



# COUNTER ELECTRIC DISPENSER (CED)

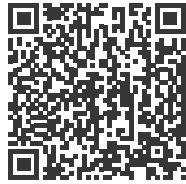
## LANCER INSTALLATION GUIDE

MODELS: 500, 1500, 2500, 8000, 9000 (Delta III)

**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 Corp website (lancercorp.com) or for your convenience, scan this QR code with a mobile device (app required) for immediate access to other Technical Documents and alternative translations (if available) pertaining to this unit. Contact Lancer Customer Service for any assistance.



500



1500



2500



8000



9000



### 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

### ⚠ Intended Use

The dispenser is for indoor use only. This appliance is to be installed in a location where its use can be overseen by trained personnel. This unit is not a toy. Children should 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 90°F (4°C to 32°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.

### ⚠ 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 key-switch 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!



500  
1500  
2500  
8000  
9000

Lancer PN: 28-0480/05  
Revision: September 2018

## ▲ 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.

## ▲ 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.

## SPECIFICATIONS

### MODEL 500

#### DIMENSIONS

*Width:* 10.4 inches (264 mm)  
*Depth:* 25.3 inches (641 mm)  
*Height:* 22.9 inches (583 mm)

#### WEIGHT

*Shipping:* 108 lbs (49.0 kg)  
*Empty:* 89 lbs (40.4 kg)  
*Operating:* 125 lbs (55.4 kg)  
*Ice Bath Capacity:* 16 lbs (17.3 kg)

#### ELECTRICAL

115 VAC / 60 Hz / 7.0 Amps  
230 VAC / 50 Hz / 3.3 Amps  
240 VAC / 60 Hz / 3.3 Amps

#### PLAIN WATER SUPPLY

*Min Flowing Pressure:* 25 psi (0.172 MPa)  
*Max Static Pressure:* 50 psi (0.345 MPa)

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

*Min Pressure:* 70 psi (0.483 MPa)  
*Max Pressure:* 80 psi (0.552 MPa)

#### FITTINGS

*Carbonator Inlet:* 3/8 inch barb  
*Water Inlet:* 3/8 inch barb  
*Brand Syrup Inlets:* 3/8 inch barb

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

### MODEL 1500

#### DIMENSIONS

*Width:* 19.2 inches (487 mm)  
*Depth:* 24 inches (610 mm)  
*Height:* 25.4 inches (645 mm)

#### WEIGHT

*Shipping:* 150 lbs (68.2 kg)  
*Empty:* 130 lbs (59.0 kg)  
*Operating:* 220 lbs (99.8 kg)  
*Ice Bath Capacity:* 30 lbs (13.6 kg)

#### ELECTRICAL

115 VAC / 60 Hz / 7.8 Amps  
230 VAC / 50 Hz / 4.4 Amps

#### PLAIN WATER SUPPLY

*Min Flowing Pressure:* 25 psi (0.172 MPa)  
*Max Static Pressure:* 50 psi (0.345 MPa)

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

*Min Pressure:* 70 psi (0.483 MPa)  
*Max Pressure:* 80 psi (0.552 MPa)

#### FITTINGS

*Carbonator Inlet:* 3/8 inch barb  
*Water Inlet:* 3/8 inch barb  
*Brand Syrup Inlets:* 3/8 inch barb

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

### MODEL 2500

#### DIMENSIONS

*Width:* 26 inches (660 mm)  
*Depth:* 27.13 inches (690 mm)  
*Height:* 31.25 inches (790 mm)

#### WEIGHT

*Shipping:* 257 lbs (117 kg)  
*Empty:* 209 lbs (95 kg)  
*Operating:* 376 lbs (171 kg)  
*Ice Bath Capacity:* 50 lbs (23 kg)

#### ELECTRICAL

115 VAC / 60 Hz / 12.0 Amps  
230 VAC / 50 Hz / 7.5 Amps  
240 VAC / 60 Hz / 7.5 Amps

#### PLAIN WATER SUPPLY

*Min Flowing Pressure:* 25 psi (0.172 MPa)  
*Max Static Pressure:* 50 psi (0.345 MPa)

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

*Min Pressure:* 70 psi (0.483 MPa)  
*Max Pressure:* 80 psi (0.552 MPa)

#### FITTINGS

*Carbonator Inlet:* 3/8 inch barb  
*Water Inlet:* 3/8 inch barb  
*Brand Syrup Inlets:* 3/8 inch barb

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

## MODEL 8000

### DIMENSIONS

Width: 24 inches (610 mm)  
Depth: 28.63 inches (627 mm)  
Height: 30.63 inches (778 mm)

### WEIGHT

Shipping: 267 lbs (121 kg)  
Empty: 220 lbs (99.8 kg)  
Operating: 386 lbs (175 kg)  
Ice Bath Capacity: 50 lbs (23 kg)

### ELECTRICAL

115 VAC / 60 Hz / 14.0 Amps  
220 VAC / 50 Hz / 7.0 Amps  
230 VAC / 50 Hz / 7.0 Amps

### PLAIN WATER SUPPLY

Min Flowing Pressure: 25 psi (0.172 MPa)  
Max Static Pressure: 60 psi (0.414 MPa)

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

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

Min Pressure: 70 psi (0.483 MPa)  
Max Pressure: 80 psi (0.552 MPa)

### FITTINGS

Plain Water Inlet: 3/8 inch barb  
Carb Water Inlet: 3/8 inch barb  
Brand Syrup Inlets: 3/8 inch barb  
CO<sub>2</sub> Inlet: 3/8 inch barb

## MODEL 9000 (Delta III)

### DIMENSIONS

Width: 25.56 inches (649 mm)  
Depth: 25.86 inches (690 mm)  
Height: 46.86 inches (429 mm)

### WEIGHT

Shipping: 160 lbs (72.5 kg)  
Empty: 146 lbs (66.2 kg)  
Operating: 220 lbs (99.8 kg)  
Ice Bath Capacity: 25 - 28 lbs  
(11.3 - 12.7 kg)

### ELECTRICAL

115 VAC / 60 Hz / 9.0 Amps  
220 VAC / 60 Hz / 4.5 Amps  
230 VAC / 50 Hz / 4.5 Amps

### PLAIN 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 psi (0.483 MPa)  
Max Pressure: 80 psi (0.552 MPa)

### FITTINGS

Carb Water Inlet: 3/8 inch barb  
Brand Syrup Inlets: 3/8 inch barb  
CO<sub>2</sub> Inlet: 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. Remove top portion of carton by lifting up.
2. Remove top inner carton pad and corners.
3. Remove accessory kit of loose parts from drip tray.

#### NOTE

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

4. Lift unit up by plywood shipping base and remove lower portion of carton.
5. Remove splash plate.

#### NOTE

Splash plate is located under unit on shipping base for Series 1500E models only

6. 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.

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

#### ATTENTION

DO NOT LAY UNIT ON ITS SIDE OR BACK. DO NOT USE DRIP TRAY FRAME FOR A HANDLE.

## Selecting/Preparing Counter Location

### NOTE

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

1. The dispenser is designed to sit on a flat, supported surface capable of supporting a minimum weight of 400 lbs (182 kg) (*minimum of 200 lbs (90.7 kg) for Model 500's ONLY*). 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
2. Select a location for the syrup pumps, CO<sub>2</sub> tank, syrup containers, water filter (recommended), and remote carbonator (if necessary).
3. The dispenser may either be counter or leg mounted. When the dispenser is to be permanently bolted to the counter top, use Lancer Sealant Kit (PN 15-0010) to seal dispenser base to counter top.

### NOTE

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

4. Condenser air is drawn in from the back grill located on the bonnet and discharged out the top of the bonnet. A minimum of fifteen (15) inches (380 mm) of clearance must be maintained over the top of the unit and a minimum of six (6) inches (152 mm) clearance behind the unit to provide for proper air flow and circulation.

### NOTE

*For Model 9000 (Delta III) units Only:* the air is drawn in from the front half of the top cover and discharged out the rear half of the top cover and a minimum of eight (8) inches (203 mm) of clearance must be maintained over the top of the unit to provide for proper air flow and circulation.

### ⚠ ATTENTION

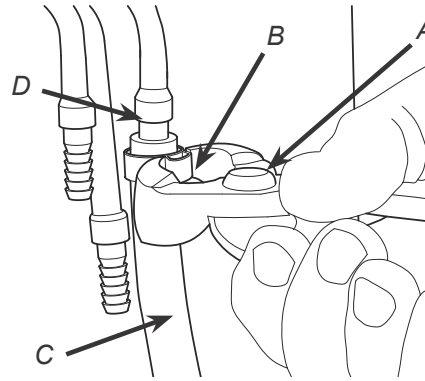
Failure to maintain specified clearance will cause the compressor to overheat and will result in compressor failure

5. Cut the necessary holes in counter for mounting in the designated dispenser location.

## Dispenser Installation

1. Install the unit onto the counter.
2. Remove the bonnet from the dispenser by lifting up.
3. Remove the drip tray from the unit and connect the drain tube to the drain fitting located on the bottom. Secure drain tube with clamp provided in accessory kit.
4. Route the drain tube to a suitable drain and replace the unit's drip tray.

5. Route appropriate tubing from the syrup pump location to the syrup inlets. Connect tubing to inlets using the oetiker pliers and fittings. Repeat for all syrup connections.



A. Oetiker Pliers  
B. Fitting  
C. Tubing  
D. Syrup/Water/CO<sub>2</sub> Inlet

6. If necessary, install remote carbonator per manufacturer's instructions.
7. Route appropriate tubing from the water source to the compressor deck fill hole, identified by the yellow cap, and **ONLY** connect tubing to water source.

### NOTE

Leave 12 inches (305 mm) of extra tubing below the counter for servicing and moving the dispenser

8. Flush water supply line thoroughly.

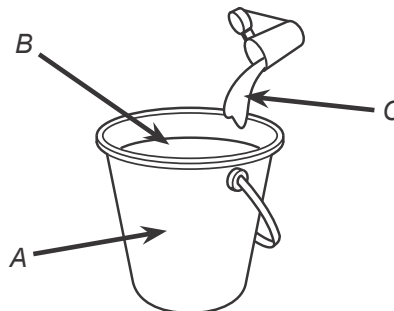
### ⚠ CRITICAL - to maximize performance

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:

9. Insert water line into a large bucket, and fill with approx. 5.4 gallons (20.4 L) of distilled water.
10. 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)

11. 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.

- Remove yellow cap from the water bath fill hole and insert and insert a funnel into the fill hole.
- Remove the insulation strip from front of the refrigeration deck.
- 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. (Repeat steps 9-11 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.

- Replace yellow cap, replace insulation, then connect water line to the carbonated water inlet in the front of the unit.
- If plain water is to be utilized for any of the valves, install a "U" fitting to the water line and connect to plain water inlet.

**NOTE**

Use the Plumbing Diagrams on pages 12-15 to determine which valves are to be plumbed with plain water or carbonated water

- Route appropriate tubing from the syrup pump location to the CO<sub>2</sub> inlet and connect tubing to CO<sub>2</sub> inlet.

**NOTE**

Leave 12 inches (305 mm) of extra tubing below the counter for servicing and moving the dispenser

- Plug in power cord to the unit control box.
- Feed all tubing, power cord, and drain line through the counter top cutout.
- Plug in the unit to a grounded electrical outlet then turn the unit on to begin building an ice bank.

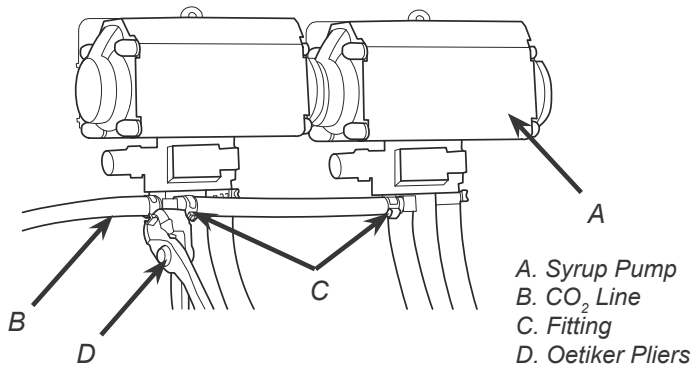
**⚠ WARNING**

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.

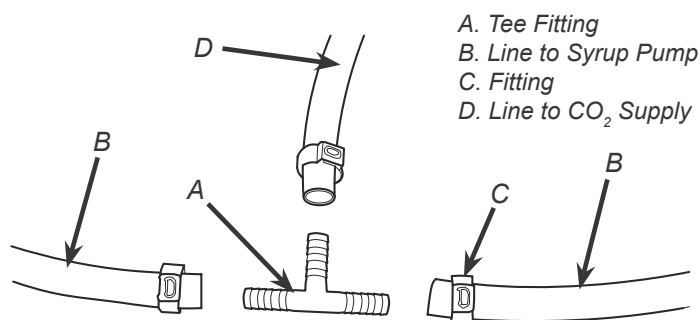
**Installing Remote Syrup Pumps (if necessary)**

- Install BIB rack and remote pumps according to manufacturers' instructions.

- 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.



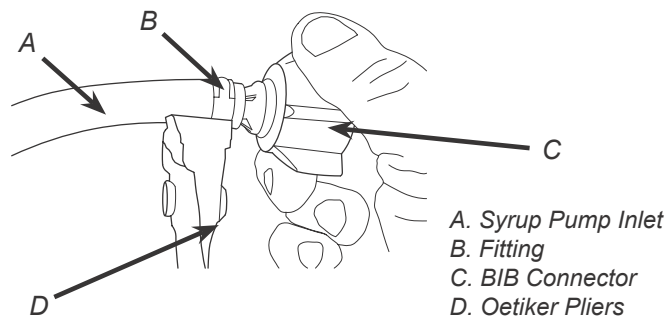
- Using tubing cutters, cut any pump CO<sub>2</sub> supply line and install tee fitting, then route appropriate tubing from the CO<sub>2</sub> supply to the tee fitting at syrup pumps.



- Cut tubing from CO<sub>2</sub> supply to tee fitting at syrup pumps and install another tee fitting.
- Attach line from dispenser CO<sub>2</sub> inlet to tee fitting between syrup pumps and CO<sub>2</sub> supply.
- 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.

**⚠ ATTENTION**

Use proper connector for syrup manufacturer

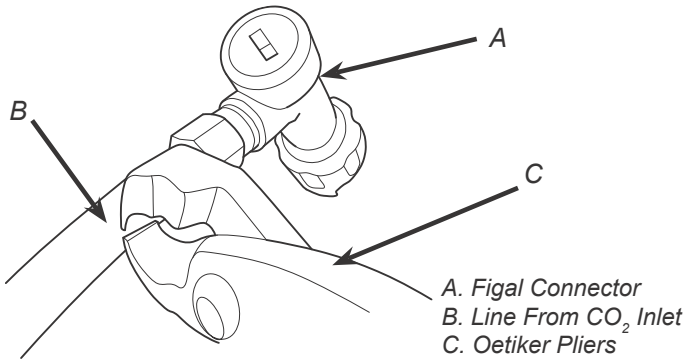


- Connect syrup BIBs to connectors. Repeat for each syrup line/pump.

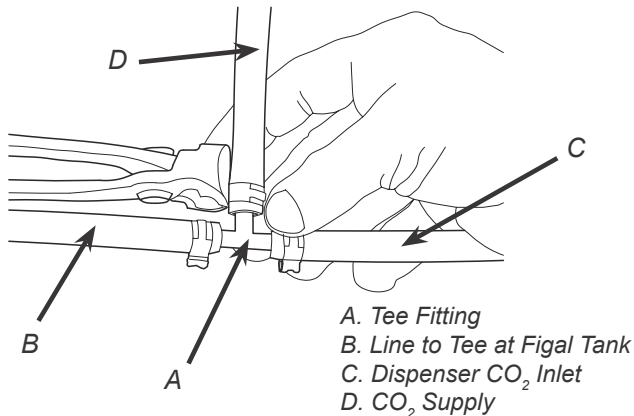


## Connecting to Syrup Supply - Figal Syrup Tank

1. Connect tubing routed from CO<sub>2</sub> inlet in dispenser to figal syrup tank CO<sub>2</sub> inlet.



2. Using tubing cutters, cut line from CO<sub>2</sub> inlet to figal syrup tank and install tee fitting, then route appropriate tubing from second figal syrup CO<sub>2</sub> inlet to tee fitting.
3. Repeat step 2 for remaining figal syrup tanks.
4. Cut tubing from dispenser CO<sub>2</sub> inlet to tee fitting at figal syrup tanks and install another tee fitting.
5. Route appropriate tubing from CO<sub>2</sub> supply to tee fitting between dispenser CO<sub>2</sub> inlet and figal syrup tanks and connect tubing to tee fitting.



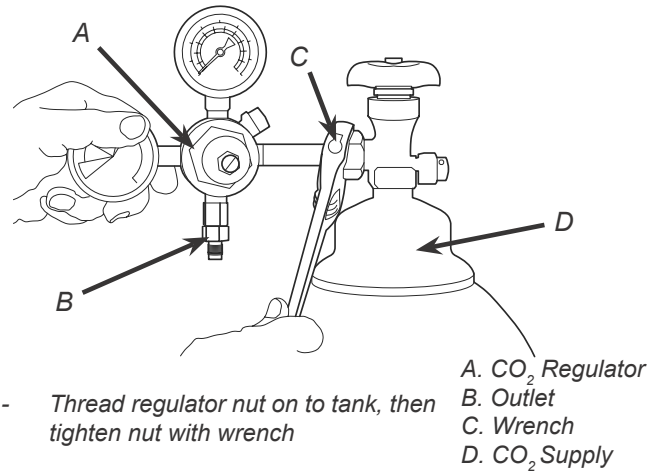
6. Connect tubing from dispenser syrup inlet to the figal syrup outlet fitting. Repeat for each syrup line/tank.

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

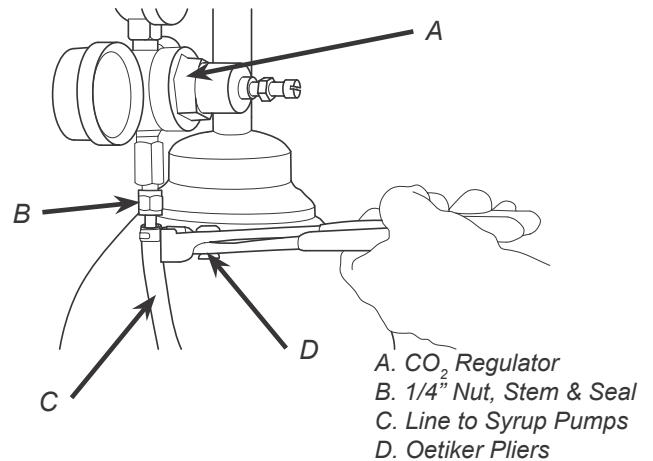
1. Connect high pressure CO<sub>2</sub> regulator assembly to CO<sub>2</sub> cylinder or bulk system.

### ⚠ ATTENTION

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

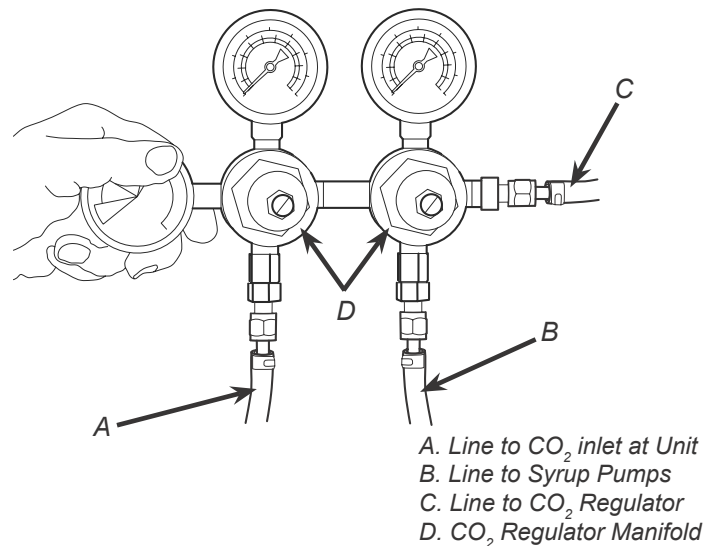


2. Connect a 1/4" nut, stem and seal to CO<sub>2</sub> regulator outlet. Then connect tubing routed from tee at syrup pumps.



### ⚠ ATTENTION

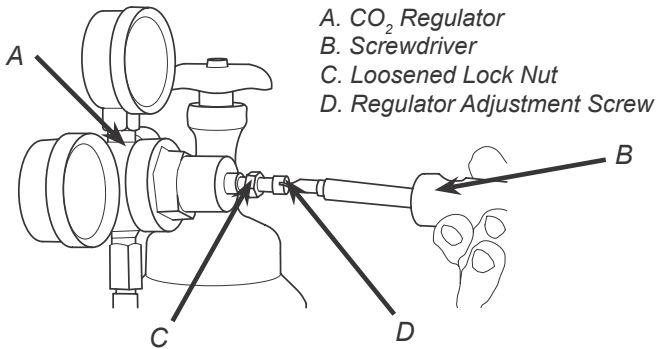
For models 8000 and 9000 only, a dedicated CO<sub>2</sub> regulator is required to supply the CO<sub>2</sub> inlet at the unit as well as to all syrup pumps.



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

**⚠ WARNING**

**DO NOT TURN ON CO<sub>2</sub> SUPPLY AT THIS TIME**

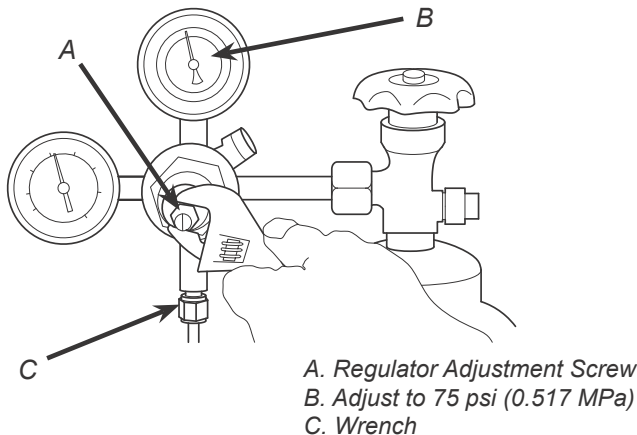


- Turn on water source then purge water to fill carbonator tank by opening carbonator relief valve. Close relief valve once water begins to come out of relief valve.
- Activate each valve until a steady flow of water is achieved.
- Unplug the unit then unplug the Pump Motor Connector from the control box. Use the wiring diagram on the unit control box for reference.

**⚠ ATTENTION**

**Failure to disconnect the motor power supply will damage the carbonator motor, the pump and void the warranty**

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



- Activate each valve until gas-out is achieved.
- Plug the Pump Motor Connector back into the control box then plug in unit.

**NOTE**

**Pump Motor will run for a few seconds to fill carbonator tank**

- Re-attach bonnet.
- Activate each valve until a steady flow of carbonated water is achieved.

## Adjust Water Flow Rate & Syrup/Water Ratio

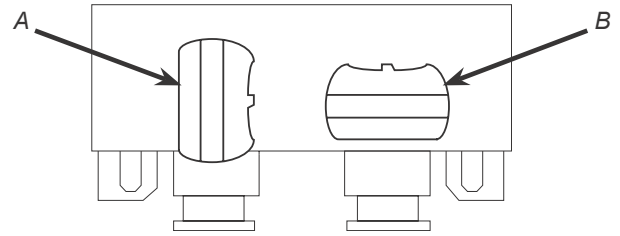
**NOTE**

The water flow can be adjusted between 1.25 oz/sec (37 ml/sec) and 2.50 oz/sec (74 ml/sec) on all dispensing valves using the following procedures:

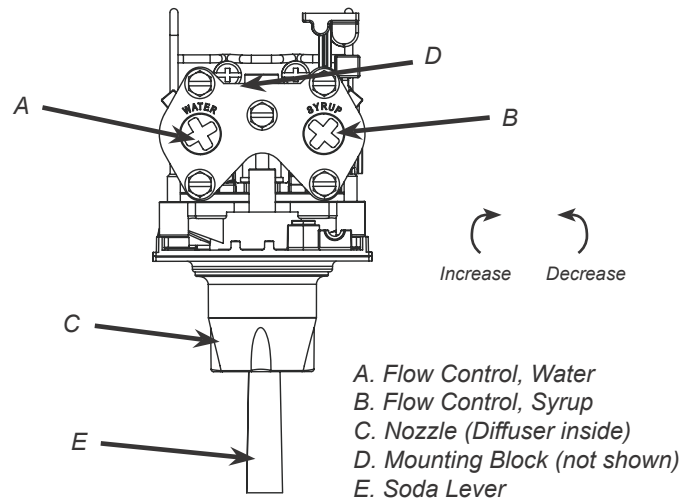
**NOTE**

Do not set flow rates or dispense from the unit until after a complete ice bank is established.

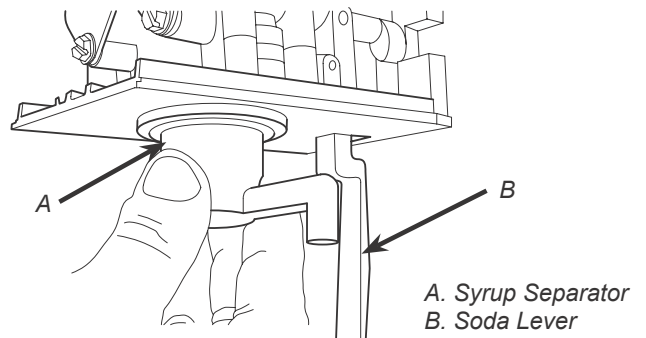
- Close syrup shut-off at mounting block for first valve



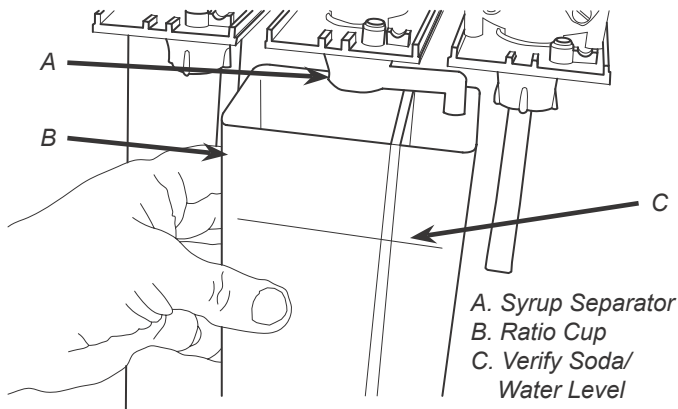
- Slide up on ID panel until flow controls are exposed.
- Using a Lancer ratio cup verify water flow rate (5 oz. in 4 sec.). Use a screwdriver to adjust if needed.



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



9. Repeat Steps 4 - 8 for each valve.

### Volumetric Valve Adjustment

1. Remove the ID panel from the front of the first valve.
2. Insert the programmer's 10-pin connector into the ID panel plug located on the front of the circuit board.
3. When properly connected, the programmer will run a self diagnostic test. The display will show all "8's" with the decimal points lighted. After about three (3) seconds, the display indicates the setting of the dip switches.

### NOTE

**If the programmer does not run its diagnostic test properly, disconnect it and try plugging it in again. If the programmer still fails, replace the programmer**

4. After the programmer is connected, Press the "Read Mem" button.
5. Press the "Ratio +" or the "Ratio -" key until the desired ratio is displayed.
6. Verify the drink type by pressing "Carb Toggle" to select "C" for carbonated or "n" for non-carbonated.
7. Press the "Enter" button to program the valve with the setting on the display.
8. Verify Ratio by pressing "Read Mem".
9. Disconnect the programmer and repeat steps 4-9 for each valve.



- Handheld Programmer  
Volumetric Valve

## 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.

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 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

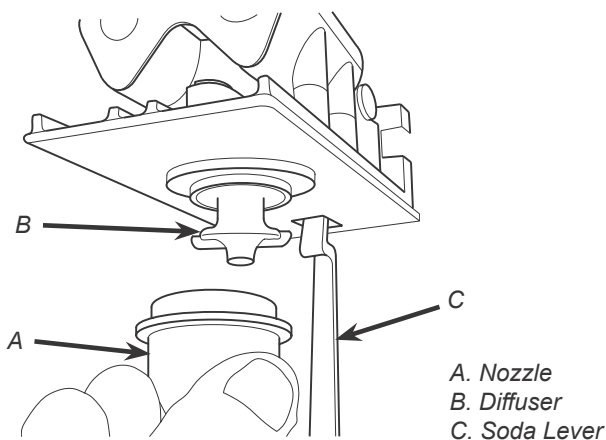
Prepare the sanitizing solution in accordance with the manufacturer's written recommendations and safety guidelines. The type and concentration of sanitizing agent recommended in the instructions by the manufacturer shall comply with 40 CFR §180.940. The solution must provide 100 parts per million (PPM) chlorine (e.g. Sodium Hypochlorite or bleach) and a minimum of five gallons of sanitizing solution should be prepared.

## Scheduled Maintenance & Cleaning

<b>As Needed</b>	<ul style="list-style-type: none"> <li>Keep exterior surfaces of dispenser (include drip tray and cup rest) clean using a clean, damp cloth.</li> </ul>
<b>Daily</b>	<ul style="list-style-type: none"> <li>Remove outer nozzle and rinse well in warm water. <b>DO NOT</b> use soap or detergent. This will cause foaming and off taste in finished product.</li> <li>Remove cup rest and wash in cleaning solution.</li> <li>Pour warm soapy water into the drip tray and wipe with a clean cloth.</li> <li>With a clean cloth and warm water, wipe off all of the unit's exterior surfaces. <b>DO NOT USE ABRASIVE SOAPS OR STRONG DETERGENTS.</b></li> <li>Replace the cup rest and nozzles.</li> </ul>
<b>Weekly</b>	<ul style="list-style-type: none"> <li>Taste each product for off tastes.</li> <li>Remove cup rest and splash plate to view water level tube indicator, replenish as required.</li> </ul>
<b>Monthly</b>	<ul style="list-style-type: none"> <li>Unplug the dispenser from the power source.</li> <li>Remove the bonnet and clean the dirt from the condenser using a soft brush.</li> <li>Replace the bonnet and plug in the unit.</li> </ul>
<b>Every Six Months</b>	<ul style="list-style-type: none"> <li>Clean and sanitize the unit using the appropriate procedures outlined in the Cleaning and Sanitizing section of this guide.</li> </ul>
<b>Yearly</b>	<ul style="list-style-type: none"> <li>Clean water bath interior, including evaporator coils and refrigeration components.</li> </ul>

## 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.

## 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 Syrup Lines - Figal Tank

1. Disconnect syrup inlet from the figal syrup tank.
2. Prepare cleaning solution and using a plastic bristle brush, scrub both disconnect valves on figal tank with cleaning solution and rinse with clean, potable water.
3. Prepare sanitizing solution and using a spray bottle or clean cloth, sanitize both disconnect valves on figal tank and allow to air dry.
4. Turn off CO<sub>2</sub> supply.
5. Connect syrup line to syrup tank filled with clean, potable water.
6. Connect CO<sub>2</sub> line to tank filled with water and pressurize.
7. Activate appropriate valve to fill the line with water and flush out syrup remaining in the line.
8. Disconnect CO<sub>2</sub> line and syrup line from tank filled with water.
9. Fill a separate tank with cleaning solution and connect syrup line and CO<sub>2</sub> line to tank and pressurize.
10. Activate appropriate valve to fill the line with cleaning solution then let stand for ten (10) minutes.
11. Disconnect CO<sub>2</sub> line and syrup line from tank filled with cleaning solution then reattach lines to tank filled with water and pressurize.
12. Activate valve to flush cleaning solution from the line.
13. Disconnect CO<sub>2</sub> line and syrup line from tank filled with water then fill a separate tank with sanitizing solution.
14. Connect both CO<sub>2</sub> and syrup lines to tank filled with sanitizing solution and pressurize.
15. Activate valve to fill line with sanitizing solution then let stand for ten (10) minutes.
16. Disconnect lines from the sanitizer tank and reattach to syrup tank and pressurize.
17. Draw drinks and refill line with end use product to flush sanitizing solution from the line.
18. Taste the drink to verify that there is no off-taste. If off-taste is found, flush syrup system again.
19. Repeat procedure for each valve/syrup tank.

### 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.**

## 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.

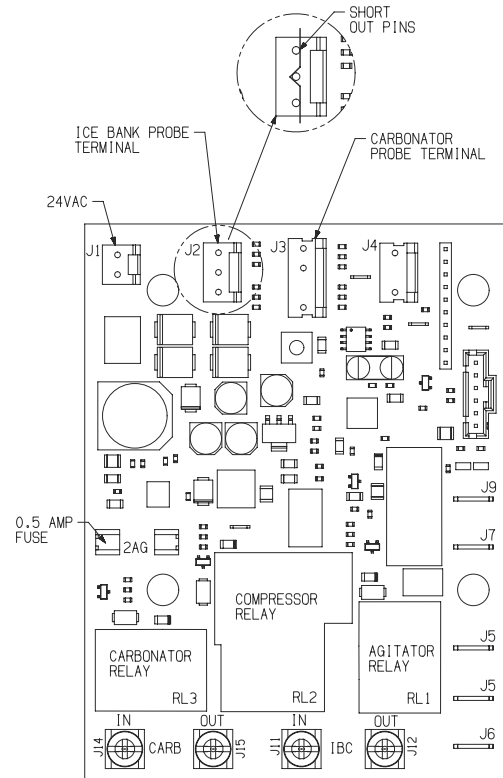
# THE ELECTRONIC ICE BANK CONTROL (EIBC)

## Checking for Normal PCB Operation

### ⚠ WARNING

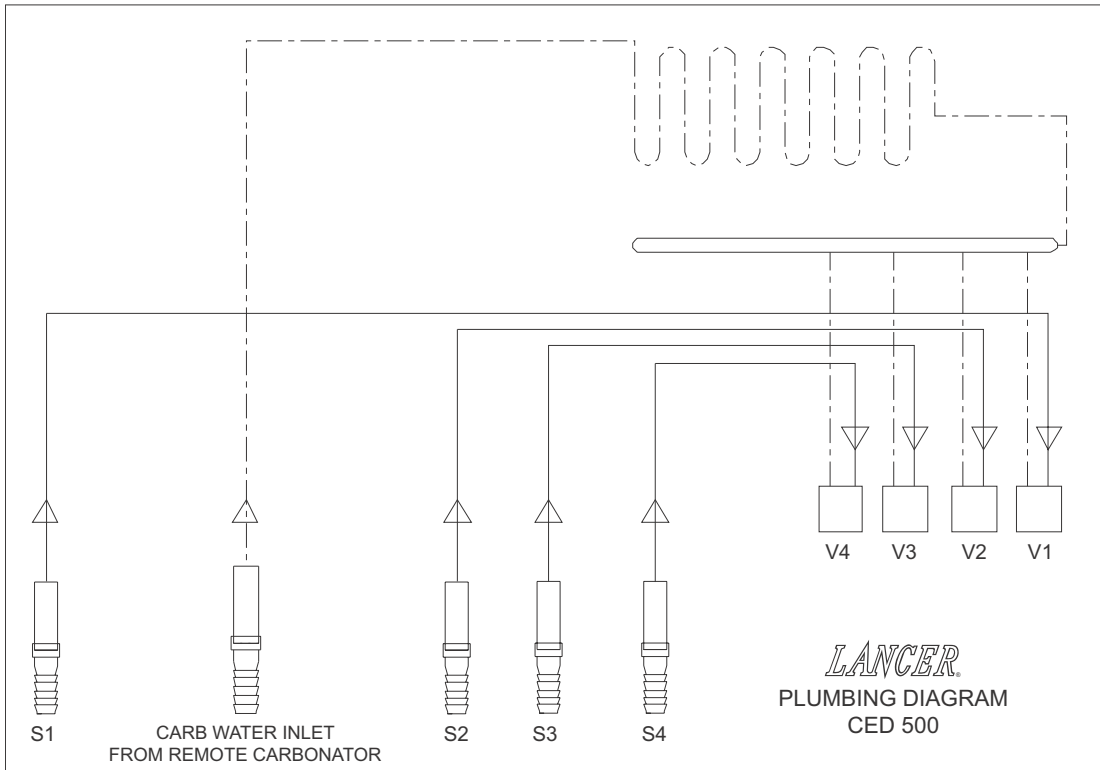
Terminal block has AC line voltage and should be covered with tape. Tape should cover bare electrical connections to prevent electrical shock.

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).

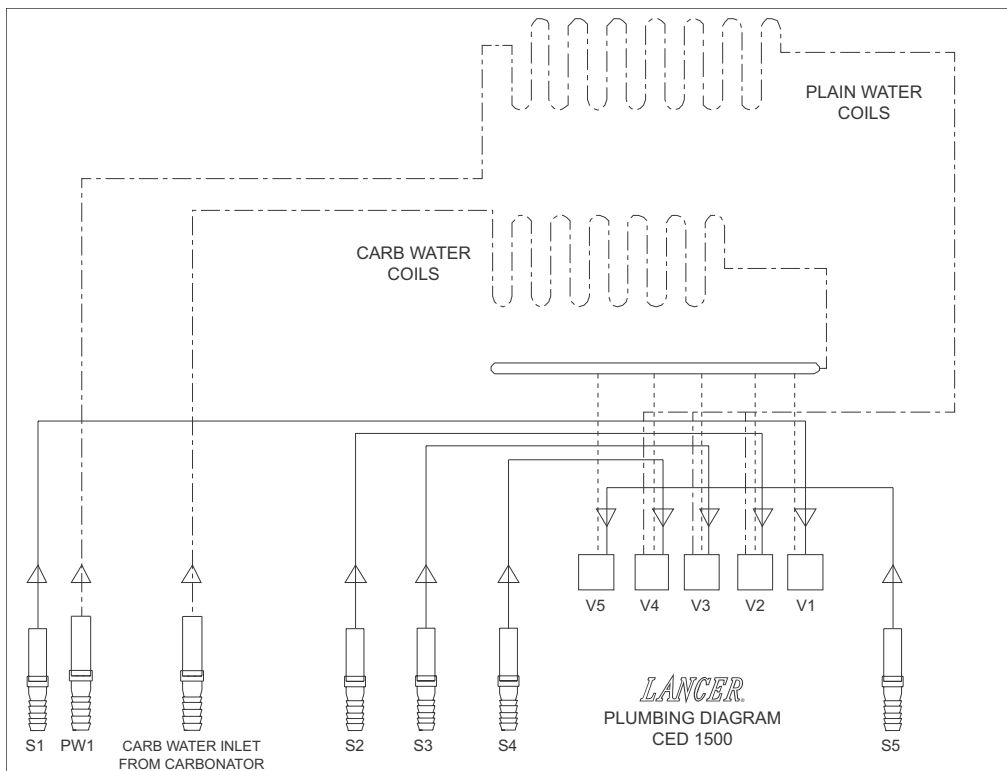


# PLUMBING DIAGRAMS

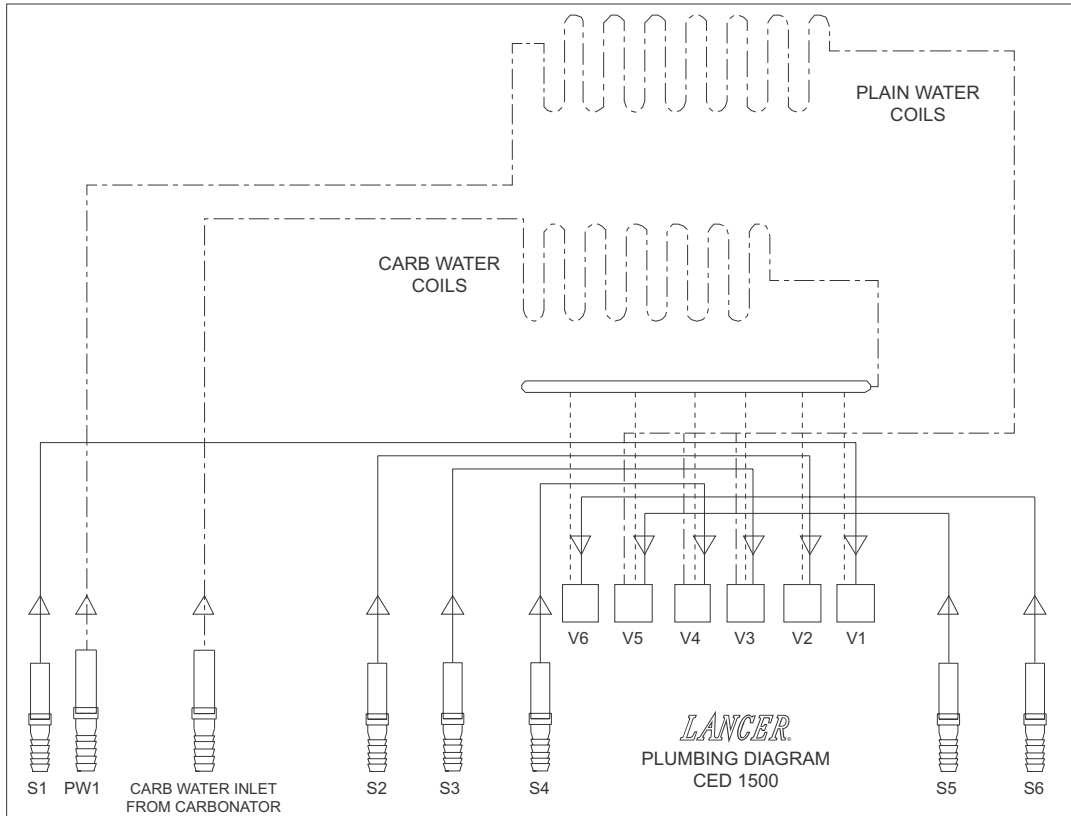
## MODEL 500



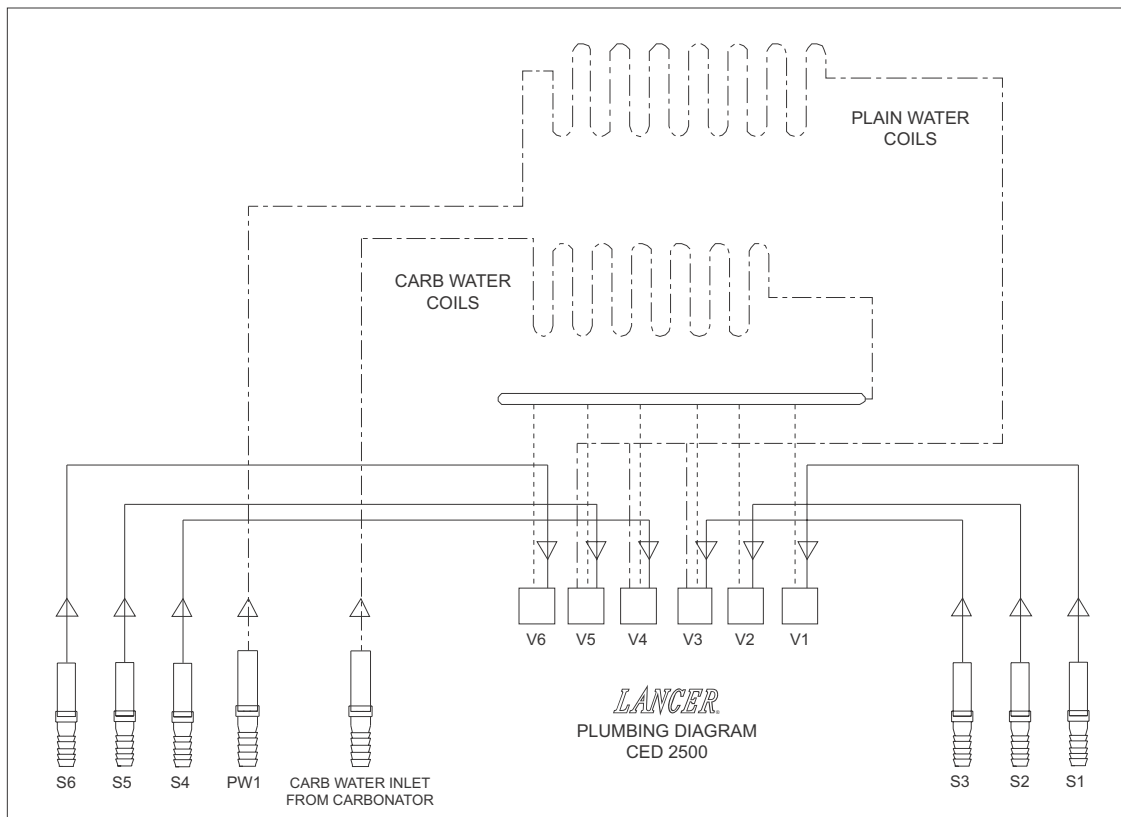
## MODEL 1500 - 5 VALVE



## MODEL 1500 - 6 VALVE

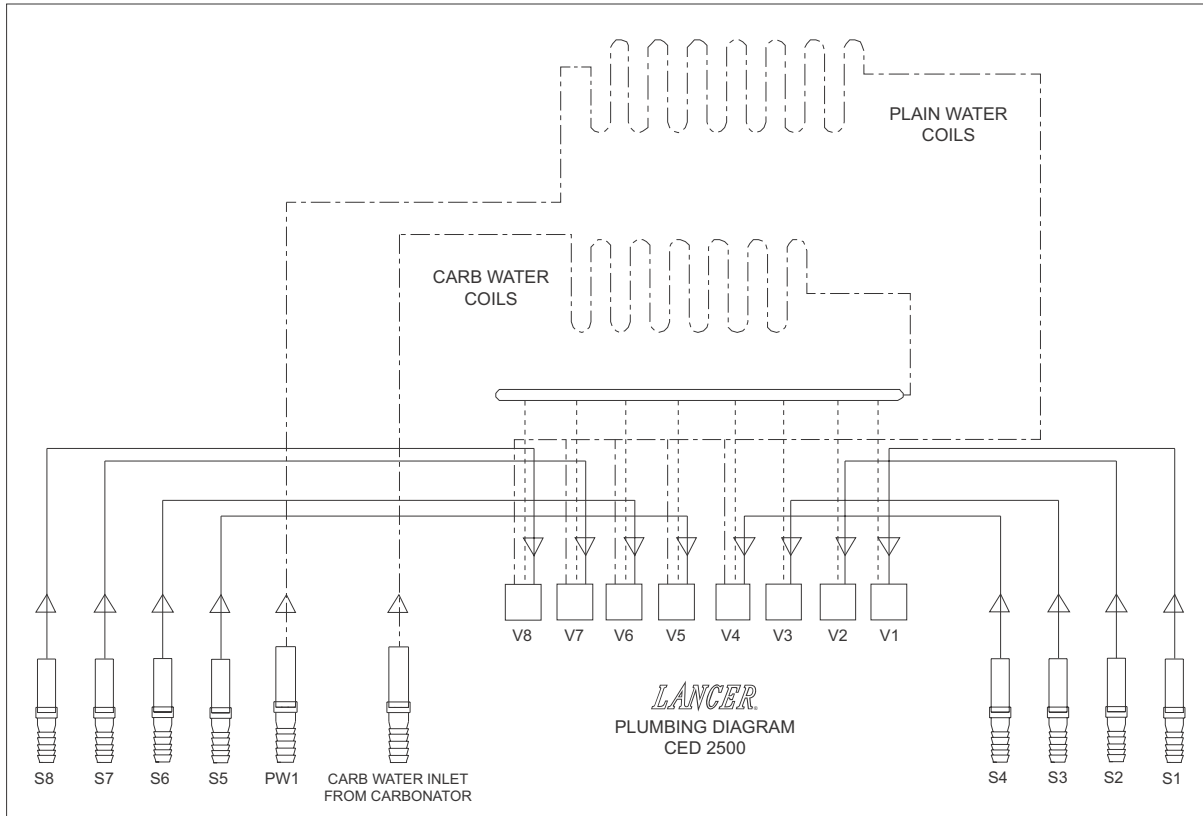


## MODEL 2500 - 6 VALVE

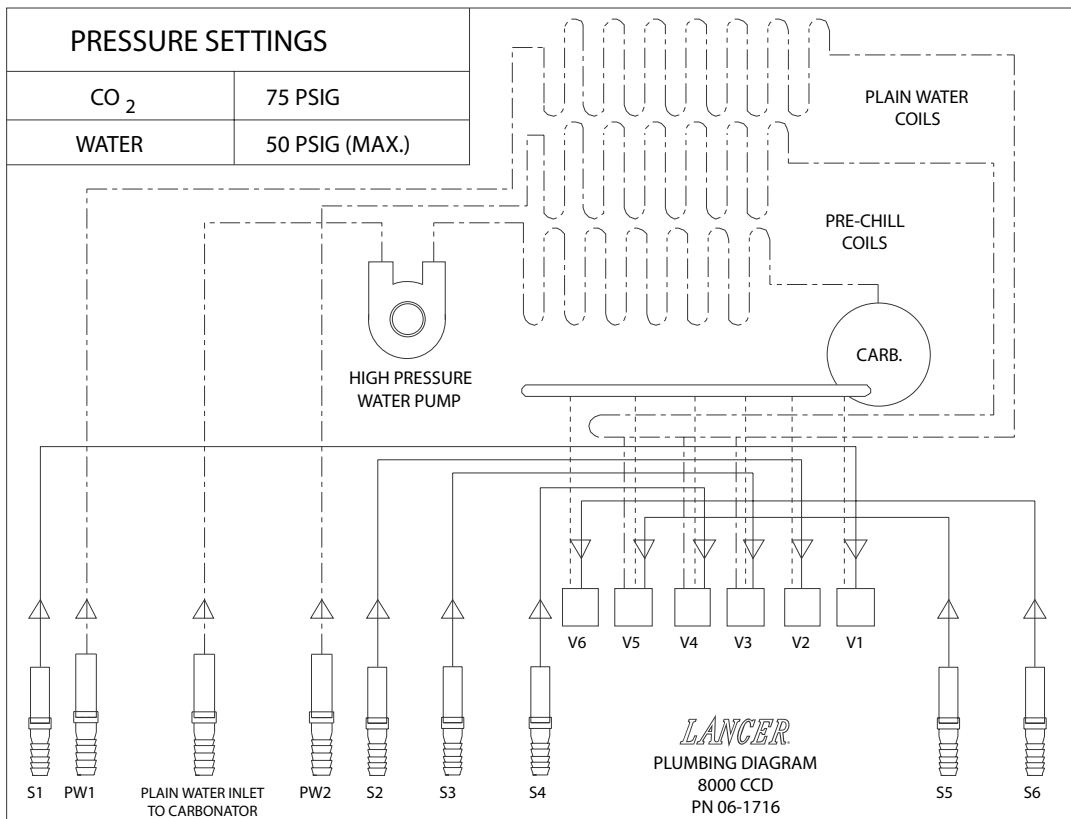




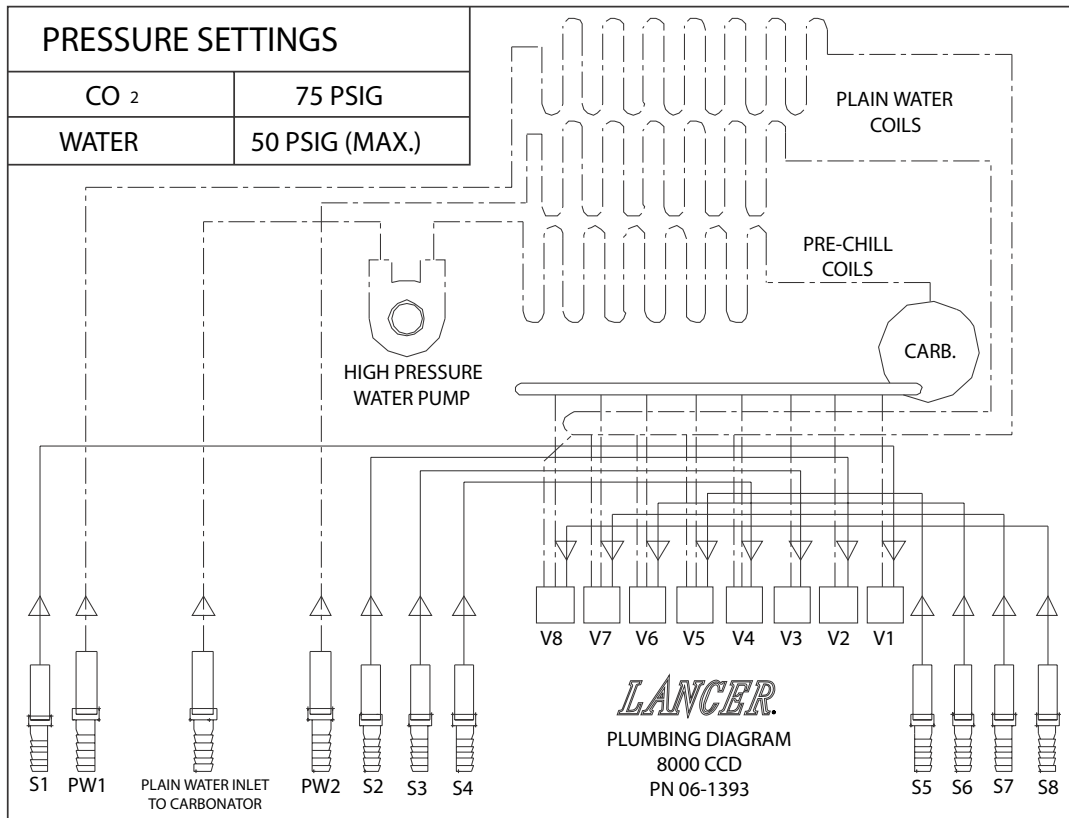
## MODEL 2500 - 8 VALVE



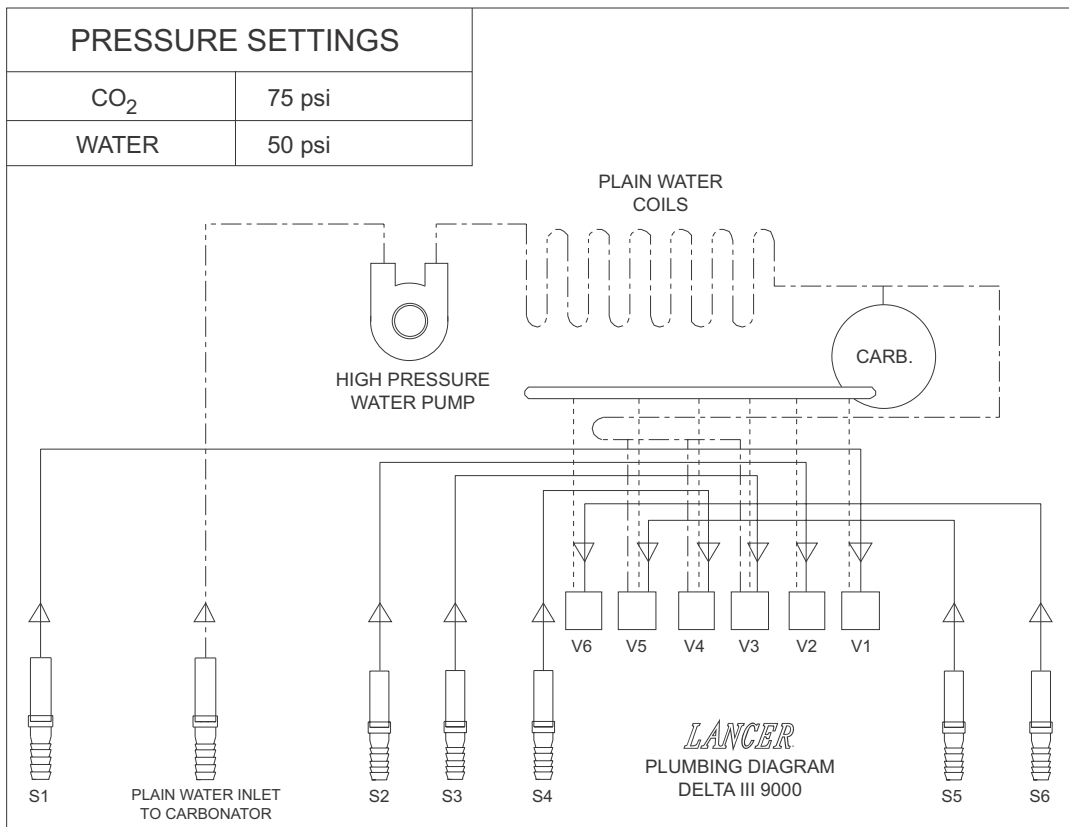
## MODEL 8000 - 6 VALVE



## MODEL 8000 - 8 VALVE



## MODEL 9000



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***LANCER***<sup>®</sup>

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