Model:G1WGD

Operationl Manual For

Single-Head Pasty Liquid

Filling Machine



OperationalManual

SEMI-AUTOMATIC PISTON FILLING MACHINE

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1. Principle and property

a.Principle: Model G1WGD series filling machines are of semi-auto piston type. The material is sucked and pumped through a piston driven by a cylinder and its flow direction controlled by a three-way rotating valve. The cylinder stroke is controlled by a signal valve and filling amount adjusted by a hand wheel. (The data shown on the counter is only for reference.)

b. Property: With foreign filling machine technology adopted, the G1WGD Filling Machine is updated and innovated from the series filling machines produced by this company. This machine is simpler in construction, higher in accuracy and easier in operation. As a filling machine mainly used for pasty liquid filling, it is a set of ideal equipment for your company's filling operation.

2. Specifications

	Items	Parameters
Technical Parameters	Rated air pressure	4~6kg
	Filling speed	0-50 Bottles/Min.
	Filling accuracy	±0.5 % - ±1 %
	Voltage	220V±5V
	Power	10W
	Current	1A

	Model	Filling Range (ml)	Preferred Filling Range (ml)	The model and number of your machine (√)
Filling Results	100	2~120	5~100	
	280	5~310	10~280	
	500	10~550	20~500	
	1000	70~1080	100~1000	√
	2500	300~2850	500~2800	
	5000	500~5300	1000~5000	

3. Safety operation

The machine is suitable for filling pasty liquid substances in foodstuffs, daily-used chemicals and other chemical industries, and cannot be used for other purposes.

In order to ensure productive safety, pay attention to the following:

1. Use air source and power source complying to this machine (Referring to the specifications of this manual).
2. Do cut off air source and power source before disassembling and washing this machine.
3. Electrical control elements are built in the rear part (close to the control button) of the machine. Do not wash the machine with water at any circs. Otherwise there is a danger of electric shock and damage to control elements.
4. A reliable earthing should be ensured by providing a socket with a earthing line.
5. Disconnect power from the machine upon repairing the circuit as voltage may exist in the circuit of power control when power is off.

4. Instructions to machine

In the process of operation, the machine is affected by the following factors:

a) In filling accuracy: Compressed air stability, material uniformity and filling speed

b) In filling speed: Material viscosity, cylinder stroke, material cylinder size, filling nozzle size and operational skill.

c) The machine is filled by the two methods of pedaling and auto filling, which can be switched as desired. To keep the workshop neat and clean, it is suggested that filling be first controlled by the pedal switch and when the operating becomes skillful, use the auto mode.

.5. Installation and adjustment

a) Mount the material pail (See Fig.1) at the top of the large square three-way control valves (11) and then lock the connecting part with anchor ears.

b) Then lock the connecting part with the anchor ears (10).

c) Confirm the signal valve position (by the hand wheel adj.)

d) Turn on the power supply (24).

e) Open the air source (02) (a sliding valve).

f) Put the working mode of the switch (05) to "pedal" .

g) Tread the pedal witch till the material flows out of the filling head (12).

h) Open the air source switch (02).

i) Adjust the throttle valve 1 (15) and 2 (18) to obtain a proper pumping speed and filling speed. To raise operating efficiency, the pumping

speed of (18) can be faster and filling speed slower. (But too fast filling speed may result in material or gas bubble rushing out of the bottle and affect filling quality.).

j) Take measurement of the filling amount and adj. the filling amount to the set value.

k) Take down the values on the counter and the filling amount you set for convenience of the next setting. Begin formal filling.

l) After the operation becomes skillful, put the working mode to "auto".

6. Maintenance

a) The machine body is made of stainless steel. Do not scrape its surface with any sharp or hard objects. Alcohol can be used for washing its surface stains.

b) Lubricant was applied before the machine leaves the factory. Do not disassemble its cylinders or apply any lubricant.

The valve body, rotary valves, charging basket, U-shaped three-way joint and charging cylinder can be disassembled for cleaning.

7. Filling speed

The filling speed is decided by the following 5 factors:

a) Sucking speed, which is decided by the material viscosity, and the rotary valve size (a standard rotary valve is provided on the machine.)

b) Filling nozzle size. With a larger nozzle size, the filling speed will be faster.

c) Material frothing speed. Filling speeding should be slower for highly frothing products.

d) Filling amount. Filling speed should be slower with greater filling amount.

e) Filling accuracy. With higher filling accuracy, the filling speed should be slower.

Adjustment operation:

Loosen the adj. nuts (15) and (18) of the adj. valve and then

a) Turn the one-way valve handle (15) clockwise to slow down the cylinder (22) forward travel speed an the charging speed;

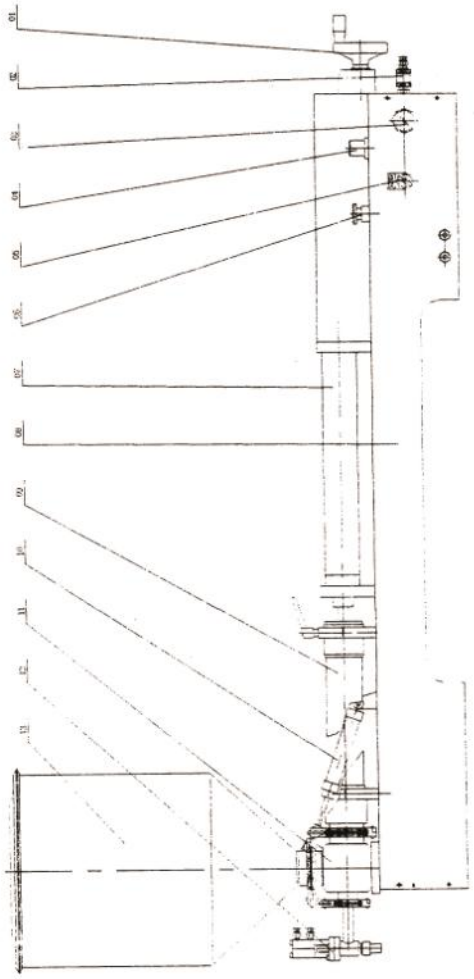
b) Turn the handle (15) counterclockwise to accelerate the cylinder forward travel speed and the charging speed;

c) Turn the handle (18) clockwise to slow down the cylinder withdrawal speed and the material-sucking speed;

d) Turn the handle (18) counterclockwise to accelerate the cylinder withdrawal speed and the material-sucking speed.

8. Diagram 1 、2、3

Diagram 1



1.Hand wheel	2.Air source switch	3. Plate-type manometer
4. Regulating filter	5. Selection switch	6. Reset switch
7. Cylinder	8. Machine body	9. Cylinder for Materiai
10. Mini-cylinder	11. Valve body	12. Filing nozzle
13. Charging basket		

Diagram 2

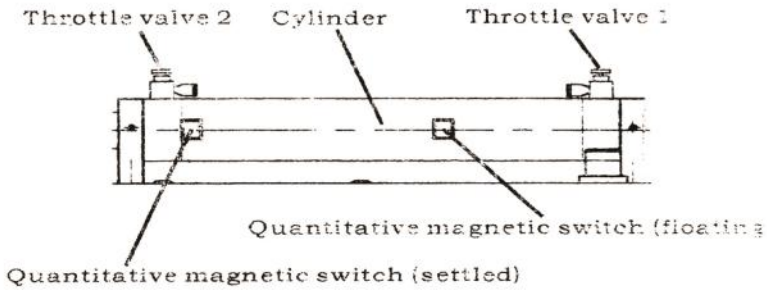
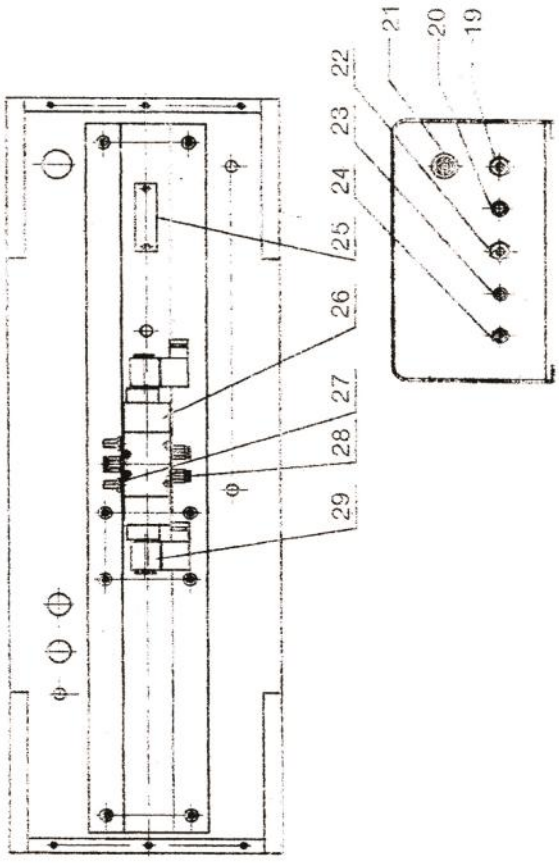


Diagram 3



19. Cable connector 20. Fuse holder 21. Air source switch

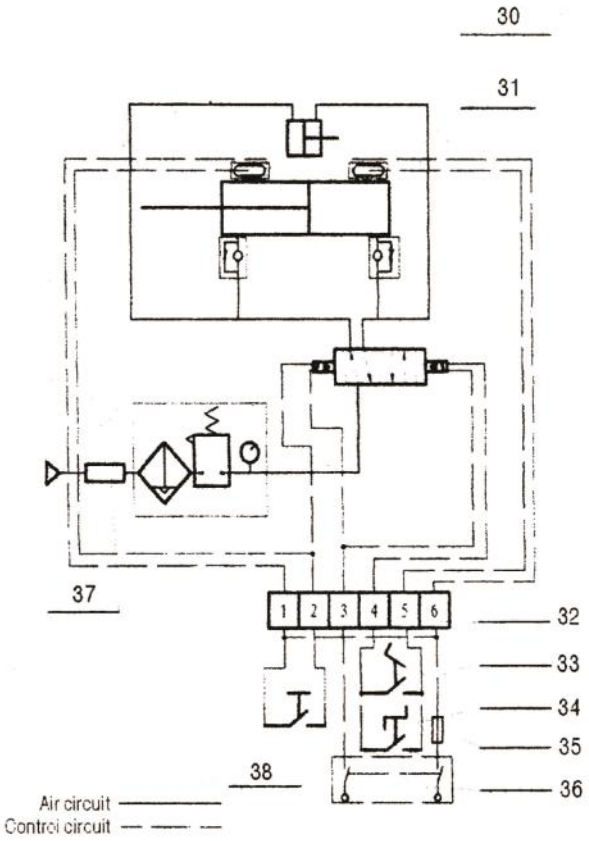
22. Cable connector (connected to pedal switch)

23. 24. Power switch 25. Terminals

26. Solenoid (two-position five- way) 27. Silencer

28. Straight way valve 29. coil

9. AIR CIRCUIT CONTROL DIAGRAM



30. Cylinder for material filling nozzle 31. Cylinder for material pushing
32. Terminal 33. pedal switch 34. Selection switch
35. Fuse 36. Master switch 37. Air source switch 38. Reset switch

Packing List

Model of product: G1WGD
Name of product: Semi-automatic piston-type single head pasty liquid filling machine

Serial No.	Category	Descriptions	Unit	Quan.	Specifications	Remarks
1	Technical Document	Main Machine	Set	1	G1WGD	
2		Instructions	Copy	1		
3		Packing List	Copy	1		
4		Receiving Apron	Copy	1		
5		Product Certificate	Copy	1		
8	Accessory	Ring	Set	1	Model O or XY	Depending on size
9		3-way valve ring	Set	1	Depending on size	
10		Inner Hexagonal Spanner	Set	1	1.5、2、2.5、3、4、5	
11		Screw Driver "+"	Piece	1	Ordinary	
12		Screw Driver "-"	Piece	1	Ordinary	

10. Troubleshooting

Filures	Causes	Elimination
Piston refuses to move.	1. Air supply abnormal.	1. Make it normal.
	2. Air source switch (02) not turned on.	2. Turn on the air source switch.
	3. Improper signal valve operational position	3. Confirm its correct position.
	4. Compressed air not meet requirement.	4. Make the pressure up to the requirement.
	5. Piston jammed.	5. Repair it .
	6. Material viscosity not proper (The machine is only for pasty liquid packing)	6. Use material with proper viscosity.
With the piston pushed to the top, it does not return.	Improper signal valve position	Adjust the valve position by pressing the reset button (06).
Filling amount inaccurate or no material fed.	1 · Signal valve position moved.	1. Make the valve position correct
	2. Material pumping speed of the cylinder too fast.	2.Reduce the pumping speed (Only apply to the material with high viscosity) .
	3. One-way valve clogged.	3. Repair it.
	4. Material in the charg-ing basket not enough.	9. Replenish the material.
	5. Leakage at pipe joints	Make the joints well sealed.
Material leaks out from the rear of the cylinder for material.	1. Sealing ring on the piston broken.	1. Replace it .
	2. Piston and piston rod loosed	2. Fasten them.