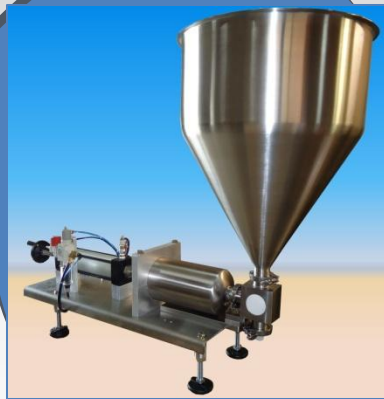
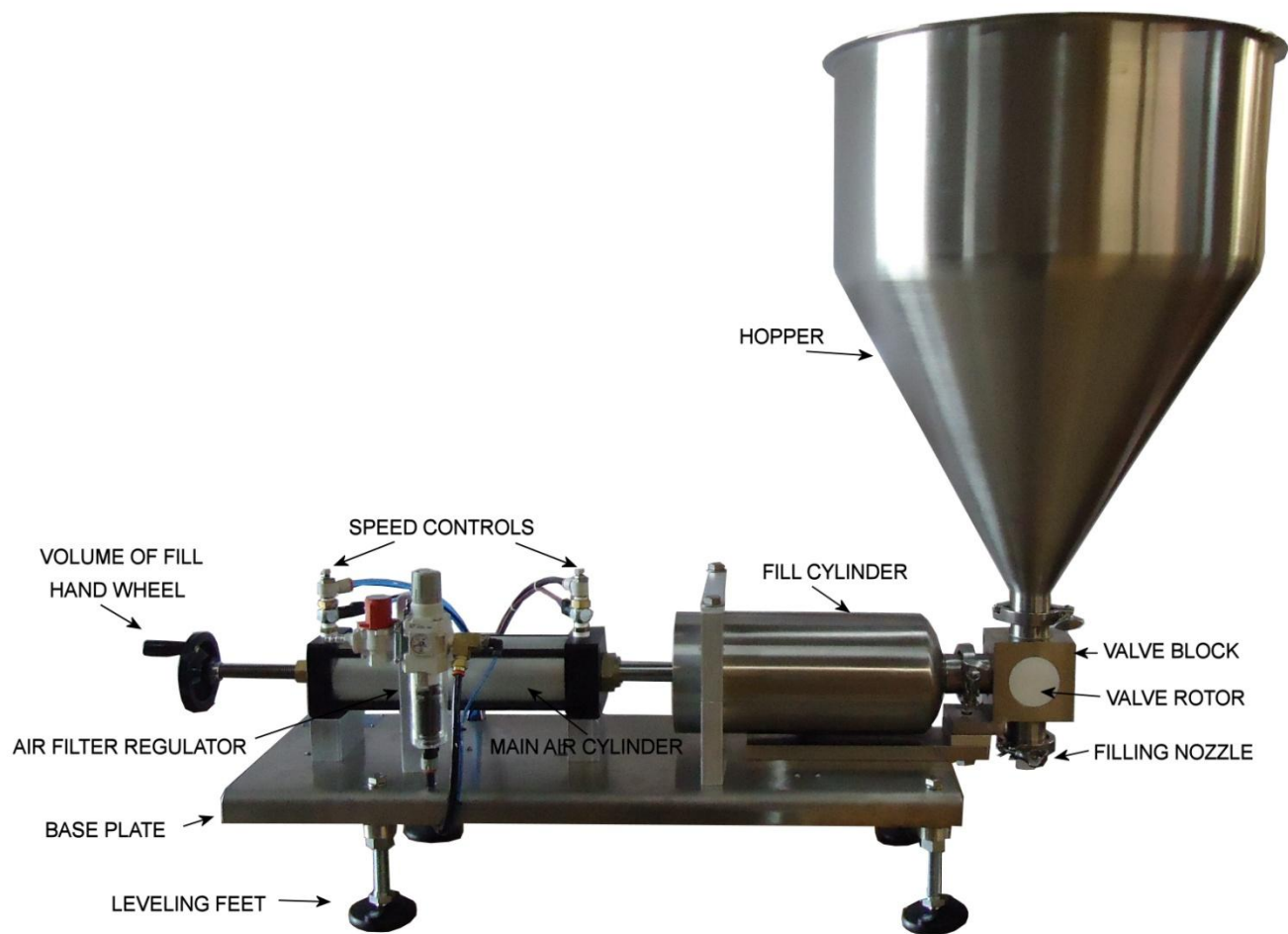




# Fillmaster

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# **Fillmaster Table Top Filling Machine**

## **A. INSPECTION UPON ARRIVAL**

Your GEYER filler has received careful final inspection and has been test run at the factory prior to shipment. It has been crated securely to insure delivery without damage or loss of parts. Upon its arrival at your plant, please inspect the shipment for any damage or loss in transit. If there is any noticeable damage, please call us at (215) 322-2122. Be sure to keep all packing material (i.e. crate, braces, and padding) for the first 30 days, in case machine needs to be returned for repair or exchange.

## **B. LOCATING THE MACHINE**

Your GEYER filler should be set up in a location which will allow enough space around the machine for the operator and provide easy access for maintenance purposes.

**C. LEVELING THE MACHINE** Make sure that the machine is placed on a level surface.

## **D. ANCHORING THE MACHINE**

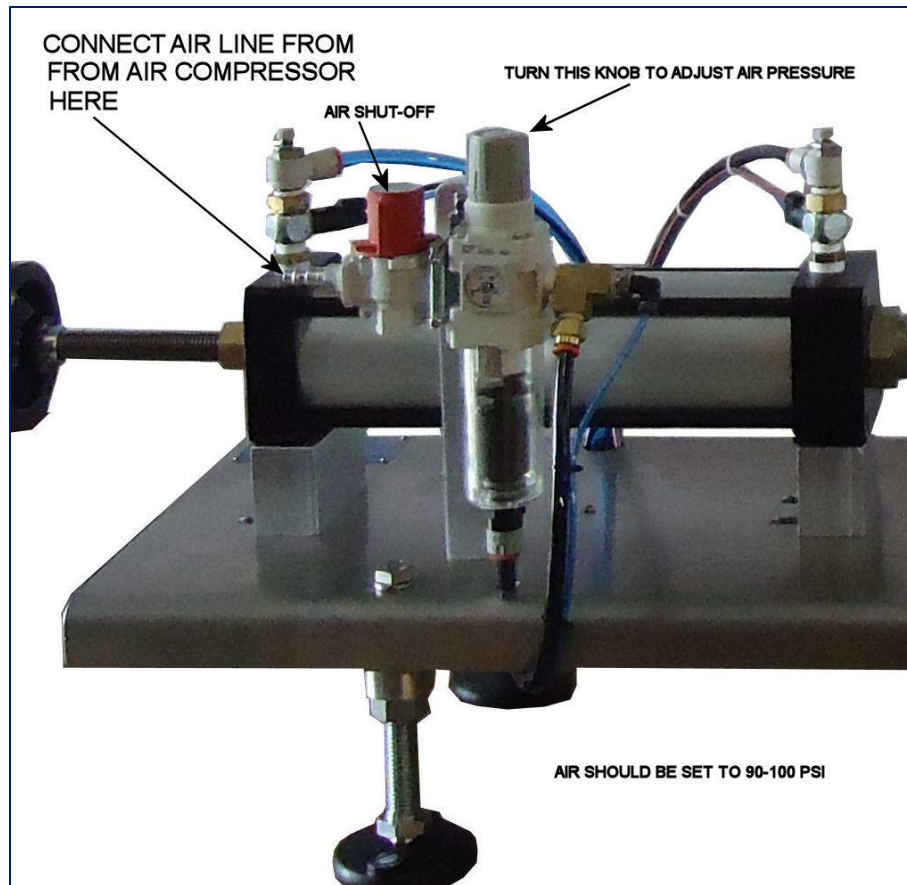
If using the table top version of the Fillmaster 5000, the back legs of the machine have been pre-drilled so that the machine can be anchored to a table or machine stand. Once the hopper is filled with product, it may make the machine top heavy. Keeping the back legs anchored will prevent the machine from tipping.

## **D. ASSEMBLING THE MACHINE**

Generally, after the filler has been tested in our plant, it is shipped to you set up ready to operate. Remove all tape and other materials used in shipping the machine. If any Parts are unattached for shipping purposes, follow the instructions on the attached tags for re-assembly. If you have any questions please call us for technical assistance.

## **E. AIR CONNECTIONS**

Your machine has been supplied with an air Filter / Regulator, which is necessary for air operation. You will need to run a line for your air compressor to the trio unit. There is a dial indicator on the trio unit (directly above the pressure gauge) for setting the required amount of air pressure (generally 100 psi). The unit will already be preset from testing at the factory. However, depending upon varying factors (different products, speeds, etc.) you will have to make adjustments to this setting. **Note: All the air components on the Fillmaster are self lubricating, No oil is needed.**

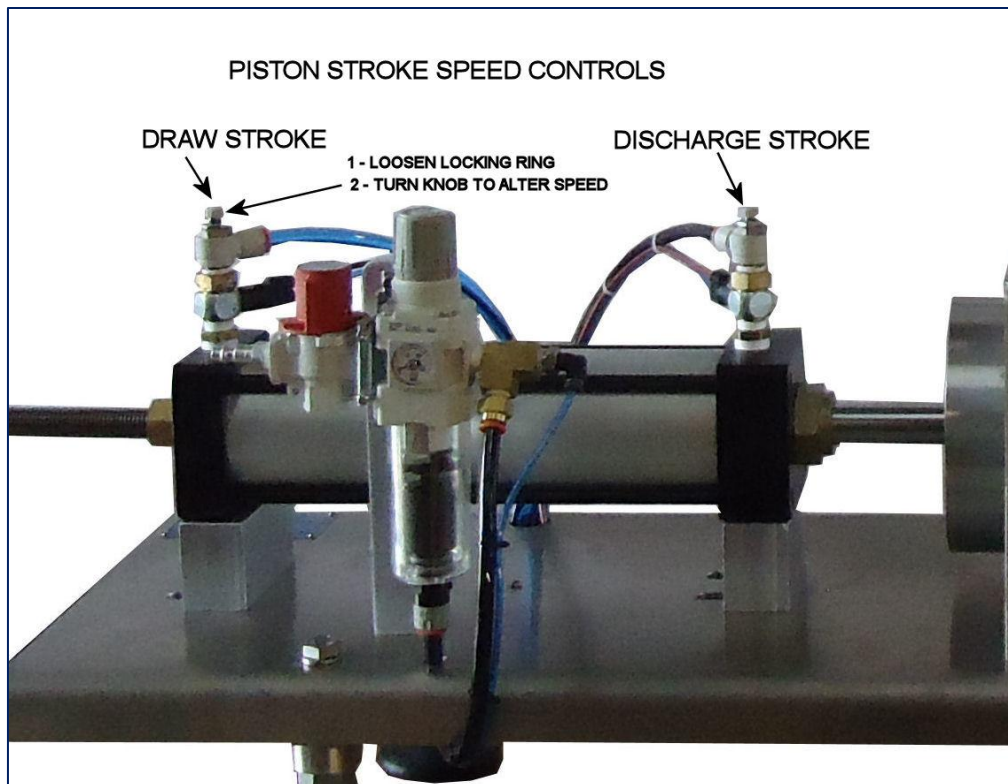


## F. MACHINE SPEED

The Fillmaster has been designed to operate on demand. In other words, a fill cycle is initiated when the operator presses the foot pedal. The machine will go through and complete one fill cycle and then automatically shut off until the foot pedal is pressed again. The machine will operate as fast as the operator can get an empty container under the nozzle and press the foot pedal (filling the container).

## G. ALTERING THE MACHINE SPEED

The Fillmaster has been supplied with two air cylinders. One to drive the piston (inside the fill cylinder), and one at the bottom of the hopper (next to the fill cylinder) to operate the valve mechanism. These air cylinders have been supplied with two flow controls each (one at either end of the cylinder and on top). Each flow control has an adjusting screw. By turning the knob you can adjust the speed of the forward stroke (the flow control closest to the discharge of the machine) and the return stroke (the control farthest from the discharge) of the air cylinder. Please note that these flow controls have been preset by the factory for the optimal speed and timing. However, you may want to make a small adjustment to increase (or decrease) the overall speed of the fill cycle, or just the speed of the piston intake or discharge stroke.



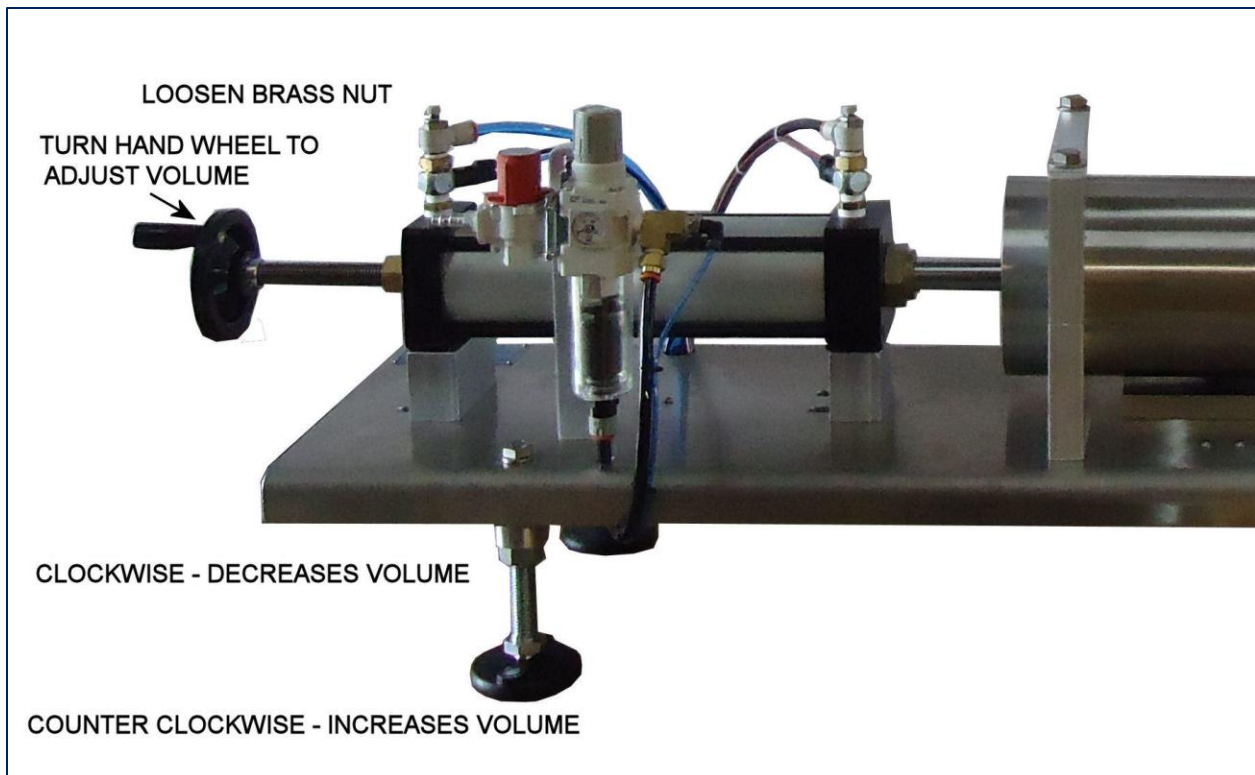
## H. ADJUSTMENT FOR QUANTITY OF FILL

The volume of product that this filling machine dispenses depends upon the size of the inside diameter of the fill cylinder that is supplied with this machine. (Other sizes can be obtained from our facility, just call 800-453-6213) And the length of the stroke that the piston takes. The stroke of the piston is adjustable, thereby allowing the machine to deliver different volumes.

## I. ADJUSTMENT FOR QUANTITY OF FILL - CONTINUED

Each size cylinder has a particular fill "range". The smaller the diameter of the cylinder the smaller the range of fill. In general, the best accuracy of fill achieved when the cylinder has a small diameter and a long piston stroke is taken. This is why a number of cylinders may be required if you are filling a variety of container sizes.

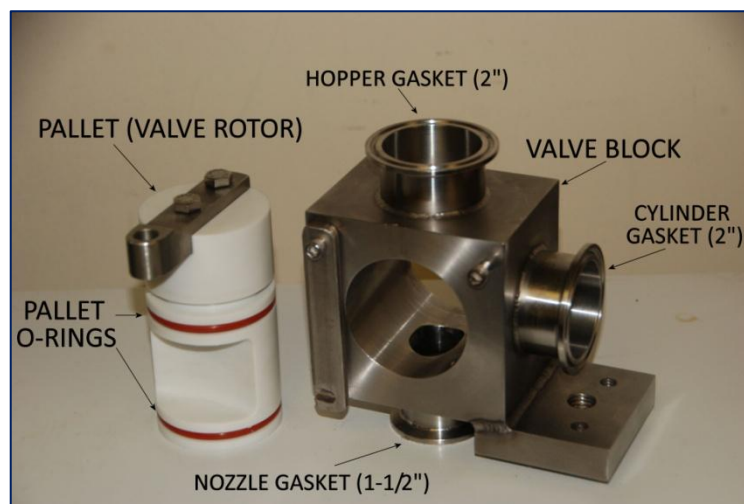
To make an adjustment in volume of fill, turn the hand wheel at the end of the air cylinder. You must first loosen the nut on the end of the threaded rod to turn the hand wheel. Turning the hand wheel clockwise will decrease the volume of fill. Turning the hand wheel counterclockwise will increase the volume of fill. Once the proper piston stroke is found, tighten the nut on the threaded rod to lock in the stroke and seal the air cylinder itself.



## I. VALVE ASSEMBLY

The main valve block is located underneath the hopper. The cylinder and nozzle are attached to it. Inside the valve block, the valve rotor (also known as the pallet) moves back and forth each fill cycle. On top of the valve block is a manifold that directs product from the hopper to both ports of the valve.

The valve rotor can be removed from the valve block by first removing the quick pin on the pallet air cylinder clevis. Then, loosen the wing nut on the rotor release lever and lift it. The valve rotor can be then be pulled out. Please be gentle with this item. Check the condition of the O-ring and replace if necessary. Once cleaned it is best to put a very slight amount of a sanitary lubricant on the diameter of the valve rotor before inserting it back into the valve block.





## **J. STARTUP**

Once the air connection has been made, and you have tried dry cycling the machine to make sure it is functioning, you may now test fill. It will take one or two cycles to prime the filling head and for product to come out the filling nozzle. Check the volume of fill and if necessary make adjustments as explained in paragraph I above.

### **SOME IMPORTANT NOTES:**

1. Keep the O-rings on the piston head as well as the O-ring on the valve plug well lubricated. We suggest using Sana-Lube #2000 Food Grade Lubricant Which may be ordered through us. Call Tim at (215) 322-2122.
2. Use lukewarm water to clean filler. Extremely hot water may cause the valve rotor to expand.
3. Before filling, make sure all the sanitary clamps are hand tight and all gaskets are in place.

## GENERAL SAFETY GUIDELINES:

- I. Please make sure that all operators use extreme caution when operating, cleaning, and repairing the filling machine.
- II. Never clean machine with hands while it is in operation. It is recommended that you turn the machine off while cleaning it.  
**This is extremely important when cleaning the valve!!**
- III. Never place hands or fingers around moving parts, especially the valve and Pallet (rotor). The valve and pallet are the main operating parts directly beneath the filler's hopper. The pallet is a mechanically operated cut off device and extreme caution should be exercised while the machine is in operation.
- IV. While cleaning the machine, making adjustments or replacing parts, please turn the machine off first before performing these operations, and make sure that it can not be accidentally restarted, by using the Safety Shutoff Valve.
- V. If using the table top version of the Fillmaster 5000, the back legs of the machine have been pre-drilled so that the machine can be anchored to a table or machine stand. Once the hopper is filled with product, it may make the machine top heavy. Keeping the back legs anchored will prevent the machine from tipping.
- VI. Philapack LLC has made every effort to provide adequate guarding to provide you with a safe machine. However, please remember this is a machine and it has many moving parts. Good judgment and caution should be exercised at all times when dealing with the machine. It is the responsibility of the buyer to inspect the filler upon receipt and inform us if the machine has any missing guards or lacks reasonable safety protection. It is also the responsibility of the buyer to make sure that all operators have been adequately trained and understand the above safety guidelines completely.

## Machine Cleaning / Maintenance

These Procedures should be performed at least twice a week to keep the machine in top running order and to maintain cleanliness. **(Food Plants must perform this cleaning procedure once a day, after run is complete, to prevent growth of bacteria.)** If there are any questions on part names in this section, refer to the drawing on page 7 and photo on page 9.

The following procedure should take no more then 10 minutes, once you become familiar with it.

Make sure the air compressor is disconnected. (There is an air connector right as the air comes into the machine. The air will be dumped, and the machine is now completely inoperable, just like unplugging a blender from the wall. It is not necessary to cycle the machine, since it can not, the foot pedal can be anywhere as long as it is out of the way.)

1. Next remove the hopper.
2. Then remove the pin in the piston rod clevis connecting it to the pallet crank.
3. Next remove the cylinder from the valve and it push back out of the way.
4. Now you can remove the bolt holding the valve to the machine base.
5. Then to clean the valve rotor (pallet) you must raise the lever on the side of the pallet crank and push out the valve plug. (Take note of the position of the pallet crank)
6. Go back to the machine and, you should be able to easily pull the cylinder off the piston.
7. You can now remove the piston head by unscrewing it from the air cylinder rod. (Nonfood plants may clean the piston in place.)
8. Now clean all the parts, you can use any cleaner. (Soap and water usually works fine (but you will probably know what works best to clean an dissolve your product, **food plants should use a sanitizer** at this time inspect the parts, O-Rings, and seals for wear. (Replace worn or damaged pieces)
9. Once everything is cleaned you can reassemble the above parts, by following this procedure.

## **Machine Cleaning / Maintenance – continued**

10. Start by screwing the piston on the air cylinder rod. Apply some lubricant on the piston and just at the Open end of the cylinder (see section "Lubricating Your Machine" page 11) Slide the cylinder over the piston. (Don't cover the opening in front or you won't be able to push it on the because, the air needs to escape)
11. Lubricate the valve rotor(pallet) and valve and then reassemble.
12. Re-attach the valve to the base and tighten the bolt all the way.
13. Now re-connect the cylinder to the cylinder port in the valve.
14. Then insert the pin into the piston rod clevis and the pallet crank. (See reference in section marked "Keep all Threaded Parts Tightened "page 11)
15. Finally re-install the hopper and re-connect the air compressor. And the machine is ready to stat filling again

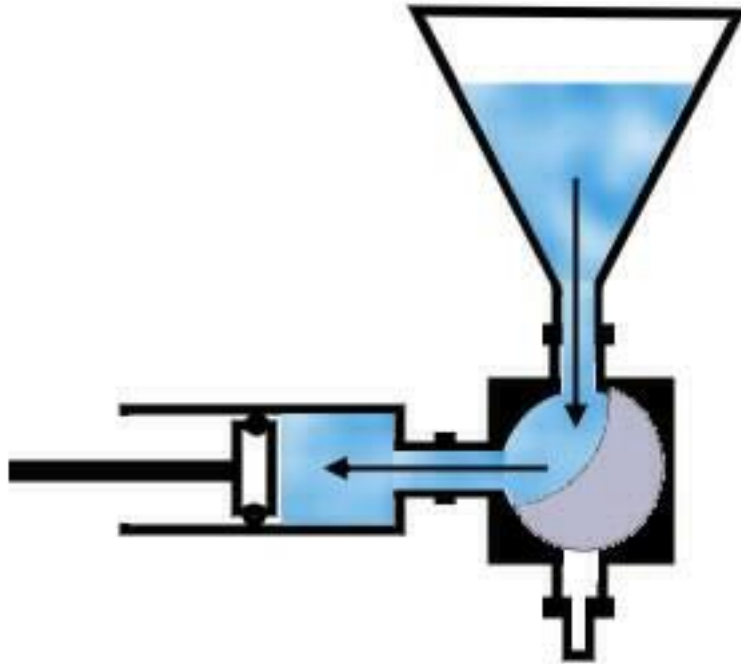
All you should need for this maintenance is a 5/16" wrench. We do offer a complete tool kit with a large assortment of tools. Contact us for pricing at (215)379-1234

## **Lubricating Your Machine**

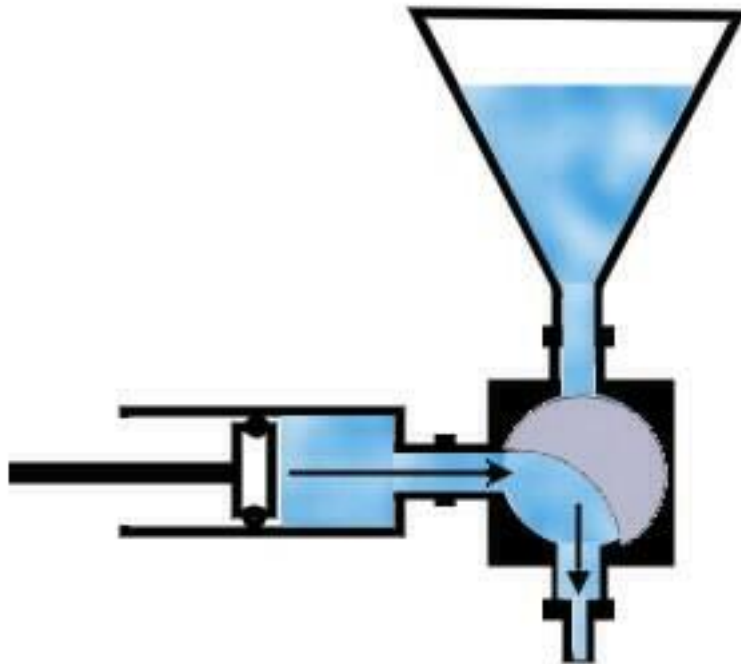
After cleaning the product contact parts and prior to reassembling the machine, make sure to apply a small amount of Sana-Lube #2000 or other food grade lubricant to the piston and valve rotor (Pallet). Make certain to coat the entire part, but do not over apply it. You can order Sana-Lube #2000 by calling us at (215)379-1234 or email to [parts@packagingenterprises.com](mailto:parts@packagingenterprises.com). Also, it is advisable to apply some Sana-Lube #2000 to the air cylinder rods periodically to help maintain a smooth operation.

## How it works!

- I. Piston takes an intake stroke drawing product from the hopper through a three way valve.

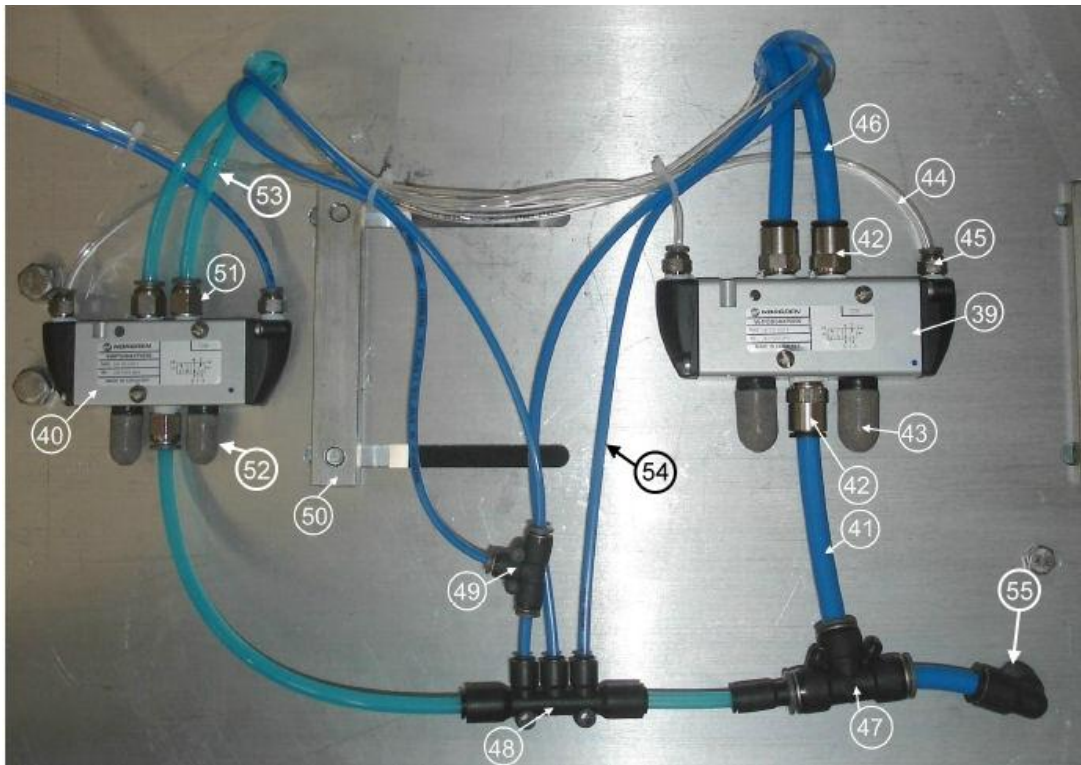
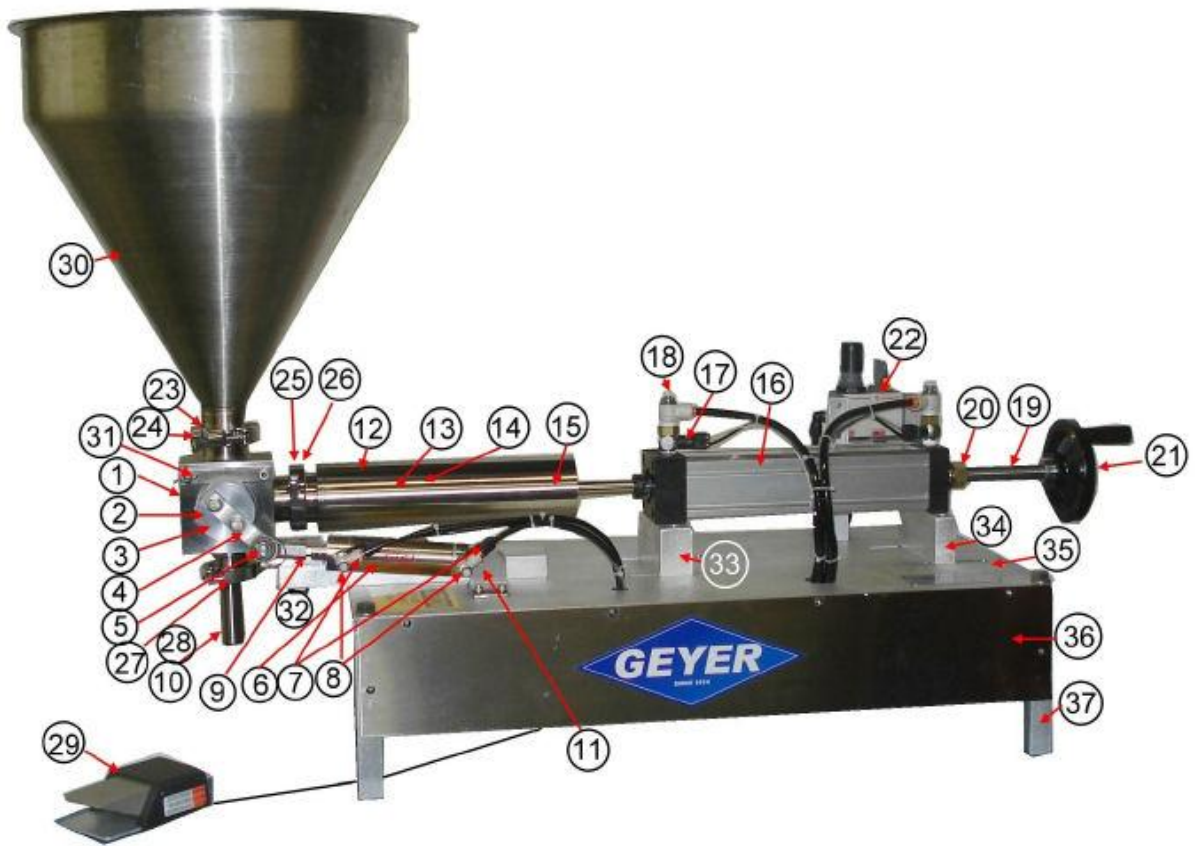


- II. The valve Rotor (pallet) shifts position, and the piston moves the product from the cylinder to the filling nozzle and into the container.



- III. The valve Rotor (pallet) shifts to its original position, cutting off the flow of product.  
(Piston full forward)





## Fillmaster 5000 filling machine parts list

Item Number	Description	Size	Material	Unit
<b>Diagram - Page 1</b>				
1	Three Way Valve		Stainless Steel	1
2	Pallet (Valve Roter)		PET	1
	Chrome Plated Pallet		Stainless Steel	1
3	Pallet O-Rings (not visible)			2
4	Pallet Crank		Stainless Steel	1
5	Pallet Crank Pin		Stainless Steel	1
6	Pallet Air Cylinder		Stainless Steel	1
7	Pneumatic Sensor	1/8 " NPT		2
8	Flow Control	1/8" NPT		2
9	Pallet Air Cylinder Rod End			2
10	Filling Nozzle			1
11	Pallet Air Cylinder Pivot Bracket (2 pieces left and right)		Stainless Steel	1 Set
12	Fill Cylinder		Stainless Steel	1
13	Fill Piston (not visible)			1
14	Fill Piston O-Rings (not visible)			2
15	Alignment Coupler (not visible)		Stainless Steel	1
16	Main Air Cylinder	2.5" x 10"		1
17	Pneumatic Sensor	3/8" NPT		2
18	Flow Control	3/8" NPT		2
19	Quantity Adjustment Rod		Stainless Steel	1
20	Locking Nut and Sealing Washer			1 Set
21	Quantity Adjustment Hand wheel			1
22	Filter/Regulator with lockout			1
23	Hopper Sanitary Clamp	2"	Stainless Steel	1
24	Hopper Sanitary Clamp Gasket (not visible)	2"		1
25	Cylinder Sanitary Clamp	2"	Stainless Steel	1
26	Cylinder Sanitary Clamp Gasket (not visible)	2"		1
27	Nozzle Sanitary Clamp	1-1/2"	Stainless Steel	1
28	Nozzle Sanitary Clamp Gasket (not visible)	1-1/2"		1
29	Foot Switch			1
	Foot Switch Internal Valve (not visible)			1
30	Hopper		Stainless Steel	1
31	Pallet Locking Lever		Stainless Steel	1
32	Valve Mounting Bolt		Stainless Steel	1
33	Air Cylinder Forward Mounting Block			1
34	Air Cylinder Rear Mounting Block			1
35	Base Plate			1
36	Base Side Guards		Stainless Steel	1 Set
37	Legs			4



## Fillmaster 5000 filling machine parts list

Item Number	Description	Size	Material	Unit
40	Pallet Air Valve	1/4" Tube		1
41	Main air valve Air Supply Tube	3/8"		
42	Male Tube Fitting	3/8" Tube		3
43	Muffler - Main Air Valve			2
44	Sensor Signal Tube			
45	Male Tube fitting - Sensor Line			4
46	Main Air Cylinder Tube			1
47	Tube Tee with Reducer	3/8" to 1/4"		1
48	Multi Tee			1
49	Tube Tee	5/32" Tube		1
50	Main Air Cylinder Mounting Bar		Stainless Steel	2
51	Male Tube fitting	1/4" Tube		3
52	Muffler - Pallet Air Valve			2
53	Pallet Air Cylinder Tube			
54	Sensor Pressure Tube			
55	Tube Elbow	3/8" Tube		1

Prices are available by going to our website [www.philapack.com](http://www.philapack.com) and clicking on "Parts and Service".