



# ACCU-MASTER

table-top filling machine



## Installation, Operation and Maintenance Data

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# Table Of Contents

<b>Table Of Contents</b>	<b>Page 1</b>
<b>Inspection Upon Arrival</b>	<b>Page 2</b>
<b>Locating The Machine</b>	<b>Page 2</b>
<b>Leveling The Machine</b>	<b>Page 2</b>
<b>Assembling The Machine</b>	<b>Page 2</b>
<b>Air Connections</b>	<b>Page 2</b>
<b>Machine Speed</b>	<b>Page 2</b>
<b>Altering The Machine Speed</b>	<b>Page 3</b>
<b>Continues Mode</b>	<b>Page 3</b>
<b>Adjustment For Quantity Of Fill</b>	<b>Page 3</b>
<b>Startup</b>	<b>Page 4</b>
<b>Some Important Notes</b>	<b>Page 4</b>
<b>Safety Procedures</b>	<b>Page 5</b>
<b>Machine Maintenance</b>	<b>Page 6</b>
<b>Lubricating Your Machine</b>	<b>Page 7</b>
<b>Keep all threaded parts tightened</b>	<b>Page 7</b>
<b>How it works</b>	<b>Page 8</b>
<b>Diagram of Machine Parts</b>	<b>Page 9</b>

## *Accu-Master 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

### ***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 properly leveled by placing it on a level surface.

### ***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 a Trio Unit (Filter, Regulator, Lubricator), 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 Accu-Master are self-lubricating, No oil is needed.**

## ***F. MACHINE SPEED***

The Accu-Master 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 Accu-Master has been supplied with two air cylinders. One to drive the piston (inside the fill cylinder), and one on the top of the hopper to operate the valve mechanism. These air cylinders have been supplied with two flow controls each (one at ether end of the cylinder and on top). Each flow control has an adjusting screw. By turning the screw with a small screwdriver 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 pre-set 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. CONTINUOUS MODE***

The machine has been sent to you equipped with a foot pedal. Once the foot pedal is depressed, the machine will complete one fill cycle and then shut off, until the foot pedal is depressed again. If you wish to have the machine cycle continuously, you can perform the following procedure. **First disconnect the air supply.** There are two lines of air tubing coming from the filler to the foot pedal. About 6 to 12 inches from the foot pedal there are two plastic instant tube fittings. By pulling back on the end of either one of the plastic connectors in one hand, and with the tubing in the other hand, the tubing will be released (see illustration below). (You are in the process of disconnecting the foot pedal from the machine). On the second tube, remove the tubing with the fitting still attached. At this point you should have one tube with a Fitting and the second one is just the tube by itself. Connect the open tube into the open end of the fitting on the other tube (closing the loop). When the air is reconnected the machine will cycle continuously

## ***I. 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 with this machine

## ***I. ADJUSTMENT FOR QUANTITY OF FILL - CONTINUED***

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. Each size cylinder has a particular fill “range”. The Smaller the diameter of the cylinder the smaller the range. 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.

## ***J. START-UP***

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’Rings on the valve plug well lubricated. (We suggest using Sana-Lube #2000 Food Grade Lubricant (Which may be ordered throw us at (215)379-1234))
2. When you are replacing the hopper onto the machine make sure that it is properly centered to allow the valve plug to move up and down easily.
3. When filling lower viscosity products it may seem that the filler is making a two stage fill. This can be minimized by making small adjustments to the air cylinder flow controls (as depicted in paragraph G above). However the machine will still fill accurately.
4. Use lukewarm water to clean filler. Extremely hot water may cause the valve plug to expand

## Machine 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 the next page.

This 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.)

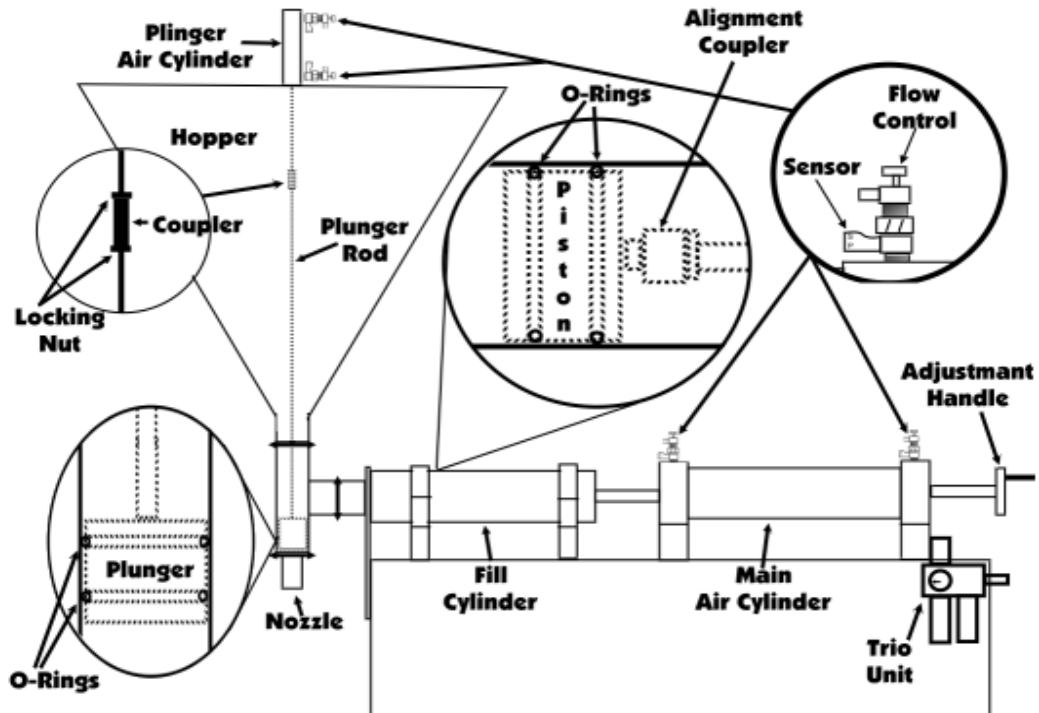
- Next disconnect the air tubes running to the air cylinder at the top of the hopper. (See the diagram on the second page, that explains how)
- Then remove the filling head with hopper, by removing the quick disconnect clamp attaching it to the fill cylinder.
- Next remove the bridge from the top of the hopper. (There are two sets of nuts and bolts, one on either side) Carefully pull the plunger out of the tee (you may need to loosen the clamp holding the tee to the hopper), **be sure not to bend the rod.** Then you can remove the tee from the hopper.
- Go back to the machine, and now you can remove the two screws on the top of the plate holding the cylinder to the front of the machine base. Next loosen the screws on the front of the plate and push it down below the fill cylinder (you may need to remove 2 of the screws to get it low enough)
- Then loosen the nuts and bolts on the hex clamps, that hold the cylinder in place; you may wish to remove the top half of the hex clamps all together (what ever you feel most comfortable with).
- Now you should be able to easily pull the cylinder off the piston. (Sometimes it takes one person to hold the machine, so it doesn't move, and the another person to pull the cylinder off.) The piston can be washed in place if you would like or you could remove it with a wrench to hold the coupler and just unscrew it (you may need to wipe the piston off to get a good grip)
- Now clean all the parts. You may use any type of cleaner. (soap and water usually works fine, but you will know what best cleans your product)
- Once everything is clean you can put it back together , as follows.
- Start by putting some lubricant on the piston and just at the beginning of the cylinder (see section "Lubricating Your Machine") and slide the cylinder over the piston (don't cover the opening, you won't be able to push it on the because, the air has to escape) again two people are better than one.

- Reattach the plate to the cylinder, (make sure the front of the cylinder touches the back of the plate) now position the cylinder so the plate is against the front of the base. Then tighten the hex clamps so that they hold the cylinder in place. (don't over or under tighten) Then tighten all the bolts on the plate.
- Next reattach the hopper to the tee, and lubricate the plunger and carefully push the plunger through the opening in the base of the hopper. Using the nuts and bolts you removed earlier secure the bridge to the top of the hopper.
- Now reconnect the fill head with the hopper to the front of the cylinder, and reconnect all the air tubes (A to A, B to B)
- 15. Finally reconnect the air compressor. (You're back in business)

All you should need for this maintenance procedure is two adjustable wrenches, a 3/16, and a 5/16" allen wrench. We do offer a complete tool kit with a large assortment of all kinds 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 or other food grade lubricant to the piston and valve plunger. 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@philapack.com. Also, it is advisable to apply some Sana-Lube #2000 to the air cylinder rods periodically to help maintain a smooth operation



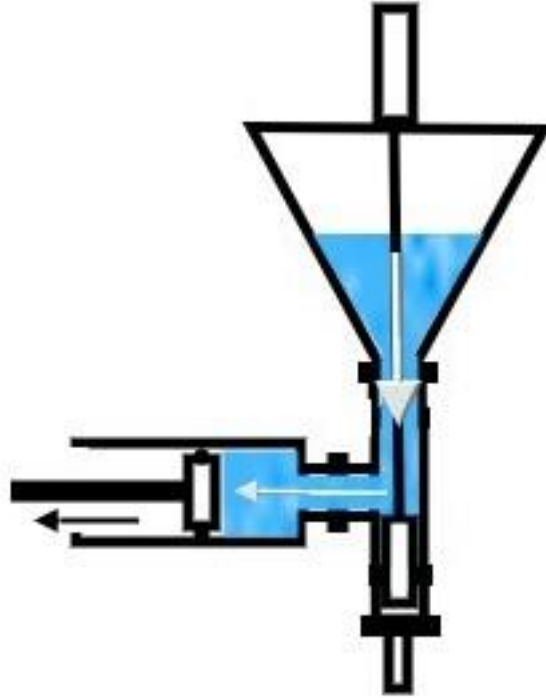
Keep all threaded parts tightened!

All bolts, nuts, screws, piston, and plunger parts are screwed in place for ease in cleaning. Keep these parts tight!!! They may come loose during every day use. Check them at the end of every day. Loose parts could cause problems! The valve plunger should be tightened as much as possible onto the rod connected to it. Also, the union between the air cylinder rod and the plunger rod should be adjusted so the plunger is at the bottom of the fill head tee. The locking nuts should be tightened to keep the union from moving. All quick disconnect clamps must be kept tight. Hand tightened is good enough. Be sure the bridge on top of the hopper is positioned so the air cylinder is centered above the port hole in the bottom of the hopper and tightened down. Keep all clamps on the fill cylinder tight as well (just a couple of turns beyond hand tightened).



## How it works

Piston takes an intake stroke drawing product from hopper. (Valve plug in down position.)



Valve plug moves to up position. Piston discharges product through nozzle.  
Valve plug moves to down position. (Piston full forward)

