to this webpage, <http://www.vita.com.cy/index.php/chemical-resistance-of-llidpe>, to make sure that you are properly caring for your unit.

## Cleaning and Sanitizing Syrup Lines

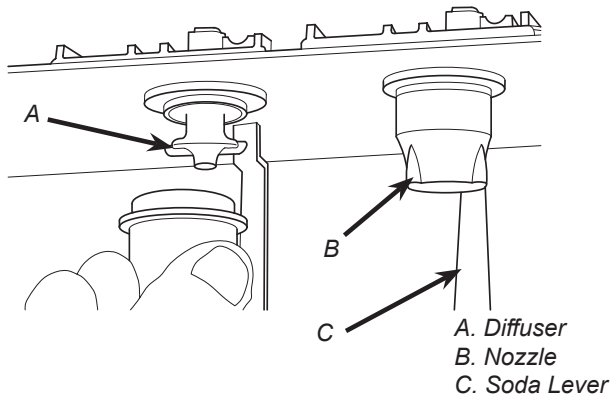
1. Disconnect syrup lines from BIB's
2. Place syrup lines, with BIB connectors, in a bucket of warm water.
3. Activate each valve to fill the lines with warm water and flush out syrup remaining in the lines.
4. Prepare Cleaning Solution described above.
5. Place syrup lines, with BIB connectors, into 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.

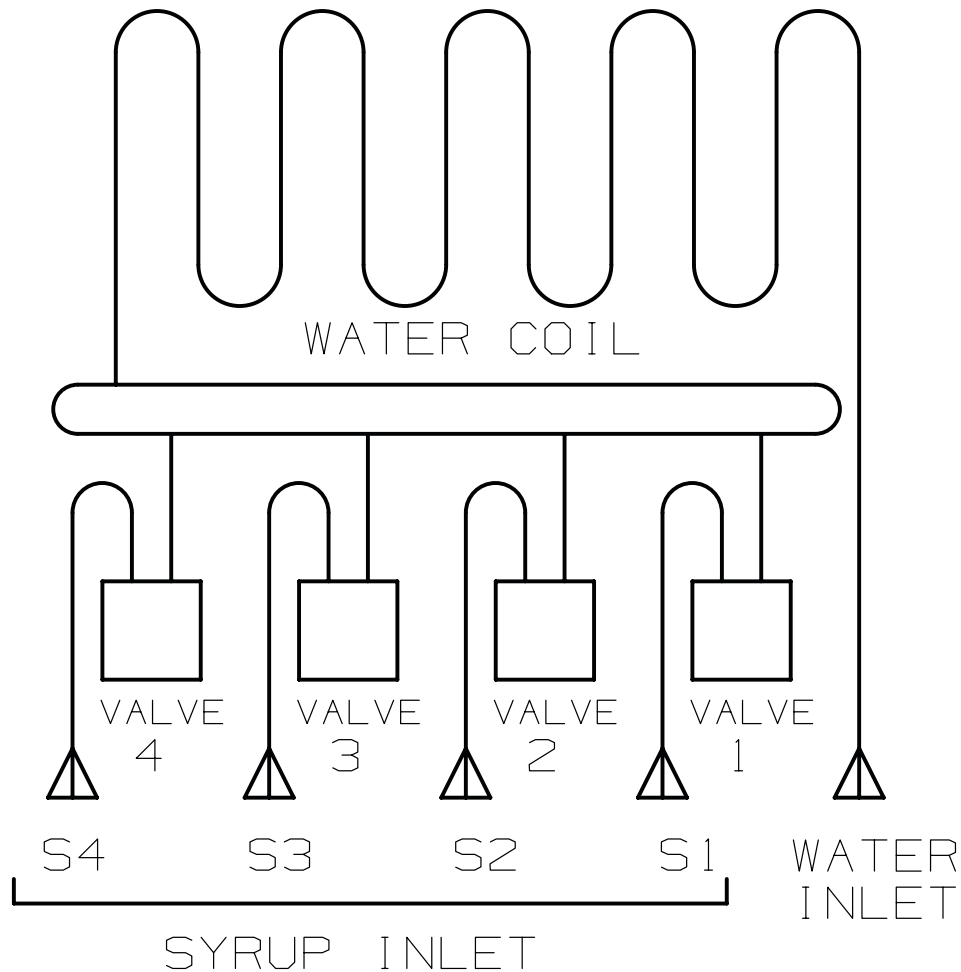


3. Remove diffuser by pulling down.
4. Rinse nozzle and diffuser with warm water.
5. Wash nozzle and diffuser with cleaning solution then immerse in sanitizing solution and let sit for fifteen (15) minutes.
6. Set nozzle and diffuser aside and let air dry. **DO NOT** rinse with water after sanitizing.
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.

## PLUMBING DIAGRAM





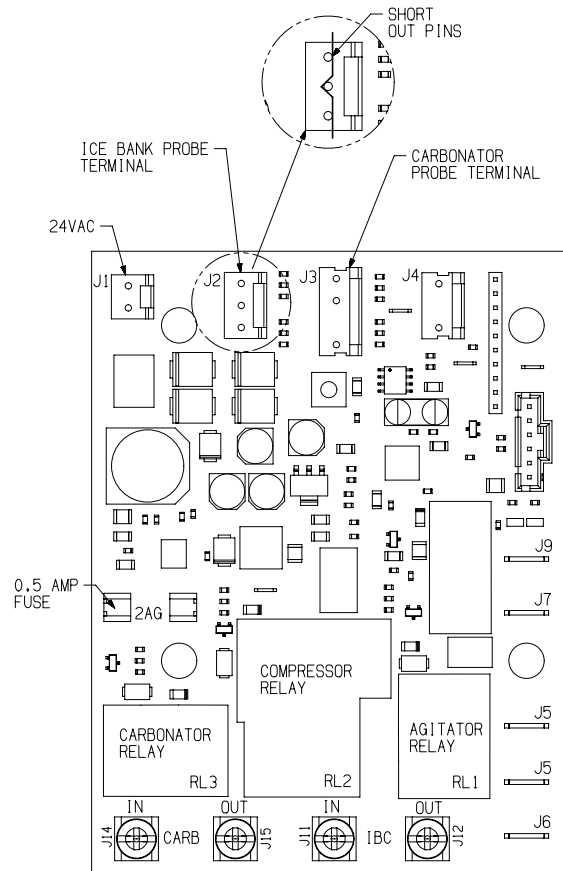
# THE ELECTRONIC ICE BANK CONTROL (EIBC)

## Checking the Normal PCB Operation

### ⚠ WARNING

Terminal block has ac line voltage and, when servicing the unit, should be covered with tape. Tape should cover bare electrical connections to prevent electrical shock.

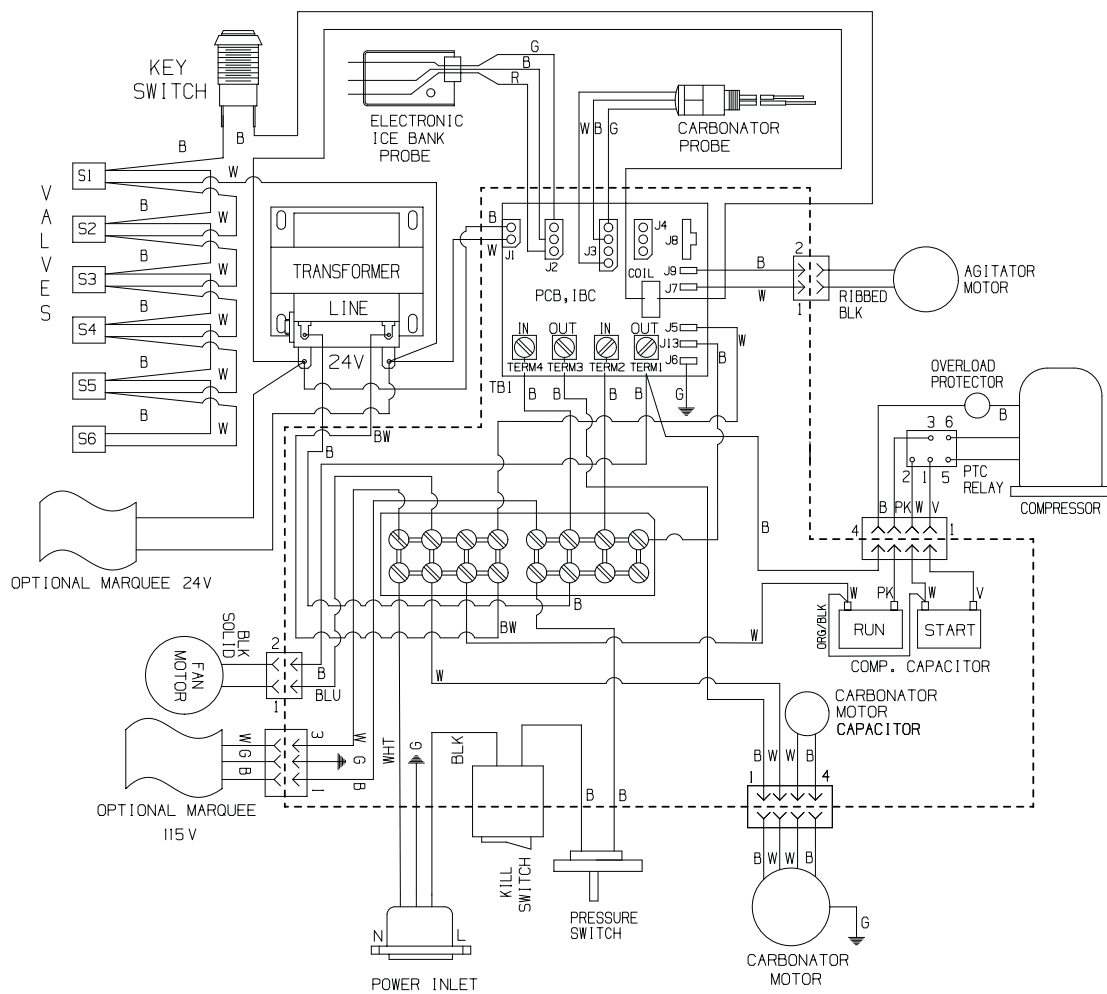
1. Turn power OFF or insure that power has been disconnected from dispenser
2. Check condition of 0.5 amp fuse at location shown in diagram to the right. If fuse is blown, trace cause of short in valve wire harness and associated 24 VAC lines and replace fuse. If fuse is good, continue with next step.
3. Disconnect leads from the terminal block that connect to the PCB, noting their specific location for reconnection.
4. Disconnect both the Ice Bank probe (J2) and the Carbonator probe (J3) (if equipped) connections from board.
5. Use a short copper wire, paper clip, or other means to short the Ice Bank probe terminals (J2) on the PCB by touching all three (3) pins together.
6. Set Ohm test meter to measure continuity.
7. Reconnect power or turn dispenser ON.
8. Observe time and check continuity of the PCB screw lug connections:
  - Terminal 3 to 4 (Carbonator): During the first 2.5 to 3.5 minutes there should be continuity. After 2.5 to 3.5 minutes, there should be NO continuity.
  - Terminal 2 to 1 (Compressor): During first 4 to 6 minutes, there should be NO continuity. After 4 to 6 minutes, there should be continuity. There should be NO continuity from 2 to 1.
  - You should be able to hear a “click” sound of the relay closing when the time delay ends.
9. Turn electrical power OFF for 15 seconds and then back ON again to reset Carbonator timer. Again, measure continuity of the PCB screw lug connections:
  - Terminal 3 to 4: There should be continuity. Use a short copper wire, paper clip, or other means to short the Carbonator probe terminals (J3) on the PCB by touching all three (3) pins together. This should be done before the 2.5 to 3.5 minute time limit has elapsed. Measure the continuity again between Terminal 3 to 4: There should be **NO** continuity.
10. If all the above work as noted, then the board is functioning properly. Remove tape and reconnect board. If any non-conformities are found, the PCB must be replaced (PN 52-1423/01).



WIRING DIAGRAM - 115 VOLT

IMPORTANT

- 1. WHEN STARTING UNIT OR IF CURRENT IS INTERRUPTED THERE IS A 5 MINUTE DELAY BEFORE THE COMPRESSOR/FAN STARTS.
- 2. THERE IS A 3 MINUTE PROTECTION TIMER ON THE CARBONATOR LEVEL SENSOR. IF THE MOTOR HAS TIMED OUT, CHECK WATER SUPPLY AND RESET BY MOMENTARILY DISCONNECTING POWER.

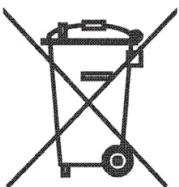


• DELTA III, C02

	DESCRIPTION
	CHASSIS GROUND
	CHAMFER PIN
	CONTROL BOX

LANCER  
LABEL, WIRING DIAGRAM  
06-3300/03

## 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.

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***LANCER***<sup>®</sup>

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