# CB1522DD INTELLICARB™ ICE COOLED DISPENSER

## Installation Manual

**Release Date: October 05, 2017**

**Publication Number: 166239002INS**

**Revision: A**

**Visit the Cornelius web site at www.cornelius.com for all your Literature needs.**

## Notice

The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. It is assumed that appropriate safety precautions are taken and that all local safety and construction requirements are being met, in addition to the information contained in this manual.

This Product is warranted only as provided in Cornelius' Commercial Warranty applicable to this Product and is subject to all of the restrictions and limitations contained in the Commercial Warranty.

Cornelius will not be responsible for any repair, replacement or other service required by or loss or damage resulting from any of the following occurrences, including but not limited to, (1) other than normal and proper use and normal service conditions with respect to the Product, (2) improper voltage, (3) inadequate wiring, (4) abuse, (5) accident, (6) alteration, (7) misuse, (8) neglect, (9) unauthorized repair or the failure to utilize suitably qualified and trained persons to perform service and/or repair of the Product, (10) improper cleaning, (11) failure to follow installation, operating, cleaning or maintenance instructions, (12) use of "non-authorized" parts (i.e., parts that are not 100% compatible with the Product) which use voids the entire warranty, (13) Product parts in contact with water or the product dispensed which are adversely impacted by changes in liquid scale or chemical composition.

## Correct Disposal of this Product

**RECYCLE**

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

## Trademarks and Copyrights



CORNELIUS INC
101 Regency Drive
Glendale Heights, IL
Tel: + 1 800-238-3600

Printed in U.S.

## Contact Information

To inquire about current revisions of any documentation or assistance with any Cornelius product, contact:

**www.cornelius.com**
**800-238-3600**

# SAFETY INSTRUCTIONS

## SAFETY OVERVIEW

- Read and follow **ALL SAFETY INSTRUCTIONS** in this manual and any warning/caution labels on the unit (decals, labels or laminated cards).
- Read and understand ALL applicable OSHA (Occupational Safety and Health Administration) safety regulations before operating this unit.

## SAFETY ALERT SYMBOL

*This is the safety alert symbol. When you see this in the manual or on the unit, be alert to the potential of personal injury or damage to the unit.*

### Types of Alerts

**DANGER:** Indicates an immediate hazardous situation which if not avoided **WILL** result in serious injury, death or equipment damage.

**WARNING:** Indicates a potentially hazardous situation which, if not avoided, **COULD** result in serious injury, death, or equipment damage.

**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury or equipment damage.

## SAFETY TIPS

- Keep safety signs in good condition and replace missing or damaged items.
- Learn how to operate the unit and how to use the controls.
- **Do not** let anyone operate the unit without proper training. This appliance is **not** intended for use by very young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
- Keep your unit in proper working condition and do not allow unauthorized modifications to the unit.

## QUALIFIED SERVICE PERSONNEL

**WARNING**

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit.

**All wiring and plumbing must conform to National and Local Codes. Failure to comply could result in serious injury, death or equipment damage.**



Publication Number: 166239002INS

# SAFETY PRECAUTIONS

This unit has been specifically designed to provide protection against personal injury. To ensure continued protection observe the following:

**WARNING:** Disconnect power to the unit before servicing following all lock out/tag out procedures established by the user. Verify all the power is off to the unit before any work is performed. Failure to disconnect the power could result in serious injury, death or equipment damage.

**CAUTION:** Always be sure to keep area around the unit clean and free of clutter. Failure to keep this area clean may result in injury or equipment damage.

## Shipping And Storage

**CAUTION:** Before shipping, storing, or relocating the unit, the unit must be sanitized and all sanitizing solution must be drained from the system. A freezing ambient environment will cause residual sanitizing solution or water remaining inside the unit to freeze resulting in damage to internal components.

## $CO_2$ (Carbon Dioxide) Warning

**DANGER:** $CO_2$ displaces oxygen. Strict attention **MUST** be observed in the prevention of $CO_2$ gas leaks in the entire $CO_2$ and soft drink system. If a $CO_2$ gas leak is suspected, particularly in a small area, **IMMEDIATELY** ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentrations of $CO_2$ gas experience tremors which are followed rapidly by loss of consciousness and **DEATH.**

## Mounting in or on a Counter

**WARNING** While installing the unit in or on a counter top, the counter must be able to support a weight in excess of 1,000 lbs. to insure adequate support for the unit.

**Failure to comply could result in serious injury, death or equipment damage.**

## Unit Location

**CAUTION:**

- This unit is not designed for use in outdoor locations.
- The appliance must be placed in a horizontal position.
- The appliance is not suitable for installation in an area where a water jet would be used.

## Machine Usage

**CAUTION:**

- 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.
- Children should be supervised to ensure that they do not play with the appliance.

# SYSTEM OVERVIEW

## PRODUCT OVERVIEW

The dispenser consists of the following:

- Rear inlet fittings
- 75 lbs. capacity ice bin
- Foamed polyurethane insulation
- 11 3/8 inch cup clearance
- Drip tray and strainer removable for cleaning
- High capacity 11/18 cold plate
- Integrated cabinet stand

## SPECIFICATIONS

### DIMENSIONS

| | |
|---|---|
| Height | 65 inches |
| Width | 15 inches |
| Depth | 23 inches |
| Shipping weight (approx) | 235 pounds |



Publication Number: 166239002INS

# INSTALLATION

**CAUTION:**
Only trained and certified electrical, plumbing and refrigeration technicians should service this unit.

**WARNING:**
It is the responsibility of the installer to ensure that the water supply to the dispensing equipment is provided with protection back flow by an air gap as defined in ANSI A 112.1.2-1979; or an approved vacuum breaker or other such method as proved effective by test and must comply with ail federal, state and local codes.

**Failure to comply could result in serious in jury, death or damage to the equipment.**

Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed and maintained according to Federal, State and Local laws.

## INSTALLATION REQUIREMENTS

### Requirements Summary

| | |
|---|---|
| Environment | Indoor installation only |
| Temperature | 40 to 100° F ambient temperature |
| CO2 | 75 psi at unit |
| Water Pressure | 60 psi max. static; 30 psi dynamic min. at pump |
| Electrical | see name plate |
| Water Volume | 125 gph |
| Product Supply Beverage Tubing | 0.375 min. |

## DELIVERY INSPECTION AND UNPACKING

### Inspection

Upon delivery inspect the unit for damage or irregularities and immediately report problems to the delivering carrier and file a claim with that carrier.

1. Open loose parts packages and inspect parts.
2. Make sure all items are present.

| Part Name | Drop-In | |
|---|---|---|
| | P/N | Qty. |
| Clamps | Oetiker | n/a |
| Drain pan drain line | 167090002 | 1 |
| Cold plate drain line | 167467072 | 1 |
| Installation Manual | 166239002INS | 1 |
| Operators Manual | 166239002OPR | 1 |
| Carbonator Installation Manual | 560004885 | 1 |

# INSTALLATION PROCEDURE

## Dispenser Installation

1. Place dispenser near the final installation position leaving access to the rear of the unit to make electrical, water, and $CO_2$ connections.
2. Remove the rear access panel and route the power chord, water and $CO_2$ pigtails out of the unit through the grommeted hole in the base of the cabinet.
3. Install the drain hose to the ice bin drain fitting and route the drain hose through the grommeted hole in the base of the cabinet to a permanent drain. Allow a 3" air gap between the drain and the end of the hose. All connections must comply with local plumbing and health codes.
4. Install the drain hose to the drip tray drain fitting and route the drain hose through the grommeted hole in the base of the cabinet to a permanent drain. Allow a 3" air gap between the drain and the end of the hose. All connections must comply with local plumbing and health codes.
5. Connect the $CO_2$ source to the dispenser. A 6' 1/4" I.D. pigtail with a shutoff valve is supplied for the $CO_2$ connection. Make sure that shutoff valve is fully open.
6. Connect the water source to the dispenser. A 6' 3/8" I.D. pigtail with a shutoff valve is supplied for the water connection. Make sure that shutoff valve is fully open.
7. Remove the left side access cover.
8. Turn on the water supply to the unit.
9. Lift the carbonator tank relief valve until water steadily streams out, then release it.
10. Turn off the water shutoff valve at the back of the unit.
11. Turn on the $CO_2$ supply.
12. Open the carbonator water valve until all of the water is purged from the carbonator tank.
13. Turn on the water shutoff valve at the back of the unit.
14. Re-open the carbonator water valve. No water should be dispensed. If water is dispensed then either the incoming water pressure is too high or the incoming $CO_2$ pressure is too low. See "Installation Requirements" for proper settings.
15. Plug the unit into the proper AC outlet. The carbonator pump should run long enough to fill the carbonator tank and then shut off.
16. Open each dispensing valve and allow product to be dispensed for two minutes to make sure there is no debris in the lines.
17. Replace the rear and side access panels.
18. Place the unit in its final installation location.
19. Level the unit using the adjustable legs. This is important to ensure the dispenser drains properly.

## Cleaning the Ice Bin

1. Prepare a mild detergent soap solution in 100°F potable water.
2. Using a nylon (not wire) bristle brush, clean the cold plate and the interior of the ice bin with the soap solution.
3. Rinse the cold plate and interior bin surfaces with clean potable water.
4. Using a mechanical spray bottle, prepare a sanitizing solution according to the manufactures directions and spray the entire interior bin surfaces. Allow to air dry.

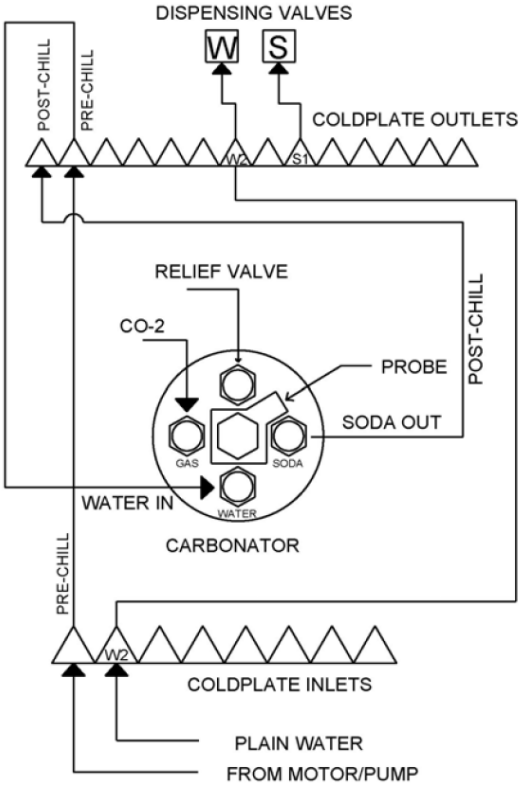
## Preparing for Operation

1. Fill the bin with 32° F ice. DO NOT use ice taken directly from the freezer. Allow ice to become "wet" before using.
2. Adjust the faucet flow controls so that each valve is dispensing 2.00 +/- 0.25 oz/sec.



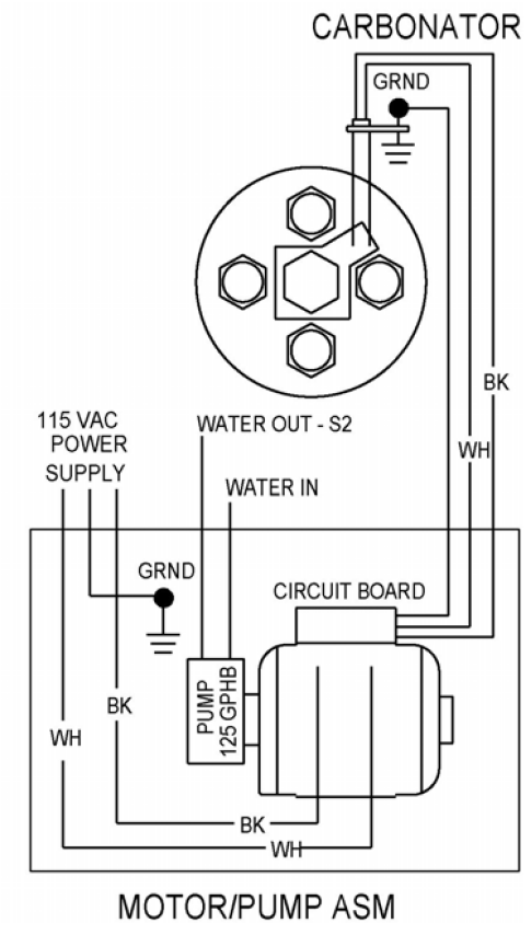
Publication Number: 166239002INS

# COLD PLATE PLUMBING DIAGRAM



## WIRING DIAGRAM



# TROUBLESHOOTING

| Trouble | Probable Cause | Remedy |
|---|---|---|
| Dispensed Product Carbonation Too Low | A. Air in carbonator tank.<br>B. Water, oil or dirt in $CO_2$ supply<br>C. $CO_2$ supply empty | A. Vent air out of carbonator tank through relief valve. Actuate dispensing valve carbonated water lever to make carbonator pump cycle on.<br>B. Remove contaminated $CO_2$. Clean $CO_2$ system (lines, regulators, etc) using a clean $CO_2$ supply.<br>C. Refill $CO_2$ source |
| Dispensed Product Comes Out Of Dispensing Valve Clear But Foams In Cup Or Glass. | A. Oil film or soap scum in cup or glass.<br>B. Ice used for finished drink is sub- cooled. | A. Use clean cup or glass.<br>B. Do not use ice directly from freezer. Allow ice to become "wet" before using. (Refer to following NOTE).<br>**NOTE: Crushed ice in the glass also causes dispensing problems. When finished drink hits sharp edges of ice, carbonation is released from dispensed drink.** |
| Dispensed Product Produces Foam As It Leaves The Dispensing Valve. | A. Dispensing valve restricted or dirty.<br>B. Dirty water supply<br>C. Warm Product - No ice in bin, bridged ice on cold plate or plugged drain. | A. Sanitize syrup system as instructed.<br>B. Check water filter. Replace cartridge. (see NOTE)<br>C. Replenish ice, break ice up to eliminate bridging, unplug the drain<br>**NOTE: If water supply is dirty, be sure to flush lines and carbonator completely. It may be necessary to remove lines to carbonator tank, invert tank, and flush tank and all inlet lines to remove any foreign particles or dirt.** |
| Drink Has Off-taste Or Odor (Water Contamination) | A. Leaking check valves.<br>B. Too much plumbers pipe compound on pipe joints.<br>C. Soda water and beverage lines made of brass or copper.<br>D. High chlorine level.<br>E. Tank corrosion.<br>F. Contaminated $CO_2$. | A. Replace O-Rings in double check valve or replace double check valve. See check valve installation instruction section.<br>B. Remove pipe compound and clean joints. Use Teflon pipe thread tape.<br>C. Carbonated water reacts with brass or copper and should NOT be dispensed through lines of this mate- rial. Replace lines with stainless steel or beverage grade plastic.<br>D. Install water filter to eliminate chlorine in excess of 1.5 ppm. Use type that do not remove all chlorine.<br>E. Replace tank.<br>F. Check that $CO_2$ is beverage grade |

# TROUBLESHOOTING FOR CARBONATOR

| Trouble | Probable Cause | Remedy |
|---|---|---|
| Pump Motor Does Not Run | A. Locked pump rotor-dirt or pipe compound in pump; pump seized.<br>B. Carbonator flooded.<br>C. No power | A. Remove and check for free rotation or replace. Also check $CO_2$ supply, faulty single check valve, liquid level control or probe.<br>B. Main water supply pressure higher than $CO_2$ pressure within the carbon- ator. If maximum water supply pres- sure is within 15 PSI of $CO_2$ pressure, install water pres- sure regulator.<br>C. Check source of electrical supply and for loose connections. |
| Pump Runs Continuously | A. Pump water supply restricted.<br>B. Pump discharge line restricted.<br>C. Inefficient or worn pump<br>D. Overdrawing. | A. Check water filter and pump inlet strainer and clean.<br>B. Noisy pump operation usually indicates restricted water supply. Also check for faulty double check valve, water leak or low pump bypass.<br>C. Water inlet check valve may be plugged. Remove, clean, or replace rubber O-Rings.<br>D. To test for efficiency, disconnect dis- charge line from pump. Connect a 300 pound gauge and hand shut off valve to pump discharge. Start pump. Bleed off any air, close hand valve then observe pres- sure. If it is approximately 180 PSI, pump is O.K. If it is significantly below 180 PSI, it may be increased by adjusting the pump by- pass. Increasing the by-pass is accomplished by removing sealing acorn cap and turning the adjusting screw in. If pressure rises to 180 PSI, pump is O.K. If it is still below 150 PSI, and the screw is turned all the way in, the pump is worn. Replace.<br>**NOTE: A badly worn pump and/or pre- mature failure usually indicates foreign material in the supply water. Install a water filter in supply line. Also check for faulty liquid level control, corroded electrode, or broken pump shaft.**<br>E. Check capacity of pump. The combined rate of flow from dispensing valves should not exceed the stated GPH for pump, or pump runs continuously. |



Publication Number: 166239002INS

| | | |
|---|---|---|
| Dispensed Product Carbonation Too Low | A. Air in carbonator tank.<br>B. Water, oil or dirt in $CO_2$ supply<br>C. $CO_2$ supply empty | A. Vent air out of carbonator tank through relief valve. Actuate dispensing valve carbonated water lever to make carbonator pump cycle on.<br>B. Remove contaminated $CO_2$. Clean $CO_2$ system (lines, regulators, etc) using a clean $CO_2$ supply.<br>C. Refill $CO_2$ source. |
| Noisy Pump | A. Bad motor bearings or worn pump shaft.<br>B. Failure of Triac on liquid level control.<br>C. Insufficient water supply. | A. Repair or replace motor.<br>B. Repair or replace liquid level control.<br>C. Check that water supply is on. Also check for clogged water filter, ruptured tank or bad double check valve. |
| Valve Delivers $CO_2$ Gas Continuously | A. Pump motor does not run.<br>B. Pump water supply restricted.<br>C. Relief valve venting.<br>D. Worn pump. | A. See Pump Motor Does Not Run.<br>B. Clean strainer. Check for faulty double check valve.<br>C. Repair or replace.<br>D. See Pump Motor Runs Continuously. |
| Valve Delivers Soda Water And $CO_2$ Gas Intermittently | A. Pump water supply restricted.<br>B. Relief valve venting.<br>C. Inefficient or worn pump. | A. Clean strainer. Check for faulty single check valve, clogged water filter, water supply off or blocked, ruptured tank, faulty liquid level control or double check valve.<br>B. Replace or repair.<br>C. See Pump Motor Runs Continuously. |
| Poor Carbonation | A. Flooded carbonator.<br>B. Water temperature too high (warm).<br>C. Oil in water supply.<br>D. Supply water containing too much air in solution.<br>E. Poor quality paper cups.<br>F. Dirty or greasy glassware<br>G. Flat drinks. | A. See Pump Motor Does Not Run.<br>B. Check water inlet temperature. Lower temperature provides better carbonation.<br>C. Check pipe thread compound. Remove and clean and replace with Teflon pipe thread tape.<br>D. To remove air before it enters pump, it will be necessary to install an open tank with float to control water level<br>E. Purchase quality cups made for this application.<br>F. Wash all glassware.<br>G. Draw drinks against side of glass or cup. Check for insufficient $CO_2$ contamination, bad check valve, ruptured $CO_2$ line. |
| No Product Dispensed From Either Dispensing Valve. | A. Water inlet supply line shutoff valve closed.<br>B. Filter plugged. | A. Open water inlet supply line shutoff.<br>B. Check water filter. Replace cartridge. |
| Water Flow Too Fast/too Slow From Dispensing Valves. | A. Faucet flow control out of adjustment.<br>B. Convertible valve flow control out of adjustment. | A. Adjust flow control on the side of the faucet. (Center of flow control travel is the highest flow. Ends of flow control travel are the lowest flow).<br>B. Adjust convertible valve flow controls under the rear access panel (CCW to decrease; CW to increase) |

Cornelius Inc.
www.cornelius.com