



**CRATHCO**

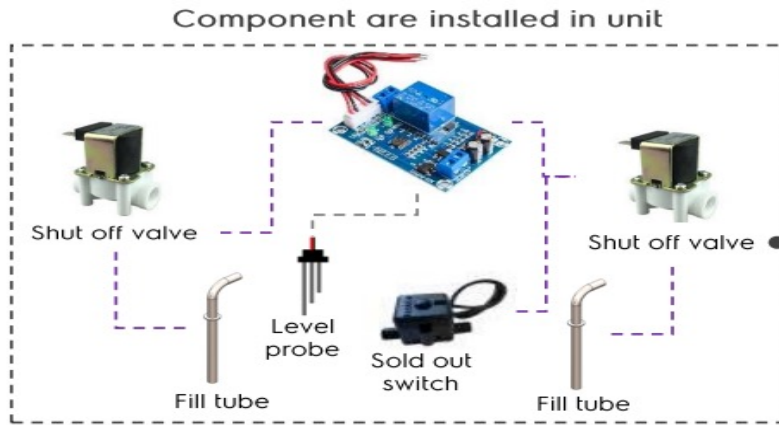
# Autofill Installation Training Guide



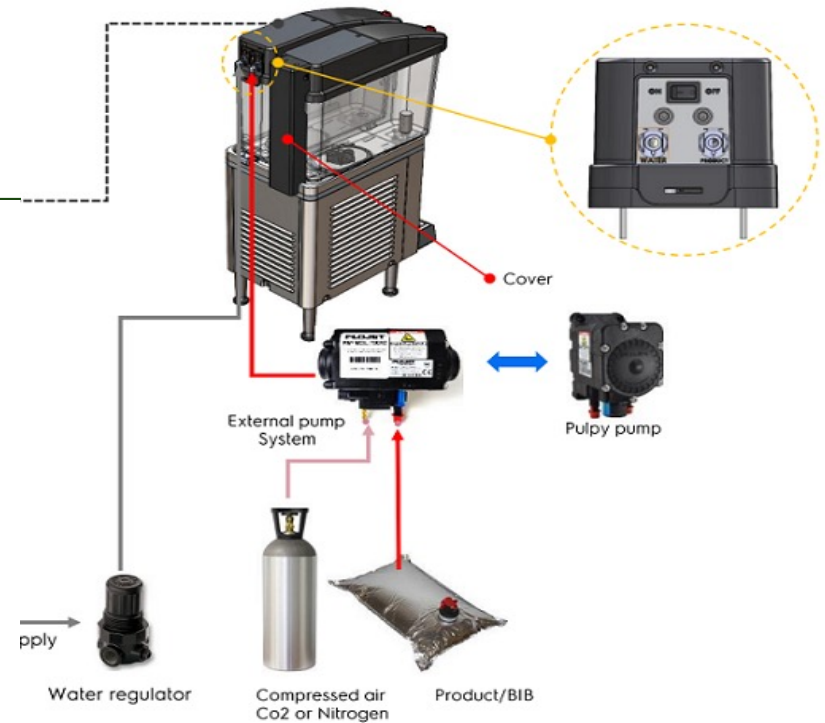


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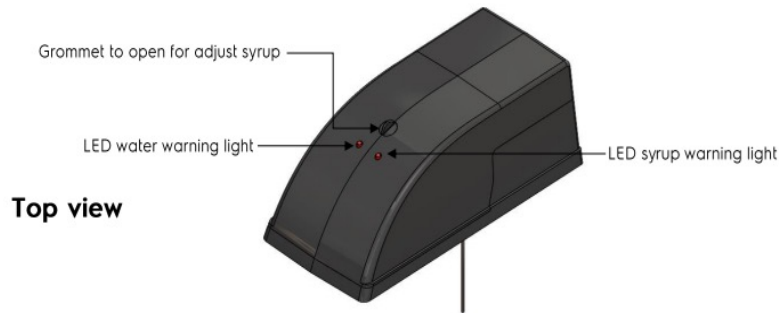
# Autofill Lid System Basics



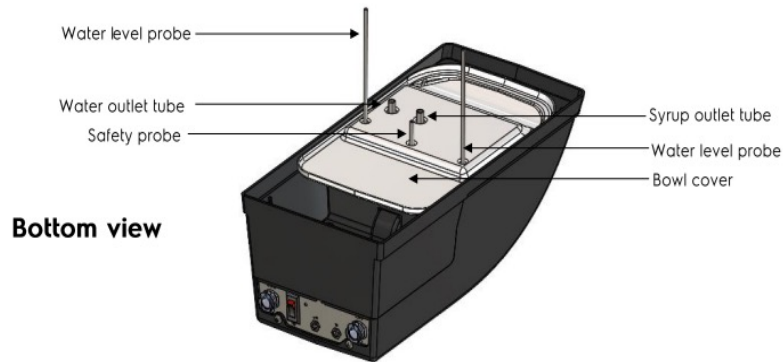
Simplicity Autofill Lid System features – This unique system automatically fills the bowls with water and concentrated syrup at the correct ratio and level in the bowl. The product ratio is adjusted by regulating valve on top of the lid and the water pressure regulator. It also incorporates an LED light for better product display. Another feature is its ability to detect water and syrup pressure and if it does not detect these pressures the autofill system will not fill the bowl. *Optional:* Gas pump with special models support for pulpy product.



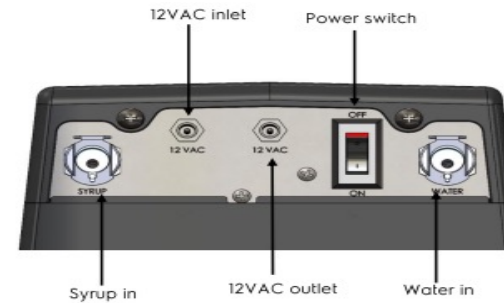
**Unit Overview**



**Top view**



**Bottom view**



The IPRO Autofill Lid System – This design is just like the Simplicity autofill lid system that automatically fills the IPRO slushy machine with water and concentrated syrup at the correct ratio and level in the bowl. This system has the same components as well in the inside the lid but also incorporates a bowl cover and microswitch that stops the autofill from filling the bowl when it is lifted off the machine. *However, this system does not have the LED light incorporated into the lid system.*



**I PRO Slush Machine** produces non-carbonated frozen beverage in double insulated bowls that is used in tandem with the I PRO Autofill Lid System. *Comes in 2 or 3 bowl configurations.*



**Simplicity Bubbler** is a premix dispenser with stainless steel base and clear plastic, easy-clean bowls that is used with in tandem with the Simplicity Autofill Lid System. *Comes in 2, 3 or 4 bowl configurations.*

## Autofill Delivery Systems Overview

This Syrup Delivery System is based on the concentrated bag in the box (BIB) syrup. This system requires the use of CO<sub>2</sub> operated pumps (Flojet T5000) that pull the syrup from the BIB and deliver it to the Autofill Lid Syrup inlet.



Syrup & Syrup Delivery System

The CO<sub>2</sub> Delivery System uses a pressurized tank connected with a pressure regulator to monitor the pressure of the tank as well as control the amount of pressure delivered to the BIB pumps.



CO<sub>2</sub> & CO<sub>2</sub> Delivery System

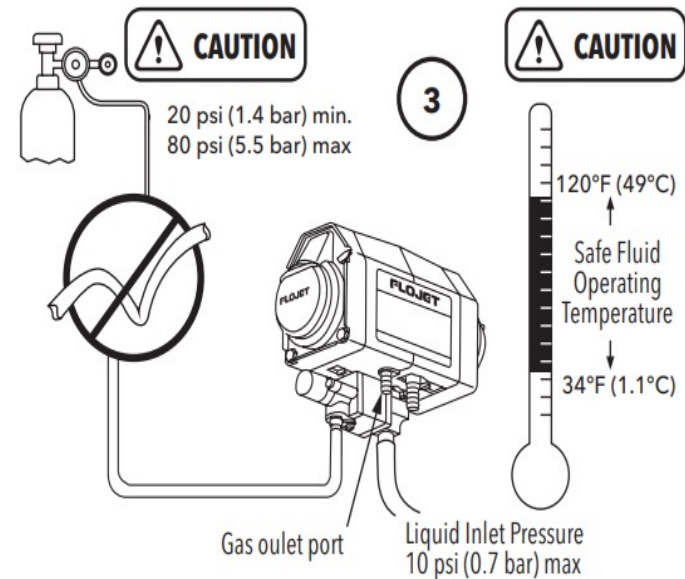
The in house Water Delivery System, incorporates a filter system that reduces chlorine, scale, taste, odor, cyst and particulates, while inhibiting bacteria growth within the filter through different technologies. This system will help deliver finely polished water of high quality for beverage drinks.



Water Delivery System

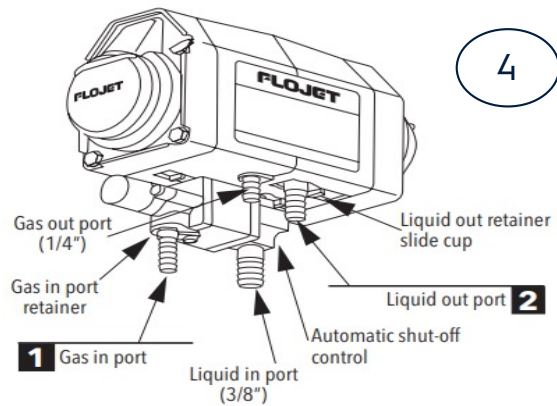
The FLOJET Model T5000 pump will operate automatically by starting and stopping on demand maintaining constant pressure at the dispensing valve. The pump has an auto shutoff valve which stops the pump by shutting off the gas supply when high vacuum builds up in the inlet line when the bag is empty. The pump will automatically restart when a new bag is connected and vacuum in the inlet line has returned to normal.

Refer to Figure 3. for minimum and maximum parameters

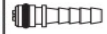


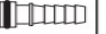





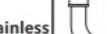









The FLOJET brass gas inlet fitting (fig. 4) includes a gas shut-off valve that automatically activates when the fitting is disconnected. This eliminates the need to shut off the gas supply to other systems in use. Gas pressure is restored when the port is plugged into the pump again.



### Available fittings

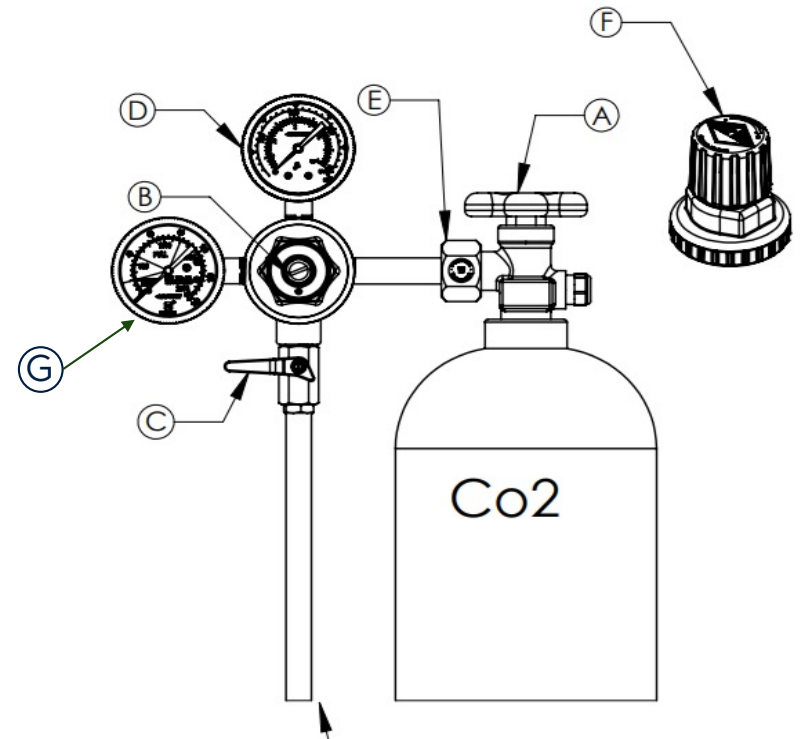
		1				2		
		1/4" HB		1/4" JG		1/4" HB	3/8" HB	1/2" HB
Brass								
	01510000	01520000				20324030	20325030	20606100
Brass								
	01521000	01523000*	01524000*	21000234B*		20607100	20608100	
Plastic								
	20325033				21000233B*		20325031	

\* 12 per kit

Classification: INTERNAL

- A. Main CO2 Tank Shutoff.
- B. Zinc Bonnet - Turn screw (clockwise) to increase pressure.
- C. Outlet valve to BIB pumps or just ¼" barbed fitting
- D. Regulated pressure gauge to BIB pumps.
- E. Tank Nut (with gasket inside) used to install regulator on the CO2 tank.
- F. Poly Bonnet - Pull cap and turn (clockwise) to increase pressure.
- G. Main tank pressure gauge.

**Note:** The recommended CO2 pressure to the BIB pumps is 55 psi.



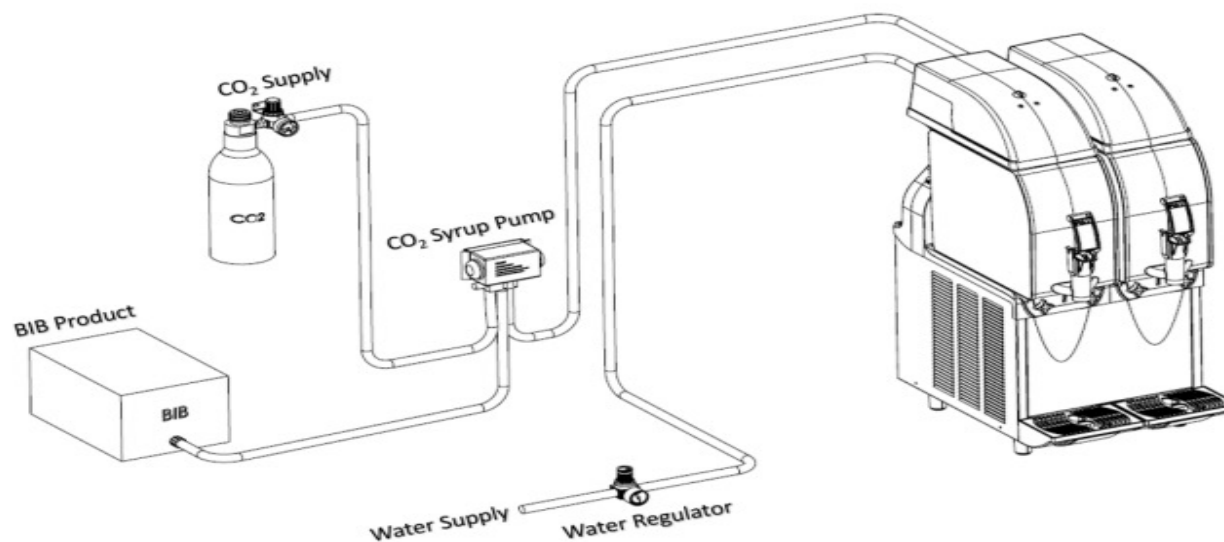
Tap into the existing water filtration system if there isn't a water filtration system, it is recommended to have one installed before connecting a water supply to the autofill beverage dispensing system.

Overall, a water filtration system is a valuable investment for any restaurant, contributing to better food and beverage quality, equipment maintenance, and customer satisfaction.



# Autofill Installation Basics

**Autofill Installation layout**

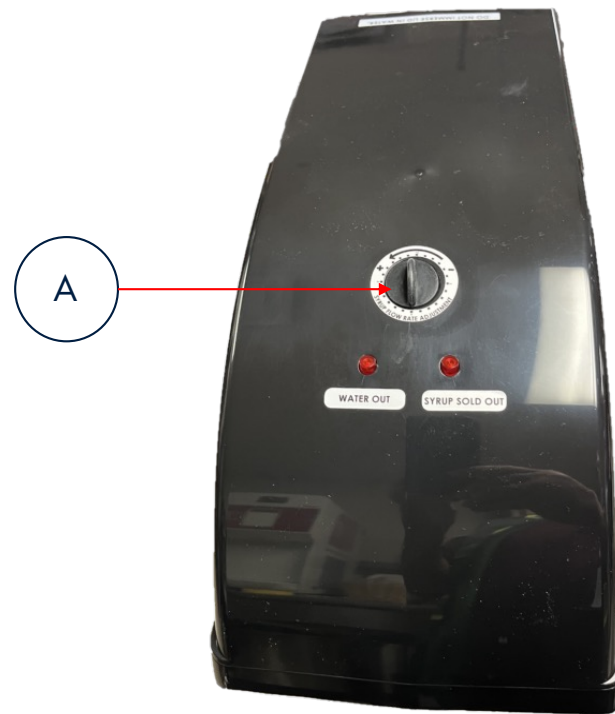


This layout is essential for setting up an autofill beverage dispensing system, ensuring proper connections and functionality. Refer to (Autofill\_Installation\_Partslist.pdf) for parts list used during the Autofill Installation Procedure (page 13).

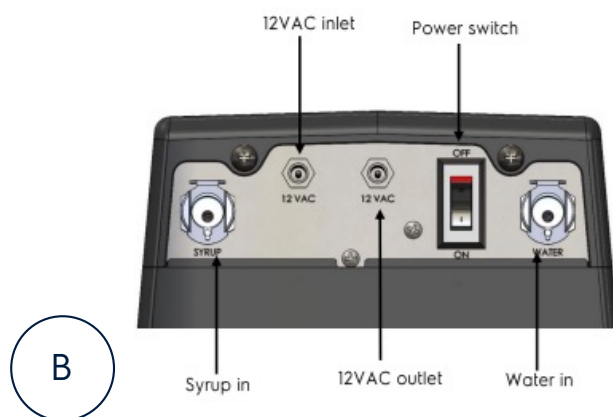
1. Connect CO2 tank regulator to CO2 tank with (B) CO2 tank wrench. *Apply gasket between the regulator & CO2 tank.*
2. Connect CO2 tank regulator output to CO2 Syrup Pump input, using 1/4" ID braided hose and proper size hose clamps (12.3mm).
3. CO2 Syrup Pump has two inputs, one from the CO2 supply and another from the syrup supply and one output leading to the dispensing system.
4. Connect 'Bag-In-Box' (BIB) with 3/8" ID Bag-in-Box hose with proper size hose clamps (17.0mm) & a BIB connector. Connect the other end of hose to Syrup Pump input with the same clamps.
5. Connect BIB output to autofill syrup input using 3/8" ID braided hose & 3/8" Valved Hose Barb with proper size hose clamps (15.7mm).
6. Install 1/4" MPT to 3/8" barbed fitting onto the input & output ports of the regulator (must use Pipe Thread Seal Tape on threads).
7. Install 1/8" MPT pressure gauge into the 1/8" output port of the water regulator (must use Pipe Thread Seal Tape on threads).
8. Lead a filtered water supply line with 3/8" ID braided hose & 3/8" ID Shutoff Valve into the water regulator to control flow and pressure to the autofill lid.
9. Connect 3/8" ID braided hose from regulator output to the autofill water input with 3/8" Valved Hose Barb with proper size hose clamps (15.7mm).

**Tools Needed:** A. Oetiker Pincers B. CO2 Tank Wrench C. 9/16 Wrench D. Flathead Screwdriver E. Hose Cutter F. Channel locks G. Pipe Thread Seal Tape.





1. Remove rubber gromet (A) on top of the Autofill Lid to expose the Syrup Valve Adjustment Screw.



2. Place Autofill Lid (B) on the IPRO/Bubbler and make the proper connections (C).
3. Turn on the power switch and ensure that the Syrup & Water is flowing into the bowl of the machine.



4. While the Autofill is filling the bowl in step 3, adjust the regulator pressure by turning the knob (D) counterclockwise to increase the pressure to 40psi (E).

5. When the target pressure is reached turn off the autofill power switch.

*Note: The pressure may measure higher if water is not flowing like in the image.*



6. To begin setting the proper brix ratio of water to syrup with the autofill lid we recommend using one of 2 methods. The first method you'll see here in this image is the use of a brix cup. It allows accurate measurement of water-to-syrup ratios for common beverage drinks. This cup has one chamber for the water output port on the autofill and 2 chambers for the syrup output port.

*Note: These chambers are set to a specific ratio of 5 to 1 or 5.5 to 1. In this example we'll be using the 5 to 1 side. (5 parts of water to 1 part syrup).*



7. To begin setting the proper brix ratio of water to syrup with the autofill lid, while the lid is in place on the bowl, lift it up so that the brix cup can be placed under the correct output ports, like in the image.

8. Turn on the power switch in the back of the lid to start filling the brix cup.

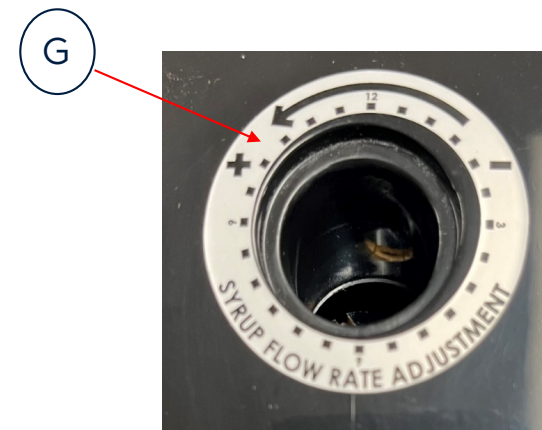
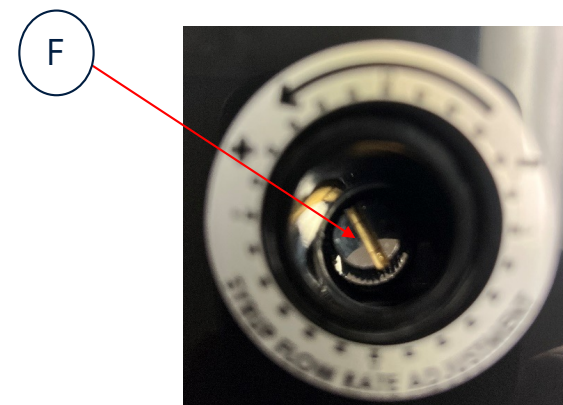
9. When the water level and syrup levels match up during the filling of the brix cup, this means that the ratio is set according to that side. In this image the syrup ratio is set to 5 to 1.



10. To adjust the flow of the syrup out of the Autofill syrup port, use a flat head screwdriver to adjust the syrup flow rate valve (F).

11. Figure (G) advises the direction to turn the valve screw to achieve the correct flow rate. *Counterclockwise will increase flow rate and clockwise will decrease the syrup flow rate out of the Autofill port.*

**NOTE:** You must run the Autofill system for at least 3 seconds to notice a change in the syrup flow rate.



12. The second method for setting the proper ratio mix of water to syrup with the autofill system is to use a refractometer.

Refractometer- is a laboratory or field device for the measurement of an index of refraction (refractometry). The index of refraction is calculated from the observed refraction angle using Snell's law.

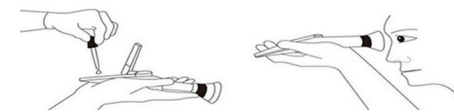
The angle of refraction determines the percentage of syrup there is in the water. To get an accurate measurement of the sample being tested , it's temperature must be near 20°C/68°F.

13. We recommend mixing a small portion sample in a container to the correct ratio to get a target reading because not all syrups brands have the same chemical composition.



14. Place a small portion on the blue glass piece of the refractometer and close the plastic lid onto it.

15. Read the percentage value of your sample that you mixed to the correct ratio like in the image. For example, if it measures in the image attached the sample reads 11%. This is will be the target % of the samples taken from the Autofill in the next steps.



16. To begin setting the proper brix ratio of water to syrup with the autofill lid & a refractometer, while the lid is in place on the bowl, lift the lid so that a cup can be placed under the correct output ports, like in the image.

17. Turn on the power switch in the back of the lid to start filling the cup. Turn off the power switch when the cup is near full.

18. If the target % is not reached refer to step 10 on how to adjust the syrup ratio.

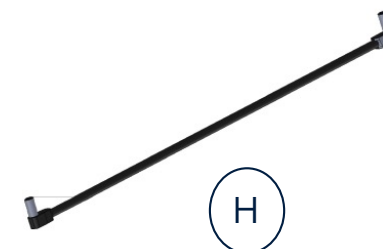
**NOTE: You must run the Autofill system for at least 3 seconds to notice a change in the brix % between sample readings.**



19. Using the provided jumper cable (H) to power the second, third or fourth Autofill lid attached to the machine. Repeat the brix cup or refractometer brixing procedure steps (1-18), whichever you prefer above.

20. We recommend filling one bowl at a time after all lids have been successfully installed and syrup flow rate set.

**NOTE:** Remember to install the bowl cover if you are installing the IPRO Autofill Lid System before completing the installation process. Refer to image.






## CRATHCO

### Clearly Clean Kit & Replenishment Case


Stera-Sheen Green Label pack size will be changing from packets to jars.

**Customer Benefits:**


- More product per case
- 1 to 2 oz. measuring options with included scoop
- Versatile for multiple applications




1 oz. packets    2/4 lb jars




Clearly Clean Kit



Same replenishment case for both kits!



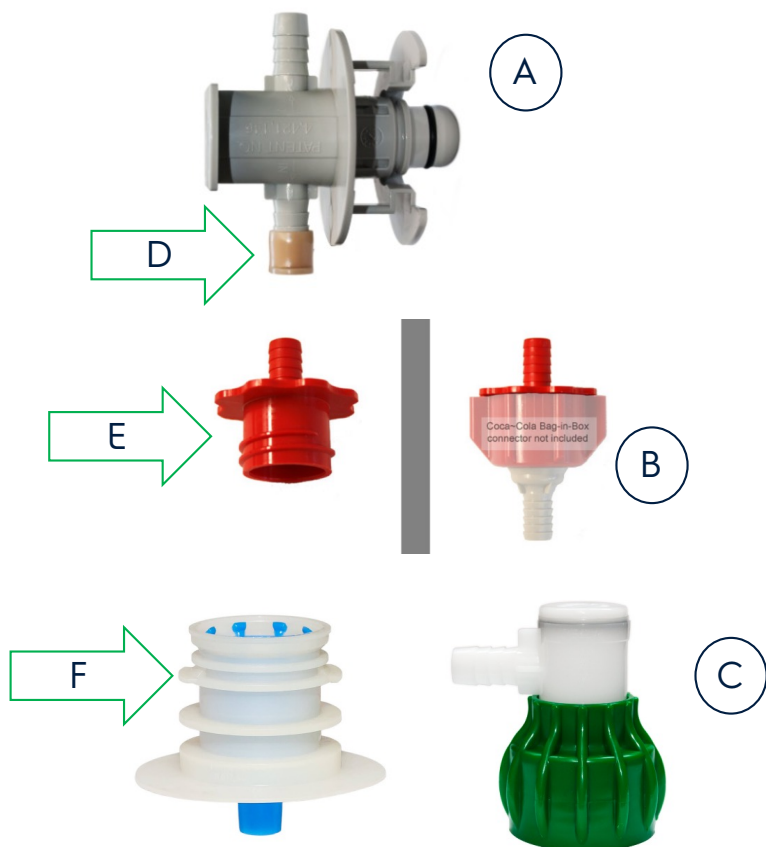
Frozen Treat-Ment Kit



Manufactured by  
Purdy Products Company  
sterasheen.com

For questions or more information, contact Marissa Olliges at (847) 526-5505 ext. 1006 or email [marissa@sterasheen.com](mailto:marissa@sterasheen.com).

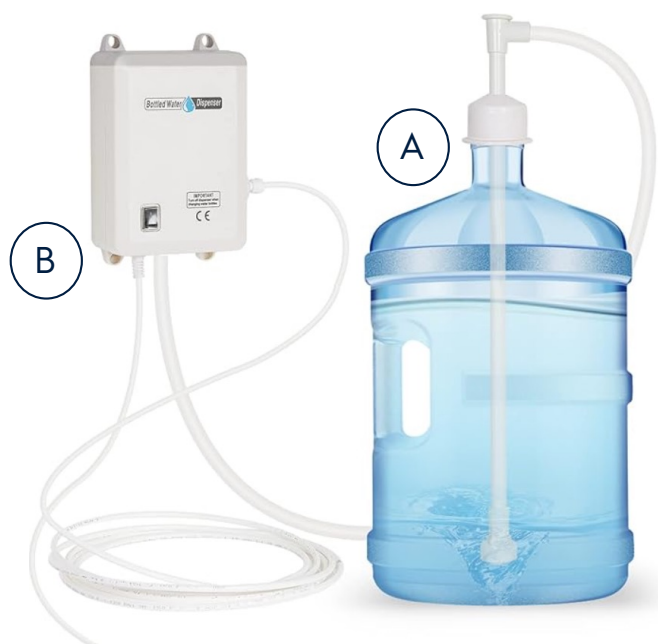
1. We recommend using our Crathco Clearly Clean Kit or any to clean the beverage machinery & autofill system.
2. Stera-Sheen Green Label can be used to clean ice cream machines, batch freezers, cappuccino machines, ice machines, ice makers, and more. Safe for all food contact surfaces.
3. Does not stain or damage metal, plastic, rubber, or glass and leaves zero residue. Emulsifiers remove and break down fat particles and oils. Easy-to-follow instructions are provided on the packaging.
4. Does not stain or damage metal, plastic, rubber, or glass and leaves zero residue. Emulsifiers remove and break down fat particles and oils. Easy-to-follow instructions are provided on the packaging.
5. No need for separate procedures to clean, delime and remove milk stone from your machine and parts. Water softeners and emulsifiers help ensure thorough cleaning and removal of any buildup.
6. NSF LISTED & APPROVED: Equipment properly cleaned and sanitized by Stera-Sheen will meet and exceed local and federal health agency standards. Formulated for restaurant-grade machines.



1. Always follow the IPRO, Simplicity or Autofill manufacture's direction in removal & attachment of all parts.
2. If the product you use with the autofill system uses a QCD BIB connector (A) then remove the cap (D) before submerging the connector in the sanitizer solution.
3. If the product uses a type (B) Coke BIB connector than you must attach the adapter (E) before submerging the connector in the sanitizer solution.
4. If the product uses a type (C) Pepsi BIB connector than you must attach the adapter (F) before submerging the connector in the sanitizer solution.



1. There are 2 methods to clean the Autofill Lid System. The first method will enable to clean the syrup lines, Autofill Lids and the dispensing machine, all at once.
2. This is the first method of cleaning.
3. Mix 2 oz. of Stera-Sheen in a bucket full of 2 gallons of warm water (may require more depending on the length of syrup lines).
4. Stir mixture until the Stera-Sheen has completely dissolved in the water.
5. Submerge the BIB connector into the sanitizing solution.
6. Use separate clean buckets to drain the dispensing machine & syrup lines.
7. Begin draining the bowl & filling the buckets until you see clear liquid coming from the syrup output port on the autofill lid. *Note: The sanitizer is food grade safe, so don't worry if a little bit gets into your drink mix.*
8. Drain dispensing machine bowl completely.
9. Repeat steps 3-9 above for the second or third bowls of the dispense machine.
10. Disassemble all bowl assemblies on dispensing machine and place parts into to soak for 1 minute in the sanitizing solution. Use the scrub brush to remove any hard to clean surfaces.
11. Remove bowl assembly parts from sanitizing solution and allow to air dry.
12. Reassemble bowl assembly parts onto dispensing machinery according to the manufacture's instructions.



1. This is the second method of cleaning the Autofill system & dispensing machine without having to clean the syrup lines. This method requires the use of the AF External Pump Cleaning Kit listed in the (Autofill\_Installation\_Partslist.pdf).
2. Drain dispensing machine bowl completely.
3. Mix 2 oz. of Stera-Sheen in a bucket full of 2 gallons of warm water (may require more depending on the length of syrup lines).
4. Stir mixture until the Stera-Sheen has completely dissolved in the water & pour this mixture into the water bottle (A).
5. Connect the water pump (B) to the water bottle (A) and plug the power chord from the water pump to a 120-volt receptacle.
6. Use the 2 valved connectors of the output of (B) to connect to the syrup & water inputs of the autofill lid.
7. Turn on the Autofill Lid & begin filling the bowl until the Autofill Lid stops filling the bowl. Drain the bowl.
8. Repeat steps 2 thru 7 for the second or third bowl of the dispensing machine.
9. Disassemble all bowl assemblies of the dispensing machine and place parts into a sink to soak for 1 minute in the sanitizing solution. Use the scrub brush to remove any hard to clean surfaces.
10. Remove bowl assembly parts from sanitizing solution and allow to air dry.
11. Reassemble bowl assembly parts onto dispensing machinery according to the manufacture's instructions.

Symptoms	Causes	Solutions
Autofill lid does not fill & Water Out LED is ON	Water pressure is low	Inspect water supply & water pressure regulator
Autofill lid does not fill & Syrup Out LED is ON	Bag-in-box is empty	Replace Bag-in-box
Autofill lid fills to safety probe	Level probe connection failure	Check level probe wiring and reconnect if disconnected or replace with new lid if wiring is damaged.
Syrup or water leaking out of autofill lid	Possible damage inside of autofill lid	Replace lid with new one
Autofill lid does not stop filling	Possible damage to wiring or control board inside of autofill lid	Check wiring harness in the autofill lid for proper connections or replace lid with new one.

Part of



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Professional  
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