



INSTALLATION INSTRUCTIONS

FOR VENTED DUAL CHECK VALVE KITS (P/N 0876 AND 1153)

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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.

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Contact Information:

To inquire about current revisions of this and other documentation or for assistance with any Cornelius product contact:

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This document contains the original instructions for the unit described.

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SAFETY

WARNING:

Before starting installation, read and understand all safety label and warnings on the machine. Also review and understand all safety instructions in the owners, installation and service manuals.

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

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.

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. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work.

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

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.

INTRODUCTION

The vented dual check valve, included in this kit, is intended to replace the non-vented dual check valve connected in the system between the water pump outlet and the carbonated water tank plain water inlet. The purpose of the vented dual check valve is to vent rather than to allow carbonated water and CO₂ gas to back flow into and possibly contaminate the plain water system should the vented dual check valve malfunction. If venting should occur, vented dual check valve must be replaced.

1. Unpack and inspect kit. Make sure all items are present and in good condition.
2. Refer Figure 1 for LOOSE-SHIPPED PARTS identification.

Table 1. Loose-Shipped Parts				
Item No.	Part No.	Name	Kit 0876	Kit 1153
			Qty./Kit	Qty./Kit
1	309854000	Clamp 0.409	1	0
2	1152	Tube Assembly	1	0
3	311304000	Gasket, Plastic	1	1
4	620608773	Dual Check Valve	1	1
5	1151	Elbow Fitting 90°	1	0
6	174004000	Vent Tube, 10 ft.	10 ft.	10 ft.
7	340242000	Snap Bushing	1	0
8	311527000	Clamp 0.344	1	1
9	1150	Warning Decal	1	1
10	0887INS	Installation Instructions	1	



WARNING:

Strict attention must be observed in the prevention of CO₂ (carbon dioxide) gas leaks in the entire CO₂ and soft drink system. If a CO₂ gas leak is suspected, particularly in a small area, immediately ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO₂ gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

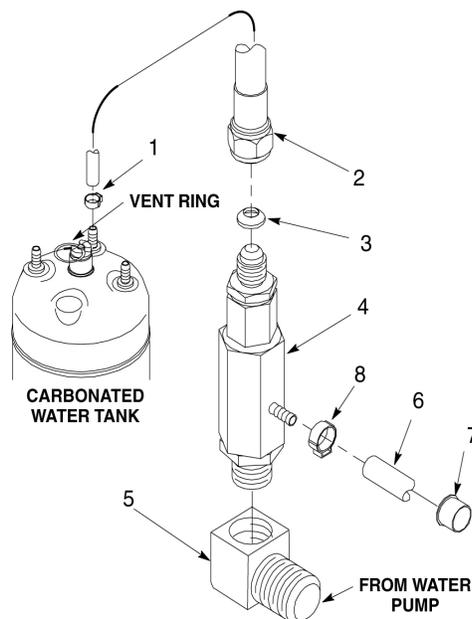


Figure 1. Loose-shipped Parts



INSTALLATION



WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work.

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

NOTE: Kit (P/N 0876) and Kit (P/N 1153) are intended to be installed on the following Cornelius manufactured Units:

INSTALLING KIT (P/N 0876)

Installing Kit (P/N 0876) on VA13 Carbonators (P/N 416411000) or (P/N 496411000)

1. At the CO₂ cylinder shut off valve, turn off CO₂ supply to the Unit.
2. Turn off water supply to the Unit at the plain water source shut off valve.
3. At the carbonator, remove four screws holding the cover and grille, then remove cover and grille.
4. At the carbonator tank, lift up on vent valve ring to remove all gas pressure from the Unit.
5. Disconnect the water inlet line to the water pump from the bulkhead fitting. Retain the seal washer.
6. Trace the CO₂ inlet line from the carbonator tank to the bulkhead fitting. At the bulkhead fitting, disconnect the CO₂ inlet line. Retain the seal washer.
7. At the carbonator tank, disconnect the water inlet line. Do not bend fitting when removing clamp.

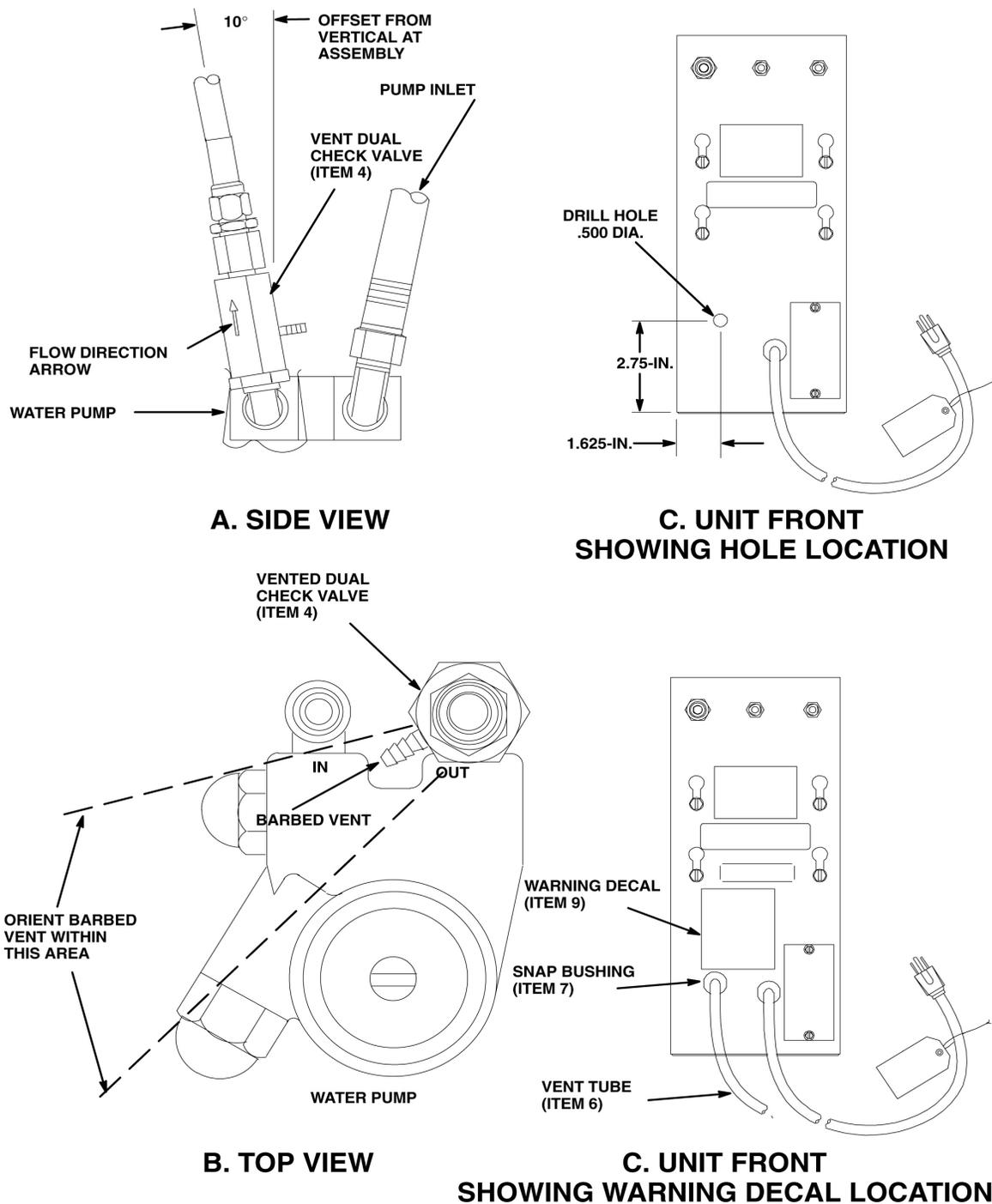


Figure 2. Installation Detail Views VA13 Carbonators (P/N 416411000) and (P/N 496411000)

8. At the water pump motor, loosen two screws on the cover of the electrical connection box. Remove the cover. Within the box, tag the electrical conductors.
9. Disconnect the tagged conductors.
10. At the water pump motor, remove four screws securing the motor to the Unit.
11. Turn the motor to expose the safety thermostat on the water pump. Note thermostat location.
12. Disengage wire strap retainer from the thermostat, and set it aside.
13. Remove the motor and water pump, with attached inlet and outlet lines, from the Unit.

14. At the water pump outlet elbow, remove the double check valve together with the attached carbonator inlet line.
15. Remove the outlet elbow from the water pump outlet.

NOTE: The double check valve, carbonator line and elbow are surplus.

16. Apply food-grade thread sealant to male end of brass elbow (item 5) and install it in the water pump outlet. Tighten and orient it to approximately 10 degrees from vertical as shown in view A of Figure 2.
17. Apply food-grade thread sealant to pipe thread fitting on inlet end of vented dual check valve (item 4) and install it into the brass elbow (item 5). Tighten to orient the barbed vent fitting on the side of the valve to the position shown in view B of Figure 2.
18. Using plastic gasket (item 3) connect swivel fitting of tube (item 2) to the outlet of the vented dual check valve (item 4). Tighten assembly.
19. On the carbonator cabinet, mark a hole center location as shown in view C of Figure 2. and drill (or punch) a 1/2-inch diameter hole on center.
20. Install snap bushing (item 7) in 1/2 inch hole.
21. Route one end of ten foot vent tube (item 6) through the snap bushing (item 7).
22. Place clamp (item 8) over one end of ten-foot vent tube (item 6) and press the end of the tube over the barbed vent fitting on the side of the vented dual check valve (item 4). Center the clamp on the barbs and tighten it using pliers.
23. Place the motor and the water pump into position in the Unit cabinet and install loosely with two of four mounting screws.
24. Install safety thermostat on the water pump body using previously removed wire retainer.
25. At the motor, reconnect electrical conductors and install cover. Tighten cover retaining screws.
26. At the motor, install two remaining screws on the motor mount and tighten all four screws.
27. Reconnect CO₂ line from carbonator tank at the bulkhead fitting.
28. Reconnect water pump inlet line using removed gasket. Tighten fitting.
29. Place clamp (item 1) over the unconnected end of tube (item 2). Press the tube end over the barbed fitting on the carbonator tank plain water inlet.

NOTE: Before tightening the clamp, be sure that vertical movement of the carbonator tank is not restricted.

30. Center clamp (item 1) over the barbed fitting and tighten clamp with pliers.
31. Route the free end of the vent tube (item 6) to a drain.



CAUTION:

Route the free end of the vent tube (item 6) to a permanent drain to avoid serious water damage in event of primary check valve failure.

32. Affix warning decal (item 9) on the side of the Unit in the position shown in view D of Figure 2.
33. Turn on plain water and CO₂ gas to the Unit.
34. Check carefully for leaks.
35. Turn on electrical power to the Unit.
36. At the carbonator tank, lift the vent ring to remove air.
37. Allow the Unit to cycle several times while observing it for correct operation.
38. Install removed cover and grille using four screws previously removed.

Installing Kit P/N 0876 on FCB Dispensers.

(See the Figure 3)

NOTE: The four-flavor FCB Units require installation of two Vented Dual Check Valve Kits (P/N 0876).



WARNING:

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work.

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

1. Press "OFF 1" and "OFF 2" switches to stop freeze cylinders beaters and refrigeration systems.
2. Close CO₂ cylinder and water inlet supply line shutoff valve.
3. Remove Unit back panel for access to the carbonator(s) water pump(s).
4. Pull up on the carbonator tank(s) relief valves to release CO₂ pressure from the tank.
5. Trace plain water line connected to the water pump double liquid check valve up to top of carbonator tank, then disconnect water line from tank barbed water inlet fitting.
6. Remove double liquid check valve, with plain water line attached from 90° elbow fitting in water pump outlet port. Discard double liquid check with attached water line.
7. Note installed position of 90° elbow fitting in water pump outlet port, then remove elbow from water pump. Discard old elbow.
8. Apply food-grade thread sealant to male threads on elbow fitting, 90° (item 5).
9. Install elbow fitting in water pump outlet port. **MAKE SURE IT'S INSTALLED POSITION IS AS NOTED IN PRECEDING STEP 8.**
10. Apply food-grade thread sealant to male threads on inlet end of vented dual check valve (item 4).
11. Install vented dual check valve on elbow fitting installed in water pump outlet.
12. Connect swivel nut end of tube assembly (item 2) to outlet of vented dual check valve. Seal connection with plastic gasket (item 3).
13. Route other end of tube assembly up to top of water tank.
14. Connect tube assembly to carbonator tank barbed water inlet fitting. Secure connection with clamp (item 1).
15. Connect vent tube (item 6) to barbed fitting on side of dual check valve. Secure connection with clamp (item 8).
16. Route other end of vented check valve vent tube out through bottom of Unit to a floor drain. **MAKE SURE VENT TUBE IS ROUTED SO AS NOT TO INTERFERE WITH ANY MOVING PARTS OF THE UNIT.**
17. Repeat proceeding steps 5 through 17 to install Vented Dual Check Valve Kit (P/N 0876) on other carbonated water pump on the four-flavor FCB dispenser.
18. Install warning decal (item 9) on inside of Unit back panel.
19. Open CO₂ cylinder and water inlet supply line shutoff valves. Check for water leaks and tighten any loose connections.
20. Pull up on carbonator tank(s) relief valve(s) to bleed air from tank(s).
21. Install back panel on Unit.
22. Connect electrical power to Unit, then restore Unit operation.

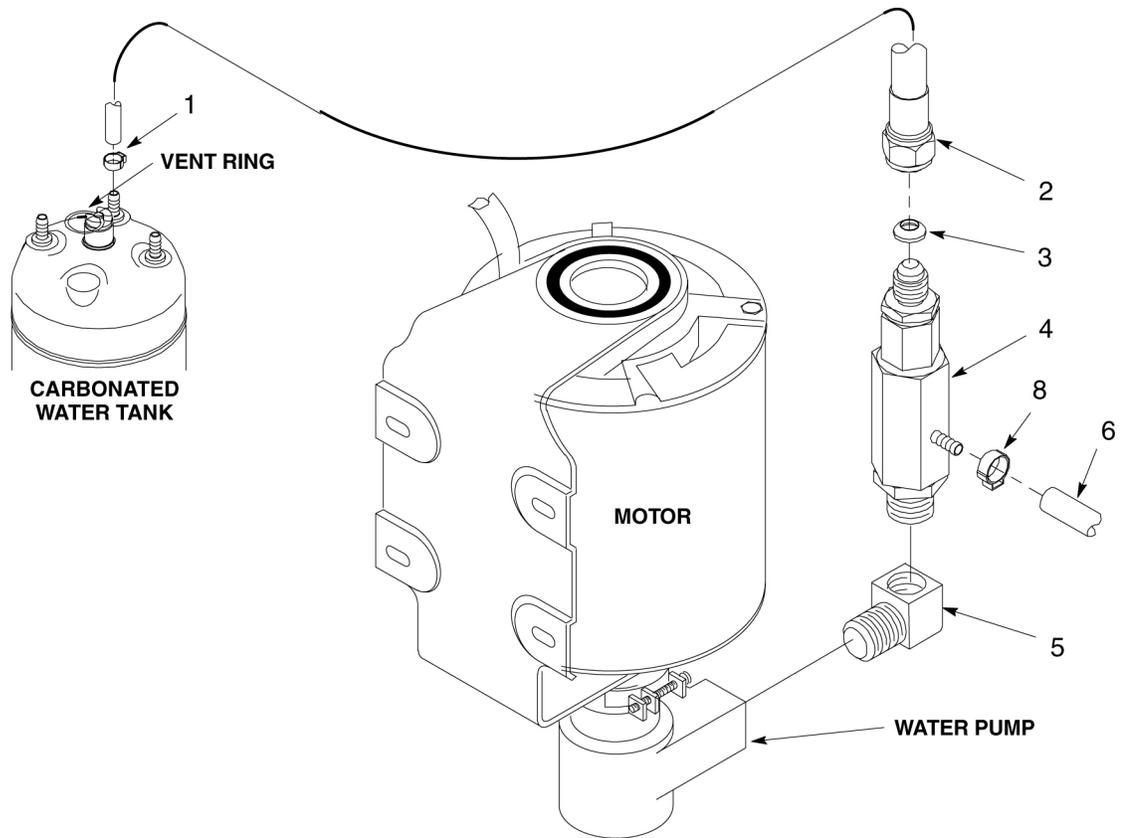


Figure 3. FCB Dispenser Carbonator

INSTALLING KIT (P/N 1153) ON LARGE RESERVE CARBONATORS (P/N 416424000) AND (P/N 496424000)

(See Figure 4.)

1. Disconnect the water line at the outlet of the dual check valve. Remove the gasket from inside the swivel nut.
2. Remove the dual check valve and pipe thread adapter fitting from the water pump outlet port.

NOTE: The gasket, dual check valve, and adapter are surplus.
3. Apply thread sealant to the threaded end of the vented dual check valve (item 4) and install the vented dual check in the water pump outlet port.
4. Using plastic gasket (item 3), connect the water line disconnected in step 1 to the top of the vented dual check valve (item 4). Tighten fittings.
5. Place clamp (item 8) over one end of 10-foot vent tube (item 6) and press the end of the tube over the barbed vent fitting on the side of the vented dual check valve (item 4). Center clamp over the barbed fitting and tighten it using pincers.
6. Route the free end of the vent tube (item 6) to a drain.

CAUTION:

Route the free end of the vent tube (item 6) to a permanent drain to avoid serious water damage in event of vented check valve failure.

7. Affix warning decal (item 9) to top of electrical enclosure.
8. Turn on plain water and CO₂ gas to the Unit.
9. Check carefully for leaks.
10. Turn on electrical power to the Unit.
11. At the carbonator tank, lift the vent ring to remove air.
12. Allow the Unit the cycle several times while observing it for correct operation.
13. Place the motor and water pump into position in the Unit cabinet and install loosely with two of four mounting screws.

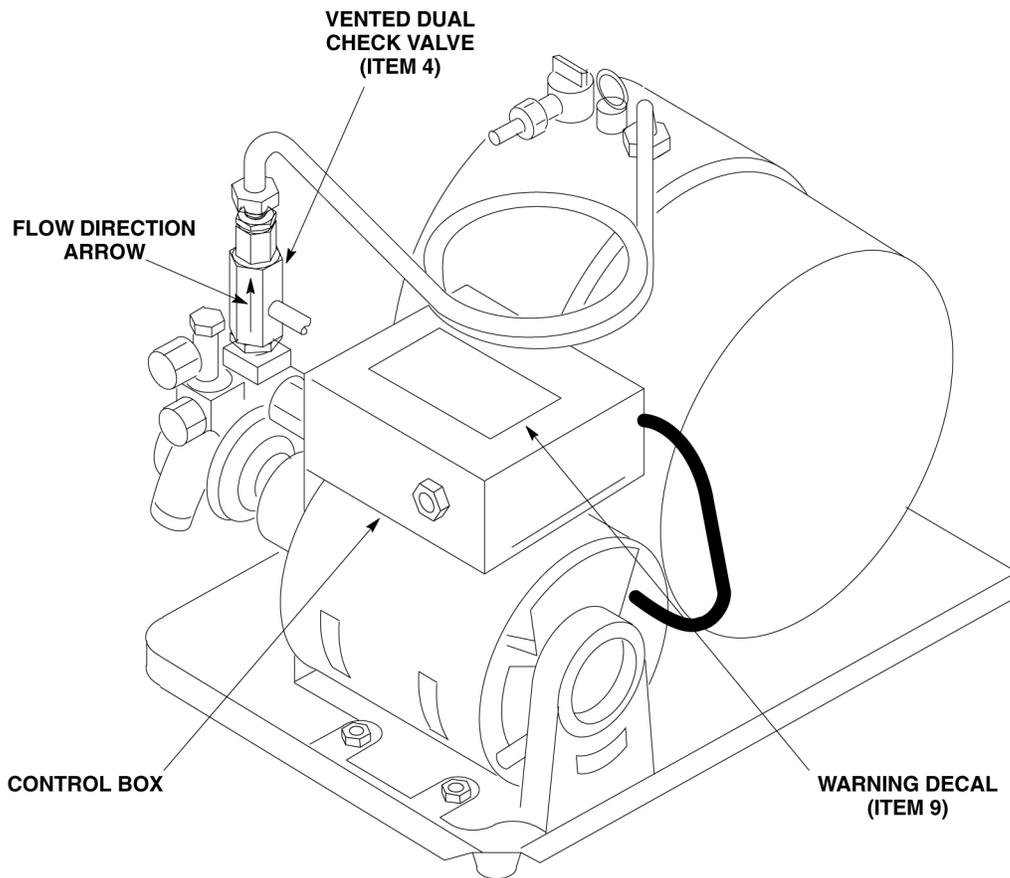


Figure 4. Low Profile Large Reserve Carbonator (P/N 416424000) and (P/N 496424000)

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