

Manual For Microcomputer-controlled Semi-automatic Filling Machine

I. Introduction

The microcomputer-controlled semi-automatic filling machine is equipped with imported microcomputer-controlled chips which can control the filling time and filling flow precisely. Besides, it uses internationally famous frequency conversion speed controller and imported magnetic gear stainless pump (316L) as key components; therefore it is of high quality and wearable. It is widely used in the industries such as pharmacy, food, cosmetic, daily chemical, domestic chemical, agricultural chemical and so on. It is able to fill almost all kinds of liquid such as: various medicaments, chemicals, beverage, cosmetic, food and other kinds of granule-free liquid.

II. Functional Features

1. Equipped with microcomputer-controlled chips, it features in precise control and easy operation.
2. Digital display, precise and free from parallax.
3. Touch panels, comfortable hand touch and good sensitivity.
4. Data saving function in the chips.
5. Large filling range. For small pump machine, it is adjustable from 1ml to 10,000ml; for large pump machine, from 10ml to 80,000 ml
6. The whole shell is made of stainless steel.

III. Technical Parameters

Model	Rated Voltage	Power	Max. Flow	Tolerance	Machine Size (mm)	Net Weight	Packing Size(mm)
CY-I-B	220V 50/60Hz	400W	Single pump >10L/M	±1%	400x350x280 mm	15Kg	470x390x345

IV. Caution

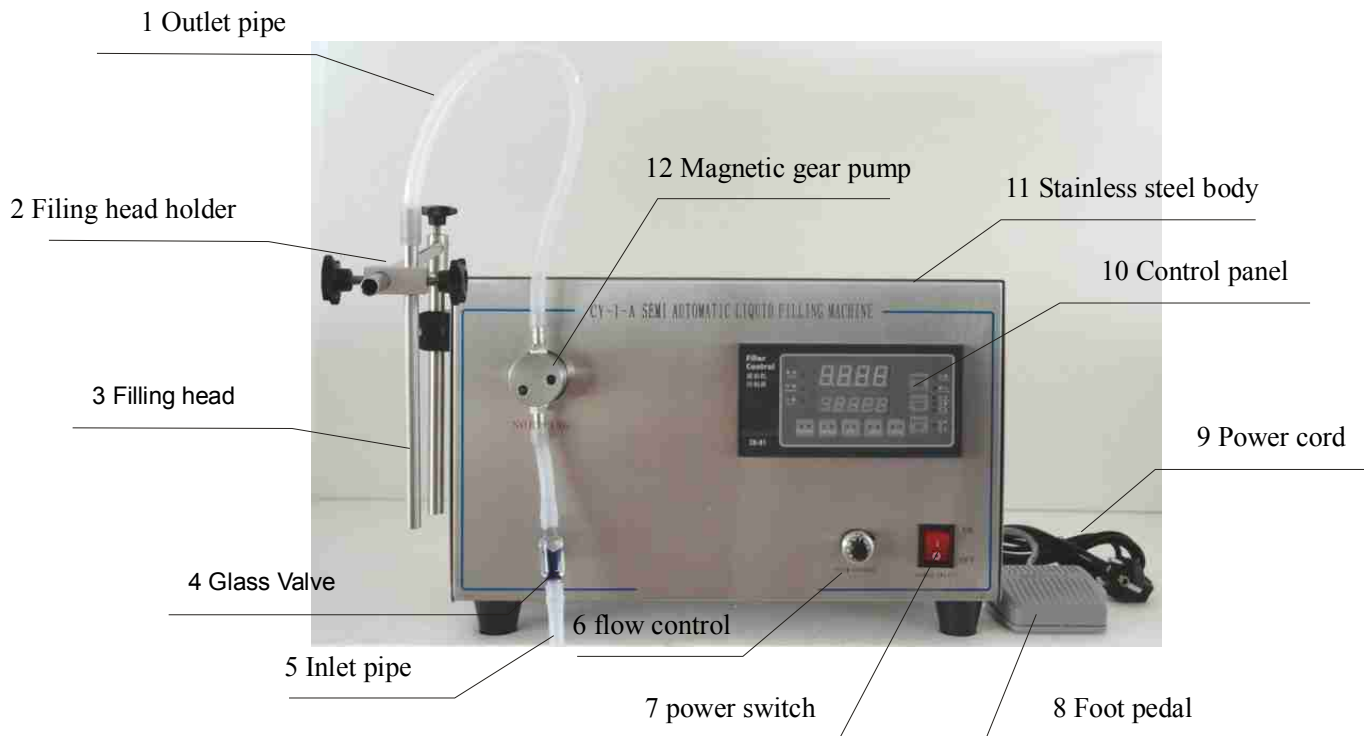
- 1 Use 220V(±5%), 50/60Hz AC power supply. Use the rated fuse correctly. Disconnect the power supply before putting the fuse in or removing the fuse.
- 2 To avoid body injury, please use grounded AC sockets. The plug and the socket should be in good contact; otherwise the filling machine may be broken easily.
- 3 The filling machine should be installed in a ventilated, dry place with few dust; it should be placed horizontally and 20CM away from the wall or other objects, so that it can exhaust normally.
- 4 The check valve should be vertical and downward, otherwise the precision may be affected.
- 5 The filling head should be vertical and downward, otherwise there may be drippings.
- 6 The angle of the pipe elbow should not be too small, otherwise the flow and precision may be affected.
- 7 There should not be obvious difference in the level of the material barrel; otherwise the precision may be affected.
- 8 Volatile liquid should be used in a ventilated environment.
- 9 Do not use with a high frequency wave machine.
- 10 Do not use with high voltage devices.
- 11 Please tell the features of the liquid to be filled to the manufacturer; so the manufacturer can check

suitable inlet/outlet pipe.

- 12 To avoid burn or electric shock, please do not open the machine box at will. During operation, do not put any metal into the box or touch the heat- dispelling components; otherwise, serious electric shock may happen.
- 13 The material to be filled should be free from hard granules, high adhesive objects or line-shaped objects.

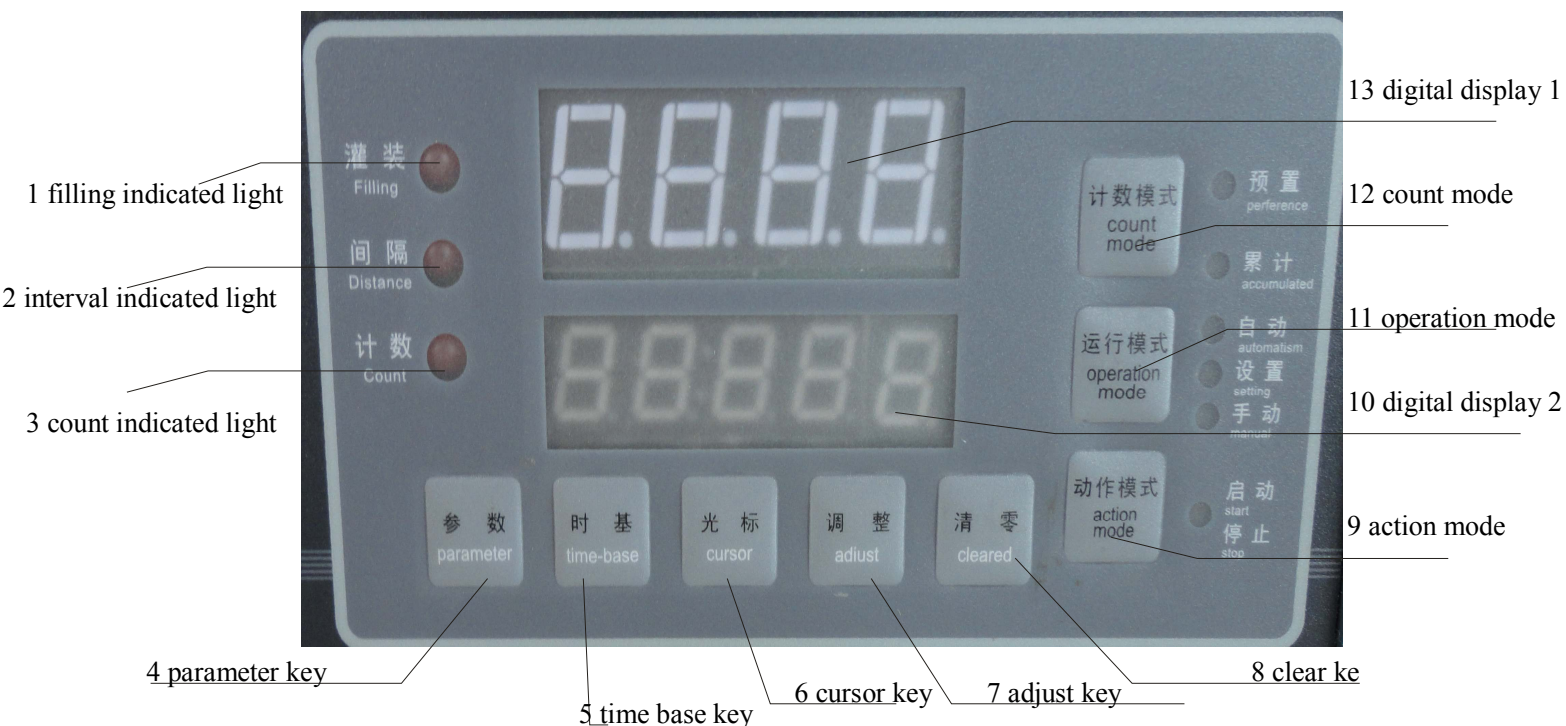
V. General Operation

1 Equipment Structure Introduction



Model:SF-2-1L

(Figure 1) Single Filling Head Small Pump Machine



(Figure 2) Operation Panel of Single Pump Machine

2 Operation of the Control Panel

When power on the machine, the control panel is in “manual” operation mode and “accumulated” count mode(the corresponding indicated light will be on). The digital display 1 will flash and shows last interval setting(the interval indicated light will be on). The digital display 2 shows last preference setting. The flash will stop in 4 seconds and all the keys become effective. Then you can set each parameter and operation mode according to your needs.

- 1). **Parameter key:** use to set the filling time, interval and count preference(the three indicated lights on the left side of control panel will indicate correspondingly)
- 2). **Cursor key:** after choosing the parameter which needs to adjust, press the cursor key, the number in the digital display 1&2 will flash, then you can adjust the number
- 3). **Adjust key:** when the digital display is in flash, press the adjust key, the number will increase one from 0-9
- 4). **Time base key:** beside setting the time, you can also set the time base. There are two time bases, 0.1second and 0.01second. Press the time base key, the radix point will move. The filling time base and the interval time base are the same.
- 5). **Clear key:** to clear the actual filling times

Note: the above five keys setting should be before the filling; while the below three keys setting can be at any time

- 6). **Count mode:** there are “preference” count mode and “accumulated” count mode. In “preference” count mode, when the count reaches the preference, the count indicated light will flash and the machine stops filling. At this time pressing the action mode key will not start the machine. If you need to continue the filling, change the count mode to “accumulated” or clear the actual filling times, and press the action mode key to restart. In “accumulated” count mode, the machine will count the filling automatically up to 99999 then recount from 0
- 7). **Operation mode:** there are automatic, manual and setting three operation modes. In manual mode, the machine only fills after you press the foot pedal or press the action mode key, one press for one fill. In automatic mode, the machine will work automatically according to your settings after you press the action mode key until the filling reaches the “preference” in preference count mode or repress the action mode key to stop the machine. In setting mode, it is almost the same as automatic mode, only no counting in setting mode.
- 8). **Action mode:** to start or to stop the filling
- 9). **Flow control:** to adjust the filling speed, the bigger valve the higher filling speed. Can be used with the filling time to control the filling volume.

3 Introduction of the Back Panel

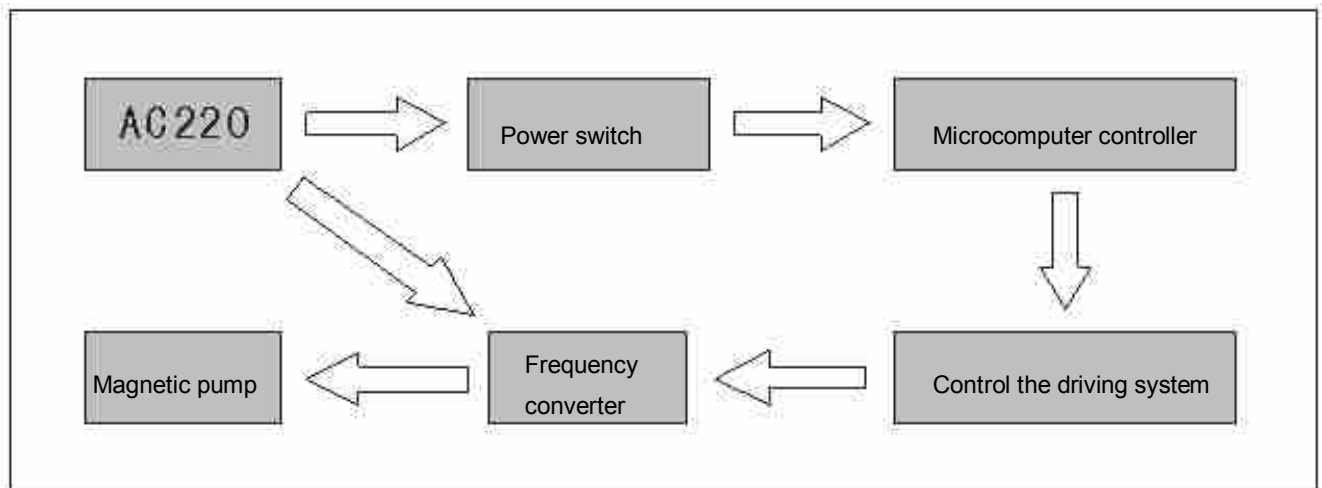


- 1). AC220V, 50/60Hz AC socket
- 2). Fuse holder
- 3). Foot switch socket

4 Operation Methods

- 1). Put the machine on a working table; prepare the material barrel and bottles to be filled; connect the power supply and turn on the power switch; the microcomputer- controlled panel starts and carries out a quick self-check; after the buzzer of the panel makes a long buzz, the panel finishes the self-check and is standby. The filling time, interval, pump flow are the same with the value saved last time.
- 2). When using for the first time, fill some liquid into the inlet/outlet pipe of the pump manually; so that it is possible to fill the liquid from the material barrel to the target bottles.
- 3). At the beginning, there may be some air or bubbles in the outlet pipe. After filling for several times and the air or bubbles in the outlet pipe have been drained out, set the filling flow and time until the filling is satisfied.

VI. System Sketch (refer to the figure below)



VII. General Malfunctions and Solutions

Malfunctions	Reasons	Solutions
Not working	Broken circuit	Replace the power cord.
	The fuse is burned out.	Replace the fuse.
	Pipes are blocked by foreign substances.	Clean foreign substances.
	Pumps don't work.	Contact with the manufacturer.

Fail to stop	Wrong setting	Check the “Filling Time” setting.
	Display garbled value.	Contact with the manufacturer.
There are bubbles in the pipe when filling	There are air leakages in the joints.	Check the joint.
	There material is not enough.	Add material.
There are continuous bubbles in the outlet pipe when stopping.	There are foreign substances in the check valve.	Disassemble and clean the check valve.
There are drippings in the filling head.	The filling head is not vertical.	Adjust the filling head until it is vertical.
	The liquid specific gravity is too small.	Use a smaller filling head.
	The inlet/outlet pipe is not made from proper material.	Choose a suitable hose.

VIII. List of Accessories

No.	Name	Specification (Model)	Quantity	Remarks
1	Power cord	250V - 15A	1	—
2	Fuse	10A	3	—
3	User’s Manual	Semi-automatic filling machine	1	—
4	Glass valve	Small one	2	—
5	injector	60ml	1	—

IX. Guarantee

- 1 For the purpose of expressing our gratitude towards various customers who support and trust us and protecting their benefits, our company provides one year guarantee for all our products.
- 2 The guarantee is not available under the conditions stipulated below:
 - 1). Without our company’s guarantee card.
 - 2). The malfunction is caused by the operation that violates the Operation Manual.
 - 3). The malfunction is not result from poor quality.
 - 4). The guarantee card is fake or has been modified.
 - 5). It is not in the guarantee period.
 - 6). Open the machine box without authorization from the manufacturer.