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USER MAINTENANCE MANUAL

FOR

POST-MIX SOFT DRINK BEVERAGE SYSTEM

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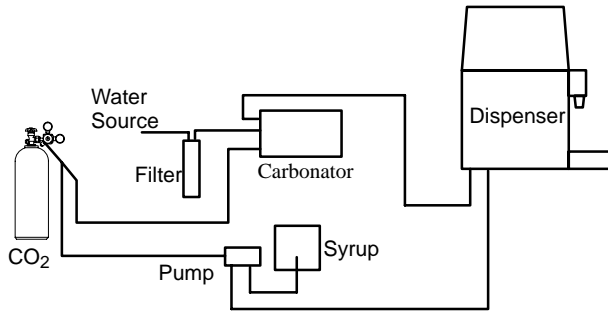
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SYSTEM LAYOUT DRAWINGS

A post-mix system is like a miniature soft drink factory. A carbonator carbonates the water from the building water supply. It is then refrigerated along with syrup that is pumped from a 5-gallon container. These two ingredients are then precisely mixed within the dispensing valve and poured into the cup. — A finished drink manufactured on-site.

COUNTERTOP ELECTRIC REFRIGERATION

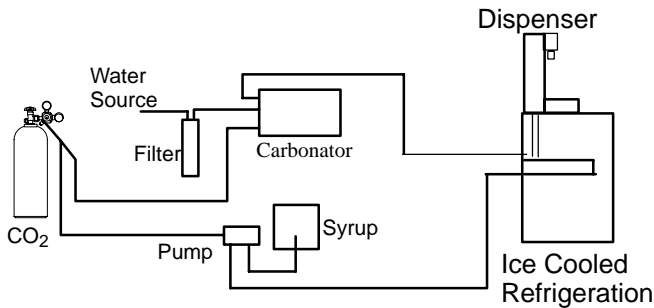


The post-mix countertop system is a common setup. Here the relationship of the dispenser, carbonator, water, syrup and CO₂ are shown.

The countertop dispenser is a mechanically refrigerated water bath style cooling unit with valves mounted on the front of the dispenser.

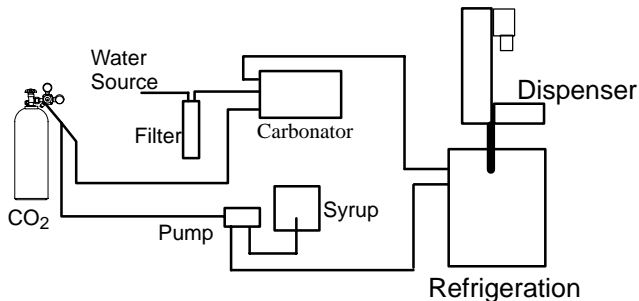
This illustration shows the carbonator remote but in some models the carbonator may be integral in the dispenser.

ICE COOLED SYSTEM



With an ice-cooled system the refrigeration type is the main difference. Here the refrigeration consists of a bin which holds ice and has a cold plate in the bottom, through which the syrup and water is cooled for your post-mix drink.

REMOTE REFRIGERATION COOLING



A remote system separates the dispensing valves from the refrigeration system. Carbonated water or water bath water is circulated between the refrigeration unit and the dispensing valves to insure that a cold product will be dispensed.

Serving top quality drinks; insuring customer satisfaction and guaranteeing optimum profits are all dependent on properly functioning equipment.

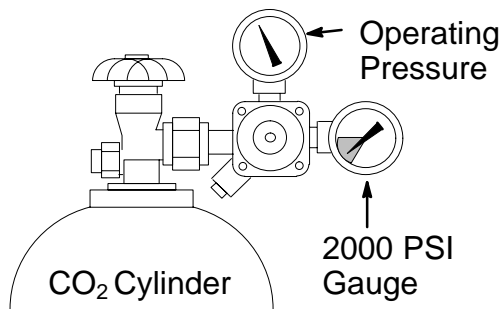
CO₂ HANDLING

CO₂ is used to carbonate the water and to propel the syrup. The CO₂ can run out and you need to know how to replenish it.



CO₂ (Carbon Dioxide) Warning

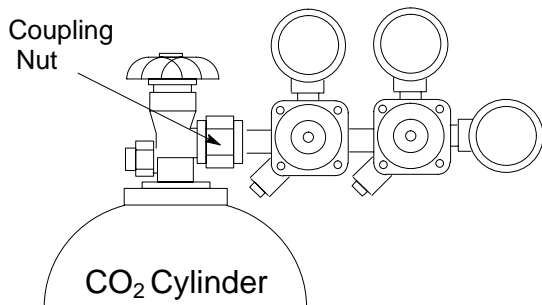
CO₂ Displaces Oxygen. Strict Attention *must* be observed in the prevention of CO₂ (carbon dioxide) gas leaks in the entire CO₂ and soft drink system. If a CO₂ gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel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



The CO₂ cylinder regulator has a 2000 PSI gauge that indicates the internal pressure in the cylinder. This gauge shows when the cylinder is about to go empty. The gray area at the zero end of the scale indicates that all the liquid CO₂ has been used and only gas remains. This is the ideal time to change the cylinder – before you run out. The cylinder valve must be open or the gauge will not register.

When changing an empty cylinder it is important to record the operating pressure so the pressure can be reset later.

Fully close the cylinder valve and adjust the regulator to zero pressure by turning the screw counterclockwise. This protects the regulator against damage when installing it on a full cylinder.



Using a wrench, loosen the coupling nut and remove the regulator from the cylinder. It is normal for a small amount of CO₂ gas to escape when removing the regulator.

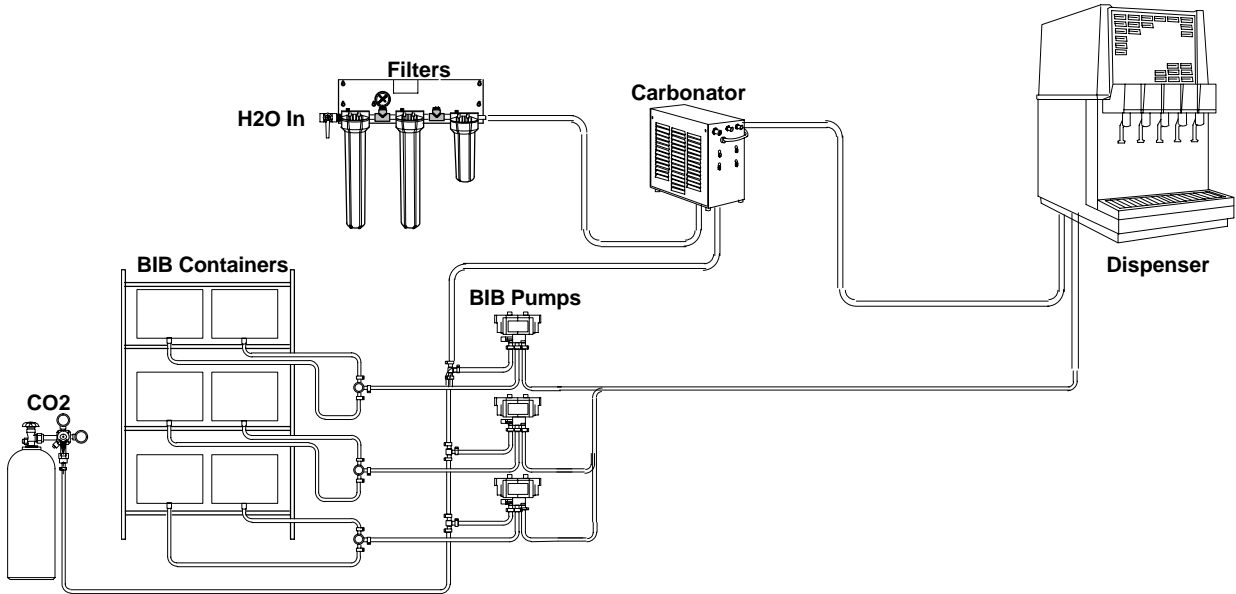
NOTE: There are federal laws that require that the cylinder is secured so it will not fall over, causing a dangerous situation.

Remove the chain or whatever is securing the cylinder and remove the empty cylinder. Move a full cylinder in place and secure it. Attach the regulator to the cylinder and tighten the coupling nut and open the valve.

The regulator should now be adjusted to the operating pressure recorded earlier. Your CO₂ system is now in back in operation.

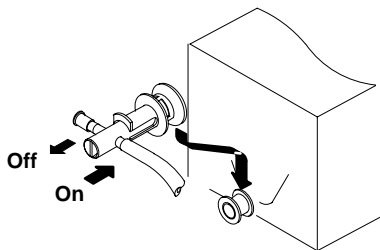
Always keep the cylinder valve closed when the cylinder is not in use – Even if the cylinder is empty. Always store the cylinder in a well ventilated area. CO₂ can accumulate in closed areas and this can be dangerous.

BAG-IN-BOX SYRUP



Post-Mix Syrup Bag-in-the-Box containers contain 5 gallons of syrup. When a container becomes empty it is simple to remove it and replace it with a full container.

The syrup pump is connected to the Bag-in-the-Box container with a Quick-Disconnect. The Quick-Disconnect can be removed from the bag by withdrawing the plunger and then lifting the Quick-Disconnect from the bag fitting. Remove the empty Bag-in-Box.



On a new Bag-in-Box container pull out the bag fitting and lock it in place with the box tab.

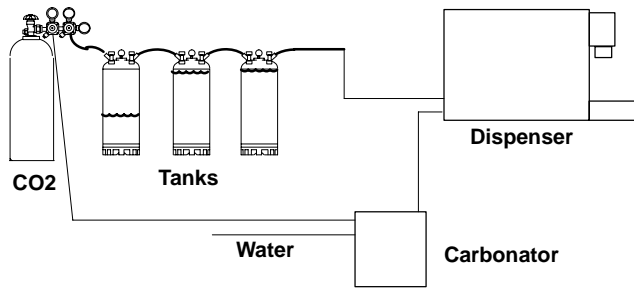
Before connecting the quick-disconnect to a new Bag-in-the-Box container, rinse the quick-disconnect in warm water to remove any syrup residue that may have accumulated. This will keep the Quick-Disconnect operating freely.

Attach the quick disconnect to the bag fitting and engage it by pressing the probe into the fitting.

Spilled syrup will attract insects and promote bacteria growth, so clean up any spilled syrup immediately – **KEEP THE AREA CLEAN.**

SYRUP TANKS

Some installations may use Stainless Steel transfer tanks. When a syrup tank is empty it is simple to remove it and replace it with a full tank. Very often tanks of the same flavor will be jumpered in series to provide a greater supply on hand.



If you have three tanks on your fastest moving flavor, the tank closest to the CO2 supply will go empty first, then the middle tank and then the tank closest to the dispenser. When removing empty tanks always remove the empty tank, "C" in this example, move the partial tank, "B", so it is closest to the CO2 supply. Next in line should be the full tank, "A" and then install the new tank in the position closest to the dispenser.

Whenever tanks are changed, the disconnects should always be rinsed with clean warm water to remove any sugar build up.

When tanks are jumpered, the outlet of the first tank is connected to the inlet of the second tank, the outlet of the second tank is connected to the inlet of the third tank and so on. Each jumper has a liquid disconnect on one end and a gas disconnect on the other end.

DISCONNECTS

The gas and liquid disconnects are different sizes. It is very important that they be applied to the proper fitting on the tank.

GAS DISCONNECTS

The gas disconnect is always gray or it has a gray insert. The gas or inlet fitting on the tank is marked and it also has a starred base on the fitting.

LIQUID DISCONNECTS

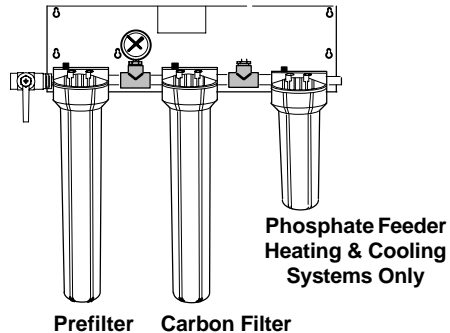
The liquid disconnect is always black. The liquid or outlet fitting on the tank is marked and it also has a hexagon base on the fitting.

Clean up any spillage to keep the area clean and sanitary. Spilled syrup can promote bacteria growth and attract insects so Keep The Area Clean.

It is important that good quality water is available. Therefore, water filters are recommended. They must be checked periodically and changed when necessary.

WATER FILTERS

It is important that good quality water is available. Therefore, water filters are recommended. They must be checked periodically and changed when necessary.



Many filter systems use a gauge at the filter outlet to indicate the pressure at the outlet. As the filter becomes plugged, the pressure will drop at the outlet.

CLEANING

The outside of the dispenser should be cleaned using warm soapy water and a soft cotton cloth. After cleaning the dispenser, dry the surface with a soft dry cloth.

If your dispenser has a removable drip tray, remove it and wash it thoroughly in a sink. If the drip tray isn't removable, wash it in place.

Install the drip tray and cup rest on the dispenser.

The outside of the valves should be cleaned daily to prevent the build up of any contaminants.

The finished drink is exposed to the air at the nozzle, consequently this is where bacteria can grow. The valve nozzles and syrup diffusers must be removed and cleaned daily.

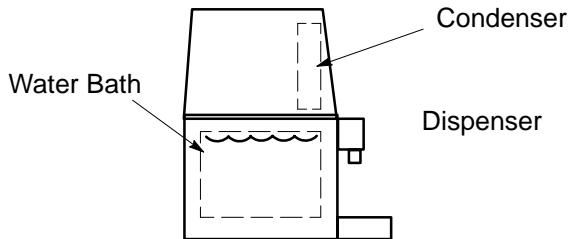
Place the nozzles and syrup diffusers in warm water and allow to soak, overnight if possible.

Scrub the nozzles and diffusers if necessary, rinse them and install them on the valves.

Ice cooled systems have ice bins with ice that is used to cool the product and to fill the cup. It is important that the ice bin be cleaned daily ...and sanitized according to the manufacturers instructions. Since the ice from the bin is food, the bin must be kept clean.

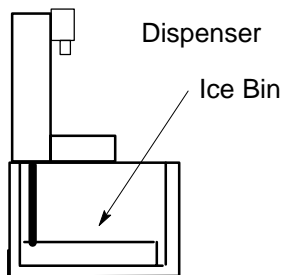
Taste test the drinks and report any Off-Taste problems to your syrup supplier.

ELECTRICALLY COOLED SYSTEMS



Electrically operated refrigeration systems rely on a clean condenser to ensure maximum ice production and product cooling. If the condenser is dirty, it can be cleaned with a soft brush or a vacuum. Also check the water bath level. If the water level is not within 1 inch of the overflow, the water bath must be filled until the water overflows the water bath and runs into the drip tray.

ICE COOLED SYSTEMS



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Ice refrigeration with cold plates rely on an ice bin filled with 32°F (18° C) ice. Ideally this is ice taken directly from a commercial ice maker.

Ice from a freezer that might be at 0°F (-18° C) will cause the product in the cold plate to freeze.

It is also very important that the ice is always in contact with the cold plate. Using your ice scoop, punch the ice down to be sure there is no gap between the ice and the cold plate.

PRODUCT STORAGE

Bag-In-Box

Syrup Bag-in-Box containers must be stored off the floor. The box is waterproofed but eventually the glue joints can weaken and the container can become unusable.

Tanks

Syrup tanks may be stored on the floor but both tanks and Bag-in-Box containers must be stored in an area that is temperature controlled between 40 and 80 degrees Fahrenheit (5°C – 27°C)

CO₂ Cylinders

CO₂ cylinders, regardless of whether they are full or empty, must be stored indoors in a warm, dry location. They must always be secured so they can't fall over and the valve must always be closed when it is not in use.

TROUBLESHOOTING

If you are experiencing trouble with your soft drink dispenser, follow these suggestions before calling for help:

- If your dispenser is not dispensing at all check the plug, the on–off switch and the bin lid on ice cooled equipment.
- Check the CO2 and be sure there is CO2 for carbonation of the water.
- CO2 is important to maintaining carbonation. Also be sure that the drinks are cold. Warm drinks will lose their carbonation very fast and will be quite flat. If the drinks are warm, check the refrigeration system.
- If your post-mix system is dispensing drinks without syrup, check the CO2, the bag-in-the-box containers to be sure they have syrup in them and the disconnects are properly connected.
- Water is important to your post-mix system. Be sure the water is turned on, there are no kinked tubing and that the filters are not plugged.
- If the CO2 pressure is too high the finished drink can foam. Ice below freezing or crushed ice can also cause foaming, as well as a lack of refrigeration allowing the drinks to warm up.
- Foam cups have a release agent on the surface and can cause foaming problems. Glasses are good but they must be thoroughly washed and rinsed. Waxed paper and plastic cups are good.
- Do not pre-fill pitchers or glasses. The carbonation will be lost as the drink warms.
- Ice cooled systems can have special problems. 32°F (18° C) ice must be on the cold plate without any bridging. There cannot be any water on the cold plate, so the ice bin drain must be open.
- Electric refrigeration units must have good air circulation so the condenser can be cooled. The condenser must be clean so plenty of air can pass over the coils. And the water bath must be full to ensure good heat transfer between the ice and the product coils.
- Off taste may indicate the system needs cleaning by your syrup supplier or it may be as simple as dirty water filters or old product.

Your Post-Mix system will give you years of trouble-free service, if you will take the time to regularly maintain the equipment. Any time you are unable to resolve a problem, call your syrup supplier.