

# 4-Head Manual Counter Pressure Filling (CPF) System

## Operators Manual



### Assembly

Your CPF was shipped to you partially assembled. Below you will find instructions on how to assemble the remaining parts.

Tools you may need:

- Allen wrench
- Plastic/rubber mallet
- Flat head screwdriver
- Crescent wrench

### ***Assembling the Base***

Six parts comprise the base of the unit; 1 horizontal stainless steel cross bar, 2 vertical stainless steel support bars, 2 plastic feet and a stainless steel drip tray.

Steps:

- 1** Insert the vertical stainless support bars into the top part of the feet, empty ends first. The end of the bars with the plastic stoppers should point up. Use a plastic mallet to tap the bar into the holes if needed. Do not use a hammer as this may damage the material.
- 2** Insert the cross bar into the side holes of the plastic feet and tap the the feet onto the bar till the bar reaches the bottom the holes. (Note: the the cross bar should fit snugly, but if it loosens over time, holes have been drilled in the feet for the addition of set screws. Contact us for help if needed)
- 3** Place the drip tray on the feet in the space provided.

### ***Assembling the Head***

Five parts comprise the head of the unit; the liquid and gas distribution unit and 4 filling stems (Note: the liquid and gas distribution unit will already be assembled for you)

Steps:

- 1** Loosen the black knobs on either end of the distribution unit and place the unit on top of the support bars by aligning the holes on either end with the bars and sliding the unit onto the bars until the top of the bars emerge through the unit. Hand tighten the knobs to keep the unit from sliding down further
- 2** Thread each of the stems onto the rotating white blocks on the unit.

### ***Connecting and Testing***

On either end of the distribution unit you will find a barbed Tee for connecting the unit to your liquid and gas sources. Identify the gas line by the larger diameter barbed fitting off the 3-way valve.

Steps:

- 1** Attach gas & liquid supply lines to their appropriate Tee and secure with stainless hose clamps.
- 2** Attach the other ends to the gas & liquid source and pressurize the system to 15 PSI making sure the valves are turned to the off position (either forward towards the user or away).
- 3** Identify any leaks by listening or spraying a soapy solution onto the unit and looking for bubbles. Tighten any pieces that may be leaking with a crescent wrench or screwdriver.

## **Operation**

Operating the unit is fairly intuitive. However, the operator/user should practice with water or sanitizing solution using one or two heads and then adding additional heads until they get more comfortable with the process.

Prior to operation, be sure the unit is cleaned and sanitized. This is achieved by pushing cleaning/sanitizing solutions through the lines for the prescribed amount of time as per directions provided by the manufacturer of the cleaning/sanitizing solutions.

## Connecting the Gas and Liquid lines

Steps:

- 1 Connect the gas line to the gas source using industry-standard connections. We recommend that the source be separated from the source of gas pushing the liquid or that they be on separate regulators for fine adjustment and setting the pressures between 8-15 P.S.I. (Note: environments and conditions vary from place to place, so it will be important to experiment with the system to determine the best settings for your location and application)
- 2 Connect the liquid line to the liquid source using industry-standard connections. The pressure pushing the liquid should be slightly higher than the pressure setting on the purging gas supply line.
- 3 Connect a drain line to the back of the drip tray and feed it to a bucket or drain.

## Operation

Steps:

- 1 Purge the liquid lines of air and/or sanitizing solution by opening all the valves to the right, allowing the liquid to flow out.
- 2 Purge the gas lines of air by opening all the valves to the left.
- 3 Pull the first filling head towards you. (Note: do not handle the bung or anything below it with anything that has not been sanitized. These parts will have direct contact with the liquid in the bottle.)
- 4 Insert the stem into the bottle from below until the bung rests partially inside the bottle creating a seal and then return the head to its former position with the bottle firmly resting (wedged) on to the drip tray. (Note: you may need to adjust the height of the heads using the black knobs on either end to get the seal tight.)
- 5 Purge and pressurize the bottle by turning the valve to the left and adjusting the relief valve on the filling stem until you hear gas escaping.
- 6 Turn the valve to the right to begin filling the bottle. The rate of fill will be dependent on the pressure at which you are feeding the liquid source to the unit & the relief valve adjustment. Adjust the relief valve to fill at a speed you are comfortable with and at a rate that does not cause excessive foaming.

- 7 Once the bottle is full, turn the valve towards or away from you to shut off the flow and remove the bottle by pulling the base of it towards you and down.
- 8 Place bottle aside for capping and repeat.
- 9 After finishing be sure to clean and sanitize the system prior to storage. Disassemble the spring actuated relief valves and be sure they are clean and dry prior to storage.

## Foaming Issues?

There can be many reasons for the beer over-foaming and the solutions to reducing it can be just as varied. Experimenting with the system in your environment will be key to determining the best way to mitigate this issue. There are numerous resources on the Internet to help you reduce excessive foaming, but two points everyone agrees on is to; a) have your beer and bottles as cold as possible (0-2 degrees Celsius), and b) to fill slowly to reduce turbulence.

We've found the following article very informative on the issue:

<http://byo.com/malt/item/506-counter-pressure-bottling-techniques>

## Cleaning

Like any other equipment used to handle perishable goods and liquids, it is important to keep this unit cleaned and sanitized.

Clean and sanitize the unit as you would any other liquid dispensing equipment, being sure to follow the directions of the specific cleaning and sanitizing product manufacturers.

### ***Deep Cleaning and Part Replacement***

Though not necessary after every use, it may on occasion be necessary to disassemble the unit to replace parts and hoses or perform deeper cleaning.

The unit is held together with stainless screws, set screws and hose clamps. The screws are usually located underneath each component and are readily removed using the appropriate size Allen wrench. Once removed or loosened the component should easily slide off the support.

Hoses can be replaced by removing the hose clamps and cutting the hose if it does not easily come off the barbed fittings. Be sure to replace the hoses with matching length and diameters and with the appropriate type (i.e. food-grade and pressurated to minimum 30 P.S.I.).

Once disassembled, the components can be cleaned or replaced. Contact us for any replacement components. Hoses and clamps may be bought from a variety of local supply companies.

Re-assembly is the reverse of disassembly. Be sure to only hand tighten screws to avoid damaging any plastic components.

