

# LANCER INSTALLATION SHEET

## ICE BEVERAGE DISPENSERS - SERIES 4500 with LCD Monitor

FOR QUALIFIED INSTALLER ONLY. *This basic Installation Sheet is an initial release.*

*If a complete Installation and Service Manual (for the unit being installed) is required or needed, please refer to the Lancer web site ([www.lancercorp.com](http://www.lancercorp.com)). All Lancer Manuals and Instruction Sheets are being made available for immediate access on the web site. Or contact Lancer Customer Service for assistance as required.*

### INSTALLATION KIT 82-1563/01

81-0112 - LEG,ADJUSTABLE,4.0" TALL,FL, 4EA  
08-0320 - TUBE,DRAIN,IBD,INSULATED, 2EA  
90-0004 - BAG,9 X 15,CLR PL, 1EA  
04-1545 - SCR,10-32X.500,HH TRIMMED, 2EA  
11-0008 - TIE,WIRE, 4EA

28-0868 - SHEET,INSTALLATION,IBD, LCD, 1EA  
22-0017 - BRUSH,VALVE NOZZLE, 1EA  
01-1612 - FTG,FEMALE,COLD PLATE DRAI, 1EA  
90-0444 - BAG,38.000 X 31.000,CLR PL, 1EA



**WARNING**

THE DISPENSER IS FOR INDOOR USE ONLY. THIS UNIT IT NOT A TOY. DO NOT ALLOW CHILDREN TO USE OR PLAY NEAR THE UNIT.  
THIS UNIT IS NOT DESIGNED TO DISPENSE DAIRY PRODUCTS.

### 1. INSTALLATION

#### 1.1 RECEIVING

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



**WARNING**

TO AVOID PERSONAL INJURY OR DAMAGE, DO NOT ATTEMPT TO LIFT A UNIT WITHOUT HELP.  
FOR HEAVIER UNITS, USE OF A MECHANICAL LIFT MAY BE APPROPRIATE.  
IBD UNITS ARE EQUIPPED WITH AUTOMATIC AGITATION.

THE UNIT MAY ACTIVATE UNEXPECTEDLY. DO NOT PLACE HANDS, OR FOREIGN OBJECTS INTO THE ICE STORAGE COMPARTMENT.  
WHEN UNIT IS BEING SERVICED, CLEANED, OR SANITIZED, UNPLUG DISPENSER FROM THE POWER SOURCE.  
THE MIN/MAX AMBIENT OPERATING TEMPERATURE FOR THE DISPENSER IS 40 TO 105 DEGREES F.

#### 1.2 UNPACKING

- Set shipping carton upright on the floor. Cut band and remove. Open top of carton and remove interior packing.
- Lift carton up and off of the dispenser. Remove wood shipping base from the bottom of the dispenser. (Support dispenser while removing shipping base to prevent damage to the dispenser.)
- Remove installation parts kits from the ice compartment.
- Inspect unit and parts for concealed damage(s). If damage exists, notify delivering carrier and file claim against same.

#### 1.3 SELECTING THE LOCATION

- Select a level, well ventilated, accessible location away from direct sunlight (avoid) or overhead lighting (convenient to water, soda, and syrup lines and open type drain), a properly grounded electric supply and ensure sufficient clearance for air circulation. **Sufficient clearance must be provided, if an ice maker is not installed, to allow filling the ice compartment from a five gallon bucket (a minimum of 16 inches is recommended).** Lancer does not recommend the use of shaved, flake, nugget, or pellet ice in the dispenser. Dispenser will only operate properly with cube ice.
- The selected location should be able to support the weight of the dispenser, ice and possibly an ice maker being installed after counter cut out is made. Total weight (with ice maker) for the IBD22 unit, IBD25 unit, IBD30 unit, or IBD44 unit could exceed 800 pounds (363.6kg).
- Unit may be installed directly on the countertop or on legs supplied with the unit. If installed directly on the counter, the unit must be sealed to the countertop with an FDA approved sealant. **If an ice maker is to be mounted on top of dispenser, do not install dispenser on legs.**



**WARNING**

THIS UNIT MUST BE PROPERLY ELECTRICALLY GROUNDED TO AVOID POSSIBLE FATAL ELECTRICAL SHOCK OR SERIOUS INJURY TO THE OPERATOR. THE POWER CORD IS PROVIDED WITH A THREE PRONG GROUNDED PLUG. IF A THREE-HOLE GROUNDED ELECTRICAL OUTLET IS NOT AVAILABLE, USE AN APPROVED METHOD TO GROUND THE UNIT. BE SURE TO FOLLOW LOCAL ELECTRICAL CODES WHEN MAKING ALL CONNECTIONS.

EACH DRINK DISPENSER MUST BE SUPPLIED WITH 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. 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!

# LANCER

6655 LANCER BLVD. • SAN ANTONIO, TEXAS 78219 USA • (210) 310-7000

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**1.4 CONNECTING TO ELECTRICAL POWER**

- A. Check the dispenser serial number plate for correct electrical requirements of unit. *Do not plug into wall electrical outlet unless the current shown on the serial number plate agrees with local current available.*
- B. Route the power supply cord to a grounded electrical outlet of the proper voltage and amperage rating, and plug in the unit.

**1.5 CONNECTING TO WATER SUPPLY LINES**

- A. Use a sharp knife, razor blade, or tube cutter to cut tubing. Tubing cut with a saw will result in plastic shavings which will plug the flow controls in the dispensing valve.
- B. 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. An adequate potable water supply must be provided. The water supply line must be at least a 3/8 inches (9.525 mm) pipe with a minimum of 20 PSI (137.9 kPa) line pressure, but not exceeding a maximum of 50 PSI (344.74 kPa). Water pressure exceeding 50 PSI (344.74 kPa) must be reduced to 50 PSI (344.74 kPa) with a pressure regulator. Use a filter in the water line to avoid equipment damage and beverage off-taste. A FILTER of at least 100 mesh [100 strands per 25mm (one inch)] shall be installed immediately upstream of all check valve type backflow preventers used for water supply protection. The screen shall be accessible and removable for cleaning or replacement. 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 (located upstream of the CO<sup>2</sup> injection system) or another approved method to comply with NSF standards. A leaking inlet water check valve will allow carbonated water to flow back through the pump when it is shut off and contaminate the water supply. Ensure the backflow prevention device complies with ASSE and local standards. Do not connect to a heated (hot) water source or a water source supplying soft water. This will cause excessive foaming.
- C. It is the responsibility of the installer to ensure compliance.

**1.6 INSTALLATION OF THE UNIT**

- A. Inspect the counter location where the unit is to be installed. Verify that the counter is strong enough to safely support the weight of the unit being installed (see Section 1.3), after the cutout for the unit is made.
- B. Remove Splash Plate and Top Cover.
- C. Remove Cover Plate at rear of unit if not a “through the counter” installation.
- D. Connect soda and water supply lines to 3/8 inch barb fittings at the front of the unit. Check for leaks. (If dispenser is to operate with all soda valves, connect water line into one of the soda supply lines.)
- E. Connect syrup supply lines to the 3/8 inch barb inlet fittings at the front of the unit. Check for leaks.
- F. Install the ice bin drain hose; connect the 90° elbow or straight fitting underneath the unit's base. The ice bin drain is located towards the front of the bin and slightly to the right. Connect the hose. Extend the hose to an open type drain.
- G. Connect the hose to the Drip Tray fitting, install the Drip Tray, and extend hose to open type drain.
- H. Both drain lines 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.*
- I. Install Cup Rest and Splash Plate.
- J. Connect Power Cord to grounded electrical outlet.
- K. Test Motor operation by pushing Ice Chute.
- L. Clean and sanitize dispenser (see Section 3).
- M. Fill unit approximately half full with ice. Push Chute and check for ice delivery.
- N. Finish filling the unit with ice and install Top Cover.
- O. Set brix ratio for beverage dispensing valves according to manufacturer's instructions.

**1.7 LEVELING THE DISPENSER**

In order to facilitate proper dispenser drainage and carbonation, ensure that the dispenser is level, front to back and side to side. Place a level on the top of the rear edge of the dispenser. The bubble must settle between the level lines. Repeat this procedure for the remaining three sides. Level unit if necessary. For optimum performance place the unit at a 0 degree tilt. The maximum tilt is 5 degrees.

**1.8 LCD INSTALLATION**

If the monitor is not on, you must remove the merchandiser from the unit by removing the 4 screws on the sides and lifting the merchandiser off and set aside.

1. Check that the power cable plug is pushed all the way in the bottom of the monitor.
2. Push the monitor power button on the bottom right side until the button is lit.
3. Replace the merchandiser and the 4 screws
4. Connect VGA cable with data source. Turn on data device.

**1.9 OTHER**

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 LIKE SUBSTANCES INTO DRAIN MAY CAUSE THE DRAIN TUBE TO BECOME CLOGGED WITH COFFEE OR TEA GROUNDS, OR OTHER SOLID PARTICLES.

**2. INSTALLATION OF VALVES (LMV, LEV® OR VOLUMETRIC)**

**2.1 Model 100** valves are factory preset for a flow rate of 3.0 ounces per second; an adjustment may be required.

**2.2 Model 145** valves are factory preset for a flow rate of 4.5 ounces per second; an adjustment may be required.

**2.3 Model 150** (Volumetric) valves are preset for flows rates of 1.5 oz/sec, 2.25 oz/sec or 3.0 oz/sec based on valve part number.

A hand held programmer (Lancer PN 52-1420/02) is required to set ratio on Volumetric Valves.

**2.4** Refer to Lancer web site (Installation Manuals 28-0027 for LMV/LEV valves and 28-0301 for Volumetric valves) for information on the following: Installation, Setting flow rate, Setting ratio, Cleaning, Sanitizing, and Troubleshooting.

### 3. CLEANING AND SANITIZING INSTRUCTIONS

- A. The cleaning and sanitizing procedures provided herein pertain to the Lancer equipment identified by this manual. If other equipment is being cleaned, follow the guidelines established by the manufacturer for that equipment.
- B. Lancer equipment (new or reconditioned) is shipped from the factory cleaned and sanitized in accordance with NSF guidelines. The equipment must be cleaned and sanitized after installation is complete. **The operator of the equipment must provide continuous maintenance as required by this manual and state and local health department guidelines to ensure proper operation and sanitation requirements are maintained.**
- C. Cleaning and sanitizing should be accomplished only by trained personnel. Sanitary gloves are to be used during cleaning and sanitizing operations. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

#### ⚠ WARNING ⚠

**USE CAUTION TO AVOID SPILLING SANITIZING SOLUTION ON ANY CIRCUIT BOARDS.**

**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 DEGREES F (60 DEGREES C).**

**THIS CAN DAMAGE THE DISPENSER. DO NOT SPILL SANITIZING SOLUTION ON ANY CIRCUITBOARDS.**

**ENSURE SANITIZING SOLUTION IS REMOVED FROM DISPENSER AS INSTRUCTED.**

### 3.2 CLEANING AND SANITIZING SOLUTIONS

**CLEANING SOLUTION:** Mix a mild, non-abrasive detergent (e.g. Sodium Laureth Sulfate, dish soap) with clean, potable water at a temperature of 90 to 110°F (32 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. Rinsing must be thorough, using clean, potable water at a temperature of 90 to 110°F (32 to 43°C). Extended lengths of product lines may require that an additional volume of cleaning solution be prepared.

**SANITIZING SOLUTION:** Prepare sanitizing solutions in accordance with the manufacturer's written recommendations and safety guidelines. The solution must provide 50 to 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 50 to 100 parts per million (PPM) chlorine. Extended lengths of product lines may require that an additional volume of sanitizing solution be prepared.

**OTHER SUPPLIES NEEDED:** 1) Clean cloth towels; 2) Bucket; 3) Extra nozzle; 4) Sanitary gloves; 5) Small brush (PN 22-0017 - Install Kit)

#### ⚠ WARNING ⚠

**IF POWDER TYPE SANITIZER IS USED, IT MUST BE COMPLETELY DISSOLVED WITH WATER PRIOR TO ADDING TO THE SYRUP SYSTEM.**

**THE USE OF HOT WATER WILL HELP DISSOLVE POWDER TYPE SANITIZERS.**

**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.**

### 3.3 DAILY CLEANING

- A. Disconnect power to unit.
- B. Carefully remove the nozzle housings by turning counterclockwise and pulling down from the nozzle body.
- C. Wash the nozzle housings in cleaning solution and rinse with warm water.
- D. Wet a clean cloth in cleaning solution.
- E. While the nozzle housing is removed, wipe down the perimeter and end of the nozzle body.
- F. Fill a cup with warm water and rinse nozzle body.
- G. Visually inspect around the nozzle mounting area on the valve for syrup residue. Using a cloth or nozzle brush and warm water, clean this area. If necessary, replace damaged o-ring with Lancer PN 02-0231.
- H. Wet the inner surface of the nozzle housing with water and reinstall the nozzle housing by sliding it over the nozzle body and turning clockwise to lock in position.

### 3.4 CLEANING LCD MONITOR

- A. To clean your antistatic screen, lightly dampen a soft, clean cloth with water. If possible, use a special screen-cleaning tissue or solution suitable for the antistatic coating. Do not use benzene, thinner, ammonia, abrasive cleaners, or compressed air. See CD under Maintenance Guidelines for further info on maintenance of your monitor.

### 3.5 CLEANING MERCHANDISER LENS

- A. Wash the lens with lukewarm water containing a neutral detergent using a soft sponge, a wool cloth or a chamois. Rinse with water and dry

#### ⚠ WARNING ⚠

**THE BIN AGITATION SYSTEM WILL OPERATE AUTOMATICALLY. DO NOT PLACE HANDS IN THE BIN OR THE ICE CHUTE.**

**UNPLUG DISPENSER FROM THE POWER SOURCE, WHEN UNIT IS BEING SERVICED, CLEANED, OR SANITIZED.**

with a soft cloth.

### 3.6 ICE BIN CLEANING

- A. Disconnect power to the dispenser.
- B. Remove the top cover.

C. Melt any remaining ice from the bin. Discard melted ice.

### 3.6 ICE BIN CLEANING - CONTINUED

D. Remove the splash plate, drip tray and front and rear bin covers.

E. Remove the agitator pin from the agitator shaft. Slide the agitator shaft rearward out of the motor shaft and pull out of the rear bearing to remove.

F. Remove the dispensing wheel from the motor shaft by sliding rearward.

### G. BLACK WHEEL SHROUD (CUBED ICE)

1. Remove the dispensing wheel shroud.

2. Remove the lower ice chute assembly.

### G. WHITE WHEEL SHROUD (PELLET ICE)

1. Remove the gasket which secures the shroud by pulling it out.

2. Push the front section of the shroud back.

3. Pull the shroud up and out.

4. Remove the lower ice chute assembly.

H. Using the cleaning solution described in the "Cleaning and Sanitizing Solutions" section and a clean cloth or soft brush, clean all removable parts, sides of ice bin, ice chute and surface of aluminum casting.

I. Using hot water, rinse the cleaning solution thoroughly.

J. Wearing sanitary gloves, soak a clean cloth towel in sanitizing solution, described in the "Cleaning and Sanitizing Solutions" section above, and wash all surfaces of removable parts, sides of ice bin, ice chute liner, and surface of aluminum casting.

K. Wearing sanitary gloves, reassemble all removable parts. Ensure agitator clip is locked.

L. Fill the unit with ice and replace the top cover.

M. Reconnect power to the dispenser.

### 3.7 CLEANING AND SANITIZING BEVERAGE COMPONENTS - BAG-IN-BOX SYSTEMS

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

A. Disconnect the syrup quick disconnect coupling from the syrup packages and connect the coupling to a bag valve removed from an empty Bag-in-Box (BIB) package.

B. Place the syrup inlet line in a clean container filled with clean, potable, room temperature water. Activate the valve until water is dispensed. Flush and rinse the line and fittings for a minimum of sixty seconds to remove all traces of residual product.

C. Make the sanitizing solution. Place the syrup inlet line in a container filled with sanitizing solution.

D. Activate the valve and draw sanitizing solution through the line for a minimum of sixty seconds. This will ensure the line is flushed and filled with sanitizing solution. Allow the line to stand for at least thirty minutes.

E. Remove the bag valve from the quick disconnect coupling and reconnect the syrup inlet line to syrup package. Ready the unit for operation.

F. Draw drinks to refill the lines and to flush the sanitizing solution from the dispenser. **FOLLOWING SANITIZATION, RINSE WITH END-USE PRODUCT UNTIL THERE IS NO AFTERTASTE. DO NOT USE A FRESH WATER RINSE. THIS IS AN NSF REQUIREMENT.**

G. Test the dispenser for proper operation. Taste the dispensed product to ensure there is no off-taste. If off-taste is found, flush syrup system again.

H. Repeat cleaning, rinsing, and sanitizing procedures for each valve and circuit.

### 3.7 ICE CHUTE CLEANING

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

A. Turn off power to the dispenser.

B. Remove merchandiser.

C. Unhook the spring from the upper ice chute by pulling up and out.

D. Remove the lower chute by carefully spreading apart the arms of the lower chute.

E. Mix the cleaning solution. Put a portion of the solution into a spray bottle. Soak the lower chute in the remaining solution.

F. Spray the upper chute with the cleaning solution.

G. With a soft sponge, clean the inside of the upper and lower chutes.

H. Rinse and dry the lower chute thoroughly.

I. Empty the cleaning solution from the spray bottle, then refill with plain water. Rinse the upper chute thoroughly.

J. Dry the upper chute.

K. Reinstall the lower ice chute onto the upper chute, then reinstall the spring.

L. Reinstall merchandiser.

M. Reconnect power to the dispenser.

### 3.8 REMOVAL OF MONITOR FOR SERVICE

1. Turn power off to dispenser

2. Remove merchandiser

3. Loosen the four (4) wing nuts on the side of monitor bracket

4. Lift monitor/bracket by grasping the side of the monitor and lifting up

5. Rotate the monitor/bracket clockwise. Set the right side of the bracket on top of the drip tray and lean the top of the bracket on the front of the unit.

6. Complete service.

7. Reverse the process to install the monitor/bracket on the unit.

### 3.9 MONITOR WARRANTY

A. All monitor warranty claims should be processed through Lancer Corporation. Do not send claims directly to Dell. Monitor troubleshooting guide can be found on the Dell supplied CD.

B. Abrasions to the monitor due to improper cleaning method's or due to use of abrasives are not covered by the limited warranty.

C. Damage during shipment should be forwarded back to the carrier and not the supplier.

E. Spillage of liquid on to the monitor is not covered under the limited warranty.

F. Voltage issues as a result of power spikes or irregular line voltage is not covered under the limited warranty.

### 4. SPECIFIC ICE COOL MANUALS AVAILABLE ON THE LANCER WEB SITE (BY PART NUMBER)

**IBD22 & IBD30, 28-0255/10**

**IBD25, 28-0417/02**

**IBD44, 28-0420/02**

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