Servend

COUNTER ELECTRIC & NON-CARBONATED POST-MIX DISPENSERS

CED-30 (6 valve) and CED-40 (8 valve)

INSTALLATION & SERVICE GUIDE

Part Number 5010146

Manitowoc™ Foodservice Group

Manitowoc Beverage Equipment
2100 Future Drive w Sellersburg, IN 47172-1868
Tel: 812.246.7000, 800.367.4233 • Fax: 812.246.9922
www.manitowocbeverage.com

5010146 Revision July 22, 2003

FOREWORD

SerVend developed this manual as a reference guide for the owner/operator, service agent, and installer of this equipment. Please read this manual before installation or operation of the machine. Consult the troubleshooting guide within this manual for service assistance

If you cannot correct the service problem, call your SerVend Service Agent or Distributor. Always have your model and serial number available when you call.

Your Service Agent _____

Service Agent Telephone Number _____

Model Number _____

Serial Number _____

The model and serial numbers are located on the right side of the dispenser, just behind the drainpan.

Installation Date _____

Your Local SerVend Distributor _____

Distributor Telephone Number _____

A qualified service technician should perform installation and start-up of this equipment.

UNPACKING AND INSPECTION

Note: The Unit was thoroughly inspected before leaving the factory. Any damage or irregularities should be noted at the time of delivery (or not later than 15 days from the date of delivery.)

WARRANTY INFORMATION

Consult your local SerVend Distributor for terms and conditions of your warranty. Your warranty specifically excludes all beverage valve brixing, general adjustments, cleaning, accessories and related servicing.

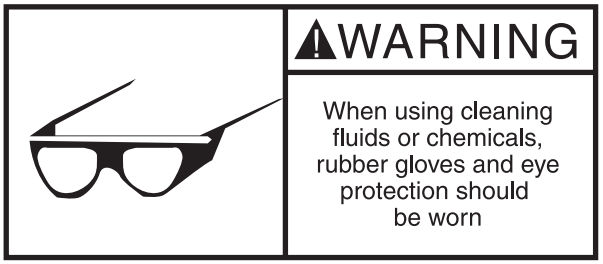
Your warranty card must be returned to SerVend to activate the warranty on this equipment. If a warranty card is not returned, the warranty period can begin when the equipment leaves the SerVend factory.

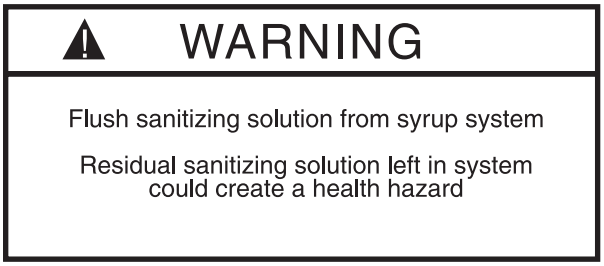
No equipment may be returned to SerVend without a written Return Goods Authorization (RGA). Equipment returned without an RGA will be refused at SerVend's dock and returned to the sender at the sender's expense.

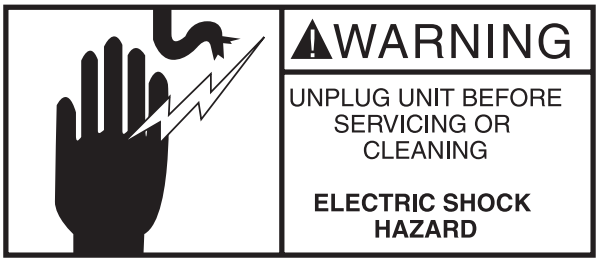
Please contact your local SerVend distributor for return procedures.

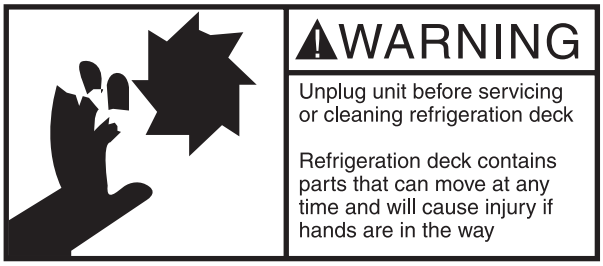
SAFETY INSTRUCTIONS

Installation and start-up of this equipment should be done by a qualified service technician. Operation, maintenance, and cleaning information in this manual are provided for the user/operator of the equipment.









DAILY CHECK LIST FOR THE OPERATOR

- Check CO_2 supply. If CO_2 supply is low, an arrow on the primary regulator gauge will point to a shaded area that reads “Low CO_2” or “Change CO_2 Cylinder.”
- Check Syrup supply.
- Clean drain pan, grid, and splash panel. See daily cleaning instructions on page 18.
- Clean the valve nozzles and diffusers. See daily cleaning instructions on page 18.

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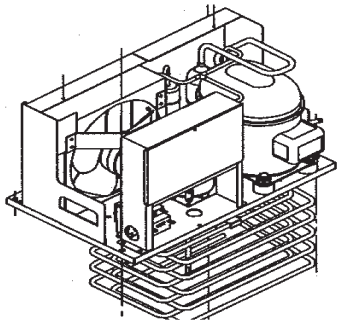
CED SERIES BEVERAGE DISPENSERS OVERVIEW

IMPORTANT: TO THE USER OF THIS SERVICE MANUAL, THIS MANUAL IS A GUIDE FOR INSTALLING THIS EQUIPMENT. REFER TO THE TABLE OF CONTENTS FOR PAGE LOCATION FOR DETAILED INFORMATION PERTAINING TO QUESTIONS THAT ARISE DURING INSTALLATION AND START-UP OF THIS EQUIPMENT.

This section gives the Counter-Electric Dispenser description, theory of operation, and service data for the 6 and 8 flavor Post Mix Dispensers (hereafter referred to as CED.)

COUNTER-ELECTRIC DESCRIPTION

The CED s are small compact chillers with a high-impact and corrosion-resistant stainless steel housing and may be island mounted or installed on a front or rear counter. The refrigeration assemblies are the drop-in-type that can be removed for service and maintenance. Adjustable syrup flow regulators, located on the dispensing valves, are easily accessible to control the Water to



Syrup Ratio (Termed Brix) of the dispensed product. All CEDs have electric dispensing valves.

INTERNAL COLD (IC) CARBONATOR CED

This CED Unit is equipped with a 1/3 H.P. refrigeration assembly and has a built-in cold carbonator. The carbonator is located on the deck of the CED under the bonnet. The carbonator tank is located within the water tank. Installation requirements for operation are: Placement of CED on a countertop making sure the unit is level, installation of loose shipped parts, connection of drains, connection of plain water and syrup supplies, adjustment of CO_2 regulators, fill water tank with water, and plug CED power cord into an electrical outlet.

EXTERNAL CARBONATOR (EC) CED

(Requires Connection to a Remote Carbonator)

This CED is equipped with a 1/3 H.P. refrigeration assembly and requires connection to an external Carbonator. Installation requirements for operation are: Placement of CED on a countertop making sure the unit is level, installation of loose shipped parts, connection of drain, connection of external carbonator, connection of plain water and syrup supplies, adjustment of CO_2 regulators, fill water tank with water, and plug CED power cord into an electrical outlet.

NON-CARBONATED CED

This CED is the same as the external carbonator unit, except no carbonator is required. Installation requirements for operation are: Placement of CED on a countertop making sure it is level, installation of loose shipped parts, connection of drains, connection of plain water including a booster system if necessary, syrup/juice supplies, possible adjustment of CO_2 regulators, filling water tank with water, and plugging CED power cord into an electrical outlet.

EQUIPMENT OVERVIEW

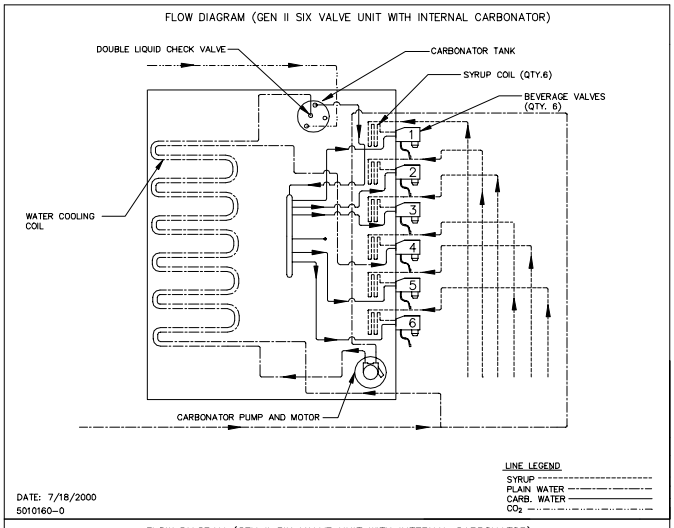
NOTE: BEFORE SHIPPING, STORING, OR RELOCATING THIS CED, THE SYRUP SYSTEMS MUST BE SANITIZED AND ALL SANITIZING SOLUTION MUST BE PURGED FROM THE SYRUP SYSTEMS. ALL WATER MUST ALSO BE PURGED FROM THE PLAIN AND CARBONATED WATER SYSTEMS. A FREEZING AMBIENT ENVIRONMENT WILL CAUSE RESIDUAL WATER IN THE CED TO FREEZE CAUSING EXPANSION OF TUBING AND RESULTING IN DAMAGE TO INTERNAL COMPONENTS.

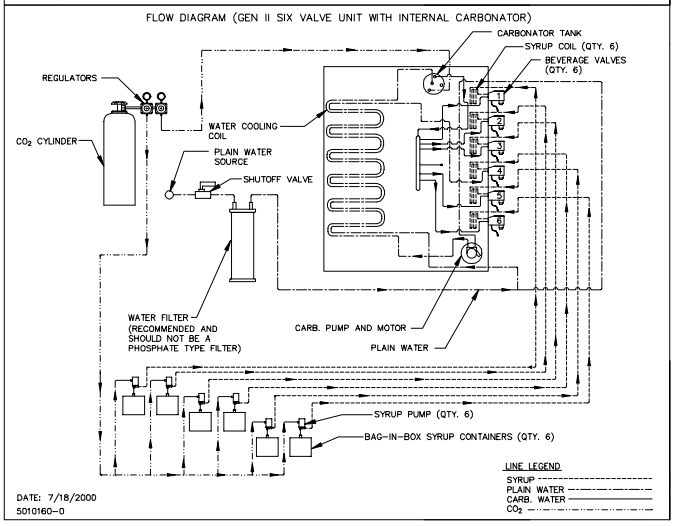
INTERNAL COLD (IC) CARBONATOR

The CED 30 is a 6 valve unit set up to dispense a non-carbonated drink from the NO. 3 dispensing valve. The CED 40 is an 8 valve unit set up to dispense a noncarbonated drink from the No. 4 and 5 valves. The remaining dispensing valves on each unit are set to dispense carbonated beverages. **Refer to the instructions on page 21-22 to convert a valve from carbonated to non-carbonated or non-carbonated to carbonated.**

A CO_2 cylinder delivers carbon dioxide (CO_2) gas through adjustable CO_2 regulator to the syrup BIB pump and also to an internal carbonator. Plain water also enters the internal carbonator tank, and is carbonated by the regulated CO_2 gas pressure. When a dispensing valve is opened, CO_2 pressure exerted within the syrup BIB pump propels syrup from the BIB, through the CED Unit beverage coils, and into the dispensing valve. Carbonated water is forced from the carbonator tank by CO_2 pressure which pushes cold carbonated water into the dispensing valve resulting in a carbonated drink being dispensed. A noncarbonated drink is dispensed in the same manner as a carbonated drink with the exception that plain water is substituted for carbonated.

The carbonator is replenished when the carbonated water level inside the tank drops, which in turn automatically starts the carbonator water pump. When the water level inside the tank has been replenished, carbonator water pump will stop.





EQUIPMENT OVERVIEW

EXTERNAL CARBONATOR (EC)

The CED 30 is a 6 valve unit set up to dispense a non-carbonated drink from the No. 3 dispensing valve. The CED 40 is an 8 valve unit set up to dispense a noncarbonated drink from the No. 4 and 5 valves. The remaining dispensing valves on each unit are set to dispense carbonated beverages. **Refer to the instructions on page 21-22 to convert a valve from a carbonated to non-carbonated or from non-carbonated to carbonated.**

A CO_2 cylinder delivers carbon dioxide (CO_2) gas through adjustable CO_2 regulators to the syrup BIB pump and also to an external carbonator. Plain water also enters the remote carbonator tank, and is carbonated by the regulated CO_2 gas pressure. When a dispensing valve is opened, CO_2 pressure exerted within the syrup BIB pump propels syrup from the BIB, through the CED beverage coils, and into the dispensing valve. Carbonated water is forced from the carbonator tank by CO_2 pressure which pushes carbonated water through the CED cooling coils, and into the dispensing valve. Syrup and carbonated water meet simultaneously and mix at the nozzle of the dispensing valve resulting in a carbonated drink being dispensed. A noncarbonated drink is dispensed in the same manner as a carbonated drink with the exception that plain water is substituted for carbonated.

The Carbonator is replenished when the carbonated water level inside the tank drops, which in turn automatically starts the carbonator water pump. When the water level inside the tank has been replenished, carbonator water pump will stop.

NON-CARBONATED UNITS

A CO_2 cylinder delivers carbon dioxide (CO_2) gas through adjustable CO_2 regulators to the syrup/juice BIB pump. When a dispensing valve is activated, pressure exerted upon the syrup BIB pump propels syrup/concentrate from the BIB, through the cooling coils, and into the dispensing valve. Plain water enters the CED and passes through the cooling coils to the dispensing valve. Syrup/concentrate and plain water meet simultaneously in the dispensing valve and mix at the nozzle resulting in a still (noncarbonated) drink being dispensed. For noncarbonated BIB syrup(s)/concentrate(s) to be delivered at ambient temperature, refer to the conversion instructions for bypassing the cooling coil.

INSTALLATION OVERVIEW

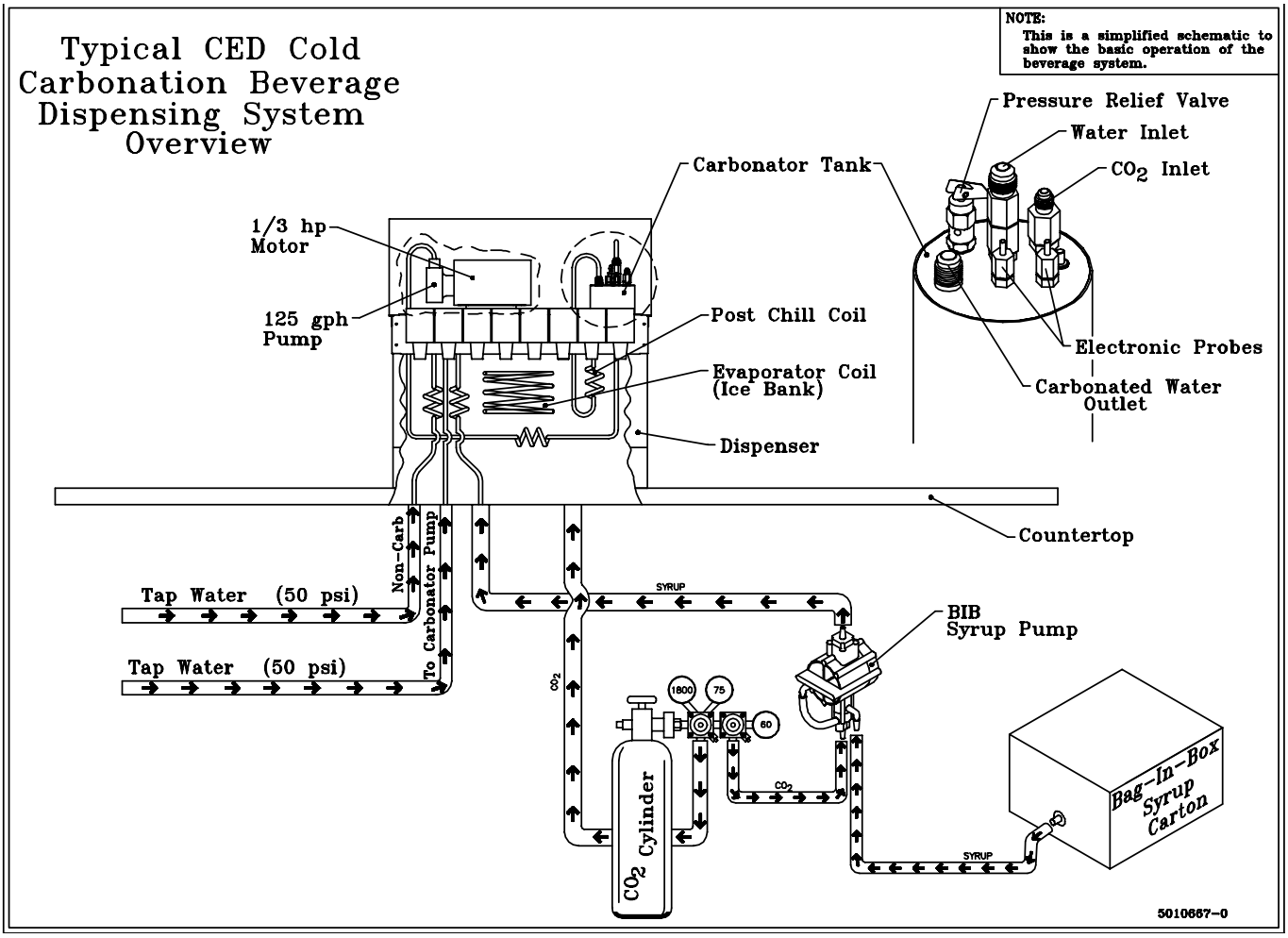
This section covers unpacking, inspecting, selecting location, installing the CED, and preparing for operation.

1. After the unit has been unpacked, remove the keys. The key will be needed to perform brixing of valves. Hold onto the keys until such time to forward them to the respective owner/operator. Remove tape (which secures grid in place in drain pan) from grid and other packing material.

2. Make sure all items are present and in good condition. Loose shipped items in the carton include the drain kit parts, S/S “U” tube, John Guest fitting and the instructions.

3. Inspect CED for any external damages.

BIB INSTALLATION DIAGRAM



The internal carbonator in the post-mix system has two inlets and one outlet connection. The internal carbonator is pre-plumbed at the factory. The inlets for CO_2 and water are located behind the splash panel. There are two inlets for water and one inlet for CO_2. If you have questions refer to the plumbing diagram on your equipment.

The outlet of the syrup supply (either BIB pump or Figal tank) connects to the appropriate syrup inlet fitting. The syrup flows through the icebath to be chilled on its way to the valves. The water flows through the icebath to the internal carbonator then back through the icebath chilling the carbonated water on its way to the valves. When both fluids leave the beverage valve they are mixed in the nozzle of the valve. Out comes a properly cooled, properly ratioed soft drink.

When starting a new beverage system of either type, be sure the electrically operated valves are turned off. Assure all connections are made, turn the water supply on to the dispenser. Open CO_2 tank valve and set all pressures. Turn the refrigeration on and allow the refrigeration coils to fill with ice. After the beverage has achieved a 40 degree F temperature, the ratio of the syrup-to-water (brix) on a post-mix system may then be set.

SELECTING LOCATIONS

The CED may be island-mounted or installed on a front or rear counter. Locate the CED so the following requirements are satisfied: CED is for indoor use only and must NOT be placed in an area where a water jet or similar high pressure sprayer could be used.

1. CED must be installed near a properly grounded electrical outlet with proper electrical requirements fused at proper amperage or circuit connected through an equivalent HACR circuit breaker with ELCB (GFCI). REFER TO UNIT NAMEPLATE FOR THE REQUIRED POWER CIRCUIT OPERATING VOLTAGE. Hz AND THE MINIMUM CIRCUIT AMPACITY OF THE CED. No other electrical equipment should be connected to this circuit. ALL ELECTRICAL WIRING MUST CONFORM TO NATIONAL AND LOCAL ELECTRICAL CODES. MAIN PLUG MUST BE ACCESSIBLE FOR DISCONNECTION. The key switch is able to be mounted on either side of the CED. When the location for the CED is selected, make sure the key switch is mounted where it will be most accessible.

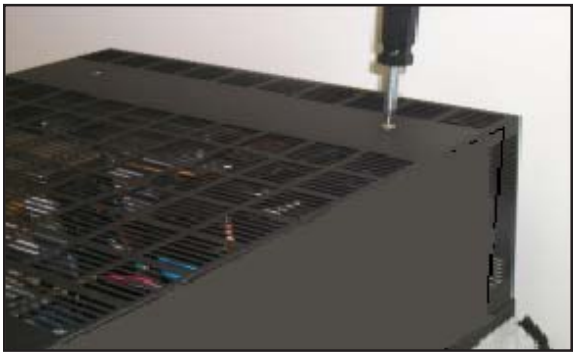
2. CED must be open at the top and on both sides with at least 6-inches clearance at the rear. CED has top air outlet and is to remain free of all objects. ***Do not place anything on top of the CED .*** The rear grill of the CED ***must*** be unobstructed to allow air to enter the hood.

3. Place CED close to a permanent drain in order to route the drain pan hose to the permanent drain. Water tank overflow hose goes into the drain pan.

Unit base back access hole, or if island-mounted, through a hole cut in the countertop under the CED Unit. Proceed to applicable installation procedure.

ALL CEDS

Remove the Bonnet by removing the two screws holding it in place.



PLACING UNIT IN THE OPERATING POSITION

The CED must be level horizontally from right to left and front to rear.

CED inlet supply lines, power cord, and drain pan hose must either be routed out of the CED

COUNTER MOUNT

Place the CED in location on the countertop. Route CED inlet supply lines, power cord, and drain pan hose out of the base back access hole. Area around inlet supply lines at flanged hole behind front access panel must be closed and sealed.

To comply with NSF requirements within the United States, the CED base must be sealed to the countertop unless the optional 4” legs are installed (see above).

All access holes to the base must be sealed. If the 4” legs are installed, proceed to step E, otherwise proceed as follows to seal the CED base.

SELECTING LOCATIONS

ISLAND MOUNT

Place the CED in location on the countertop flush with the countertop edge. Mark CED's center line on the edge of the countertop, then move the CED to one side. Starting at the center line mark on the edge of the countertop, measure back 12-inches for the location of a hole at least 4 inches to be cut into the countertop. Cut at least a 4 inch hole in the countertop where indicated. Place the CED in position over the hole. Route the inlet supply lines, power cord, and drain pan hose down through the hole in the countertop. Install the line outlet plug, provided with the CED in the base back access hole. The area around the inlet supply lines at the flanged hole behind the front access panel must be closed and sealed.

A. Tilt CED up to expose bottom of base.

B. Liberally apply silastic sealant such as Dow Corning RTV 731 or equivalent on the base bottom edges.

C. Lower the CED into operating position on the counter top to complete the seal of the base to the countertop.

Note: Do not move CED after positioning or the seal between the base and the countertop will be broken.

D. Apply additional sealant around the bottom of the base. The seal must be a minimum of 1/4 inch to prevent crevices and to ensure a complete seal.

E. Close and seal all access holes to the inside of the CED base.

Fill Water Tank and Start Refrigeration System

1. Make sure the plug in the water tank drain hose is secure.

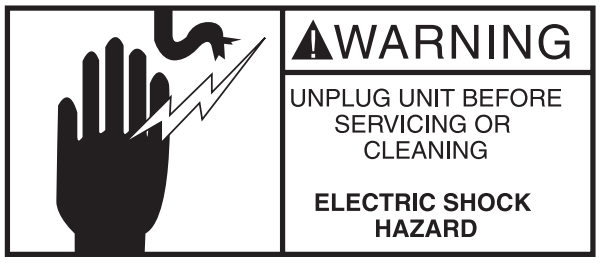
2. Remove the plug from the water fill hole located on the carbonator pump deck. Fill the water tank with clean water until water flows out of the tank overflow. Use a funnel if necessary. **Caution: Be careful not to spill water on any electrical fitting or connection. Do not use distilled water.**

Note: An alternative method to fill the water tank would be to temporarily splice the incoming water line into the water tank drain hose, turn on the water and fill the tank until water comes out the overflow drain. Turn off the water and plug the water tank drain hose.

3. Install plug in water fill hole.

4. Place CED refrigeration system switch and the agitation switch, located on the side of the control box, in "OFF" position ON A CED WITH AN INTERNAL COLD CARBONATOR, DISCONNECT THE POWER SUPPLY TO THE CARBONATOR AT THIS POINT. OTHERWISE WATER PUMP DAMAGE WILL OCCUR.

REFRIGERATION SYSTEM START



WARNING: CED must be electrically grounded to avoid possible fatal electrical shock or serious injury to the operator. 120V CED power cord is equipped with a three-prong plug. If supply cord is damaged it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard. If a grounded electrical outlet is not available, use an approved method to ground the CED.

A. Plug CED power cord into an accessible properly grounded electrical outlet.

B. Place CED refrigeration system switch and agitation switch located on the side of the control box, in "ON" position. Compressor, condenser fan motor, and agitator motor will start and begin forming an ice bank. **NOTE: The refrigeration system on the 50 Hz CED is equipped with a 4-minute time delay. Whenever power to the compressor is interrupted, the time delay will take effect.** When a full ice bank has been formed, the compressor and condenser fan motor will stop, but the agitator motor will continue to operate, circulating ice bath water in the water tank. Turn the key switch to the "ON" position to check all beverage valves for operation. Check for water, syrup, and CO_2 leaks in the supply system. Replace the bonnet with the two screws provided.

Recommended: Beverage pour temperature should be maintained at a constant 40° F or below for optimum brixing value. Time required to reach the proper temperature will be subject to water and ambient air temperatures.

INCOMING WATER SUPPLY REQUIREMENTS

NOTE: SerVend International Inc. recommends that a water shutoff valve and water filter be installed in the incoming water supply line.

The incoming water source to the equipment shall be installed with adequate backflow protection to comply with applicable National, State, and local codes.

Water pressure should be a minimum of 45 PSI or you will starve the pump of water and damage it. The maximum water pressure should be 55 psi or you will affect the quality of the carbonation.

The carbonator pump should be located within 6 feet of a 1/2 inch water source. A minimum 3/8 inch ID water line must be used. Before connection the water source should be flushed of approximately 5 gallons of water to purge the system of any sediments, especially in areas of new construction.

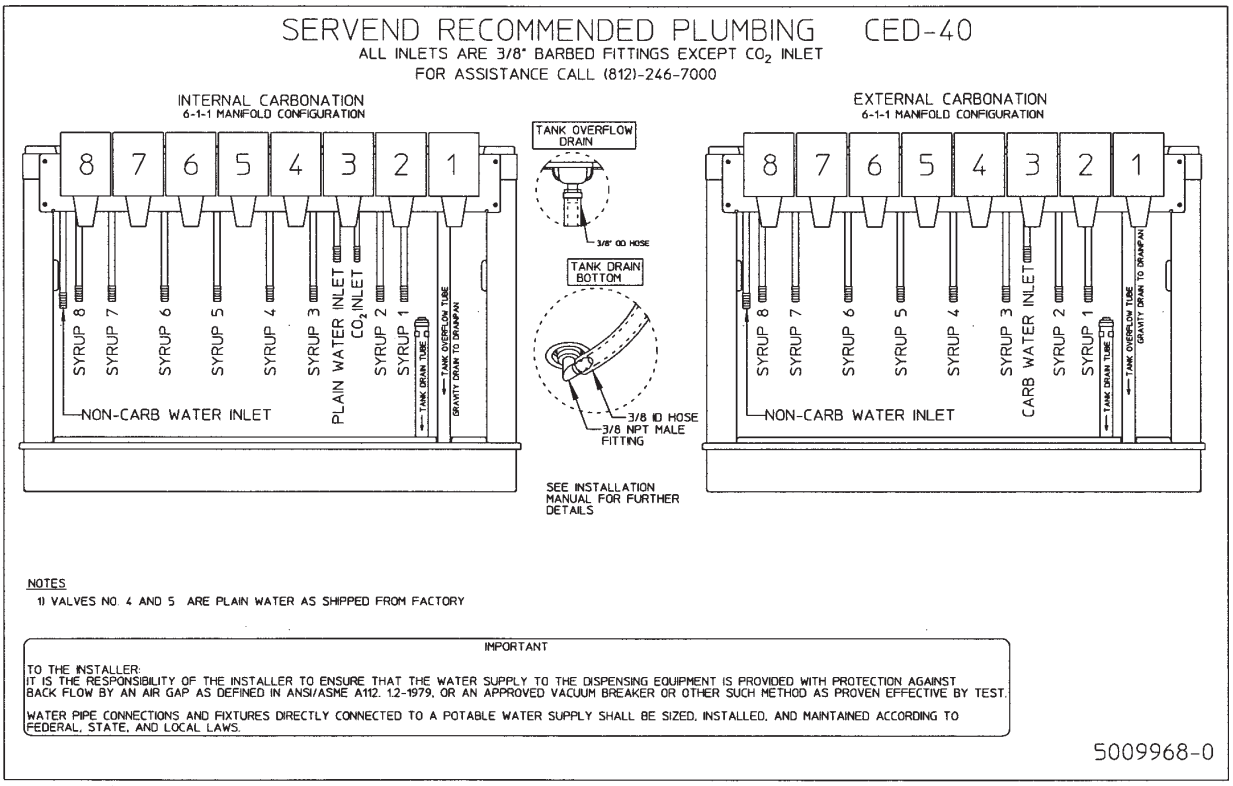
CONNECTING THE DRAIN PAN HOSE

NOTE: Connection of the drain pan hose to a permanent drain is recommended. A drain pan hose routed to a waste container is not recommended due to sanitation problems.

1. Remove the plug from the drain pan nipple.
2. Connect drain pan hose to the nipple on the drain pan.
3. Install drain pan in position on the CED, then place grid in the drain pan.
4. Route lower end of drain pan hose to a permanent drain and connect according to local codes.

NOTE: If no permanent drain is available the drain pan may be emptied manually. Some CED's come equipped with a drain pan that may be removed by sliding it forward. Nothing else needs to be removed to take the drain pan off, empty it and replace it on the CED. If this drain pan is hooked to a permanent drain, the drain nipple must be opened and connected to the drain hose as described on page 12 of this manual.

CONNECTING WATER SUPPLY LINE(S) TO THE CED



INTERNAL CARBONATOR

Connect plain water supply line to the CED at the plain water inlet line, and the non-carbonated water inlet.

EXTERNAL CARBONATOR

Connect carbonated water supply line from the external carbonator to the CED at the carbonated water inlet line.

Connect plain water supply line to the CED at the non-carbonated water inlet line.

NONCARBONATED UNIT

Connect plain water supply lines to the CED at the plain water inlet line and the non-carbonated water inlet.

CONNECTING SYRUP SUPPLY LINES TO ALL CEDS

Connect syrup supply lines to the CED at the corresponding syrup inlet lines. Syrup inlet line #1 will correspond with the right hand dispensing valve. The valves are numbered in sequence from right to left.

CONNECTING CO_2 SUPPLY LINE TO THE CED

CED WITH INTERNAL CARBONATOR

1. Connect CO_2 supply to the CO_2 inlet at the CED.
2. Open pressure relief valve. (Red arm should be in the upright position).
3. Turn water supply on and fill the carbonator tank until water can be seen coming out the pressure relief valve.
4. Close the pressure relief valve.
5. Activate a dispensing valve until a good flow of plain water is established.
6. Check for water leaks.
7. Turn on the CO_2 bottle and adjust the regulator to 75 psi.
8. Activate a valve until all the water has been forced out of the system by the CO_2.
9. Check for any leaks.
10. Connect the power to the carbonator.
11. Operate the valves until the carbonator cycles several times and there is a good flow of carbonated water from each valve.

CED WITH EXTERNAL CARBONATOR

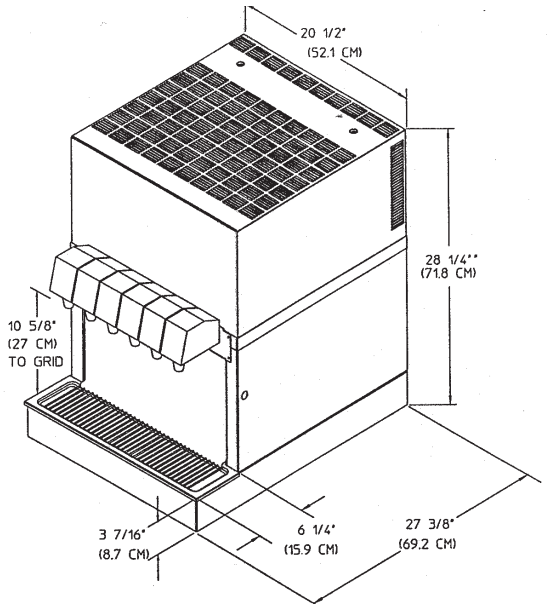
1. Connect CO_2 supply to the CO_2 inlet on the carbonator tank.
2. Connect carbonated water outlet line to the dispensing system. To avoid contamination of potable liquids, do not connect copper tubing or fittings between the discharge fitting on the carbonator and the dispensing valve.
3. Open pressure relief valve. (Red arm should be in the upright position).
4. Turn water supply on and fill the carbonator tank until water can be seen coming out the pressure relief valve.
5. Close the pressure relief valve.
6. Activate a dispensing valve until a good flow of plain water is established.
7. Check for water leaks.
8. Turn on the CO_2 bottle and adjust the regulator to 100 psi.
9. Activate a valve until all the water has been forced out of the system by the CO_2.
10. Check for any leaks.
11. Plug in the carbonator.
12. Operate the valves until the carbonator cycles several times.

NON-CARBONATED CED

1. Open plain water inlet supply line shutoff valve. Check for water leaks and tighten any loose connections.
2. Operate each dispensing valve until the system is flushed and water flows smoothly from each valve.

SPECIFICATIONS FOR CED SERIES DISPENSERS

CED - 30 SPECIFICATIONS



Dimensions:
20 1/2" W x 27 3/8" D x 28 1/4" H
51.435 cm W x 69.53 cm D x 72.4 cm H

Ice Bank Size:
30 lbs/13.636 kg

Valves:
Six beverage valves

Standard Voltage:
120/60/1
6 - foot (1.82m) three-wire cord and plug provided.
Fuse Size:
Minimum 20 amp
Amperage:
8.2 Operating amps
13 FLA

Other voltage available:
220/240 Volts - 50 Hz - 1 Ph
208/230 Volts - 60 Hz - 1 Ph
Fuse Size:
Minimum 10 amp
Amperage:
4.5 Operating amps
6.5 FLA

Compressor:
1/3 HP
50 Hz refrigeration system is equipped with a four minute time delay.

Refrigerant:
R-134a
120 V Unit 8.5 oz.
208/230 V Unit 7.75 oz.
220/240 V Unit 11 oz.
Always check serial plate for exact charge

Ship Weight:
EC Approximately 143 lbs/65 kg.
IC Approximately 158 lbs/71.8 kg

Cabinet:
Stainless Steel

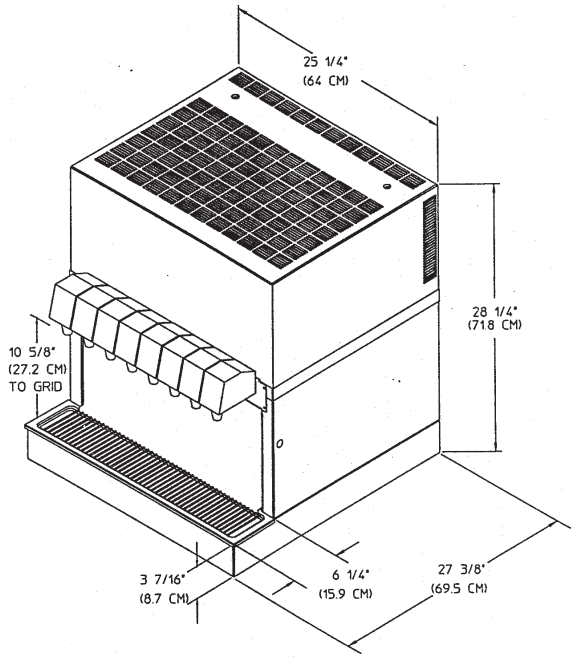
Drain:
Single pre-installed 3/4" PVC (NPT) drain fitting extends from the drain pan.

Service:
Beverage valves, inlet connections, drain connection, and electrical components are front accessible.

Optimum Ambient Conditions are:
Between 50 ° and 95°F (10°C and 35°C).

SPECIFICATIONS FOR CED SERIES DISPENSERS

CED - 40 SPECIFICATIONS



Dimensions:
25 1/4” W x 27 3/8” D x 28 1/4” H
63.1 cm W x 69.53 cm D x 72.4 cm H

Ice Bank Size:
Up to 40 lbs/18.182 kg

Valves:
Eight beverage valves

Standard Voltage:
120/60/1
6 - foot (1.82m) three-wire cord and plug provided.
Fuse Size:
Minimum 20 amp
Amperage:
8.2 Operating amps
13 FLA

Other Voltage Available:
208/230 Volts -60 Hz - 1 Ph
Fuse Size:
Minimum 10 amp
Amperage:
4.5 Operating amps
6.5 FLA

Compressor:
1/3 HP

Refrigerant:
R-134a
120 V Unit 11 oz.
208/230 V Unit 10.25 oz
Always check serial plate for exact charge.

Ship Weight:
EC Approximately 160 lbs/72.7 kg.
IC Approximately 175 lbs/79.5 kg

Cabinet:
Stainless Steel

Drain:
Single pre-installed 3/4” PVC (NPT) drain fitting extends from the drain pan.

Service:
Beverage valves, inlet connections, drain connection, and electrical components are front accessible.

Optimum Ambient Conditions are:
Between 50 ° and 95°F (10°C and 35°C).

OPERATION

BAG-IN-BOX (BIB) START-UP

All lines should be properly flushed and sanitized before starting the CED. Sanitizing instructions can be found beginning on page 18 of the Installation Manual.

1. Connect each BIB connector to the appropriate BIB.

2. Gradually adjust the secondary regulator to 70 psi. Never run a BIB pump without the BIB installed as the pump could be damaged. Set final secondary regulator pressure 70 -75 psi depending on the line size and the distance of the run.

3. Operate each dispensing valve until the syrup flows smoothly from the valve.

Adjust Syrup to Water Ratio (Brix) of Dispensed Product.

1. Adjust water flow rate on each dispensing valve to 2.5 ounces per second.

2. Adjust dispensing valves for water-to-syrup ratio (brix) as recommended by the syrup distributor.

INSTALL DECALS

Install decals (provided with CED) on the dispensing valve covers.

CLEAN UP

Clean up all work areas. Dispose of all packing material, excess tubing and trash properly.

DAILY CLEANING

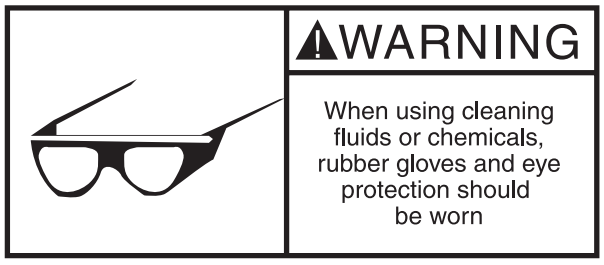
- Drain pan
- Grid
- Splash Panel
- Valve Nozzles
- Diffusers

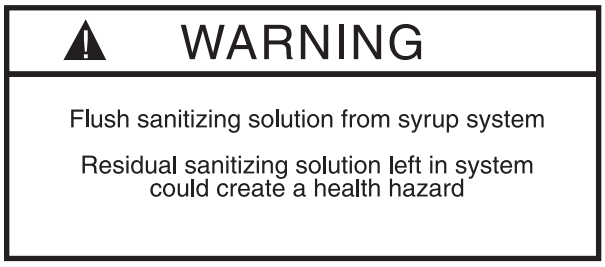
You will need: Warm clean water, a mild nonabrasive soap, and a clean cloth.

1. Lift the grid and remove it from the drain pan.
2. Using warm water, mild soap, and a clean cloth, wash the drain pan and splash panel. After cleaning, rinse with clean, warm water.
3. Allow plenty of warm (not hot) tap water to run down the drain of the drain pan to remove any syrup residue that can clog the drain opening.
4. Wash the grid, then rinse with clean water. Place the grid back in the drain pan.
5. Wash all exterior surfaces of the CED with warm water and a clean cloth. Wipe again with a clean, dry cloth.
6. Remove the nozzles and diffusers from the dispensing valves.
7. Clean both the nozzles and the diffusers with soap and water to remove syrup residue, then rinse with warm, clean water.
8. Replace the diffusers and the nozzles on the valves.

WATER BATH

It is recommended that the water bath be drained at least twice a year. Turn off the refrigeration. Completely melt the ice bank. Refill the water bath with fresh water until water runs out the overflow tube. Turn on the refrigeration.





SANITIZING AND CLEANING

Note: Scheduled cleaning must be in compliance with local health codes. The CED must not be cleaned with a water jet. This cleaning schedule is a recommendation.

PERIODIC SANITIZING OF THE DISPENSER

Note: Sanitize the dispenser at initial start-up in addition to periodic sanitizing.

BAG-IN-BOX

BEVERAGE SYSTEM SANITIZING

(for trained personnel only)

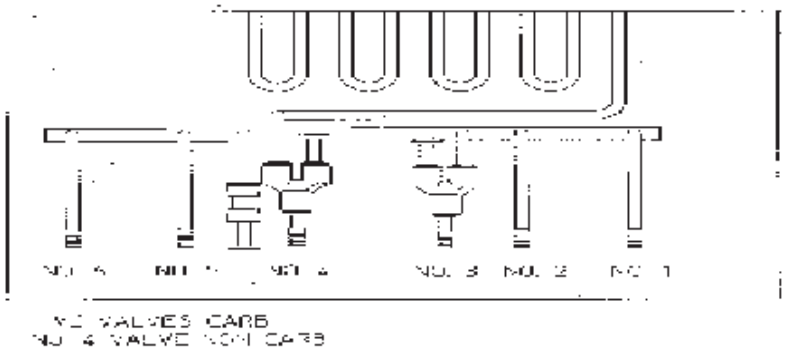
You will need: Three clean, empty five-gallon buckets to be used for the rinse, detergent, and sanitizing buckets, and a container to be placed under soda valves to carry away detergent and sanitizing agents which will be flushed through the valves.

1. Disconnect the bag-in-box connectors.
2. Prepare the following in three clean buckets:
   A. Rinse bucket - fill bucket with clean tap water. (Refill as necessary.)
   B. Detergent bucket - mix approved beverage system cleaner with warm water as recommended.
   C. Sanitizing bucket - mix a solution of 1 ounce of liquid, unscented household bleach (5.25% Cl Na O concentration) with two gallons of tap water. The mixture should supply 200 PPM of available chlorine.
3. Remove the cap located opposite the tubing connection on the bag-in-box connector.
4. Place bag-in-box connector in rinse bucket (step 2A). Draw clean tap water through the system and out the beverage valve until all syrup is flushed from the system.
5. Place bag-in-box-connector in the detergent bucket (step 2B). Draw detergent solution through the system and out the beverage valve for 2 minutes. Then, allow the remaining detergent to stay in the system for 5 minutes.
6. Remove the valve nozzle and diffuser, as described in the daily cleaning instructions. Using a clean cloth or a soft brush, scrub the nozzle, the diffuser, the bottom of the dispensing valve, and the cup lever, if applicable.
7. Place the valve diffuser and nozzle in sanitizing solution for 20 minutes, then replace them on the beverage valve.
8. Place bag-in-box connector in the sanitizing bucket (step 2C). Draw sanitizing solution through the system and out the valve for 5 minutes. Allow the sanitizing solution to remain in the system for a minimum of 20 minutes.
9. Place the bag-in-box connector in the rinse bucket (step 2A). Draw clean rinse water through the system and out the valve for 2 minutes, flushing the sanitizing solution from the system.
10. Repeat Step 8 and Step 9.
11. Replace the plastic cap opposite the tubing connection on the bag-in-box connector.
12. Reconnect the bag-in-box connector to the beverage syrup bag-in-box.
13. Repeat the above steps for each beverage valve, or follow this procedure with any number of valves concurrently.

FIGAL SYSTEM SANITIZING

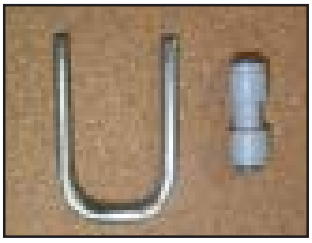
1. Prepare the following in three clean Figal tanks:
   a Rinse tank - fill with room temperature water.
   b Detergent tank - mix approved beverage system cleaner with warm water as directed.
   c Sanitizing tank - mix a solution of 1 ounce of unscented household bleach (5.25% Cl Na O concentration) to two gallons of tap water. The mixture should supply 200 PPM available chlorine.
2. Locate the Figal syrup tank for the circuit to be sanitized. Remove both quick disconnects from the Figal syrup tank. Rinse quick disconnects in warm tap water.
3. Connect rinse tank to the syrup line. Draw clean rinse water through the valve until syrup is flushed from the system.
4. Connect detergent tank to the syrup line and draw detergent through the valve for 2 minutes. Then, allow remaining detergent to stay in the system for 5 minutes.
5. Follow steps 6 and 7 in the bag-in-box sanitizing instructions to clean and sanitize the beverage valve nozzle and diffuser.
6. Connect sanitizing tank to the syrup line and draw sanitizing solutions through the valve for 5 minutes. Allow sanitizing solution to remain in the system for a minimum of 20 minutes.
7. Connect rinse tank to the syrup line. Draw clean rinse water through the system for two minutes to flush the sanitizing solution from the system.
8. Repeat Step 6 and Step 7.
9. Reconnect syrup lines.

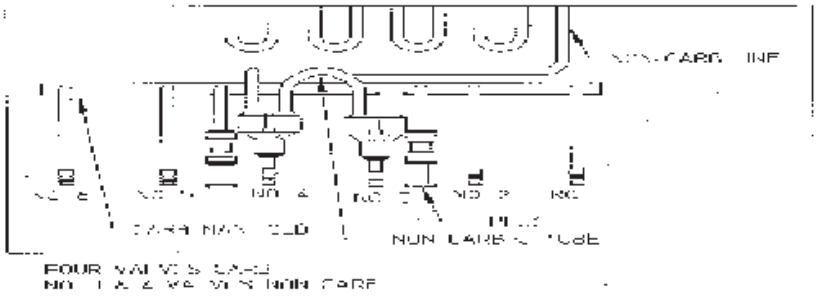
CARBONATED/NON-CARBONATED CONVERSION



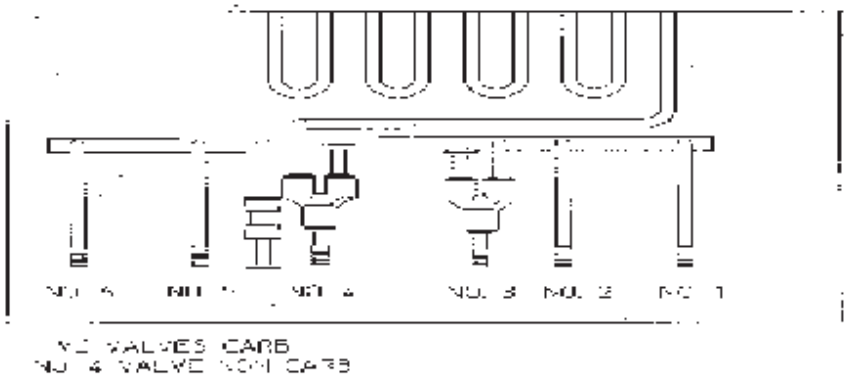
To change a valve from carbonated to non-carbonated:

1. Turn off the water and CO_2 to the CED.
2. Disconnect the syrup box to the valve you want to change.
3. Bleed the pressure from the valve.
4. Remove the plug from the back of the John Guest ”Y” fitting on the non-carbonated water line behind valve #4.
5. Remove the plug from the back of the John Guest ”Y” fitting on the carbonated water line behind valve #3.
6. Install the stainless steel “U” tube between the 2 John Guest “Y” fittings.
7. Remove the carbonated water supply line from the back of the John Guest “Y” fitting behind valve #3.
8. Install a plug into the “Y” fitting.
9. Install a John Guest union and plug on the carbonated water supply line that was removed from the “Y” fitting.
10. Turn on the water and CO_2 to the CED.
11. Follow the sanitizing instructions to clean the old syrup from the line.
12. Hook up a fresh box of the syrup to be used.
13. Set the valve to the proper ratio of syrup to water.
14. CED 40 converts the same way between valve numbers 5 & 6.



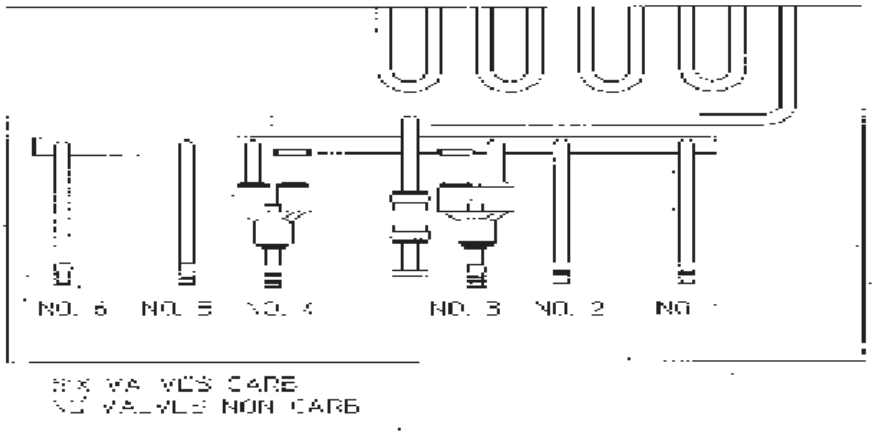


CARBONATED/NON-CARBONATED CONVERSION



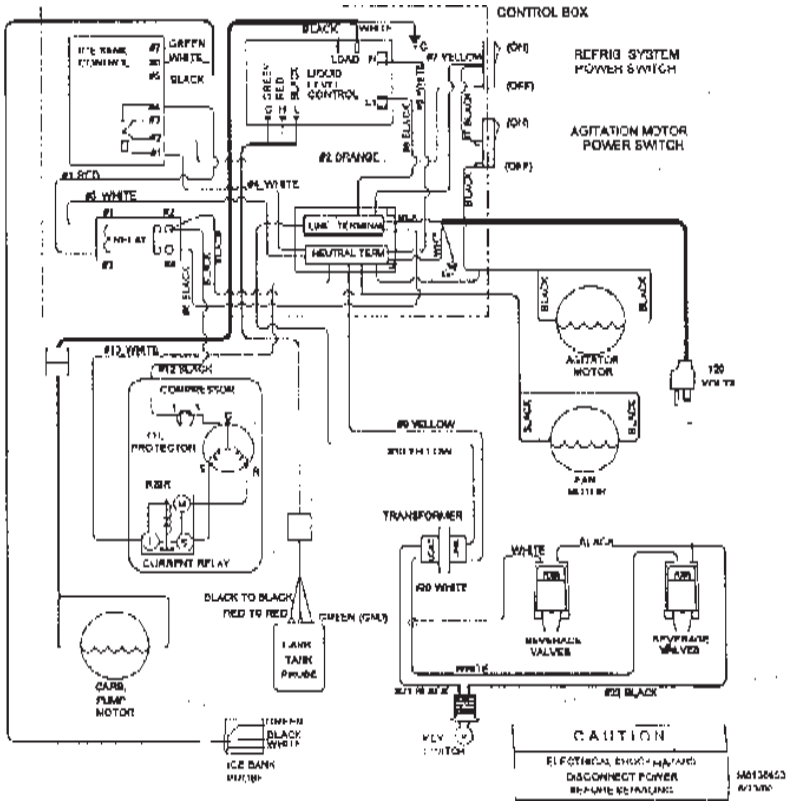
To change a valve from non-carbonated to carbonated:

1. Turn off the water and CO_2 to the CED.
2. Disconnect the syrup box to the valve you want to change.
3. Bleed the pressure from the valve.
4. Remove the John Guest union and plug from the carbonated water line that is stubbed out behind valve #4.
5. Remove the plain water line from the John Guest "Y" fitting going into valve #4.
6. Install the union and plug removed from the carbonated water line into the plain water line.
7. Insert the carbonated water line into the John Guest "Y" fitting behind the #4 valve.
8. Turn on the water and CO_2 to the CED.
9. Follow the sanitizing instructions to clean the old syrup from the line.
10. Hook up a fresh box of the syrup to be used.
11. Set the valve to the proper ratio of syrup to water.
12. CED-40 converts the same way, but the valve numbers are 4 & 5.

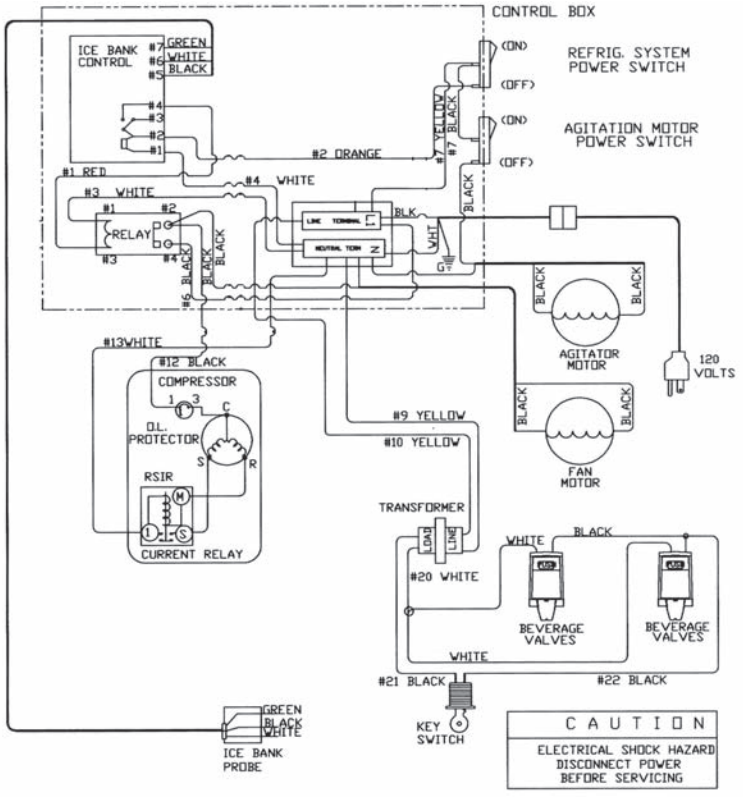


WIRING DIAGRAM 120 VOLT/60/1

INTERNAL CARBONATOR

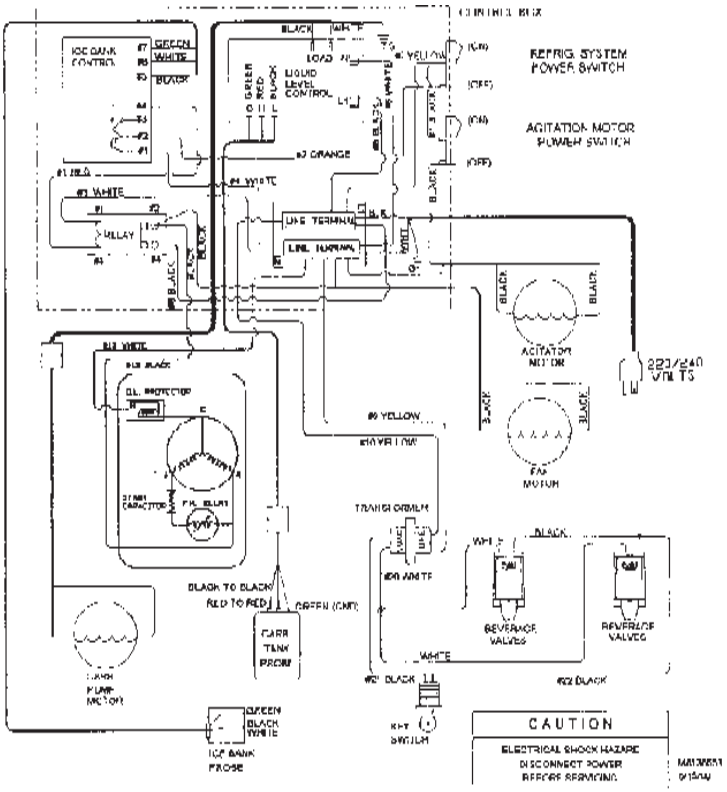


EXTERNAL CARBONATOR

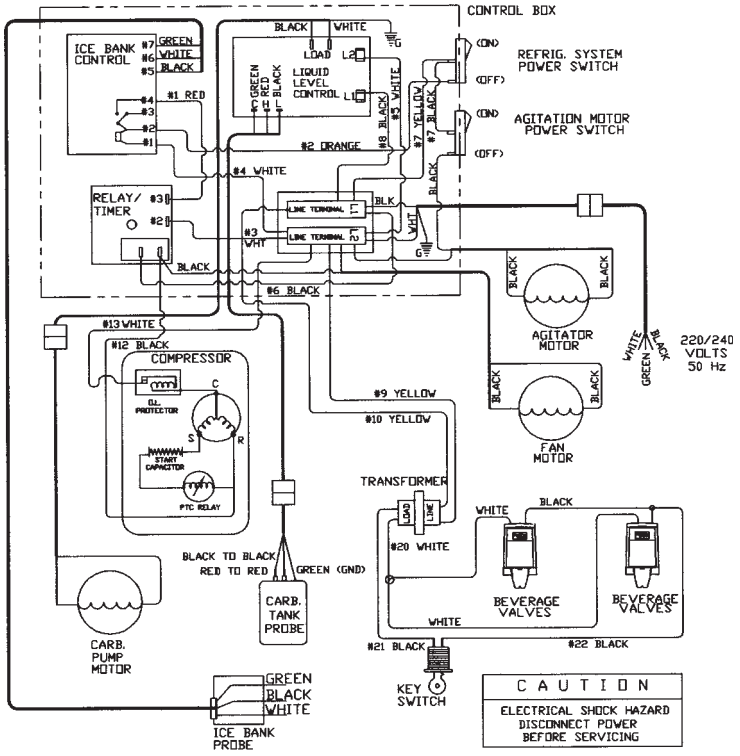


WIRING DIAGRAM 220-240 VOLT/50/1

INTERNAL CARBONATOR

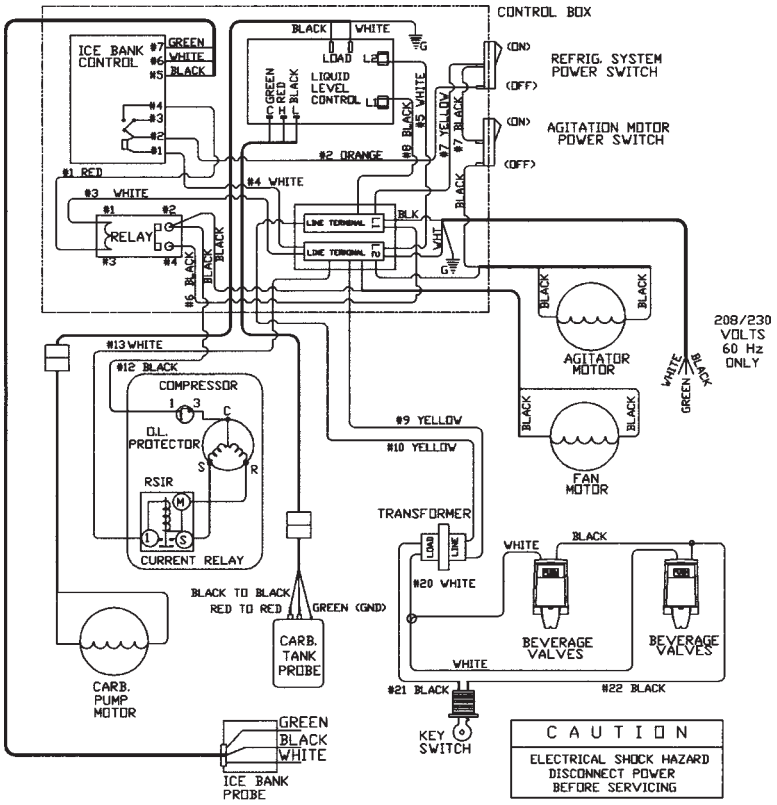


EXTERNAL CARBONATOR

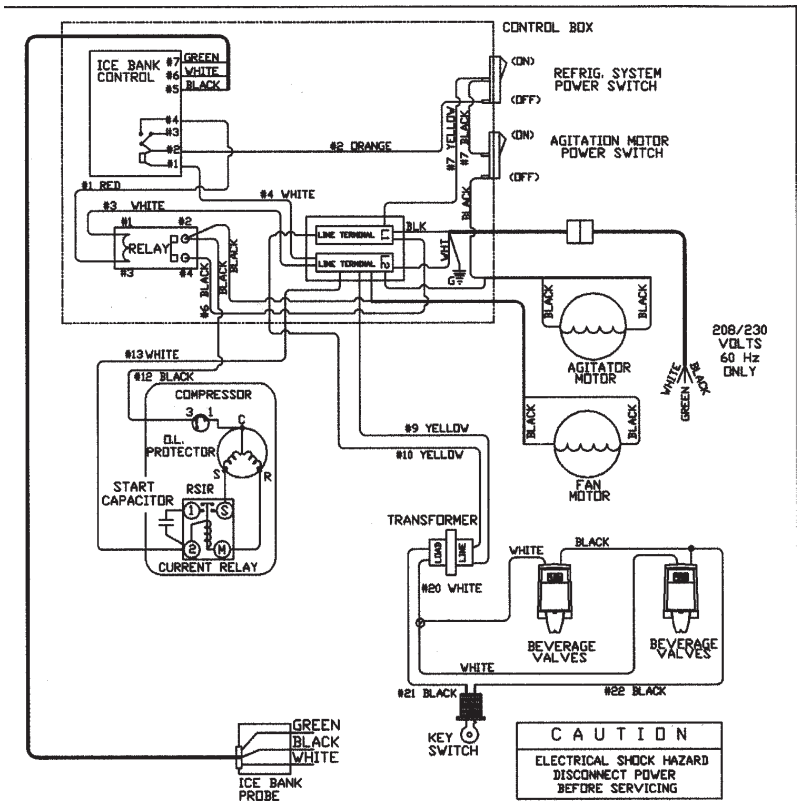


WIRING DIAGRAM 208-230 VOLT/60/1

INTERNAL CARBONATOR



EXTERNAL CARBONATOR



TROUBLESHOOTING GUIDE

CONDITION	INVESTIGATION	CHECK	CORRECTION
Warm drinks	Is the compressor running? No.	Power switch off.	Move switch to "on" position
		Ice bank control	Check/replace control (see Note B)
		Compressor overload	Check/replace overload
		Start relay	Check/replace relay
		Compressor	Check/replace compressor
Note A: It is important to remember that anytime the refrigeration system is opened the refrigerant should be recovered, a new drier installed and the proper charge of refrigerant weighed into the refrigeration system.			
	Is the compressor running? Yes.	Condenser dirty	Clean air filter
		Condenser blocked	Remove obstruction
		Fan not running	Replace fan motor
		No Agitation	Check/replace impeller
			Check/replace agitation motor
		Refrigerant level low	Repair leak, charge with refrigerant. **See note A above.**
No water, syrup or gas dispensing.	Is there power to the unit?	No power	Plug in unit or reset breaker
	Is power coming through key switch?	Key switch "off"	Turn key switch "on"
		Key switch defective	Replace key switch
	Is there power to the key switch?	No power through the transformer	Reset/replace transformer
	Is unit frozen?	Water level low	Check/refill ice bath
		Ice bank control	Check/replace control. **See Note B below.**
Note B: In order to check the ice bank control you must check the resistance between probes 5 and 7 and between 6 & 7. The refrigeration unit will start when a resistance less than 45K ohms is detected across probes 5 & 7. The refrigeration unit will stop when the ice bank covers all the probes, which will create a resistance greater than 85K ohms between probes 6 & 7. If the probe registers the proper resistance and the CED won't refrigerate or freezes solid, replace the control module. If the probe does not register the proper resistance, replace the probe and the ice bank control module. The ice bank control module is mounted in the control box on the refrigeration deck. It may be replaced without removing the probe from the water bath. The ice bank control probe may be accessed by removing the carbonator deck. The probe can be thawed and removed without removing the refrigeration deck from the CED Unit.			

TROUBLESHOOTING GUIDE

CONDITION	INVESTIGATION	CHECK	CORRECTION
Water only dispensing	No pressure	Regulator(s) out of adjustment	Check/adjust regulator(s)
		Out of CO_2	Install fresh tank
		Defective regulator(s)	Check/repair/replace regulator(s)
		CO_2 line pinched, kinked or obstructed	Check/repair/replace CO_2 line
Syrup and CO_2 only dispensing	Carbonator	No power	Check power supply. Plug in carbonator or reset breaker.
		Water supply	Make sure water is turned "on"
			Replace water filter
			Check/clean/replace pump strainer
			Check/clean/repair water check valve
			Check for frozen water line. ***Internal Carbonator unit only.***
		Defective carbonator	Check/repair/replace carbonator pump, motor, electrode or liquid level control.
Syrup only dispensing	Is soda/water line frozen?	Defective ice bank control	Replace ice bank control. **See note B.**
Syrup and plain water only dispensing	No pressure	Out of CO_2	Install fresh tank
		HP regulator out of adjustment	Adjust HP regulator to the proper setting
		Defective HP regulator	Check/repair/replace HP regulator
		CO_2 line pinched, kinked or obstructed	Check/repair/replaceCO_2 line
One valve will not dispense anything	Is there power to the valve?	Broken wire or loose connection	Replace/repair wire or connector
		Bad microswitch	Replace microswitch
Beverage dispensed is too sweet	Is the ratio (brix) of the drink correct?	Flow control out of adjustment	Adjust the flow control
		Insufficient soda flow due to low carbonator pressure	Adjust CO_2 pressure or change the tank
		Low CO_2 pressure due to leaks	Repair CO_2 leaks
		Obstruction in the water or soda line	Clean out the lines
Beverage is not sweet enough	Is the ratio (brix) of the drink correct?	Flow control out of adjustment	Adjust the flow control
		Soda flow too high	Reset CO_2 pressure or replace regulator if necessary
		Obstruction in syrup line	Clean out the syrup line
Drinks are foaming	Are system pressures correct?	Over carbonation	Check CO_2 supply. Reset pressure or replace regulator if necessary
		Dirty lines/valves	Clean/sanitize entire system

Servend

Manitowoc Foodservice Group

Manitowoc Beverage Equipment
2100 Future Drive w Sellersburg, IN 47172-1868
Tel: 812.246.7000, 800.367.4233 ◆ Fax: 812.246.9922
www.manitowocbeverage.com

5010146 Revision July 22, 2003