



## BATCH CARBONATOR BC-1 Installation Kit



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This document contains the original instructions for the unit described.

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### **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.

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# SAFETY INSTRUCTIONS

## READ AND FOLLOW ALL SAFETY INSTRUCTIONS

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### 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 and/or national and local codes before operating this unit.

### Recognition

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#### *Recognize Safety Alerts*



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

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### Different 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.

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### SAFETY TIPS

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- Carefully read and follow all safety messages in this manual and safety signs on the unit.
  - Keep safety signs in good condition and replace missing or damaged items.
  - Learn how to operate the unit and how to use the controls properly.
  - **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.

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## QUALIFIED SERVICE PERSONNEL

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 **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.**

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## SAFETY PRECAUTIONS

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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 of 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.

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## SHIPPING AND STORAGE

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 **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.

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## UNIT LOCATION

**CAUTION:**

Appliance is not suitable for installation in an area where a water jet could be used.

**CAUTION:**

The appliance must be placed in a horizontal position.

**CAUTION:**

This unit is not designed for use in outdoor locations.

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## POWER CORD

**CAUTION:**

If the power cord is damaged, it must be replaced by a special cord available from the manufacturer or its service agent.

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## SOUND LEVELS

**CAUTION:**

The A-weighted sound pressure level has been determined to be below 70 dBA.

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## 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.

**CAUTION:**

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

**CAUTION:**

This appliance is intended to be used in commercial applications.

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## GROUNDING INSTRUCTIONS

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**⚠ CAUTION:**

This appliance must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

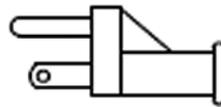
**⚠ DANGER:**

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with green insulation with or without yellow stripes is the equipment grounding conductor. If repair or replacement of the cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal. If in doubt whether the appliance is properly grounded, check with a qualified electrician or serviceman. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

**⚠ CAUTION:**

This appliance is for use on electrical circuits, as shown in Table 2, and has a grounding plug that looks like the plug illustrated in Figure 1.

A qualified electrician should be consulted if there is any doubt about the outlet box being properly grounded.



3-Prong Plug \*

\* Example of grounded North American plug.

**Figure 1.**

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# INSTALLATION

## INSTALLATION KIT

The following table describes the parts contained in the installation kit for the unit. Be sure to verify that the kit is complete before proceeding with the installation.

**Table 1.**

Item No.	Part No.	Description	Quantity
1	10353	Cable Tie 11 in. (27.94 cm.) Screw Mount	10
2	134410001*	Wrench, CO <sub>2</sub> regulator	1
3	178025100	1/4 in. (0.64 cm.) White Washer, Flare	2
4	283186111*	Regulator, CO <sub>2</sub> 1X160 1-1/4FL	1
5	312926000	Clamp, OETR 484OPEN STPLS #12.3	4
6	620056764	P-FitG L-Barb 1/4 X QD Insert	1
7	620056765	P-FitG L-Barb 1/4 X QD Valved Body	1
8	629097217INS	Installation Manual	1
9	630901505	Tubing, FLEXCOR 265X465 300'	1
10	77040100	Fitting, L-SWV 1/4 FL X 1/4BRB	1

\* Indicates possible country specific parts.

## SPECIFICATIONS

**Table 2.**

Capacity	17.75 fl. oz. (0.52 liters)
CO <sub>2</sub> Input Connection	1/4 in. quick connect
CO <sub>2</sub> Vent Connection	1/4 in. quick connect
CO <sub>2</sub> Pressure at Unit	Max: 100 PSI (0.69 MPa)
Operational Voltage	100 V, 115 V, 220-240 V 50/60 Hz
Height	19.1 in. (485 mm)
Depth	14.1 in. (358 mm)
Width	11.5 in. (292 mm)
Weight (unit)	39 lbs. (17.7 kg)
Ambient Operating Temperature	40° F to 100° F (4.4° C to 37.8° C)

## TOOLS REQUIRED

The following list of tools is required to properly install this kit.

1. Tubing cutter, anvil type
2. Clamp Pincher (Cornelius Part No. 311938000 or equivalent)
3. 6 in. (15.24 cm.) adjustable wrench
4. Slotted screwdriver
5. Tape measure
6. Power drill
7. Assorted drill bits\*

\*Drill bits needed depend on the size of hole required and the material being drilled. Read instructions to determine the best drill bit sizes to use.

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## SUMMARY

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The Batch Carbonator is designed to sit on a countertop. The countertop may require a hole to route a CO<sub>2</sub> line and power cord through. The unit requires an appropriate protected wall receptacle of the proper voltage and current within reach of the power cord.

1. The Batch Carbonator should be placed in a convenient countertop location. The carbonator vibrates when operating, so it is recommended that it be placed on a solid counter that will not shake when the carbonator is operating.
2. In determining the best location, consideration should be given to the following:
  - a. Overhead clearance
  - b. Countertop work space on each side.
  - c. Sinks, faucets, etc.
  - d. If the unit is located near a sink, a splash guard must be installed.
  - e. Unit needs to slide forward for cleaning counter under the unit.
3. A 160 psi (1.1 MPa) regulator set to an output pressure of 100±1 psi (0.69 MPa) and CO<sub>2</sub> supply tank(s) are required to be remotely located from the unit.
4. The CO<sub>2</sub> tubing must be routed from the back of unit to the CO<sub>2</sub> supply.

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## CO<sub>2</sub> TANK LOCATION



### **DANGER:**

CO<sub>2</sub> displaces oxygen. Do not place the tank in a confined area used by staff. 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. If a CO<sub>2</sub> 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<sub>2</sub> gas experience tremors which are followed rapidly by loss of consciousness and **DEATH**.

**⚠ CAUTION:**

When mounting safety bracket to wall caution should be taken. The walls may have hidden electrical wires or plumbing lines inside. Method used to secure bracket to wall should be strong enough for its intended purpose.

Refer to Figures 2 and 3 while performing this procedure.

1. Determine the best location for the unit and the CO<sub>2</sub> cylinder bracket. Bracket and cylinder(s) can be located under the counter or another available space in the store. Minimum clearance for the CO<sub>2</sub> cylinders is 22 inches (55.88 cm.) wide and 36 inches (91.44 cm.) high.
2. Secure the bracket to the wall using appropriate mounting hardware.
3. Make sure that the minimum clearance is maintained for replacement of the CO<sub>2</sub> cylinders and the regulator.
4. The CO<sub>2</sub> cylinders must be placed upright against the bracket and held in place with the provided safety chains at all times.
5. Slide the CO<sub>2</sub> regulator wrench over the swivel nut. Then connect the CO<sub>2</sub> regulator to the cylinder making sure the plastic flat washer is inside the nut.
6. Using the wrench, tighten the swivel nut to the CO<sub>2</sub> cylinder valve. The wrench can hang on the regulator when you are done tightening the regulator.



Figure 2.



Figure 3.

## PHYSICAL LOCATION OF UNIT

**⚠ CAUTION:**

Countertop material and thickness can vary between stores (stainless steel, molded resin, etc). Also, the underside of the countertop may be open or may be part of an enclosed cabinet.

Refer to Figures 4 and 5 while performing this procedure.

1. The unit power cord varies in length according to the power requirements of the unit. The power cord can be routed to an electrical outlet above the counter or it may be routed through a hole that drilled in the counter. It is then routed to an electrical outlet under the counter.



Figure 4.



Figure 5.

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## COUNTERTOP PREPARATION

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**CAUTION:**

Before drilling any holes in the countertop, cabinet or walls, be sure to measure and inspect areas that the drill bit will be passing thru. Electrical wiring, plumbing lines and fixtures along with brackets and braces may be hidden from sight.

Refer to Figures 6 and 7 while performing this procedure.

1. A hole should be drilled in the counter [minimum of 1-3/4 in. (4.44 cm.) dia.]. This hole size allows the insertion of the power cord and the CO<sub>2</sub> tubing.
2. The hole should be as close as possible to the center of the unit when it is in its operating location. The hole location should be as far back on the counter as counter construction allows, allowing the drilled hole to pass straight down.
3. All holes must be sealed with a grommet or escutcheon. After drilling the hole, it is recommended that a bead of silicone sealant be placed around the edge of the hole and the grommet or escutcheon be inserted into the hole. Wipe excess sealant from around the top edge of the grommet or escutcheon.

**NOTE: Escutcheons: Insert metal or hard plastic escutcheon with caulk/adhesive to hold; may be necessary if jurisdiction requires a scrubable/washable material.**

**Grommets or escutcheons are not supplied with the kit.**



Figure 6.



Figure 7.

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## ADDITIONAL HOLES

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Additional holes may be required for different stores, depending on the location of the CO<sub>2</sub> supply. These holes may be through cabinets, shelving, countertop supports or studded walls.

Refer to Figures 8 through 10 while performing this procedure.

These additional holes should be large enough to accommodate the CO<sub>2</sub> tubing and the power cord, where appropriate.

All holes must be sealed with a grommet or escutcheon. After drilling the hole, it is recommended that a bead of silicone sealant be placed around the edge of the hole and the grommet or escutcheon be inserted into the hole. Wipe excess sealant from around the top edge of the grommet or escutcheon.

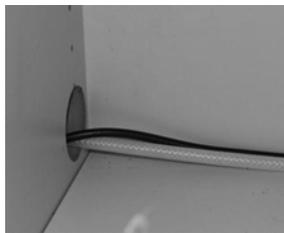


Figure 8.

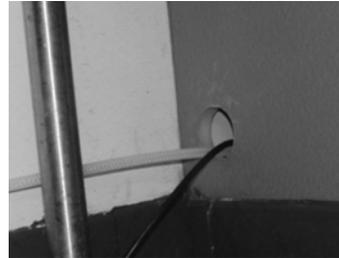


Figure 9.



Figure 10.

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## ROUTING AND CONNECTION OF TUBING

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 **CAUTION:**

Use caution when mounting retaining straps to wall. Walls may have hidden electrical wires or plumbing inside. Method used to secure the straps should be strong enough for its intended purpose.

### Routing Tubing

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 **CAUTION:**

Care should be taken to avoid routing the CO<sub>2</sub> tubing near heat sources or contacting sharp edges.

 **CAUTION:**

Do not route the CO<sub>2</sub> tubing in such a way that tight bends are required. Sharp radii may cause the tubing to kink or fold, blocking CO<sub>2</sub> flow.

 **CAUTION:**

Use a tubing cutter rated for cutting plastic tubing.

Refer to Figures 11 through 13 while performing this procedure.

1. Leave an additional length of gas line/tubing at the machine to enable movement of the machine for cleaning. Gas line/tubing must be 6 ft. (1.82

m) long and with a 3 ft. (0.91 m) leader running to the machine. Tie the coil off and affix to the wall under the counter. CO<sub>2</sub> line should be protected from sharp angles and impact.

2. Some installations may have the CO<sub>2</sub> tank located directly under the counter and will not require any additional holes.
3. Tubing should be secured to appropriate permanent surfaces to keep it from laying on the floor or getting caught on other equipment.
4. When the tubing is routed to the CO<sub>2</sub> tank location, extra tubing should be provided for the movement of the tanks during changing.
5. Gas lines should not rest on the floor or on the bottom of cabinets. Floor level lines must be secured at the top of the base tile. If running a line through a cabinet, secure the line at the top of the cabinet.
6. Leave an additional length of gas line/tubing at the CO<sub>2</sub> tank to enable movement when changing a tank. Gas line/tubing must be 6 ft. (1.8 m) long and with a 3 ft. (0.91 m) leader running to the tank. Tie the coil off and attach to the wall under the counter.



Figure 11.

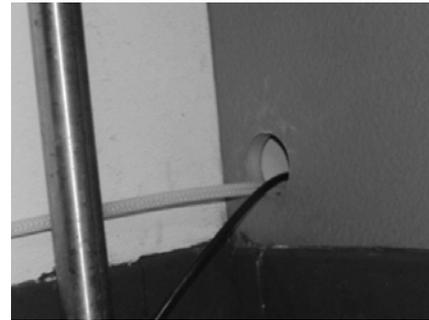


Figure 12.

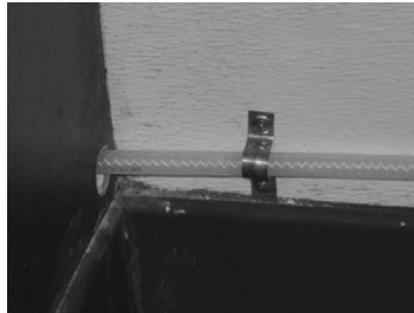


Figure 13.

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## Tubing Connections

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 **CAUTION:**

All tubing connections **MUST** be completed using the supplied Oetiker clamps and crimped with the recommended pincher tool.

1. Label both ends of the tubing as "CO<sub>2</sub>". Also label the tubing randomly along the tubing route.

2. At the unit end of the tubing, using the Oetiker clamps provided, place a clamp loosely over the end of the CO<sub>2</sub> tubing (Figure 14). Push the inlet quick disconnect fitting into the tubing so that no barbs are showing. Using the proper tool, crimp the Oetiker clamp to hold the tubing to the fitting.
3. At the tank end of the tubing, place the white plastic washer (provided in the kit) inside the female threaded nut of the 90-degree fitting provided in the kit.
4. With the plastic washer in place, thread the nut onto the male flare fitting on the bottom of the CO<sub>2</sub> regulator. The nut should be tightened firmly.
5. Using the Oetiker clamps provided, place a clamp loosely over the end of the CO<sub>2</sub> tubing. Then push the tubing onto the barb fitting(s). Using the proper tool, crimp the Oetiker clamp to hold the tubing to the fitting (Figure 15).

**NOTE: If completing the rough-in phase only, secure the regulator to the top loop of the hose coil.**



Figure 14.



Figure 15.

## PROPER REGULATOR INSTALLATION AND PRESSURE ADJUSTMENT

To connect and adjust the regulator properly, perform the following procedure.

1. Slide the CO<sub>2</sub> regulator wrench onto the regulator nut. Make sure the white washer (Cornelius regulator), as shown in Figure 16, or the o-ring seal (Taprite regulator) are in place.

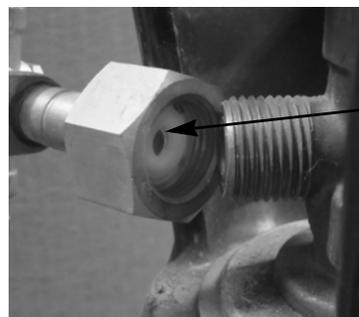
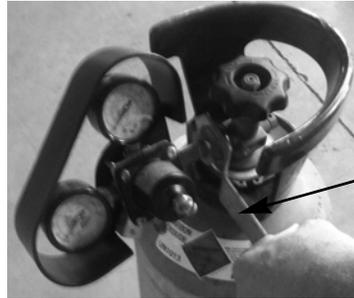


Figure 16.

2. Tighten the regulator on the tank, as shown in Figure 17.



Regulator Wrench

**Figure 17.**

3. Open CO<sub>2</sub> tank by turning the knob counterclockwise until it is back seated, as shown in Figure 18.



Cylinder Knob

**Figure 18.**

4. Using a screwdriver, adjust the regulator to 100±1 PSI (0.69 MPa), as shown in Figure 19.



**Figure 19.**

5. Use the digital display reading on the unit to validate the regulator gauge reading, as shown in Figure 20.



Digital Display

Selector Knob

**Figure 20.**

6. Enter the display mode, shown in Figure 21, for tank pressure by performing the following steps.
  - a. Depress the selector knob and hold it in for a total of 5 seconds. This displays the menu options. The first option is (01) Tank Level.



**Figure 21.**

- b. Close the door and depress the selector knob again and enter the menu option 01. The unit prompts the operator with the request for a tank check, shown in Figure 22. To start again depress the selector knob.



**Figure 22.**

- c. The unit displays a level, for example the tank pressure was measured at 95PSI, as shown in Figure 23.



**Figure 23.**

7. When complete, the menu prompts the user to exit, as shown in Figure 24. Select it by depressing the selector knob.



**Figure 24.**

- The display returns to the “menu” screen, shown in Figure 25. From there scroll to option 06 and exit to the primary operations screen.



**Figure 25.**

- Adjust the regulator setting and repeat Steps 6 and 7 until the reading at the unit is between a minimum of 95 PSI (0.66 Mpa) and a maximum of 100 PSI (0.69 Mpa).



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