CED-600 R-290

LANCER INSTALLATION GUIDE

Model 9000

Español...
Français...
Deutsche...
日本語...

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 (lancerworldwide.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

⚠ WARNING

Warning; flammable material. Taking care to avoid causing a fire by igniting flammable material.

⚠ Refrigerant Warning

This system uses a flammable refrigerant under pressure. Do not tamper with it. Contact qualified service personal before disposal. In order to minimize the risk of possible ignition due to incorrect parts or improper service, only factory authorized personnel should perform service on the appliance and its component parts. Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance. Replace component parts with like components. Only use genuine Lancer parts or parts certified by Lancer. Do not damage the refrigerant circuit.

⚠ Intended Use

The dispenser is for indoor use only. 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 65°F to 105°F (18°C to 40°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.

9000

Lancer PN: 28-3040
Revision: 00-0 - April 2020

⚠ 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. Do not locate multiple portable socket-outlets or portable power supplies at the rear of the appliance. 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!

⚠ 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 65 psi (0.448 MPa). Water pressure exceeding 65 psi (0.448 MPa) must be reduced to 65 psi (0.448 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.

⚠ Carbon Dioxide (CO_2)

- **WARNING:** Carbon Dioxide (CO2) is a colorless, noncombustible gas with a light pungent odor. High percentages of CO_2 may displace oxygen in the blood.
- **WARNING:** Prolonged exposure to CO_2 can be harmful. Personnel exposed to high concentrations of CO_2 gas will experience tremors which are followed by a loss of consciousness and suffocation.
- **WARNING:** If a CO_2 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_2 gas leaks in the entire CO_2 and soft drink system.

SPECIFICATIONS

DIMENSIONS

Width: 16.86 inches (429 mm)
Depth: 25.56 inches (649 mm)
Height: 26.86 inches (657 mm)

WEIGHT

Shipping: 160 lbs (72.5 kg)
Empty: 146 lbs (66.2 kg)
Operating: 237 lbs (107.5 kg)
Ice Bath: 22 - 24 lbs (10.0 - 10.9 kg)

ELECTRICAL

115 VAC, 60 Hz, 8.0 Amps
220-240 VAC, 50/60 Hz, 4.0 Amps

PLAIN WATER SUPPLY

Min Flowing Pressure: 25 psi (0.172 MPa)
Max Static Pressure: 65 psi (0.448 MPa)

CARBON DIOXIDE (CO_2) SUPPLY

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

FITTINGS

Water for Carb Inlet: 3/8 inch barb
Brand Syrup Inlets: 1/4 inch barb
CO_2 Inlet: 3/8 inch barb

This unit emits a sound pressure level below 70 dB
Max Altitude: 16,400 ft (5,000 m)

READ THIS MANUAL

This manual was developed by the Lancer Worldwide 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: _____

INSTALLATION

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.

⚠ WARNING

Never energize the machine if there is any trace of damage. Contact Lancer Customer Service for assistance.

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 2.

⚠ WARNING

When positioning the appliance, ensure the supply cord is not trapped or damaged.

2. Select a location for the syrup pumps, CO_2 tank, syrup containers, and water filter (recommended).
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.

⚠ WARNING

Keep ventilation openings, in the appliance enclosure or in the built-in structure clear of obstruction. 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.

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°.

Dispenser Installation

NOTE

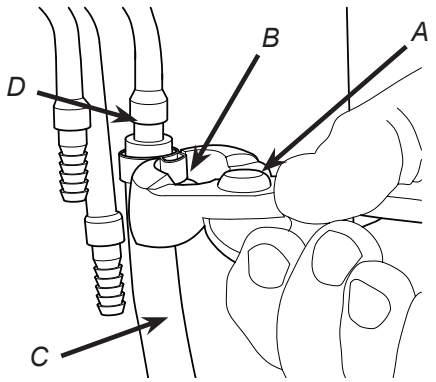
The installation, and relocation if necessary, must be carried out by qualified personnel with up-to-date knowledge and practical experience, in accordance with current regulations.

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

NOTE

NSF listed units must be sealed to the counter or use legs provided.

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 cup rest, splash plate, and valve shroud.
4. Connect drain tube to the drain fitting located on the bottom of the drip tray and secure drain tube with clamp.
5. Route the drain line to designated floor drain.
6. Remove the bonnet screw from the top of the unit and lift the bonnet to remove from the dispenser.
7. Route appropriate tubing from the syrup pump location to the syrup inlets located behind the splash plate. 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_2 Inlet

8. Route appropriate tubing from the water source to the carbonator pump inlet at the unit, and connect tubing to water source.

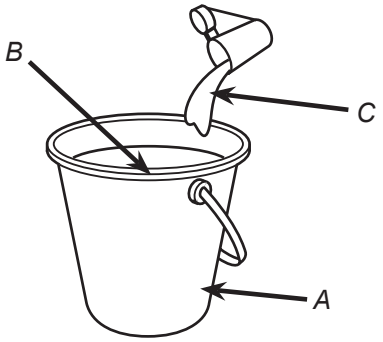
⚠ CRITICAL - to maximize performance

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:

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 100-500 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 500 uS/cm. Below 100 uS/cm, the compressor will not work properly and above 500 uS/cm could cause the lines to freeze.

12. Remove yellow cap from the water bath fill hole and insert and insert a funnel into the fill hole.
13. 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 7-8 if needed)

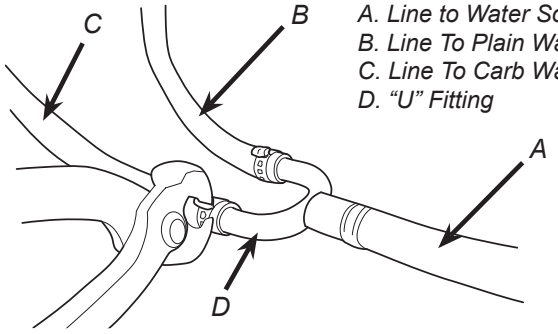
⚠ ATTENTION

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

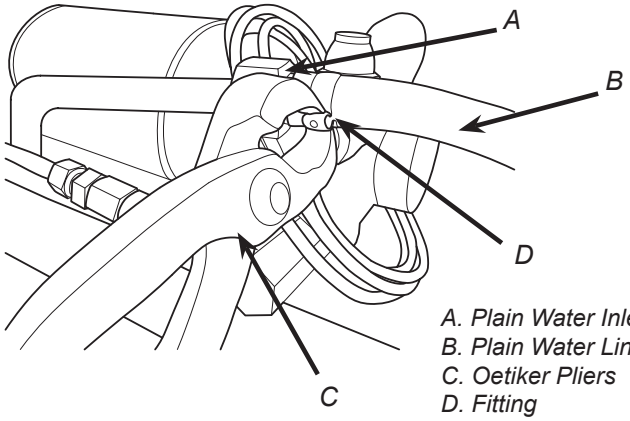
Make sure the top of overflow tube is not covered so that the water from the water bath tank cannot escape.

14. Using tubing cutters, cut water supply line and install "U" fitting, *(PN 01-2128/01).*



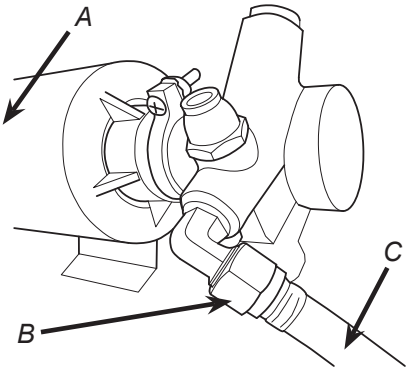
A. Line to Water Source
B. Line To Plain Water Inlet
C. Line To Carb Water Inlet
D. "U" Fitting

15. Route appropriate tubing from the plain water inlet, located at the front of the unit, to one side of the "U" fitting at water supply and connect tubing to inlet.



A. Plain Water Inlet
B. Plain Water Line
C. Oetiker Pliers
D. Fitting

16. Route appropriate tubing from the carbonator pump inlet and the "U" fitting at water supply then connect tubing to inlet using flare seal washer *(PN 05-0017).* Use a back-up wrench to prevent damage to carbonator pump.

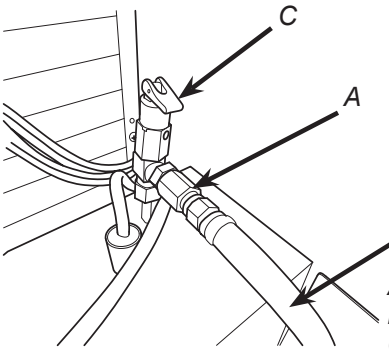


A. Carbonator
B. Carb Water Inlet
C. Carb Water Line
D. Fitting

NOTE

If the water source is above 50 psi (0.345 MPa), cut tubing assembly and install Water Regulator Kit *(PN 18-0253/02, sold separately)* as shown in kit instruction sheet. Once installed, use a test gauge assembly *(PN 22-0138, sold separately)*, to set regulator at a maximum of 50 psi (0.345 MPa).

17. Route appropriate tubing from the syrup pump/syrup supply location to the CO_2 inlet and connect tubing to CO_2 inlet.



A. CO_2 Inlet
B. CO_2 Line
C. Pressure Relief Valve

18. Feed all tubing, power cord, and drain line through the counter top cutout.
19. Connect tubing routed from carbonated water inlet and plain water inlet to the “U” fitting at the water supply.
20. Turn on water supply and check for leaks.
21. Plug in the unit to a grounded electrical outlet then turn the power switch, at the top of the unit, to begin building an ice bank.

⚠ WARNING

Never energize the machine if there is any trace of damage. Contact Lancer Customer Service for assistance.

⚠ 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.

⚠ WARNING

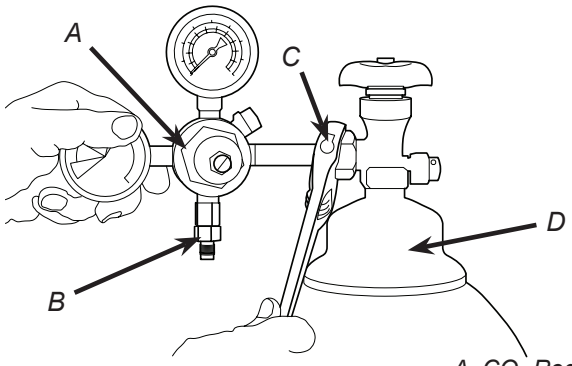
Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

Installing CO_2 Supply

1. Connect high pressure CO_2 regulator assembly to CO_2 cylinder or bulk system.

⚠ ATTENTION

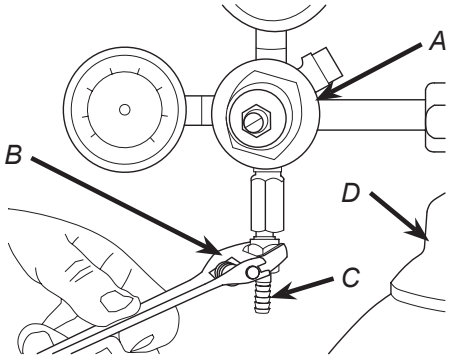
Before installing regulator, assure that a seal (washer or o-ring) is present in regulator attachment nut.



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

A. CO_2 Regulator
B. Outlet
C. Wrench
D. CO_2 Supply

2. Connect a 1/4” nut, stem and seal to CO_2 regulator outlet.



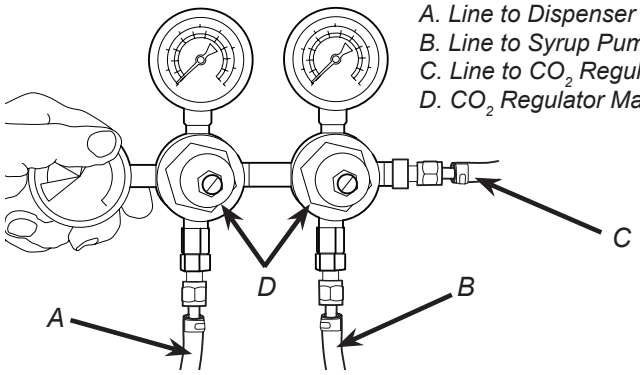
A. CO_2 Regulator
B. Wrench
C. 1/4” nut, Stem
D. CO_2 Supply

3. Route appropriate tubing from the low pressure CO_2 regulator manifold location to the 1/4” nut, stem on the high pressure CO_2 regulator attached to source and connect tubing.

⚠ ATTENTION

A dedicated CO_2 regulator is required to supply the CO_2 inlet at the unit as well as to all remote syrup pumps.

4. Connect tubing routed from the CO_2 inlet at the unit to one of the low pressure CO_2 regulator manifold outlets.
5. Connect tubing routed from the syrup pump location to the second outlet of the low pressure CO_2 regulator manifold.

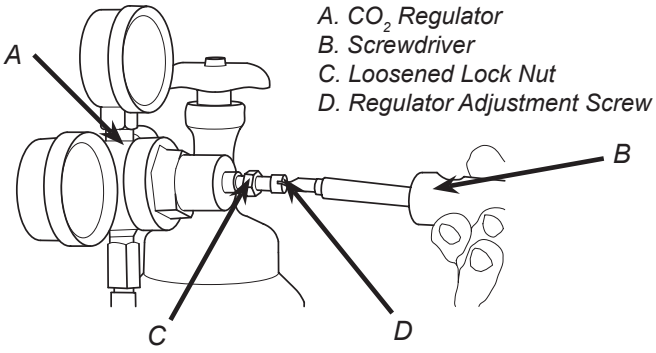


A. Line to Dispenser
B. Line to Syrup Pumps
C. Line to CO_2 Regulator
D. CO_2 Regulator Manifold

6. Using a wrench, loosen lock nut on the regulator adjustment screw of the high pressure CO_2 regulator connected to the source, then using a screwdriver back out lock nut screw all the way.

⚠ WARNING

DO NOT TURN ON CO_2 SUPPLY AT THIS TIME

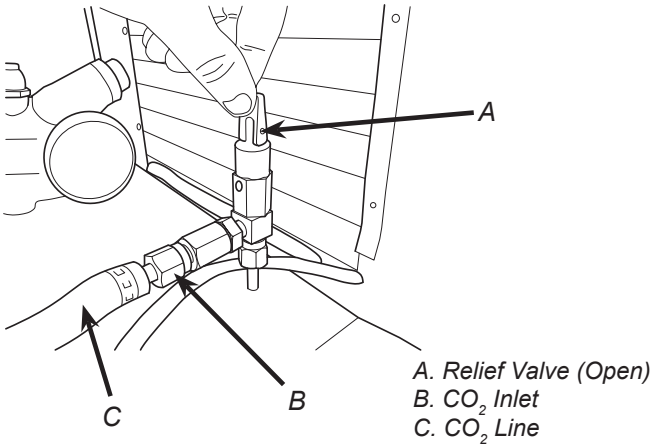


A. CO_2 Regulator
B. Screwdriver
C. Loosened Lock Nut
D. Regulator Adjustment Screw

7. Repeat Step 6 for both low pressure CO_2 regulators on the regulator manifold routed to the unit and the syrup pumps.

Dispenser Setup

1. Purge water to fill carbonator tank by opening carbonator relief valve. Close relief valve once water comes out.



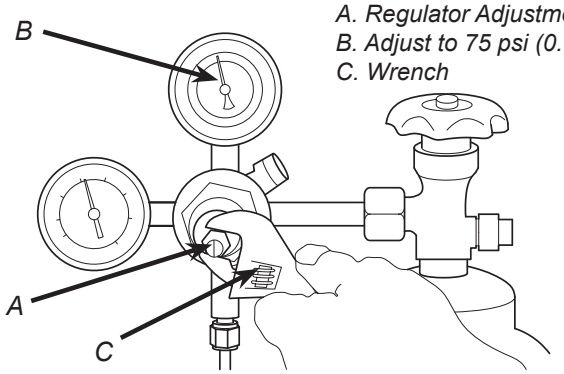
A. Relief Valve (Open)
B. CO_2 Inlet
C. CO_2 Line

2. Activate each valve until a steady flow of water is achieved.
3. Turn power off.
4. Unplug the Pump Motor Connector from the control box. Use the wiring diagram either on the unit control box or in the back of this manual for reference.

⚠ ATTENTION

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

5. Turn on CO_2 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.



A. Regulator Adjustment Screw
B. Adjust to 75 psi (0.517 MPa)
C. Wrench

6. Adjust both of the low pressure regulators on the regulator manifold to 75 psi (0.517 MPa) then tighten locknut with wrench.
7. Activate each valve until gas-out is achieved.
8. Plug the Pump Motor Connector back into the control box.

NOTE

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

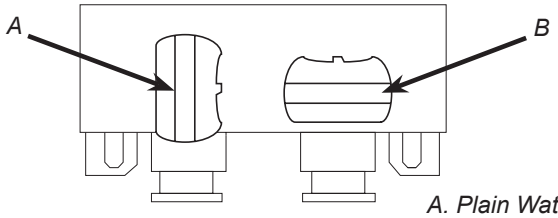
9. Turn power on.
10. Activate each valve until a steady flow of carbonated water is achieved.

Adjust Water Flow Rate & Syrup/Water Ratio

NOTE

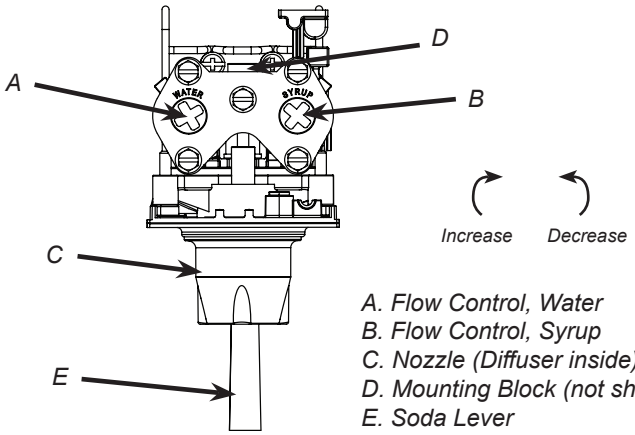
Do not set flow rates or dispense from the unit until after a complete ice bank is established.

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



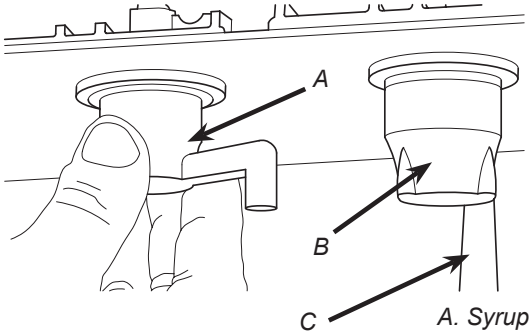
A. Plain Water ON
B. Syrup Closed

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



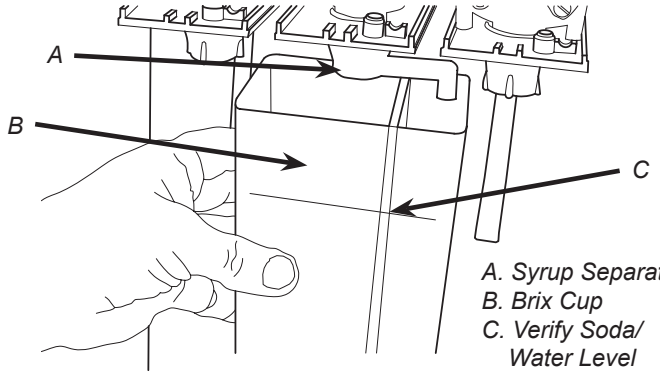
A. Flow Control, Water
B. Flow Control, Syrup
C. Nozzle (Diffuser inside)
D. Mounting Block (not shown)
E. Soda Lever

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.



A. Syrup Separator
B. Nozzle
C. Soda Lever

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



A. Syrup Separator
B. Brix Cup
C. Verify Soda/ Water Level

8. Repeat process for each valve.
9. Re-install the merchandiser, splash plate, cup rest, and drip tray then reattach bonnet using the top bonnet screw.

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.

- Hand held 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.

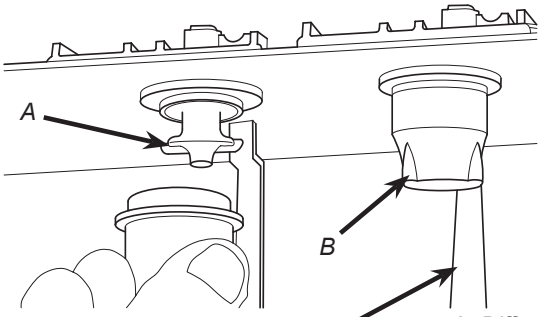
Scheduled Maintenance & Cleaning

As Needed	• Keep exterior surfaces of dispenser (include drip tray and cup rest) clean using a clean, damp cloth.
Daily	• Remove each nozzle and diffuser 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, diffusers, and valve nozzles.
Weekly	• Taste each product for off tastes. • Remove the unit's bonnet and check the level of water in the water bath. Replenish as required and replace bonnet.
Monthly	• Unplug the dispenser from the power source. • Remove the bonnet and clean the dirt from the gas cooler 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 manual.
Yearly	• Clean water bath interior, including evaporator coils and refrigeration components. • Clean the entire exterior of the unit.

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.



A. Diffuser
B. Nozzle
C. Soda Lever

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

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.

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.

DISPENSER TROUBLESHOOTING

TROUBLE	CAUSE	REMEDY
Water leakage around nozzle.	1. O-ring not properly installed above diffuser 2. O-ring is damaged or missing.	1. Install or replace o-ring correctly. 2. Replace o-ring.
Leakage between upper and lower bodies.	1. Gap between upper and lower valve bodies. 2. Worn or damaged paddle arm assemblies. 3. Cracked valve bodies	1. Tighten all six (6) retaining screws. 2. Replace paddle arm assemblies. 3. Replace Valve Body.
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
Insufficient water flow.	1. Insufficient incoming supply water pressure. 2. Shutoff on mounting block not fully open. 3. Foreign debris in water flow control. 4. Foreign debris in water pump strainer	1. Verify incoming supply water pressure is a minimum of 25 psi (0.172 MPa). 2. Open shutoff fully. 3. Remove water flow control from upper body and clean out any foreign material to ensure smooth free spool movement. 4. Remove water pump strainer and clean.
Insufficient syrup flow.	1. Insufficient CO_2 pressure to BIB pumps. 2. Out of CO_2. 3. Shutoff on mounting block not fully open. 4. Foreign debris in syrup flow control. 5. Bad syrup pump.	1. Adjust CO_2 pressure to 80 psi (0.550 MPa) [minimum 70 psi (0.480 MPa)] for BIB pumps. 2. Replace CO_2 tank/refill. 3. Open shutoff fully. 4. Remove syrup flow control form upper body and clean out any foreign material to ensure smooth free spool movement. 5. Replace BIB pump.
Erratic ratio.	1. Incoming water and/or syrup supply not at minimum flowing pressure. 2. Foreign debris in water and/or syrup flow controls.	1. Check pressure and adjust 2. Remove flow controls from upper body and clean out any foreign material to ensure smooth free spool movement.
No product dispensed	1. Water and syrup shut-offs on mounting block not fully open. 2. The key switch on an electric valve is in the OFF position. 3. Cup lever arm or ID panel actuator on electric valve is not actuating the switch. 4. Electric current not reaching valve. 5. Improper or inadequate water or syrup supply. 6. Transformer Failure 7. Bad valve solenoid(s)	1. Open shutoff fully. 2. Turn key switch to ON position. 3. Repair 4. Check electric current supplied to valve. If current is adequate, check solenoid coil and switch, and replace if necessary. 5. Remove valve from mounting block and open shut-offs slightly and check water and syrup flow. If no flow, check dispenser for freeze-up or other problems 6. Reset transformer circuit breaker. If breaker trips again check for pinched wire harness at back-blocks 7. Replace Solenoid(s)

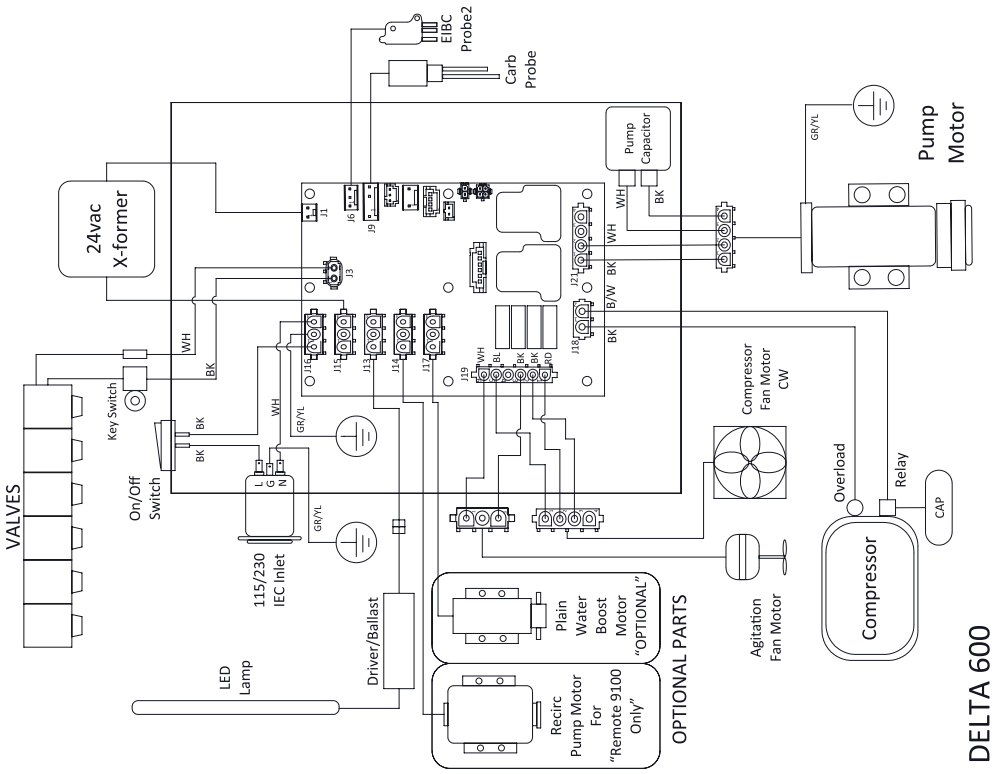
TROUBLE	CAUSE	REMEDY
Water only dispensed; no syrup; or syrup only dispensed, no water	1. Water or syrup shutoff on mounting block not fully open. 2. Improper or inadequate water or syrup flow. 3. BIB supply too far from dispenser. 4. CO_2 pressure too low. 5. Stalled or inoperative BIB pump 6. Kinked line.	1. Open shutoff fully. 2. Remove valve from mounting block, open shutoffs slightly and check water and syrup flow. If no flow, check dispenser for freeze-up or other problems. Ensure BIB connection is engaged. 3. Check that BIB supply is within six (6) feet of the dispenser. 4. Check the CO_2 pressure to the pump manifold to ensure it is between 70 and 80 psi (0.483 and 0.552 MPa). 5. Check CO_2 pressure and/or replace pump. 6. Remove kink or replace line.
Valve will not shut off.	1. Cup lever may be sticking or binding. 2. Switch not actuating freely. 3. Solenoid armature not returning to bottom position.	1. Correct or replace lever. 2. Check switch for free actuation. 3. Replace defective armature or spring.
Excessive foaming.	1. Incoming water or syrup temperature too high. 2. CO_2 pressure too high. 3. Water flow rate too high. 4. Nozzle and diffuser not installed. 5. Nozzle and diffuser not clean. 6. Air in BIB lines. 7. Poor quality ice. 8. High beverage temperature.	1. Correct prior to dispenser. Consider larger dispenser or pre-cooler. 2. Adjust CO_2 pressure downward, but not less than 70 psi. 3. Re-adjust and reset ratio. Refer to “Adjust Water Flow Rate & Syrup/Water Ratio” Section. 4. Remove and reinstall properly. 5. Remove and clean. 6. Bleed air from BIB lines. 7. Check quality of ice used in drink. 8. Check refrigeration system.
Water continually over-flows from water bath into drip tray.	1. Loose water connection(s). 2. Flare seal washer leaks. 3. Faulty water coil.	1. Tighten water connections. 2. Replace flare seal washer. 3. Replace water coil.
Warm drinks.	1. Dispenser was recently installed. 2. Restricted airflow. 3. Dispenser connected to hot water supply. 4. Condenser fan motor not working. 5. Dirty condenser, air vents clogged. 6. Dispenser capacity exceeded.	1. It may take up to 5 hours, after install, to reach the desired temperature. 2. Check clearances around sides, top, and inlet of unit. Remove objects blocking airflow through grill. 3. Switch to cold water supply. 4. Replace condenser fan motor. 5. Clean condenser and air vents of any blockage. 6. Add pre-cooler or replace with larger dispenser.

WIRING/PLUMBING DIAGRAMS

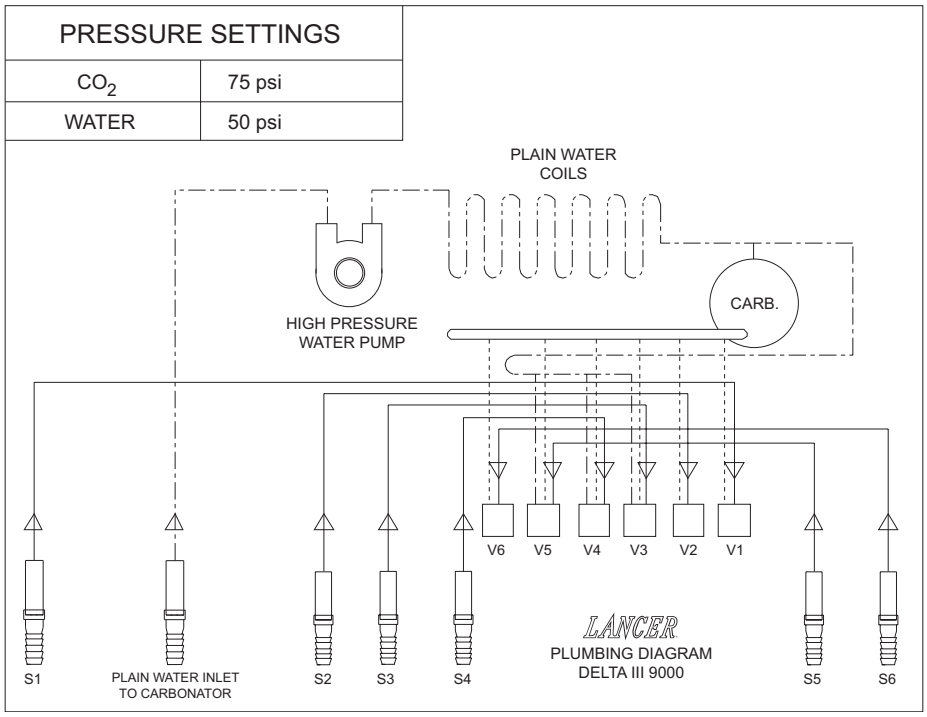
Wiring Diagram

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.



Plumbing Diagram



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