

# XpressFill XF4500

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## **Congratulations on the purchase of your XpressFill Bottle filling machine.**

Thank you for choosing our handcrafted bottle filler as the technology to bottle your passion. We look forward to assisting you in experiencing the best performance from your filler.

This manual is written with your safety and convenience in mind. We highly recommend reading the manual before using your filler for the first time.

If you have any questions or comments, please do not hesitate to contact us.

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## **Important Safety Instructions**

Misuse of the bottle-filling machine can result in serious injury or death. Do not use the machine in any way not covered in this manual or for any purpose other than those explained in the following pages.


Severe product damage and/or injury could result from the use of unqualified Service Technicians or non-original replacement parts. All repairs must be performed by a qualified Service Technician or with the approval from an XpressFill Technician. Only original factory replacement parts should be used.

Electrical shock or fire could result if the electrical supply for the bottle filler covered in this manual is not correctly installed or if the bottle filler has been improperly grounded. Do not use the bottle filler covered in this manual unless you are certain the electrical supply has been correctly installed and the bottle filler has been properly grounded.

# Safety Warnings

|   |  |
|---|--|
| <b>⚠ WARNING</b>  |  |
| <b>Hazardous Voltage!</b><br>Disconnect power before servicing. |  |

|   |   |
|---|---|
| <b>⚠ WARNING</b>  |  |
| <b>For use in Non-Hazardous &amp; well ventilated area.</b><br>This equipment is not Explosion Proof rated! |   |

|  |  |
|--|--|
| <b>NOTICE</b>  |  |
| <b>Back panel must be in place during operation to prevent electrical shock.</b> |  |

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# 1

## Introduction

### **XpressFill Product Guarantee**

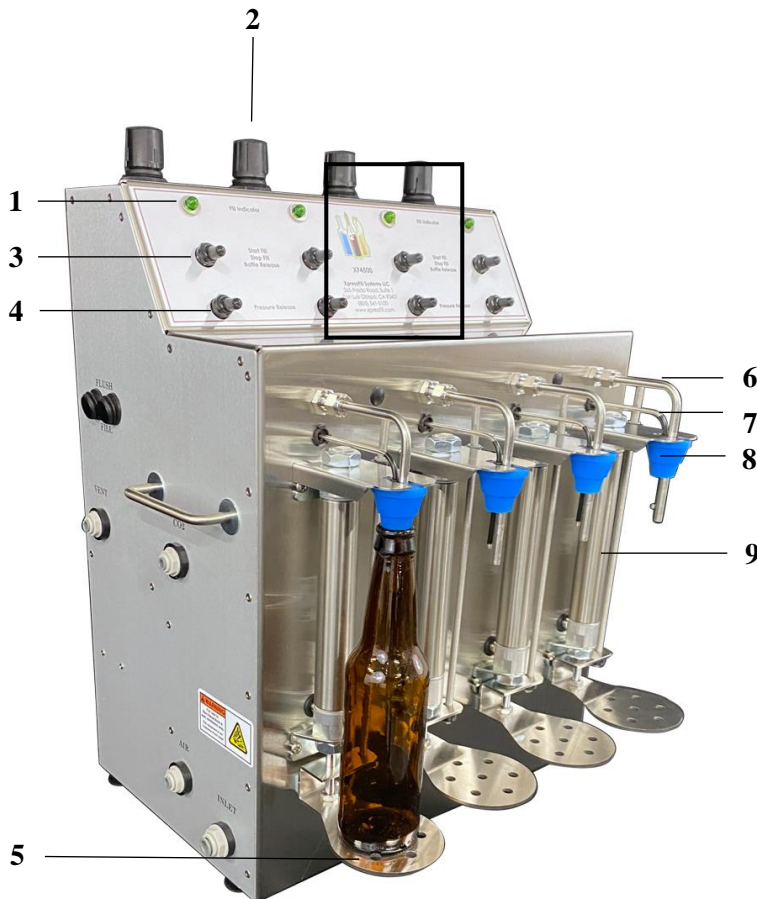
We guarantee our products to be free of defects in materials and workmanship. The filler will be repaired or replaced if, upon inspection at the factory, the filler is found to be defective in materials or workmanship.

This guarantee does not apply to damage resulting from normal wear and tear, accident, abuse, negligence or shipping. The guarantee may be rendered invalid if the customer has made repairs or alteration to the machine without first consulting XpressFill Systems LLC.

## 2 Know Your Filler

The below diagram highlights the important features on your filler, which will be referenced throughout this manual. Being familiar with each of these and their functions will make your filling experience easier.

- |                                     |  |
|-------------------------------------|--|
| 1. Fill indicator light             | 4. Pressure release switch                       |
| 2. Bottle pressure adjustment       | 5. Bottle foot rest                              |
| 3. Fill toggle switch (3 positions) | 6. Upper spout / product filling                 |
| · Start fill                        | 7. Lower spout / pressurizing, venting & release |
| · Stop fill                         | 8. Bottle neck filling stopper                   |
| · Bottle release                    | 9. Pneumatic ram                                 |



### Detail Highlight



1. *Fill Indicator Light:* This green light will turn on when the fluid solenoid valve is getting a signal to open.
2. *Bottle Pressure Adjustment Knob:* This knob allows you to adjust the pressure inside your bottle. Turning the knob counterclockwise will lower the pressure, while turning it clockwise will increase the pressure. This will typically only need to be adjusted when starting a new filling session and during cleaning.
3. *Fill Switch:* The three (3) position fill switch turns the fill cycle on (up position), turns the fill cycle off but maintains a seal (center position), and releases the bottle supporting foot rest after the bottle pressure has been safely released (down position).
4. *Pressure Release Switch:* This switch electrically activates a pressure release valve to release the pressure inside your bottle. It will be used at the end of each fill sequence or in an emergency.
5. *Bottle Foot Rest:* These feet will hold your bottle securely in place once the fill sequence is started. Avoid putting your hands between the bottle and the foot to prevent injury.
6. *Larger Spout:* This spout is used for the gas flush and filling sequences of the bottle.
7. *Smaller Spout:* This spout is vented to relieve the pressure in your bottle and acts as the sensor for the automatic shut off of the level filling system.
8. *Stopper:* The stopper seals your bottle and helps to control the level your bottles is filled to. While the stoppers are already set for the level of a typical 12 oz. beer bottle, they can be adjusted up and down on the spout to fill to your own specifications.
9. *Pneumatic Ram:* The pneumatic ram raises the bottle and foot rest and is activated when the filling sequence begins.

# 3

## Setting Up Your Filler and Filling Your First Bottle

### Required Equipment

- XF4500 bottle filler
- Pressurized CO2 tank and 1/4" hosing (an additional CO2 tank can be used or a ‘Y’ fitting from your CO2 tank)
- Air compressor and 1/4" hosing
- Outlet container and 1/4" hosing

(See Figure 2 on page 9)

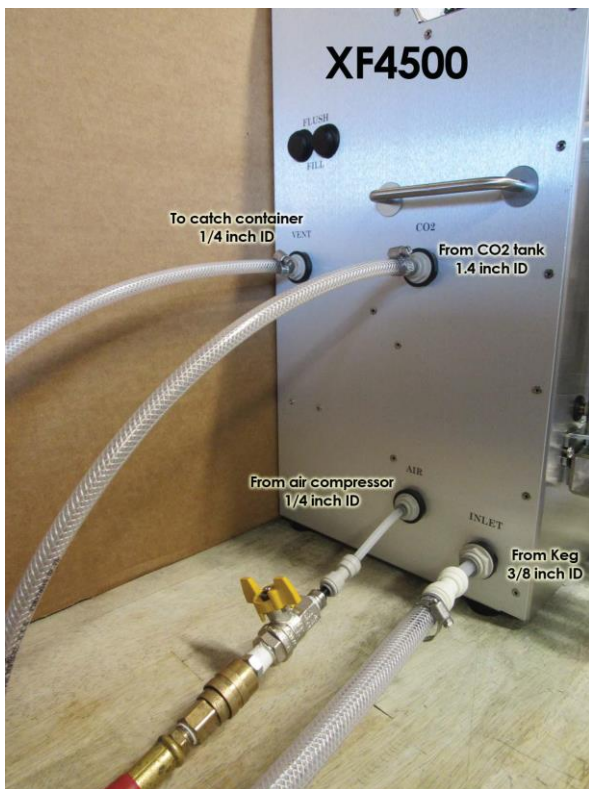


Figure 1

Connect the air/CO2 and inlet from the keg hosing to their respective attachment points shown in Figure 1.

*Note:* Some air/CO2 and liquid will come out of the vent in operation. The output labeled “Vent” should be connected to a container to collect any liquid.





Figure 2

- |                          |   |
|--------------------------|---|
| 1. Air compressor        | 5. Pressurized keg                              |
| 2. CO2 tank              | 6. Line to “Inlet” input on filler              |
| 3. CO2 regulator         | 7. CO2 line to “CO2” input on filler            |
| 4. CO2 line to keg inlet | 8. Compressed air line to “Air” input on filler |

The recommended operating pressures for the CO2 and air compressor are listed below. Please keep in mind that varying temperatures and product properties will mean that adjusting the pressures will be necessary for your product. You are encouraged to adjust these pressures carefully until you find a combination that works for your product and bottling environment.

## Pressure Recommendations

*Air:* 30 psi recommended

*CO2:* 30 psi recommended

*Tip:* Please see page 12 for “Adjusting Pressure” to set pressures outside the recommended settings.

*Warning:* Follow the recommended settings of the equipment you are using. Exceeding manufacture recommended settings may result in injury to self and others, as well as damage and/or failure of the machine.

# 4

## Operating Procedures

*It is highly recommended that water be used during the initial set up procedure. Water allows you to familiarize yourself with the filler by removing most variables related to your product, for ease of operation, and the reduction of waste of your product.*

### Step By Step

1. You will first want to unpack your filler from the shipping box and spread the components out on a large flat surface. Make sure that you also have the following:
  - a. Pressurized CO2 tank with regulator and connecting hosing (we recommend a wye as well, see setup diagram for details).
  - b. Air compressor and 1/4" hosing
  - c. A small (.5 liter or so) catch container for collecting vented liquid.
2. Place your filler on a flat surface where you plan to bottle, ensuring that you have access to a standard wall outlet or extension cord. Place the liquid and CO2 tanks, as well as the air compressor, nearby.
3. Attach the support legs by sliding the legs between the enclosure and the rubber feet. The support legs should extend forward, however if you extend them out the back you need to clamp them to the flat surface.
4. Begin by plugging the provided power cord into your machine, and then plug it into the wall outlet. Flip the Power Switch on the right side to turn on the filler. Confirm the cleaning switches on the left side are in the down position (Fill Mode).
5. Toggle the fill switches to the full up position (Start Fill Position). Wait a few seconds to verify that the green fill light illuminates.
6. Flip the fill switch back down to the Release Bottle Position, the green fill light will turn off.
7. Once you are sure the filler is powering up properly, turn off the power switch on the right side of filler.
8. Make sure the Pressure Relief Switch is in the off position (Down).



**The valves on the tanks should be off for steps 9-11**



9. Plug the hose from your liquid container into the port marked “Inlet” on the left side of the machine using one of the provided 3/8” barbed fittings.  
  
See “Adjusting Pressure” on page 12.
  10. Plug one end of the provided 4’ x 1/4” tube into the port marked “Vent” on the left side of the machine, and place the other end into your catch basin.
  11. Plug your air compressor into the port marked “Air” on the left side of the machine using one of the provided 1/4” barbed fittings.
  12. Plug your CO2 tank into the port marked “CO2” on the left side of the machine using one of the provided 1/4” barbed fittings.
  13. Once you are sure that all components are plugged in correctly, you can open the valves on your tanks and turn on the air compressor.
  14. Turn on your machine by flipping the power switch on the right side of your machine so that it is lit up.
  15. You are now ready to place a bottle on your machine. While pressing down on the Bottle Foot Rest, place a bottle on the Bottle Foot Rest and allow the return spring to **lightly** hold the bottle against the stopper.
- Note:* During the purge process, the bottle will temporarily unseat from the stopper to allow air to escape.
16. Make sure the Pressure Release Switch is in the off position (DOWN).
- Always keep your hands clear of the bottle and foot rest during step 17.**
17. Flip the Fill Switch to the full up position. The filler will purge the bottle for a few seconds, after which the Bottle Foot Rest will immediately lift the bottle into a sealing position against the stopper and pressurize the bottle.
  18. After the purge and bottle pressurization, the fill light will come on and liquid begins to flow into the bottle. If no flow is visible, then the Pressure Relief needs adjustment.  
  
See “Adjusting Pressure” on page 12.
- Repeat steps 15 – 18 for the other spouts.**
19. Once the green fill light deactivates, put the Fill Toggle Switch to the middle position (**do not flip** to the full down position), then you can turn on the Pressure Release Switch (UP).
  20. Hold the bottle with one hand and flip the Fill Toggle Switch to the full down position to release air in the pneumatic ram and remove the bottle.
- Note:* You can use the silicone surgical tubing included to fill from the bottom of the bottle or even halfway to the bottom.

**Congratulations,  
you have now filled your first bottle using  
the XF4500 Counter-Pressure Filling System!**

## Adjusting Pressures

It is the pressure differential between keg/brite tank pressure and bottle pressure that determines the rate of filling, amount of foam and retention of CO<sub>2</sub> in your product. Therefore, adjusting either or both pressures can result in a more favorable fill.

1. Each spout must have its bottle pressure set individually.
2. The pressures during filling are adjusted to obtain a quick rate of filling with limited foaming. Excessive foaming will trigger the fill sensors and stop filling prematurely. The bottle will begin filling again as the foam settles, but this significantly slows down the filling rate.
3. Typical maximum inlet pressures from a keg or brite tank are 30 psi and 15 psi, respectively.
4. Turning the Bottle Pressure Knob counterclockwise will start venting the pressure in the bottle and allow product to flow into the bottle. The more the bottle vents, the quicker it will fill, but foam can start to develop. The Bottle Pressure Knob can be adjusted to achieve an acceptable rate of fill as evidenced by the visual presence of limited foaming.
5. The inlet pressures can also be adjusted in conjunction with bottle pressures to change the filling rate and foaming characteristics.

# 5

## Troubleshooting

If at any time you have issues with the setup or adjustment of your XF4500 bottle filling machine, or any other questions about filling your product, please contact us at the number listed at the front of this manual. We are always happy to assist you.

### Excessive Foaming

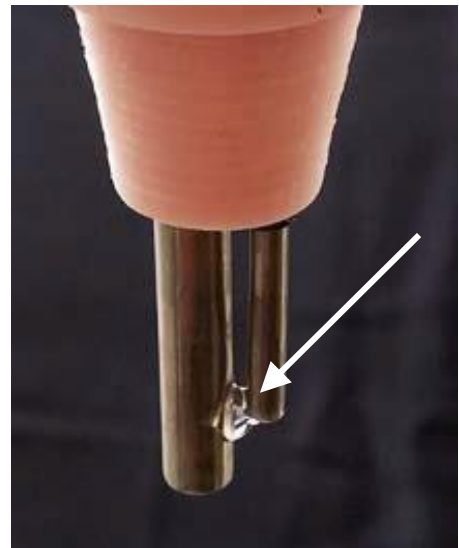
Excessive foaming is usually the result to the keg pressure not being high enough, too high fluid temperature, or the indicated pressure on the filler gauge is too low. The difference between the keg pressure and the counter pressure indicated on the filler should be around 5 psi. The higher the pressure, the more CO2 will stay in solution.

Turning the Bottle Pressure Adjustment Knob clockwise will increase the bottle pressure and reduce foaming. The higher the bottle pressure and lower the temperature, the more CO2 will stay in solution.

### Premature Shut Off

The XF4500 is a Level Fill Machine, meaning when liquid touches a spout and probe, it will automatically shut off. If moisture is allowed to collect between the spout and the probe, the filler will shut off prematurely, stopping the fill or not allowing the fill to begin at all, which is characterized by the green LED fill indicator light to flash quickly and stay off as the machine senses a full bottle is in place.

Dry the area between the spout and the probe with a clean towel or use the compressor to air dry. Once completely dry, the fill will resume.



## 6 Cleaning and Sanitizing

Cleaning your XpressFill is quick and easy, and is the single most important maintenance you can administer to ensure long life and solid performance from your filler. Please use extreme caution when using any cleaning product.

For general cleaning, we highly recommend a product called PBW by Five Star Chemicals. It is safe, fast, and effective, and our customers have been happy with the results. To clean your XpressFill, begin by flushing your filler with 2 gallons of plain warm (not boiling) water from a pressurized keg, which is pressurized with air. Follow that with a 3-gallon mix of PBW cleaner, and let the PBW sit inside your filler for a few minutes in order to do its cleaning job. Follow the cleaning with a sanitizer.

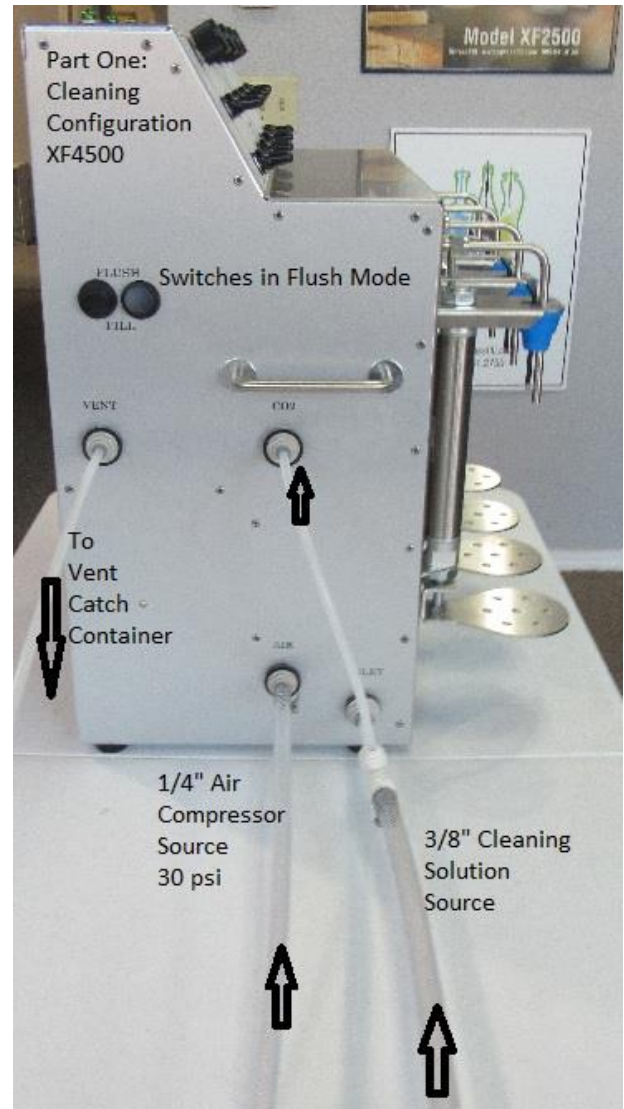
For sanitizing, we recommend Saniclean, from the same manufacturer. Saniclean has low foaming characteristics, is highly effective, and completely food grade if diluted correctly per the manufacturer's instructions. Use the sanitizer with about 3 gallons of water, and follow the steps according to the manufacturer's instructions. After sanitizing, flush your filler with 2 gallons of warm water. Before storing your XpressFill filler, make sure you get all water out of the flow path. Allow to run until pressurized keg with cleaning solution is empty and runs dry, blowing the remaining water out of the filler vent.

*See step-by-step instructions and diagrams on the following pages.*

## Part One

*Attach cleaning hoses as pictured below. Hosing and connectors are supplied in the accessory packet.*

1. Flip the Fill/Flush switches to flush mode (Rocker switches located left of machine).
2. Place bottles under spouts.
3. Turn on the main power switch (Green rocker switch located right side of the machine).
4. Turn on the spout switch, full on position all the way up. Then turn on the Release Switch (UP) to allow flushing through the vent area. Also turn the pressure release dial on the top counter-clockwise to open up the valve for fast flow.
5. Let solution fill the bottle completely and allow it to run for a while after full.
6. Turn the spout switch to the middle position (stop fill).
7. Turn on the spout switch again all the way up (This runs the purge cycle again and allows the CO2 flow path to be cleaned as well) Repeat step 7 a few times.
8. When satisfied with the cleaning put the Fill/Flush switches back to Fill mode (down).
9. Turn off the spout switch completely. This will allow you to remove the bottle and empty it of the remaining cleaning solution.
10. This is the end of part one of the two part process for cleaning your machine.

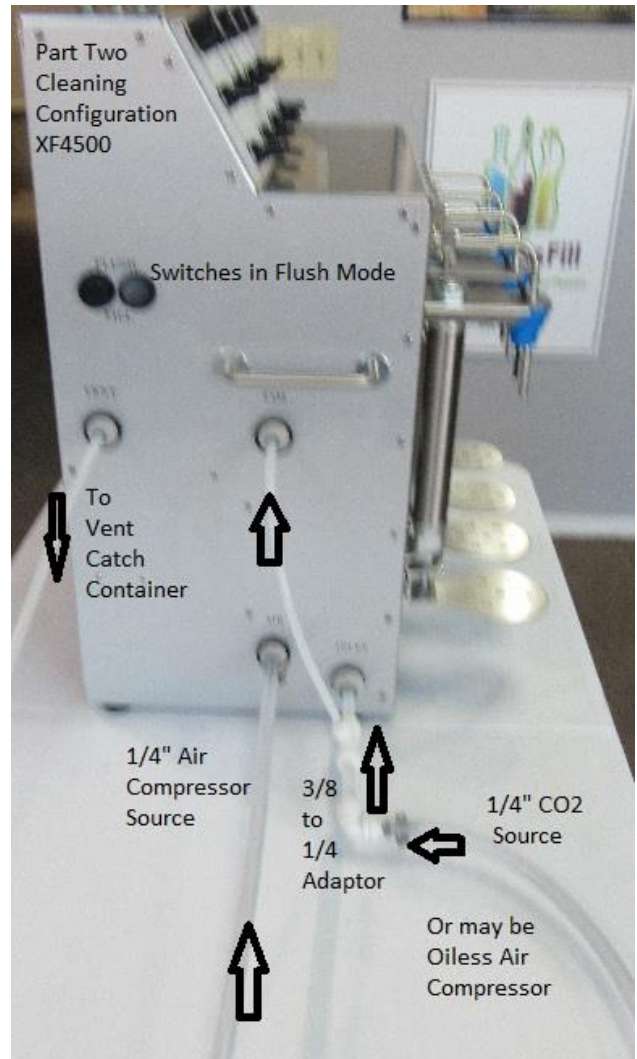


## Part Two

Attach cleaning hoses as pictured below. Hosing and connectors are supplied in the accessory packet.

1. Turn on main power switch with bottles in place.  
(Green switch located right side)
2. Push in to close quick release knobs.
3. With gas line on turn on spout switch and allow gas to flow through the filling system.
4. Turn spout switch to middle position, and then back up to full on position. Repeat this several times to allow the purge path to ventilate completely.
5. Turn the release pressure knob at top of machine clockwise to close valve about half way, approximately ten turns.
6. Turn on the Pressure Release Switch (UP) for maximum ventilation through the flow path.
7. When you are satisfied with the results turn off the spout switch and remove the bottles.
8. Turn off the air/gas supply and remove all the hoses.
9. Turn off the machine.

*Note:* Instead of using CO2, you can use an oil-free air compressor as well.



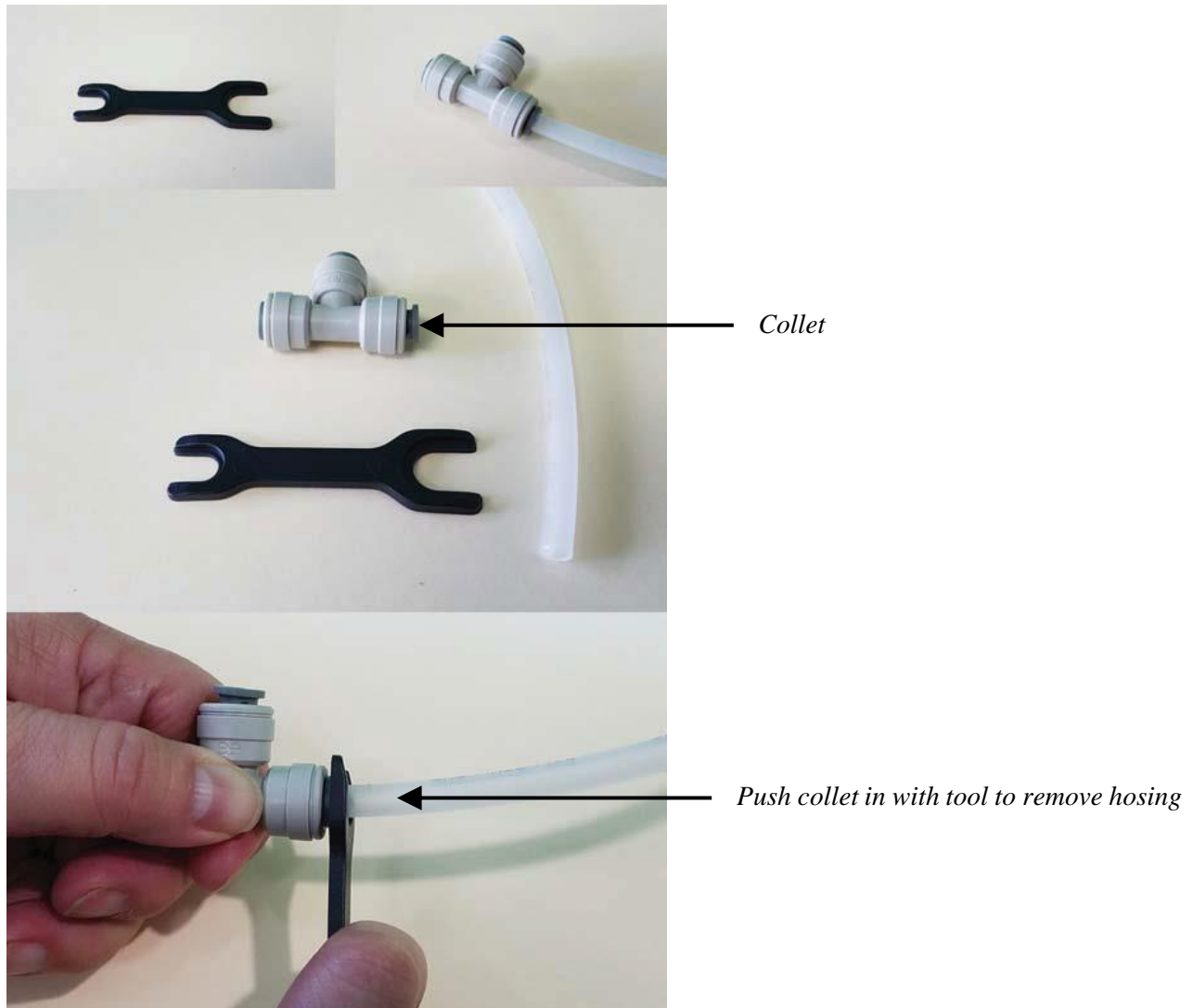


# 6

## Additional Information

### Collet Release Tool

Our fillers use “Push-to-Connect” type connectors which are standard in the beverage industry. Installation simply requires pushing a hose into the fitting and pulling lightly to check that the connection is secure. Removal requires using the collet release tool to firmly push the collet and remove the tube. A tool is included with the filler and can be found inside the filler.

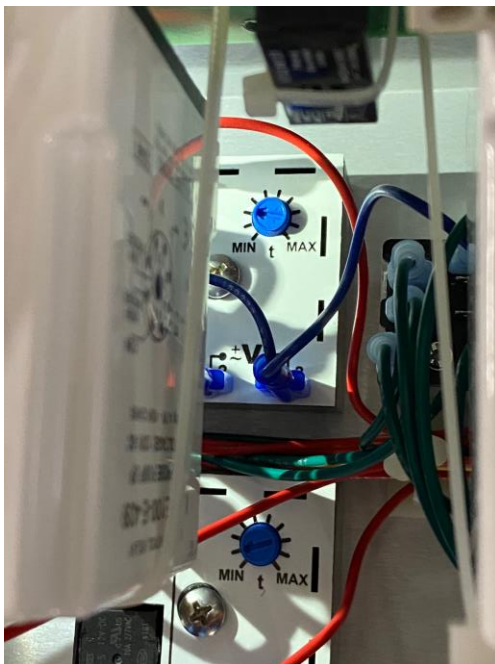


## Spare Fuse

There is a spare fuse in the power entry connector (where the power cord plugs in). Unplug the machine and set a screwdriver on the notch (do not remove screws) and pop the spare fuse holder toward you, then replace the fuse. XpressFill Part No. 200002 - Bussmann Series by Eaton, Model BK/GDB-2A, 5mm x 20mm



## Delay-Timer Adjustment



Each spout has two delay timers.

To adjust time, turn the blue knobs with the arrow counter clockwise to reduce the purge time or clockwise to increase purge time.

The top delay timers control the time of CO2 flow.

The bottom delay timers control the time the vent solenoid is open, purging the bottle.

*Note:* The top timer should always be set for a bit longer than the lower timer, allowing the bottle to pressurize.

## Fluid Solenoid Valve Deep-Cleaning Instructions

*Note:* This maintenance is needed only when the filler is not performing properly.

Remove the solenoid valve from the filler. Use the release tool provided to disconnect the push-to-connect fittings. If you disconnect the two wires, it does not matter which wire goes back into which terminal.



Loosen the hex nut at the top of the coil assembly. Unscrew the base from the coil assembly. Use a screwdriver as needed. Remove the center shaft. Note and keep track of the flat O-ring. A pair of pliers may be needed to grip the metal shaft to “crack” open for unscrewing the shaft.



Now clean out all openings inside and outside of the solenoid valve, removing any particulates and stickiness that may have accumulated.

Reassemble and replace in the filler.

The white plastic body is marked #1 for output and #2 for input. The valve may leak if installed backwards.



## CO2 Purge Solenoid Valve Deep-Cleaning Instructions

*Note:* This maintenance is needed only when the filler is not performing properly.

Remove the solenoid valve from the filler. Use the release tool provided to disconnect the push-to-connect fittings from the tubes.



Slide off the clip from the top of the coil assembly. Remove the coil assembly off the center shaft. Unscrew the shaft from the stainless steel base. It is not necessary to unscrew the tubing adaptors from the stainless steel base.



Now rinse out all the openings inside and outside of the solenoid valve, removing any particulates and stickiness that may have accumulated.

Reassemble and replace in the filler.

Stainless steel valve body is marked #1 for input, #2 for output. *Note:* Valve may leak if installed backwards.



## Pressure Adjustment Knob Deep-Cleaning Instructions

*Note:* This maintenance is needed only when the filler is not performing properly.

Remove the pressure relieve valve from the filler. Use the release tool provided to disconnect the push-to-connect fittings from the tubes.

Turn the knob counterclockwise until you feel a resistance and push down (lock position). Unscrew the black plastic housing (including knob) from the brass base. It is not necessary to unscrew the tubing adaptors from the brass base.

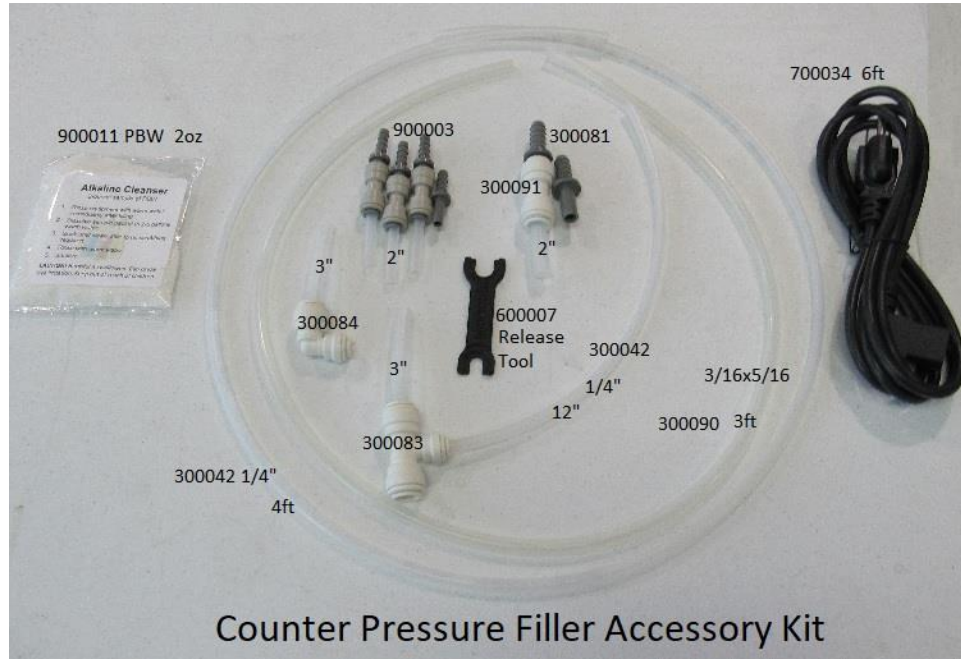
Now rinse out all the openings inside and outside of the valve, removing any particulates and stickiness that may have accumulated.

Reassemble and replace in the filler.

The Brass body is marked “IN” on one side. This is the input side.



## Accessory Kit



### Part Number Key

- 100169 – Chassis Support Legs
- 300042 – 1/4" ID Polyethylene hosing
- 300081 – 3/8" Hose barb connector
- 300083 – 3/8"x3/8"x1/4" Reducing tee
- 300084 – 3/8"x1/4" Reducing elbow
- 300090 – 3/16" ID Surgical tubing
- 300091 – 3/8" Union connector
- 900003 – 1/4" Hose barb connector