USER MANUAL

FILLING MACHINES

SINGLE HEAD
60, 125, 1000, 5000 mL

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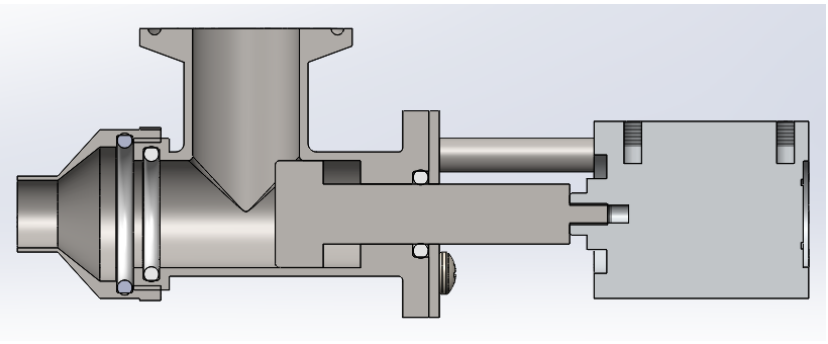
I. General Machine Information & Applications

The semi-automatic pneumatic series filling machines are the latest of advanced designs that offer precise filling options ideal for the home, restaurant, industrial shop, or any other setting requiring containment of liquid or paste, “wet” products. A gravity-fed design that utilizes vacuum pressure with instant “drip-free” cut-off, allows the machine to operate efficiently and avoid unnecessary waste and power consumption. With the majority of the components made from high quality, food-grade stainless steel, rest assured that this machine will reliably dispense sanitary product for years to come.

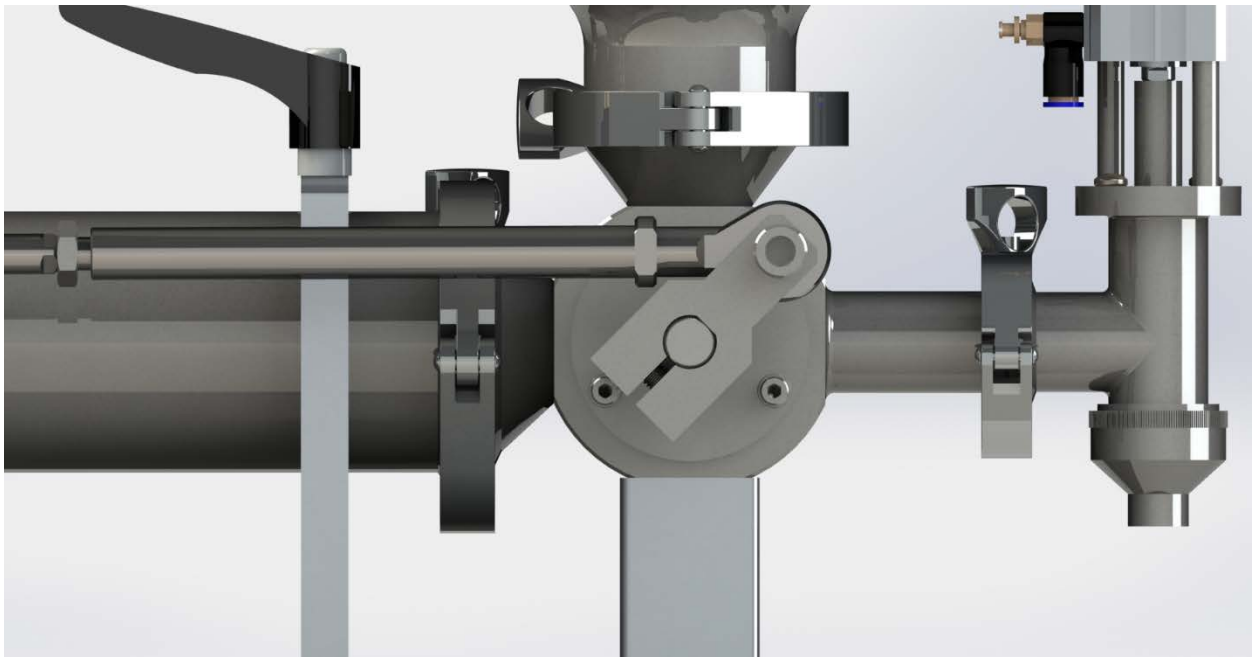
The table-top machine design allows for portable use as a single entity or easy configuration in an assembly line, which will prove extremely versatile in the pharmaceutical, food, and chemical industries. Examples of product that can be dispensed include but are not limited to: sweet chili sauce, salsa, BBQ sauce, tomato sauce, cooking oil, creamed potatoes, mineral water, juice, shampoo, lotions, body scrubs, detergent, and so on.

II. Machine Features

- Universal outputting mouth dispense head for optimal product flow:
  - applicable to 60, 125, & 1000mL models, actual nozzle may vary by machine size



- Bracket keyway to elimate slippage between drive cylinder and rotating mechanical valve



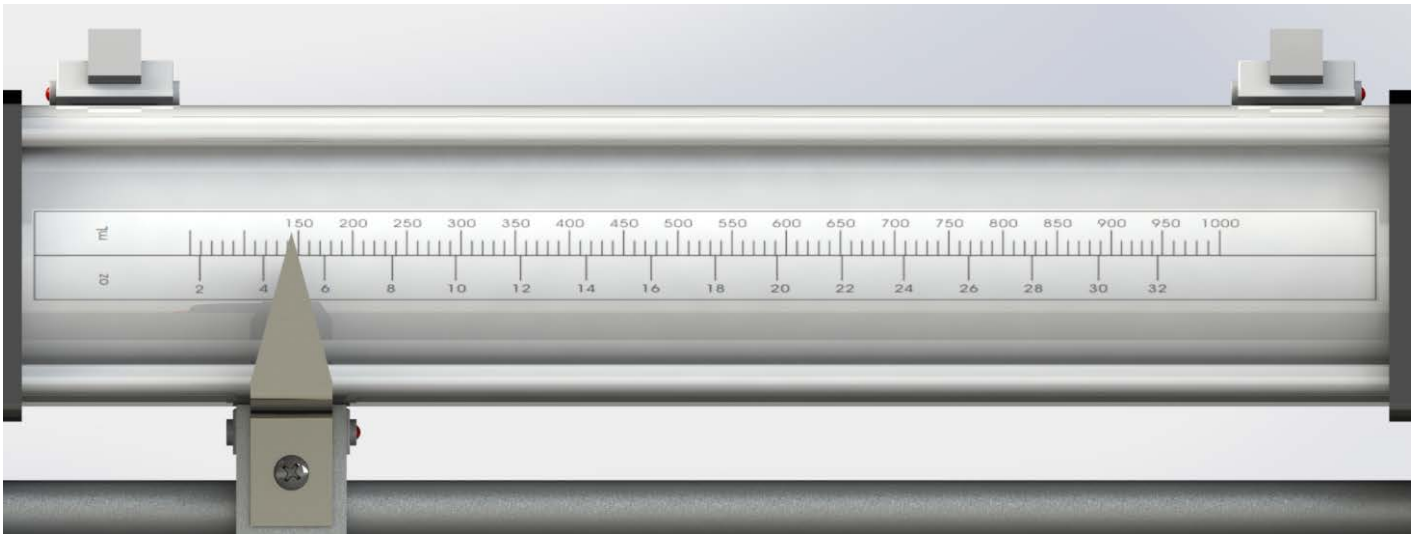
- Standard english and metric food-grade Viton rubber seals, found at most USA industrial suppliers
  - mechanical valve U-cup seal made of durable food-grade 90A Hard Nitrile rubber

- UL reocgnized foot pedal, power cord, and general electrical wiring

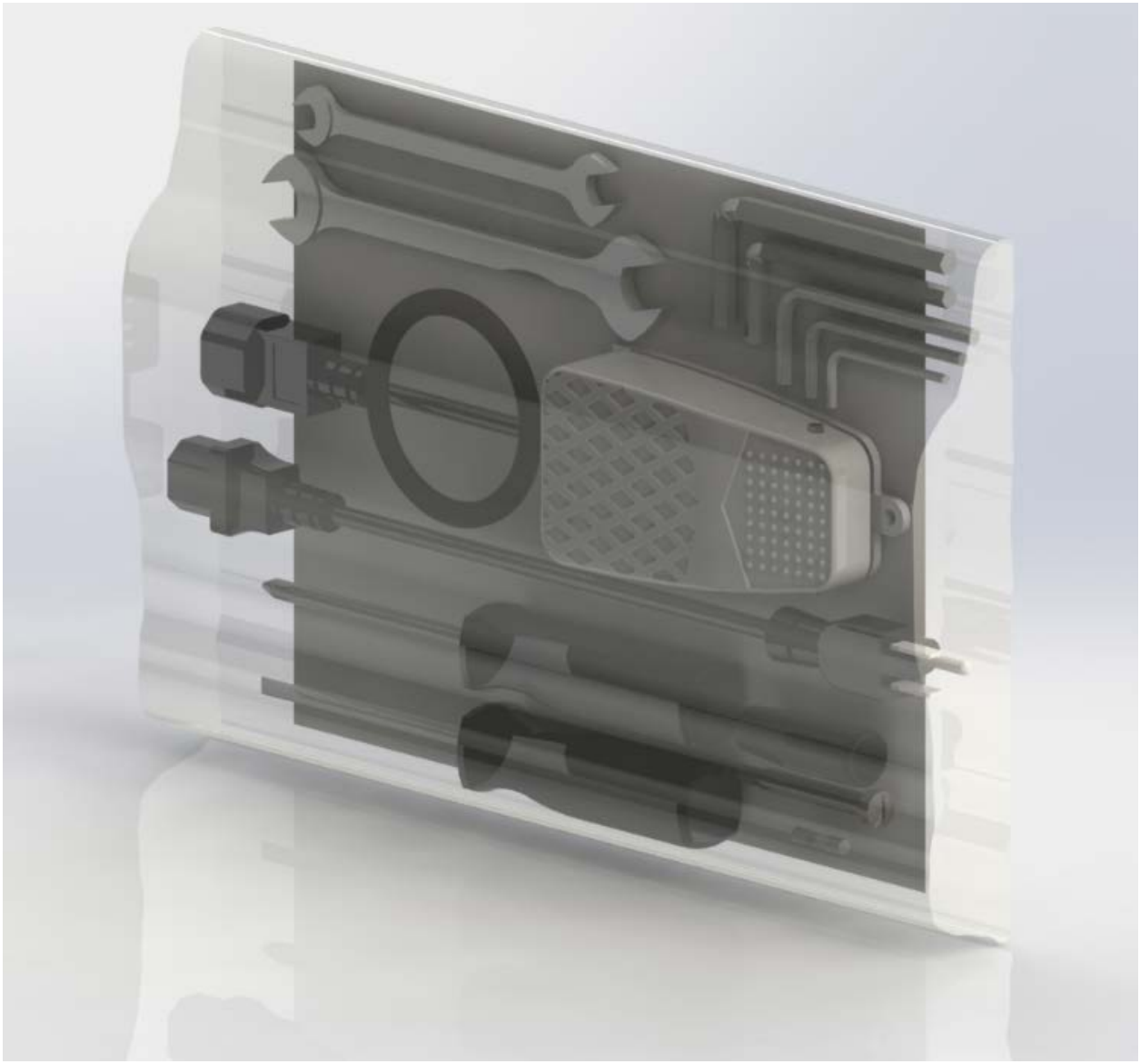
❖ Upgraded plugs and sockets for foot pedal and power cord

❖ Dual unit pressure gauge reading in both **kg/cm^3** and **psi**

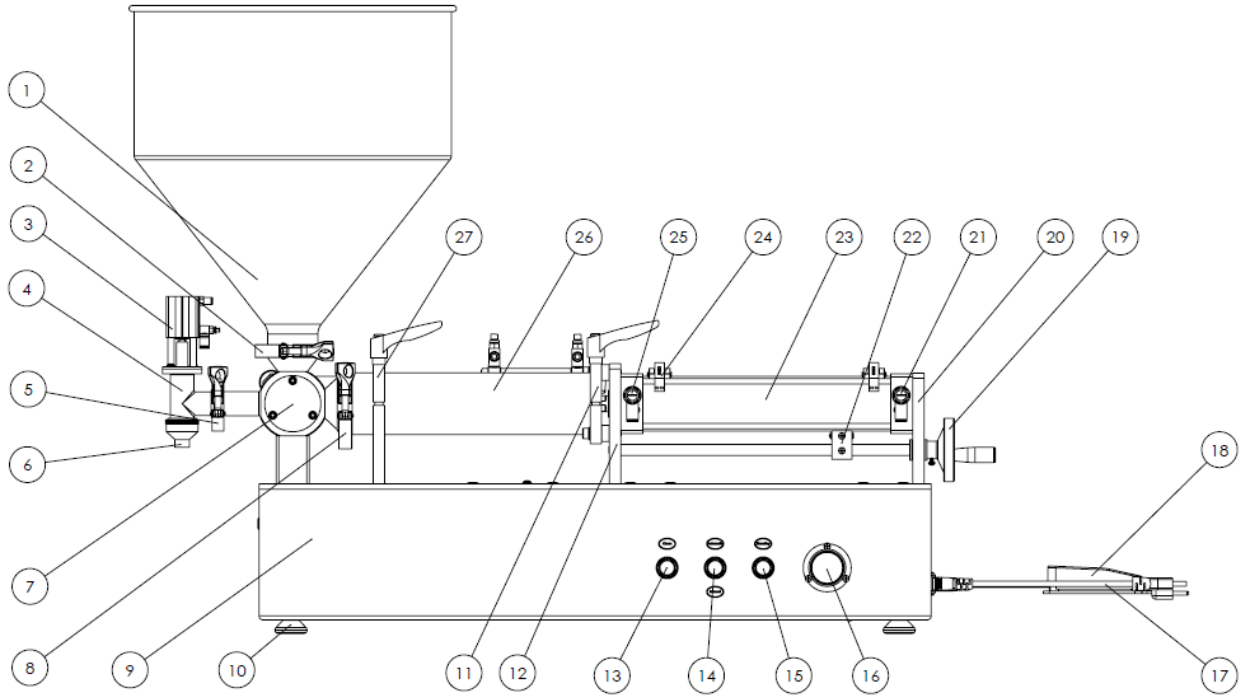
- Dual unit filling capacity label in both **oz** and **mL**



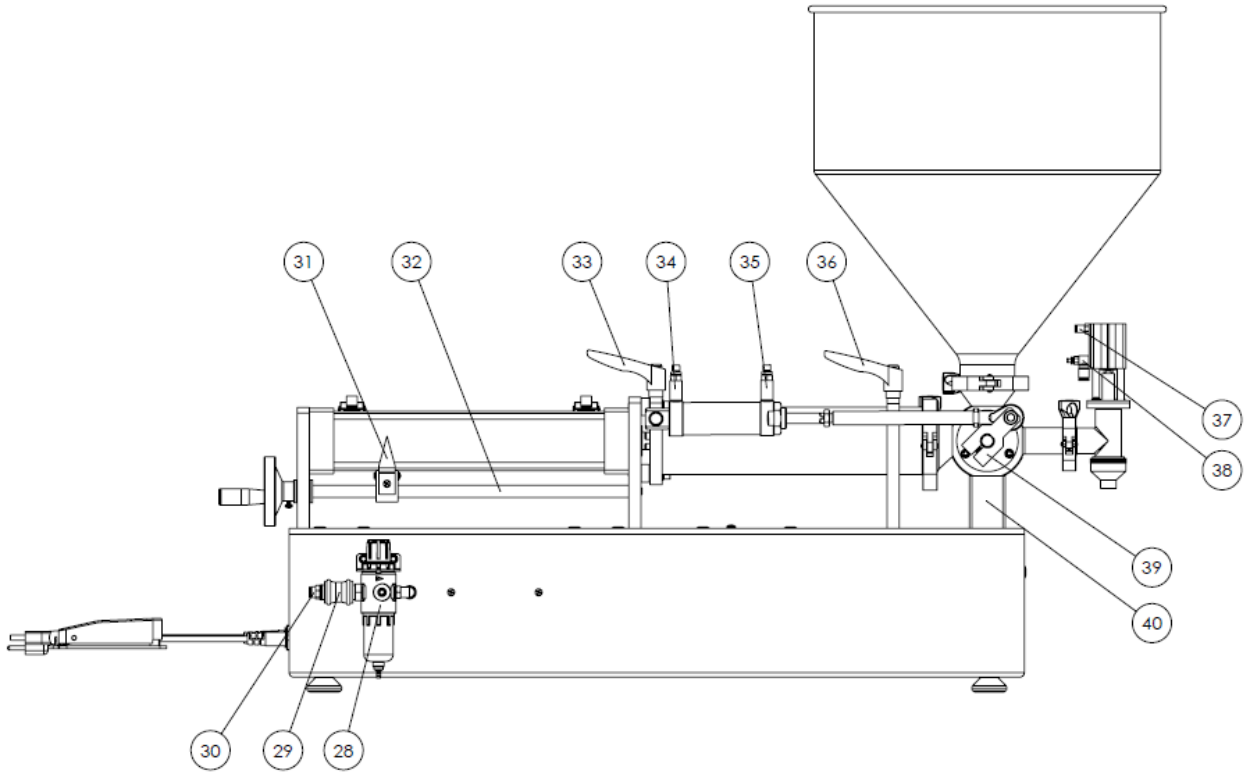
- Assembly kit containing additional hardware and tools for machine setup and maintenance



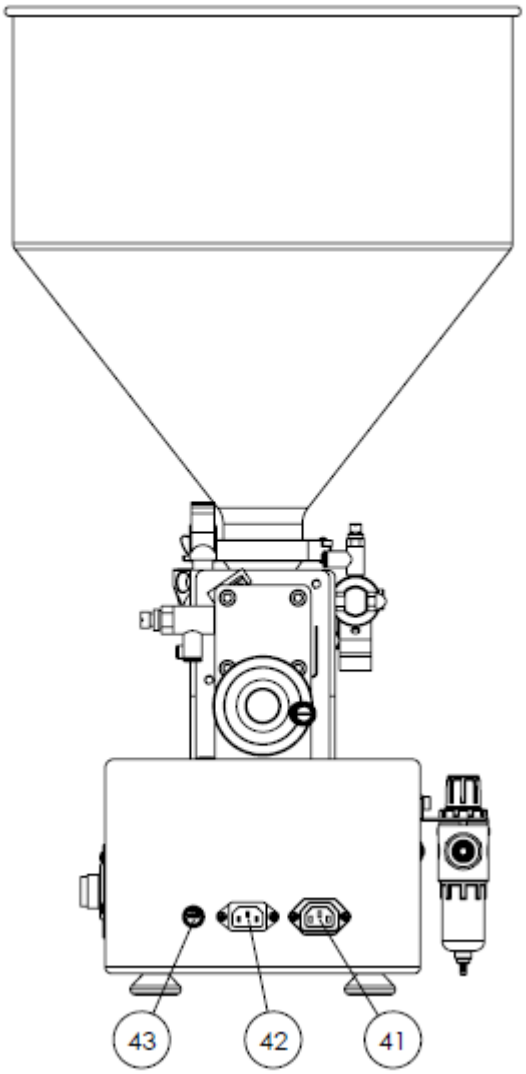
III. Parts List



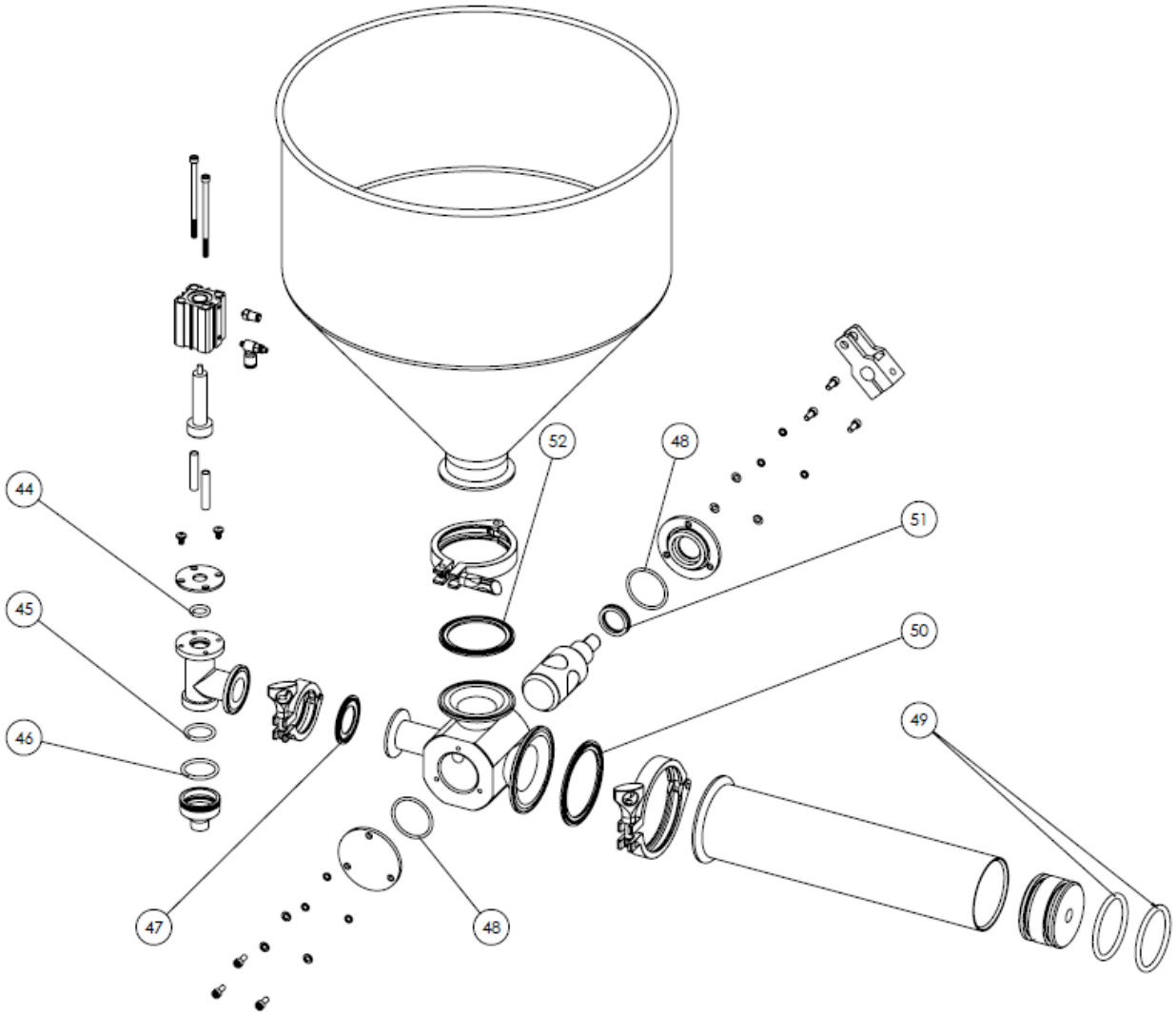
Machine Parts List, Front View		
Item No.	**Description**	**Qty.**
1	Machine Hopper	1
2	Straining Ring Clamp Assembly, Medium	1
3	Air Cylinder, AirTAC SDA25X30 (60, 125, & 1000mL), & SDA50X50 (5000mL)	1
4	Outputting Mouth	1
5	Straining Ring Clamp Assembly, Small	1
6	Outputting Mouth Nozzle	1
7	Selector Valve	1
8	Straining Ring Clamp Assembly, Medium (60 & 125mL), Large (1000mL), or X-Large (5000mL)	1
9	Machine Base	1
10	Machine Base Leg	1
11	Reversing Cylinder Board	1
12	Main Cylinder Frontal Board	1
13	Machine Control Button, Clean (Green)	1
14	Machine Control Button, Automatic/Manual (Green)	1
15	Machine Control Button, Stand by (Red)	1
16	Pressure Gauge, PSI	1
17	Machine Power Cord	1
18	Machine Foot Pedal	1
19	Adjustor Hand Wheel	1
20	Main Cylinder Back Board	1
21	AdjustableThrottle Valve, Reverse Stroke for AirTAC SC63X150-S, SC63X270-S, & SC80X270-S	1
22	Adjustable Inductive Switch	1
23	Main Air Cylinder, AirTAC SC63X150-S (60 & 125mL) , SC63X270-S (1000mL), SC80X270-S (5000mL)	1
24	Fixed Inductive Switch	2
25	AdjustableThrottle Valve, Forward Stroke for AirTAC SC63X150-S, SC63X270-S, & SC80X270-S	1
26	Piston Cylinder	1
27	Piston Cylinder Board	1



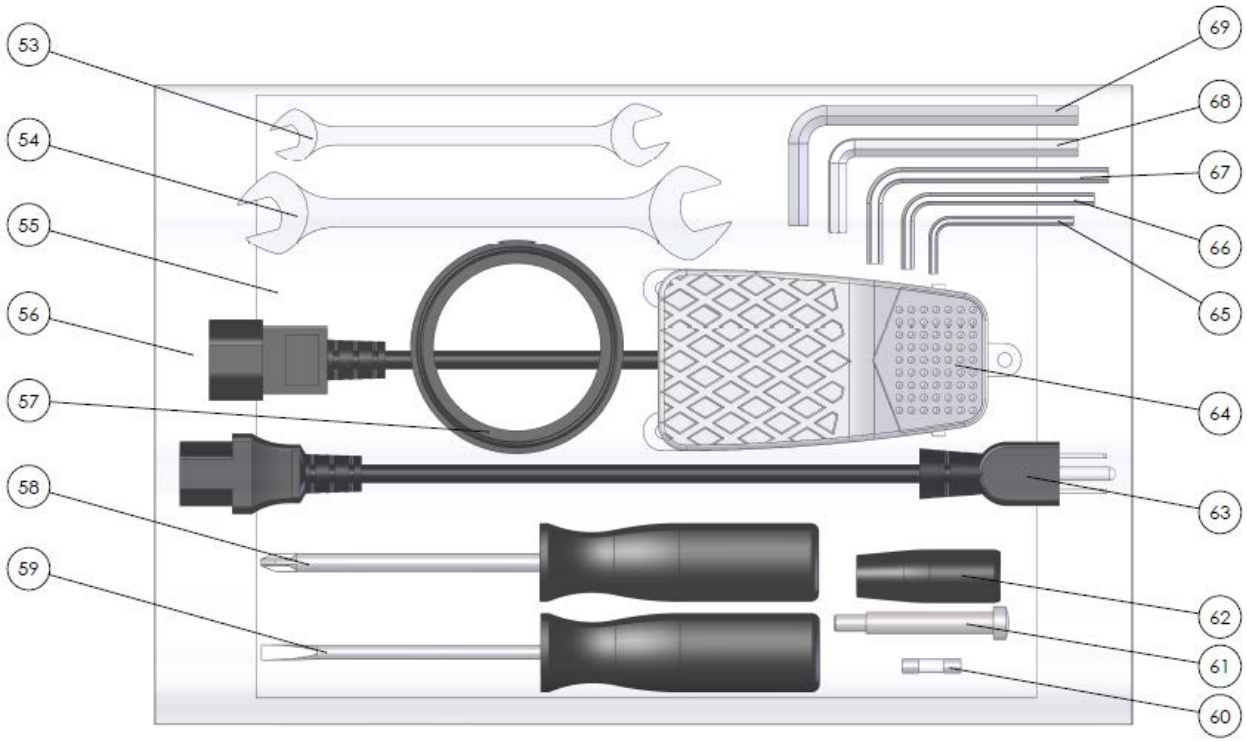
Machine Parts List, Rear View		
Item No.	**Description**	**Qty.**
28	Air Pressure Regulator, AirTAC AFR2000	1
29	Air Lockout Check Valve	1
30	Air Inlet Connection Port Fitting	1
31	Filler Indicator Mark Index	1
32	Adjustable Screw Rod	1
33	Handle, Reversing Cylinder Board	1
34	Adjustable Throttle Valve, Reverse Stroke for AirTAC MAL32X50-CA	1
35	Adjustable Throttle Valve, Forward Stroke for AirTAC MAL32X50-CA	1
36	Handle, Piston Cylinder Board	1
37	Air Connection Fitting Port, Reverse Stroke for AirTAX SDA25X30	1
38	Adjustable Throttle Valve, Forward Stroke for AirTAC SDA25X30	1
39	Reversing Cylinder Staff Bracket	1
40	Selector Valve Base Mount	1



Machine Parts List, Right Side View		
Item No.	**Description**	**Qty.**
41	Socket, Machine Foot Pedal	1
42	Socket, Machine Power Cord	1
43	Machine Fuse Holder and Fuse	1



Machine Parts List, Rubber Seals						
Item No.	**Description**	**Seal Type**	**Seal Standard**	**Material**	**Machine (mL)**	**Qty.**
44	Outputting Mouth	O-Ring	AS568A-207	Viton	60, 125, 1000	1
					5000	
45	Leakproof Cylinder Shaft	O-Ring	AS568A-214	Viton	60, 125, 1000	1
					5000	
46	Outputting Mouth Nozzle	O-Ring		Viton	60	1
					125	
			AS568A-218		1000	
					5000	
47	Small Sealing Ring	Gasket	Tri-Clamp 1-1/2”	Viton	All	1
48	Selector Valve Cover	O-Ring	Metric 41 ID x 3 W	Viton	60, 125, 1000	2
					5000	
49	Piston	O-Ring		Viton	60	2
					125	
			AS568A-332		1000	
					5000	
50	Medium Sealing Ring	Gasket	Tri-Clamp 2-1/2”	Viton	60, 125	1
	Large Sealing Ring		Tri-Clamp 3”		1000	
	X-Large Sealing Ring		Tri-Clamp 4”		5000	
51	Selector Valve Core	U-Cup	25ID x 33OD x 5H	90A Nitrile	All	1
52	Medium Sealing Ring	Gasket	Tri-Clamp 2-1/2”	Viton	All	1



Machine Parts List, Assembly Kit		
Item No.	**Description**	**Qty.**
53	Double Open End Wrench, 8mm & 10mm	1
54	Double Open End Wrench, 12mm & 14mm	1
55	Filling Machine User Manual	1
56	Assembly Kit Poly Bag	1
57	Medium Sealing Ring	1
58	Cross Screw Driver (Phillips Head)	1
59	Slotted Screw Driver (Flat Head)	1
60	Replacement Machine Fuse	1
61	Adjustor Hand Wheel Handle Screw	1
62	Adjustor Hand Wheel Handle	1
63	Machine Power Cord	1
64	Machine Foot Pedal	1
65	3mm Hex Key Wrench	1
66	4mm Hex Key Wrench	1
67	5mm Hex Key Wrench	1
68	6mm Hex Key Wrench	1
69	8mm Hex Key Wrench	1

IV. Technical Data

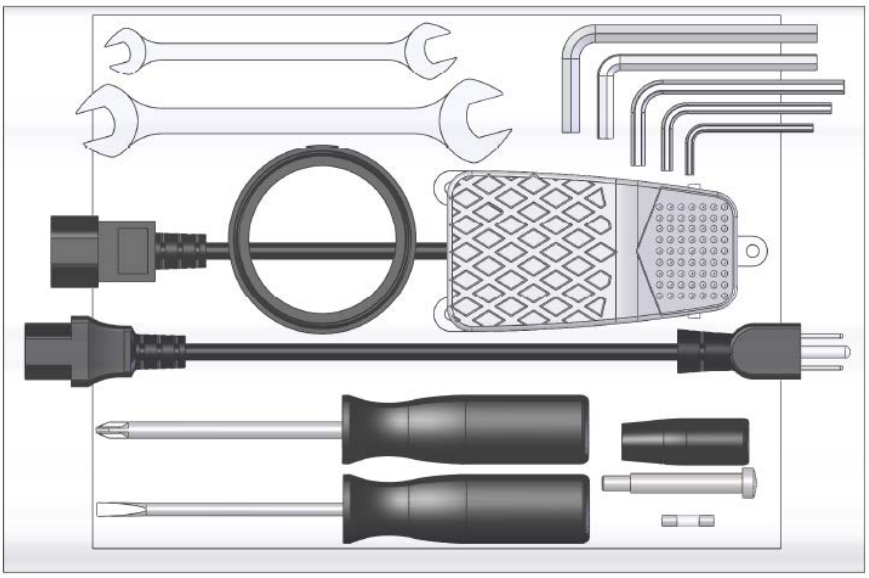
	PPF-250	PPF-250T	PPF-500	PPF-500T	PPF-1000	PPF-1000T
Voltage (V/Hz)	AC 220/50 or 110/60					
Power (W)	20					
Air Pressure (MPa/psi)	0.4-0.6/58-87					
Filling Range (ml)	50-250	50-250	100-500	100-500	100-1000	100-1000
Filling Frequency (cyl/min)	10-18					
Filling Accuracy	≤1%					
External Dimensions (LxWxH) (cm)	90x50x105	77x25x78	100x50x105	88x25x77	110x50x105	101x25x77
Net Weight (Kg)	30	25.5	35	27	40	32

V. Setup & Operation

A. Machine Initial Setup

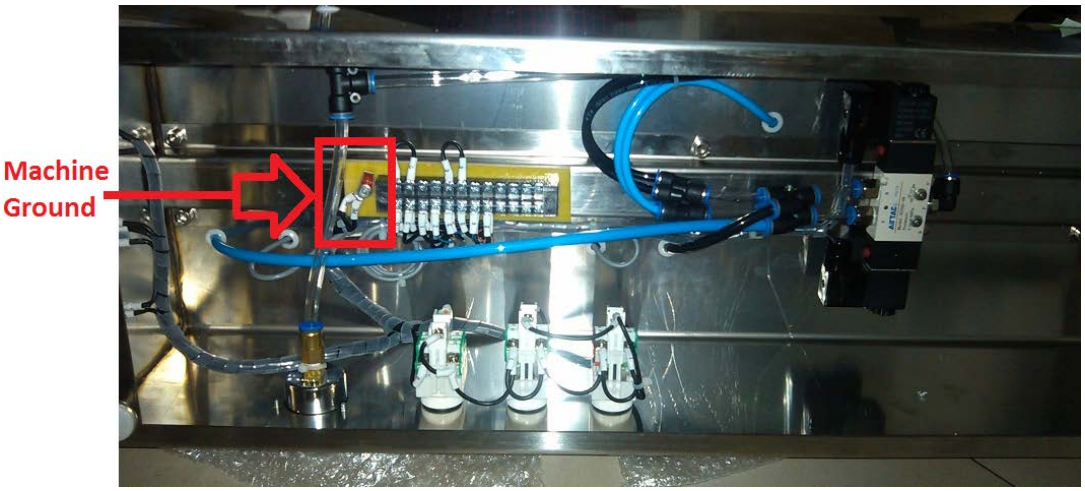
1. Upon receipt of your new machine, please unpack the machine and hopper to ensure all contents are included and that there are no evidential signs of damage to your product. If you feel a component is missing or damaged, please contact your supplier for immediate assistance.

2. Locate the accessory kit and ensure all components listed in the parts list section of this document, are included.

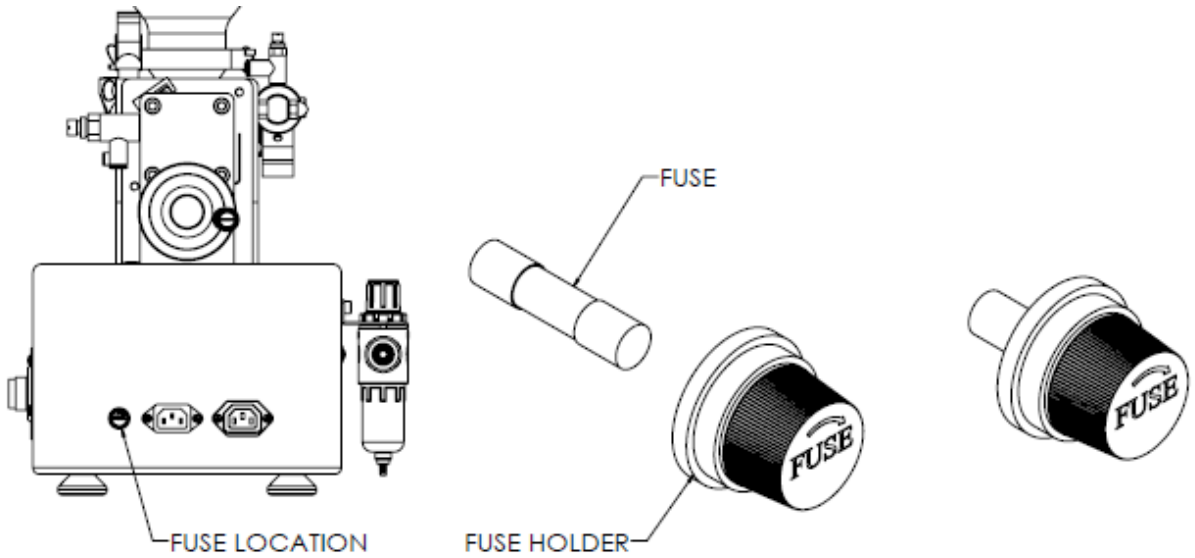


3. Place machine on stable working table check to see if any components are noticeably loose. Use supplied hex keys and screw drivers to tighten down loose components as necessary.

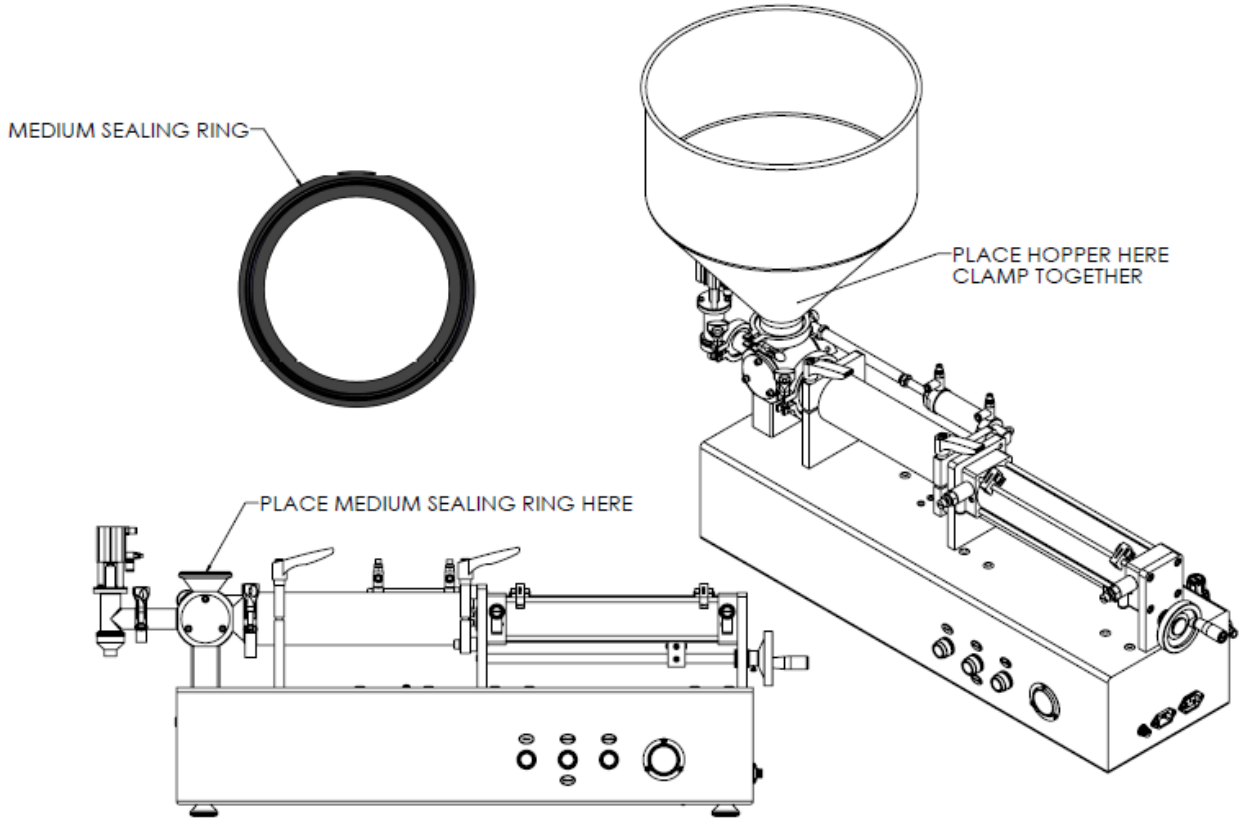
4. Check to ensure the machine ground line is properly connected as shown below.



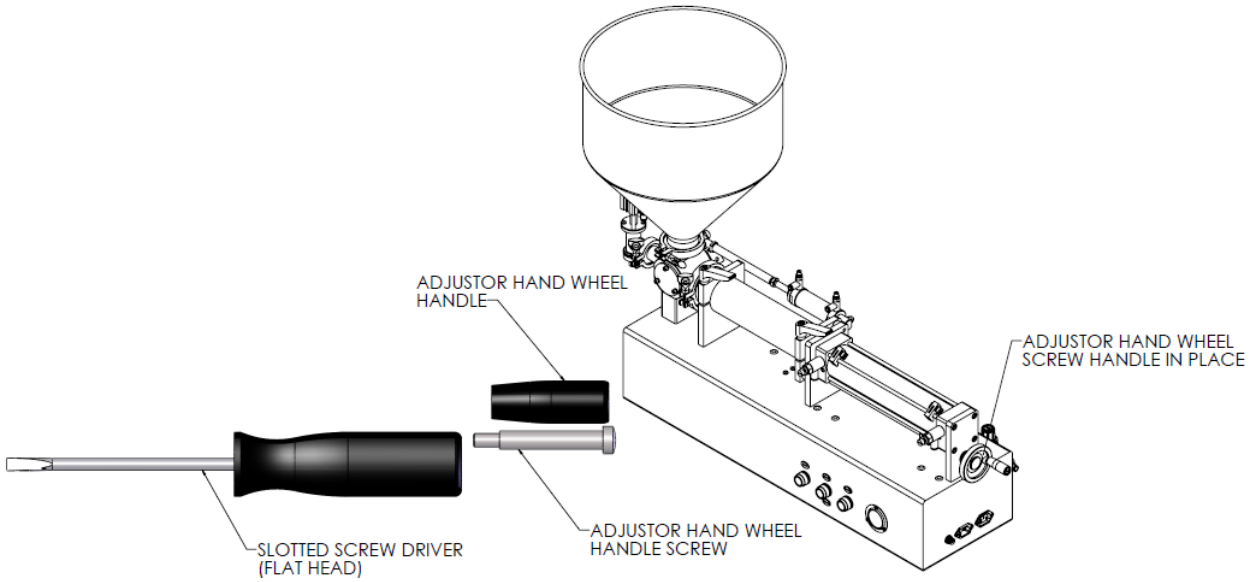
5. Locate machine fuse holder and ensure fuse is installed as shown below.



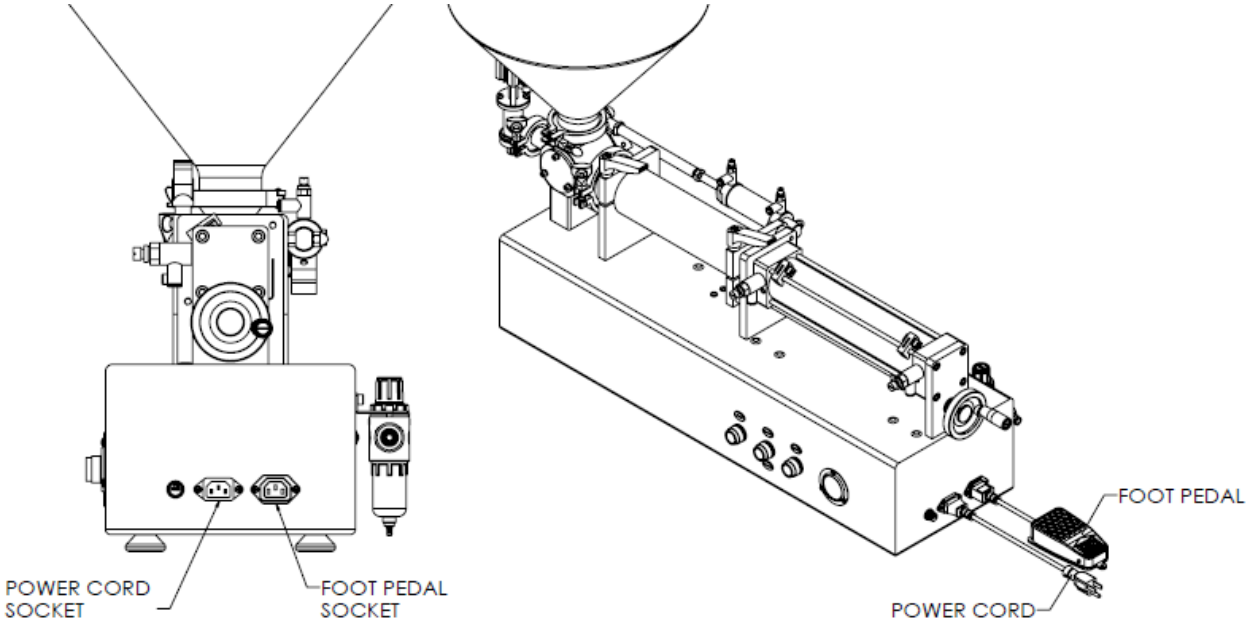
6. Locate medium sealing ring that came with the accessory kit. Remove clamp on top of selector valve and place medium sealing ring on top of flange. Install hopper such that the medium sealing ring forms a flush sealing surface between hopper and selector valve. Clamp hopper to selector valve.



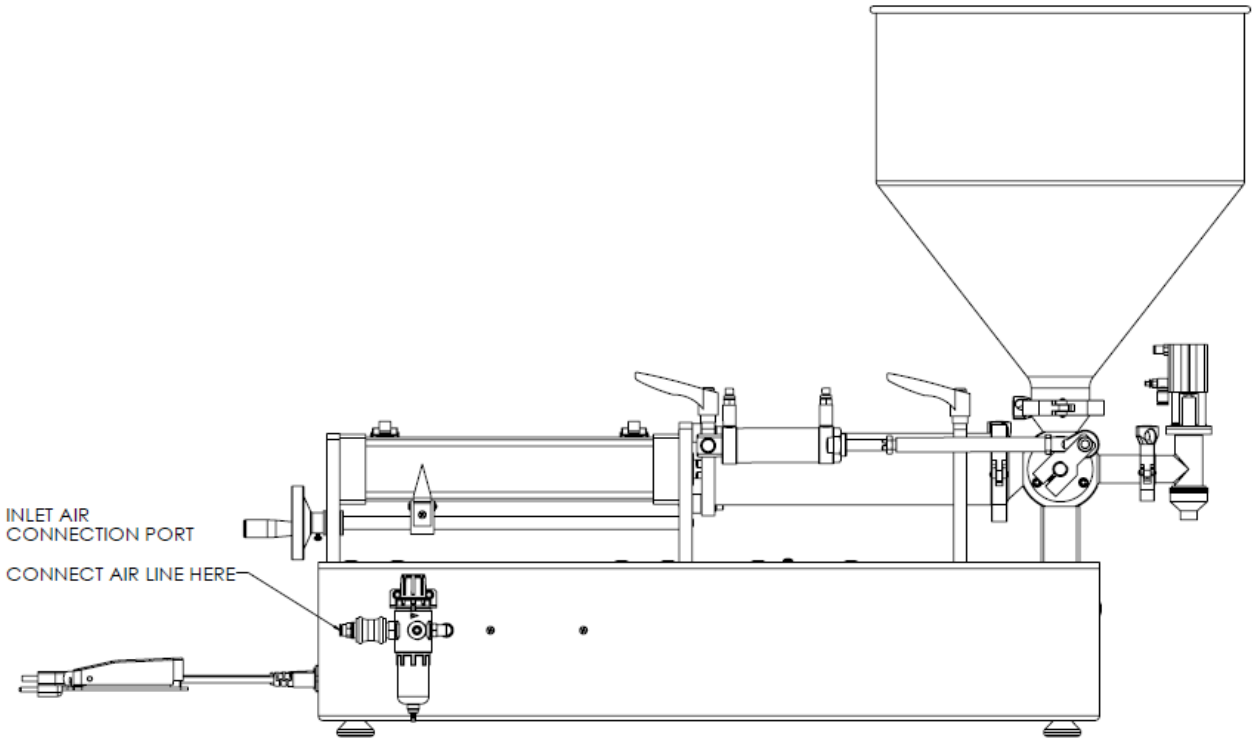
7. Install adjustor hand wheel handle with supplied screw drivers as shown below.



8. Plug power cord and foot pedal into correct machine socket as shown below.



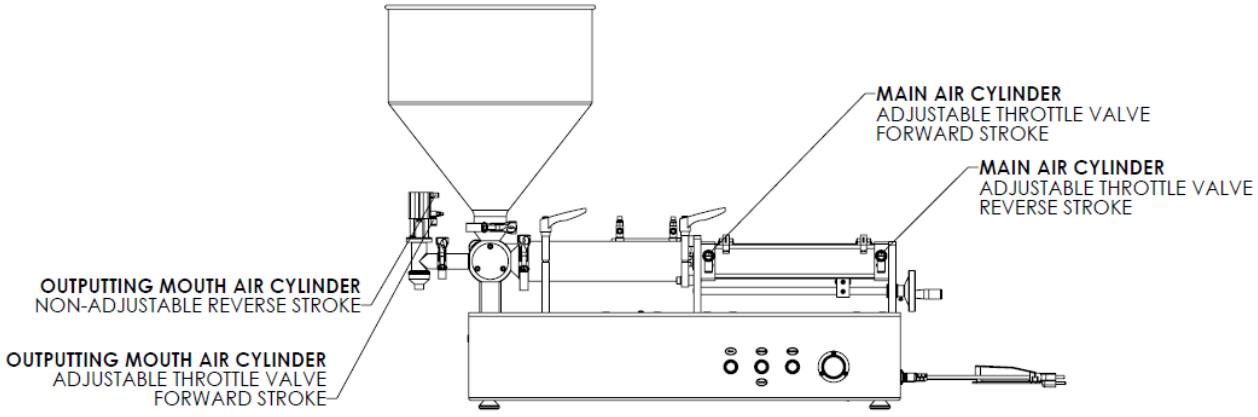
9. Remove all dust, dirt, impurities, etc from inlet air connection port to avoid any possible damage to pneumatic components. Connect air line to inlet air connection port on back of machine as shown below.

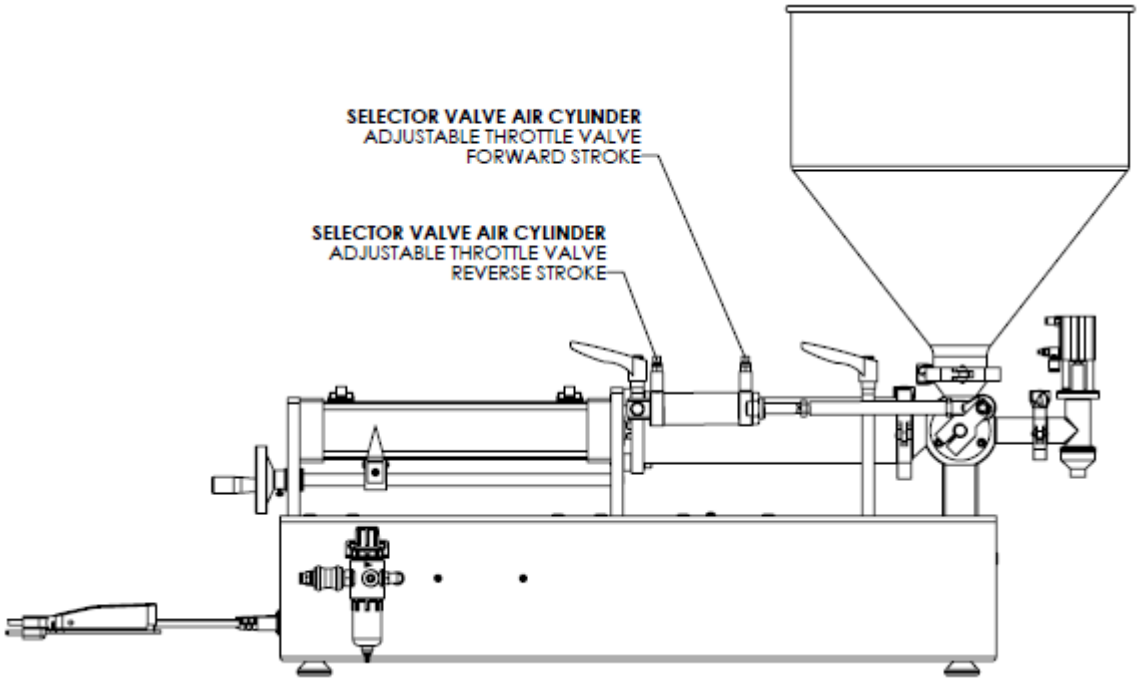


10. Connect power cord to a 220V/50Hz or 110V/60Hz power supply.

B. Machine Idle Tuning

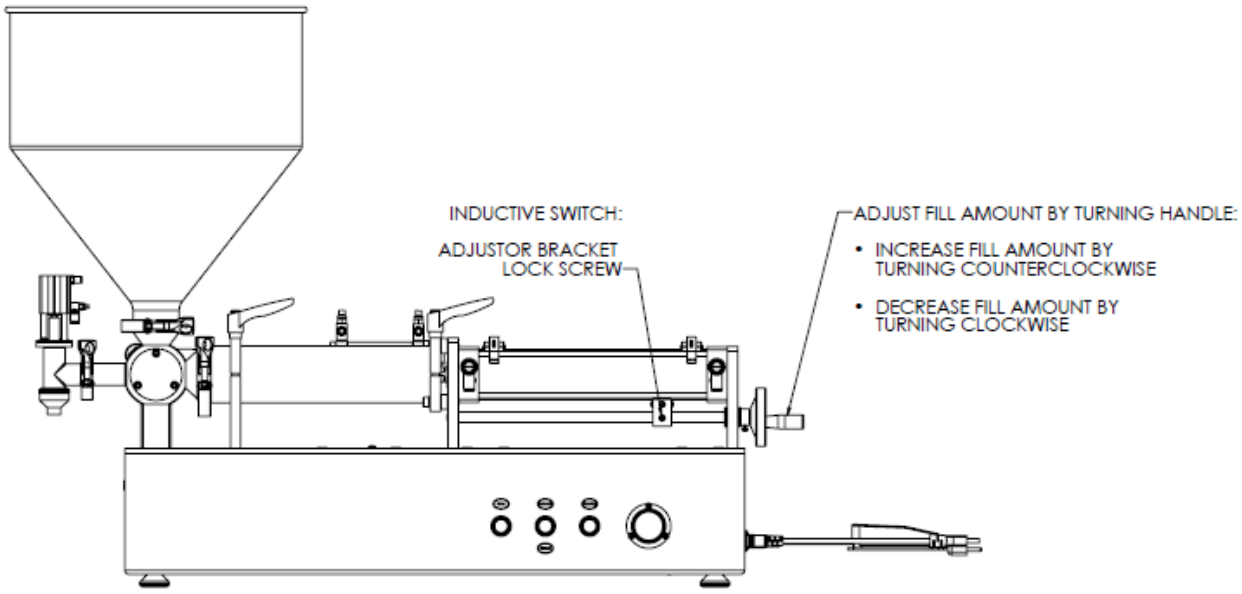
1. Adjust the air pressure regulator (as shown below) to reach air pressure of 0.4-0.6 MPa (58-87 psi), which is optimal for continual machine use.
2. Press the optional Automatic/Manual button to engage manual mode and run several filling cycles
    i. Note: Place a bucket or alternate contain under the outputting mouth nozzle during this step
3. Filling speed can be increased or decreased by the user to optimize production efficiency. It is generally recommended to increase filling speed when the piston cylinder is in vacuum or suction mode and to slow down when the piston cylinder discharge or filling mode. Please refer to the following for fine-tuning adjustments:
    i. Loosen the locking thumb nut on throttle valve
    ii. Turn throttle valve counter clock-wise to increase speed or clock-wise to decrease speed
    iii. Fasten locking thumb nut
    iv. Usually adjusting the throttle valves on the main cylinder is all that is needed to control filling speeds





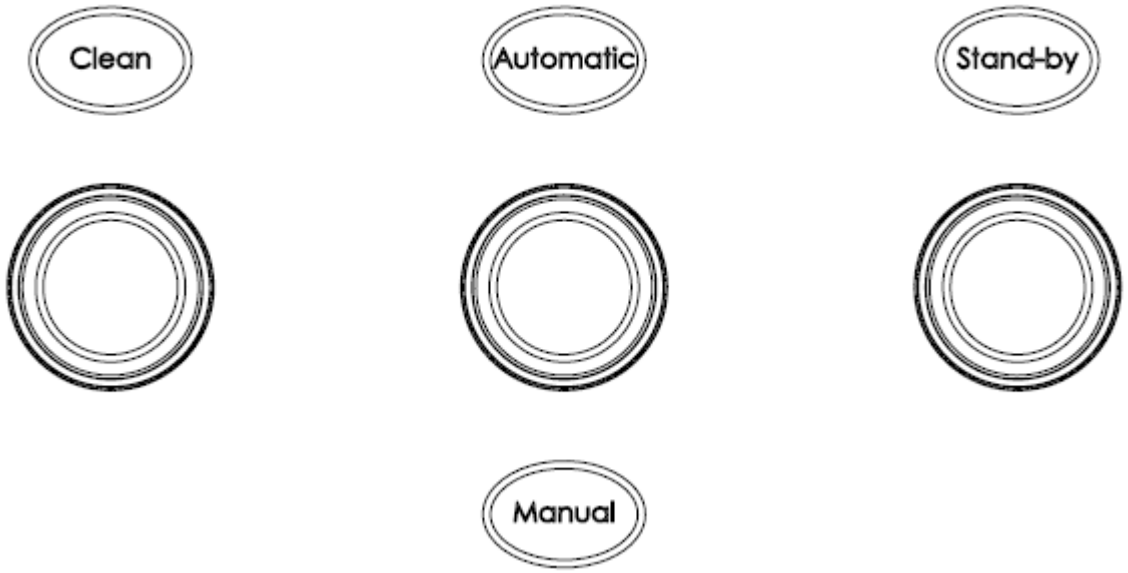
C. Machine Filling Capacity Adjustments

1. Coarse adjustment: loosen set screw on the filler indicator bracket and turn adjustor hand wheel to move the inductive switch position to the correct fill capacity—this adjusts your filling capacity.
2. Precision adjustment: Fine-tune filling capacity for possible errors by adjusting fill amount against actual amount dispensed. Lock the filler adjustor lock screw once desired filling amount and actual dispensed amount are equivalent.
3. Do not move the inductive switch while machine is running, this may cause machine failure or incorrect measurements.
4. If the inductive switch is moved, adjust the position again until the machine works as desired and then properly fasten the inductive switch.



D. Machine Operation

1. After machine setup, idle tuning, and adjustments are complete the machine is now ready for use. Please use the following control buttons according to your production needs to operate the machine.
   - Clean (Green Button) – allows user to clean out the system
   - Automatic/Manual (Green Button) – allows user to operate in manual mode (foot pedal) or automatic mode (without foot pedal)
   - Stand-by (Red Button) – machine shutoff



VI. Service & Maintenance

1. Clean the air circuitry components thoroughly and often to prevent dust, dirt or any other impurities from affecting the pneumatic performance of the machine.

2. Keep foreign and/or sharp objects away from machine to prevent surfaces and components from being scratched or furthered damaged, which could affect machine measurement calibrations. It is recommended that all product be appropriately filtered prior to processing through machine.

3. To prolong the life of the machine and its pneumatic components, it is highly recommended to us a clean, filtered air supply for machine operation.

4. **DO NOT** operate machine without liquid or paste “wet product” in the hopper, or without product cycling through the machine. Failure to do so can result in damage to all internal rubber seals (O-rings and Gaskets)

5. **DO NOT** operate machine with products that are not in the liquid or paste form (i.e. hard materials, beaded materials, pellets, etc). Failure to do so may result in permanent damage to machine.

6. To avoid corrosion, contamination, or further damage to machine and its surfaces, it is recommended to regularly clean all components thoroughly. Depending on your exact process, use FDA or industry approved stainless steel cleaner for stainless steel components, and FDA or industry approved cleaner for non-stainless steel components. Clean components with a lint-free cloth.

7. If machine is to be without use for a long period of time, place it in a dry location, remove and clean all components thoroughly, and cover the machine.

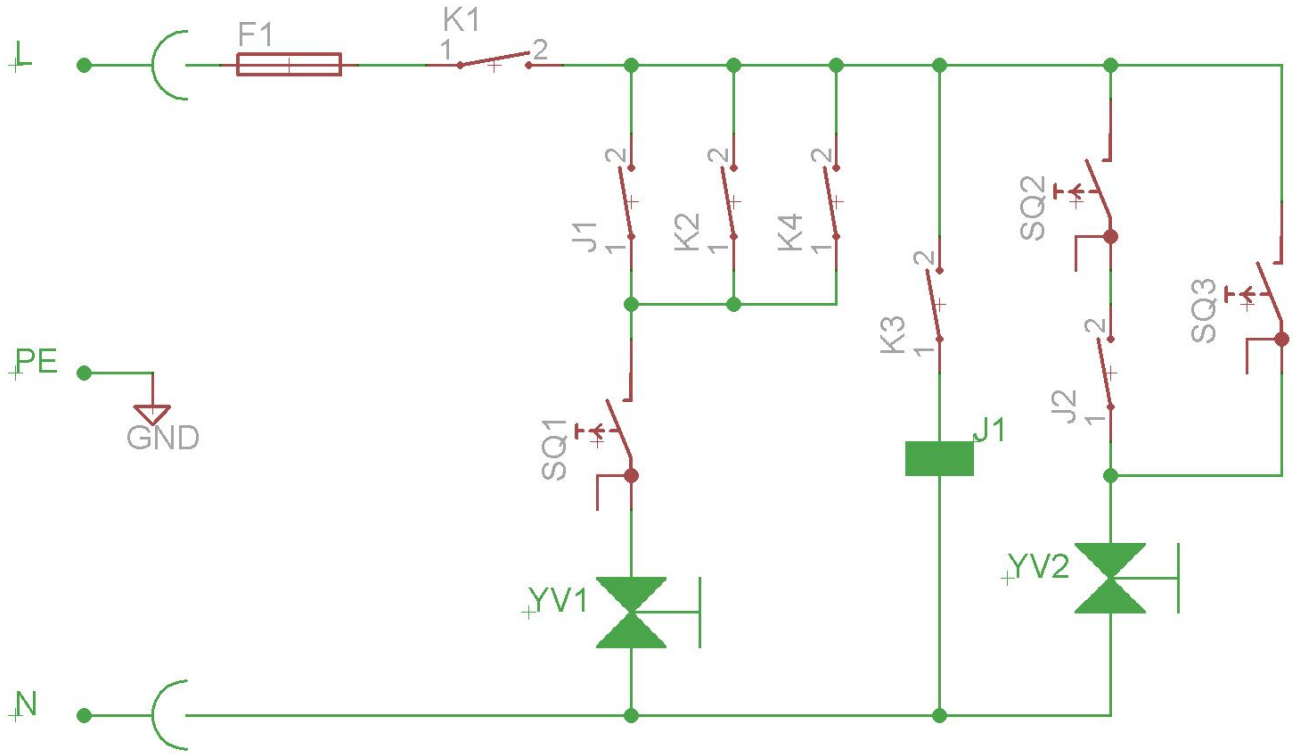
VII. Failure & Recovery

Failure Mode	Recovery Mode
1. Pilot lamp doesn't shines and machine cannot start running.	1. Check and ensure power supply is properly connected
	2. Check and ensure all air tubes are properly connected
	3. Check and ensure foot pedal is properly connected
	4. Check and ensure machine fuse is properly installed
2. Cylinder moves slowly and reciprocating motion shows fatigue	1. Low air pressure. Please adjust the air pressure regulator
	2. Mechanical interference, ensure all components are assembled correctly
	3. Air cylinder could be damaged, contact supplier for replacement
	4. Damaged electromagnetic valve, contact supplier for replacement
3. Power and air supply are connected, but machine will not operate	1. Adjust the position of inductive switch(es)
	2. Damaged electromagnetic valve, contact supplier for replacement
4. Inconsistent Filling Measurement	1. Damaged piston, piston cylinder, or air cylinder, contact supplier for replacement
	2. Filling speed is too fast, adjust and slow down the filling speed
	3. Worn electromagnetic valve or inductive switch, contact supplier for replacement
5. Blocked outputting mouth nozzle	1. Mechanical chucking
	2. Damaged leakage proof cylinder, change the cylinder
	3. Air pipeline is wrong connected
6. Leaking Components	1. Damaged leakage proof cylinder
	2. Damaged gasket, change the leakage proof piston gasket.

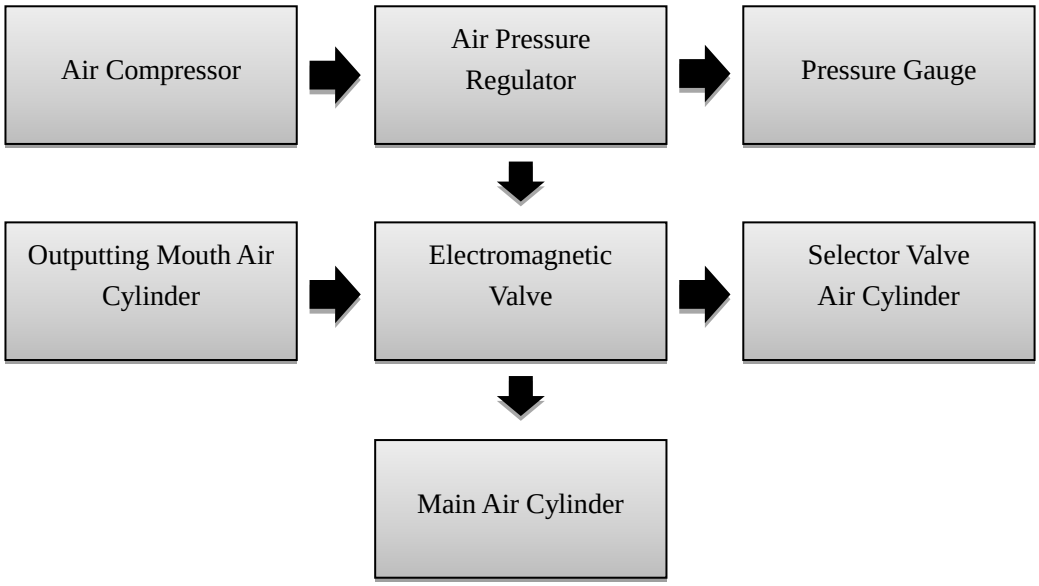
Provisions:

1. Contact a professional or your supplier if you are unable to clean, service, or otherwise maintain the machine
2. Never change or swap the air tubes on the machine, this will cause the machine to not operate or become permanently damaged
3. Before cleaning, servicing or otherwise maintaining the machine, stop operation and unplug power and air supply

Electrical Circuitry Schematics:



Air Circuit Schematic for Pneumatic Components (PPF Series):



Air Circuit Schematic for Pneumatic Components (LPF Series):