

Cylinder Quantitative Filling Machine

(Specification & User's Manual) (BAL-4001)



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Cylindrical Quantitative Filling Machine BAL-4001

Specification :

Dimensions : 150cm X 70cm X 42cm

Power Supply: 110V, 50/60HZ

Filling Quantity : 3ML ~ 30 Liters

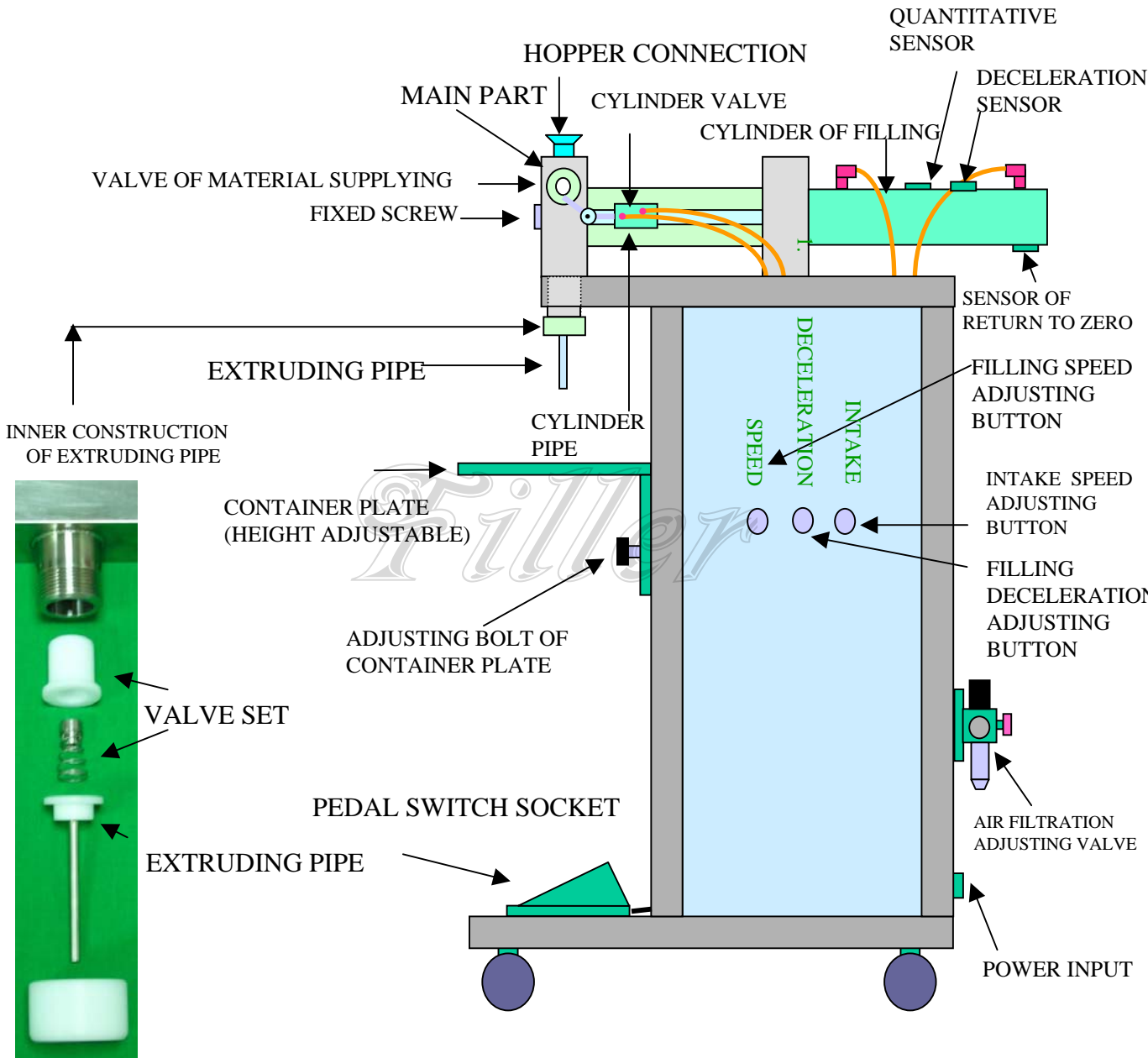
Material Hopper : 50 Liters

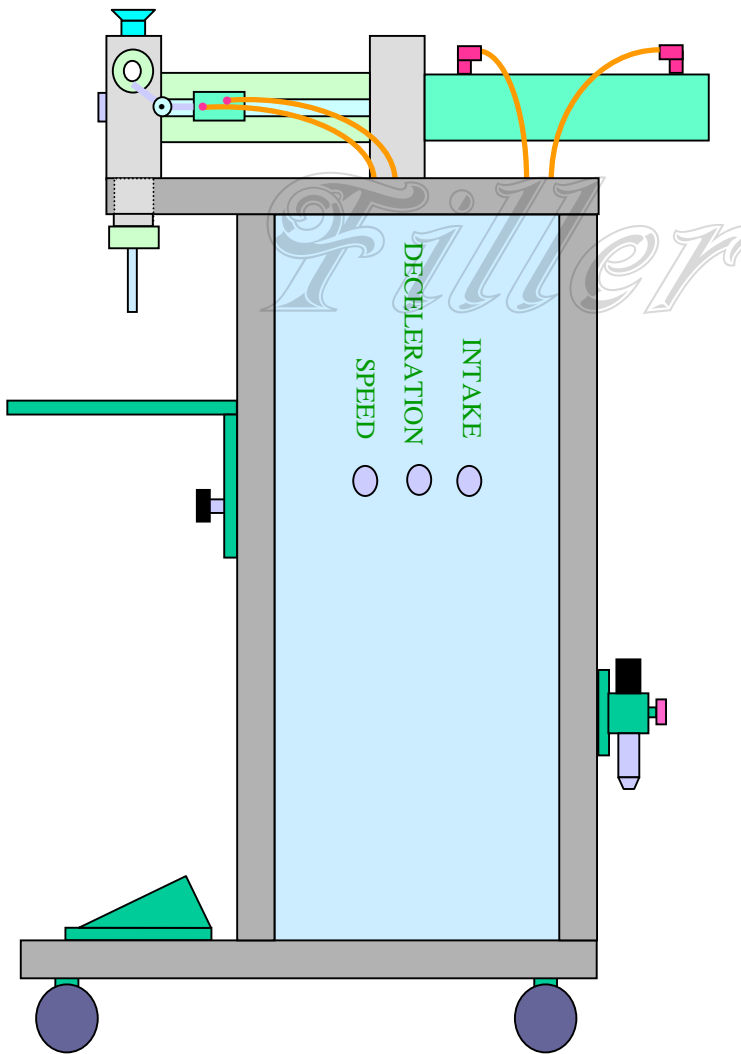
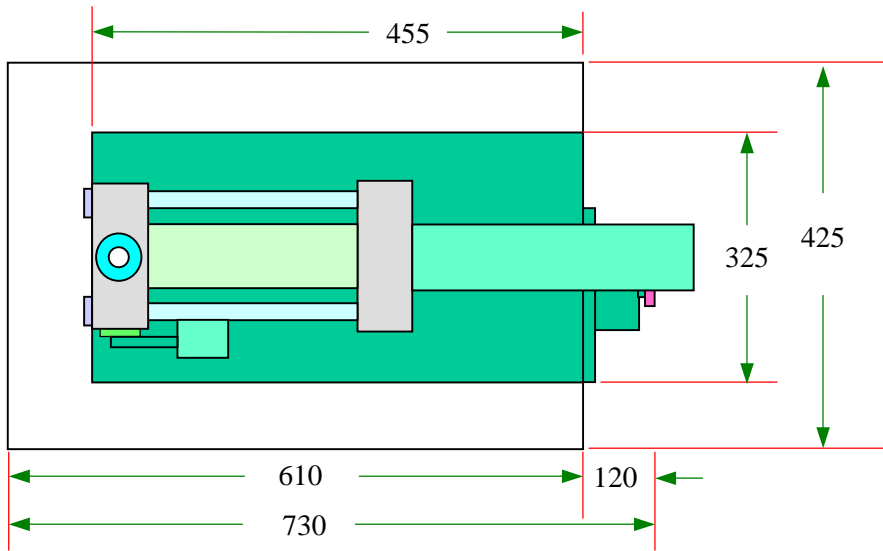
***Operated with air compressor
(1 HP & above)**

Technical Capability :

1. PLC system adopted, easy setting, precise filling from 3ml to 30L without parts change.
2. Capable of deceleration setting, filling velocity controlled automatically, no foaming and spilling during rapid filling work.
3. Cylinder made of stable and low-friction material, ensures no contamination, efficiently fills any liquid and sticky material.
4. Alternative parts included, hopper for sticky material and general materials are filled by auto-sucked of machine.
5. No blind corner design, no remnants, easy to maintain clean and re-assemble.
6. Suitable for food industries, cosmetics industries, pharmacy...etc.

Diagrammatic Structure:

















FILLER_04

FILLER CO., LTD.			
item	CYLINDRICAL FILLING MACHINE BAL-4001		
Map no	02	Scale	1 : 1
Q'ty	2	Measurement	mm
date	97.09.23	material	Aluminum alloy & stainless steel

List of Accessories:

ITEM	ILLUSTRATION	ARTICLE	CODE	Q'TY	DESCRIPTION	REMARKS
1		HOPPER	FM-H50	1 UNIT	50 LITERS #316 STAINLESS STEEL	WITH COVER
2		EXTRUDING PIPE	PF-06	3 PCS		
3		CLAMP	FM-L01	2 PCS	STAINLESS STEEL	
4		90° STAINLESS STEEL JOINT	FM-L02	1 PC		
5		CLIPPED RUBBER GASKET	FM-L03	5 PCS	INNER DIA. 1 INCH	
6		GASKET OF VALVE SET		5 PCS		
7		SPRING OF VALVE SET	PF-05	3 PCS		
8		BACKUP O-Ring		1 BAG		

ITEM	ILLUSTRATION	ARTICLE	CODE	Q'TY	DESCRIPTION	REMARKS
9		V- SEALS OF CYLINDER PIPE		3 PCS		
10		BACKUP SCREWS		1 BAG		
11		SCREW DRIVER	FM-A04	1 PC		
12		HEXAGON WRENCH	FM-A02 FM-A03	2 PCS	6mm 8mm	
13		PEDAL SWITCH	CF-38	1 SET		
14		FILTER FIXTURE	PF-23	1 SET		
15		CYLINDER FIXTURE BOLT	PF-21	1 PC		
16		STAINLESS STEEL JOINT	FM-L07	1 PC	DIA.1" ATTACHED ON THE INTAKE HOSE	
17		INTAKE HOSE	FM-T05	5 FEET	DIA.1" VACUUM PIPE	

ITEM	ILLUSTRATION	ARTICLE	CODE	Q'TY	DESCRIPTION	REMARKS
18		FILTER	CF-46	1 SET		
19		TOOL BOX	FM-X02	1 BOX		
20		USER'S MANUAL	FM-B4001	1 SET		

Filler

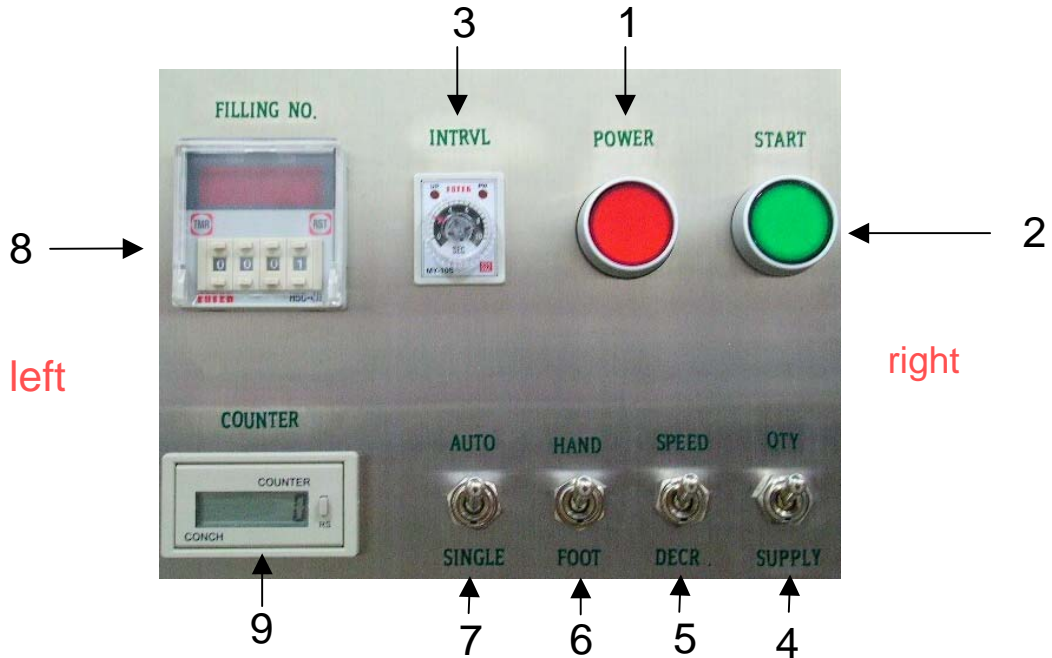
Warnings :

1. This machine should be operated with air compressor and electricity, please check if the voltage is appropriate before use. Also check if the air compressor is connected with the machine. In order to keep the action in good and normal situation, please keep air pressure above **5kgcm**.
2. Must carefully read through instructions given in this User's Manual before operating this machine.
3. Connect the ground wire along with the plug properly before use. Never attempt to dismantle the ground wire.
4. Avoid any careless operation at all time.
5. Turn off the Power while it's not in use for a long time.
6. Disassembling the main body of machine is strictly prohibited. Action of such automatically results in warranty to be totally voided.

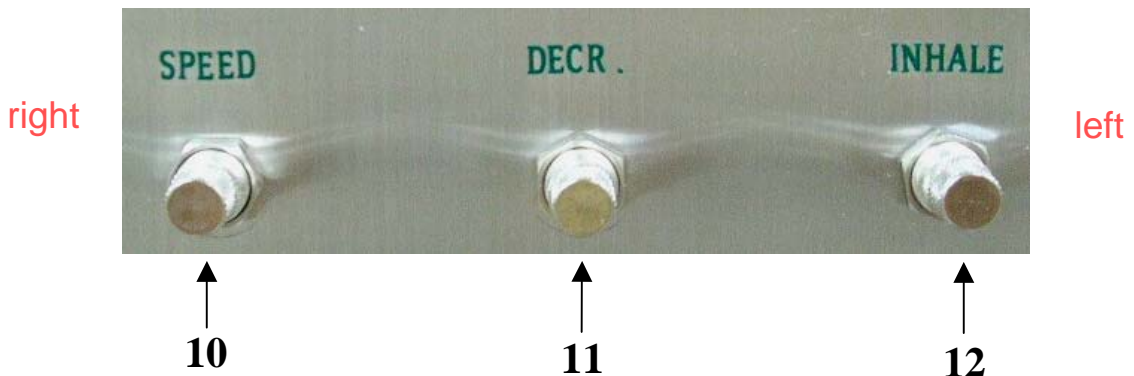
Emergency Measures:

Immediately unplug the power in case of any abnormal output continually performed by the machine. Contact us right away for further assistance.

Control Panel Introduction:



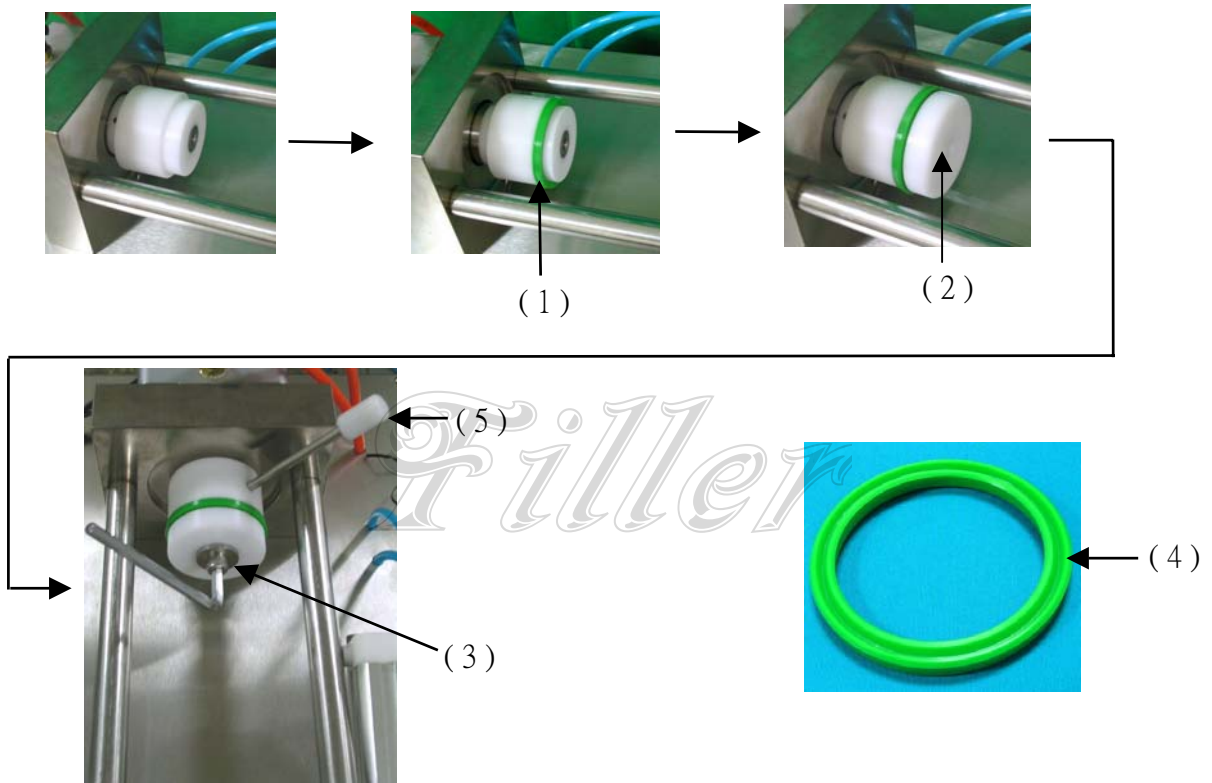
1. Power On/Off
2. Start On/Off
3. Interval time adjuster (for "Auto")
4. Quantitative / Supply filling selecting key
5. Filling speed / Deceleration selecting key
6. By Hand / Foot selecting key
7. Automatic / Single filling selecting key
8. Filling number setting
9. Filling amount counter
10. Filling speed adjusting button
11. Filling Deceleration adjusting button
12. Intake speed adjusting button



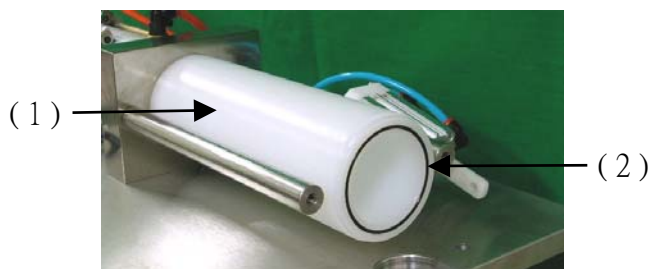
Assembling Procedures:

Please note : Assemble the machine only in "power off" condition

1. Place the v-seals of cylinder pipe(4). The concave should face outside(1). Then put on the lid of cylinder(2) and gasket, fasten by the screw (3). Using the tool (5) in assistance when fastening the screw

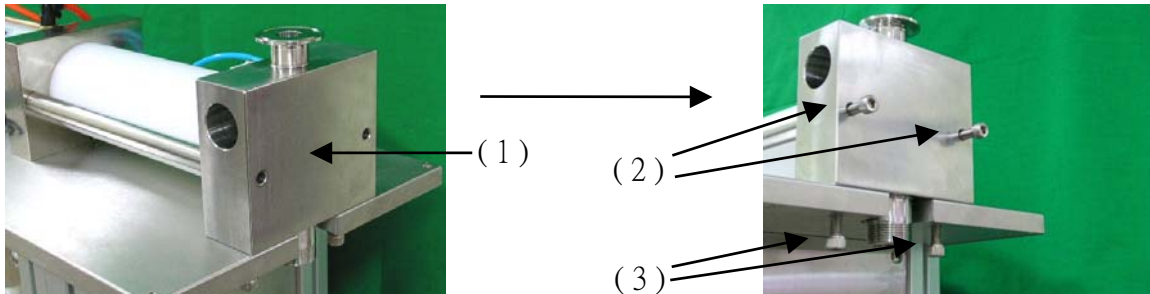


2. Insert the cylinder pipe (1) to the machine, the seal of cylinder pipe is facing outside.



3. Install the main part (1) to the machine and screw up with 4 screws (2)(3).

Please note : the screw (2) should use the 6mm hexagon wrench and the screw (3) should use the 8mm hexagon wrench.

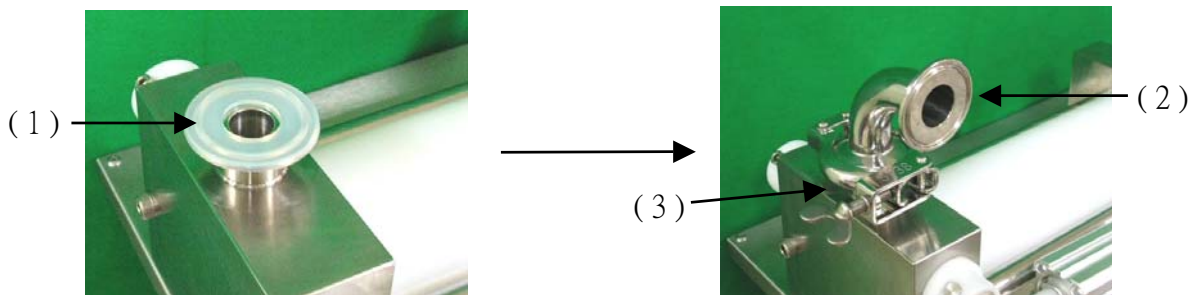


4. Insert the valve into the main part (1), combine with the lid of valve (2) and fasten with the screw (3). Connect (4) and (5) by using the screw (6).

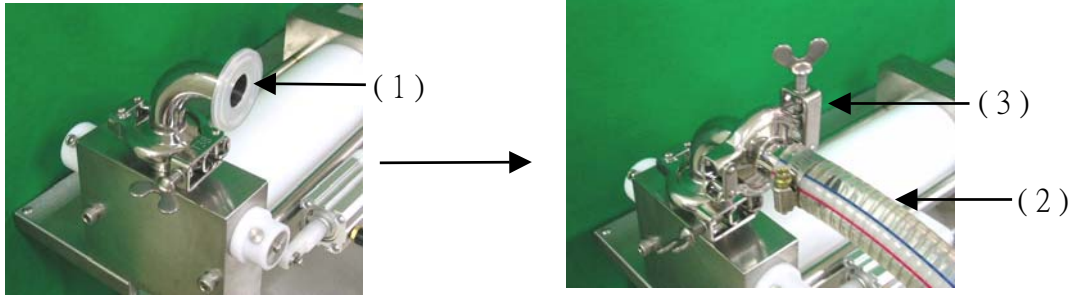


5. There are two ways to fill the materials

❖ <1> put on the clipped rubber gasket (1), then fasten the 90° stainless steel joint (2) with the clamp (3).

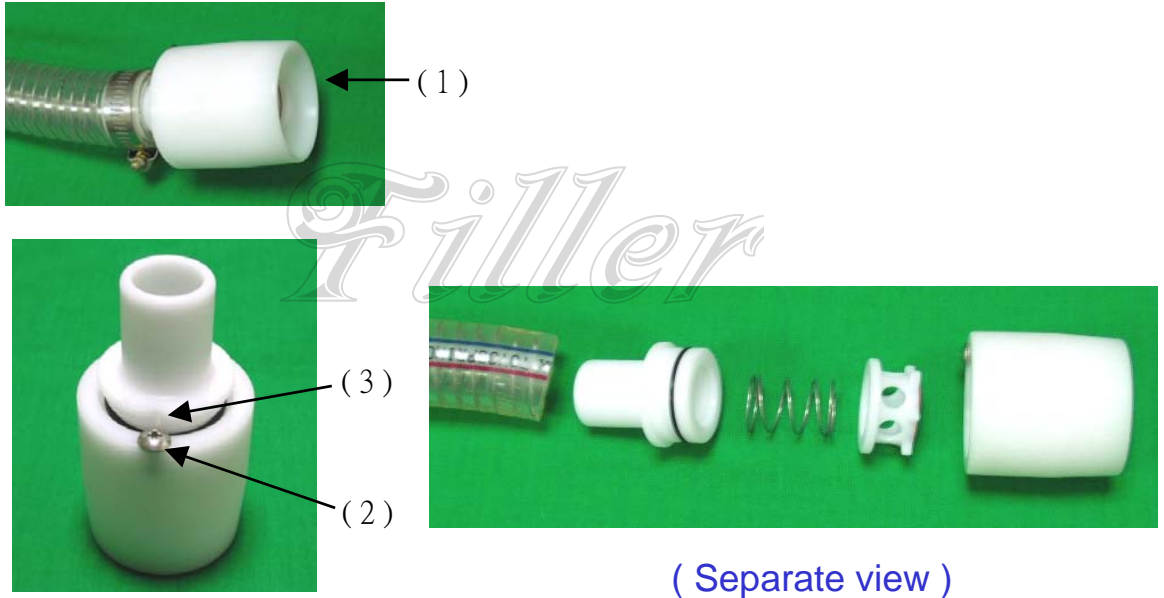


<2> put on the clipped rubber gasket (1) and insert the intake hose, and then fasten with the clamp (3).

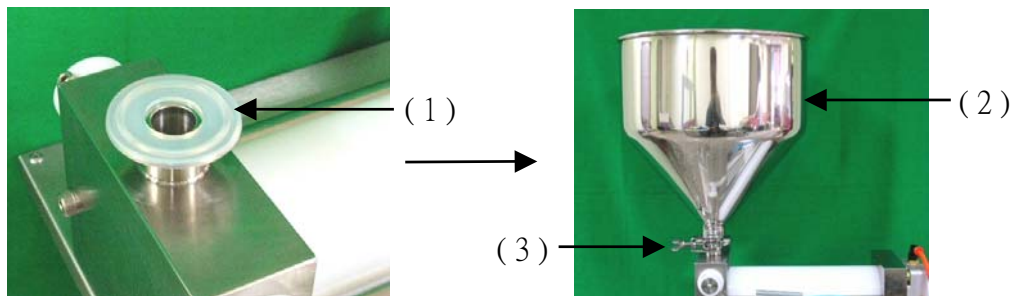


Below is the photo of the head of intake hose (1), right photo is the separate view.

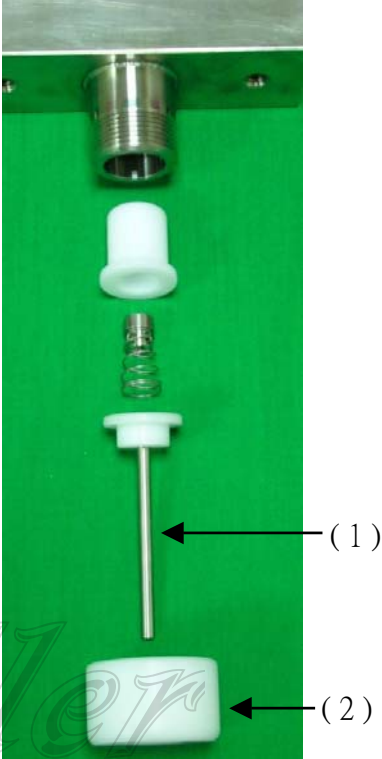
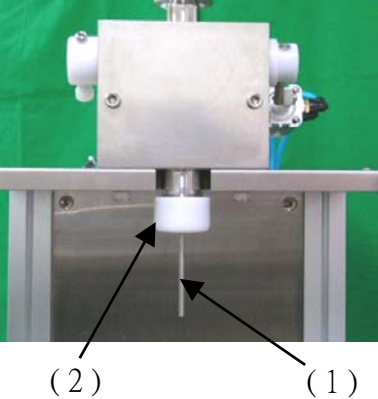
Please note : when assembling the head of intake hose, the screw(2) should face to the concave (3) then screw up.



❖ Put on the clipped rubber gasket, then fasten the hopper with the clamp (3).



6. Install the extruding pipe and fasten with the screw (2).
Right photo is the separate view.



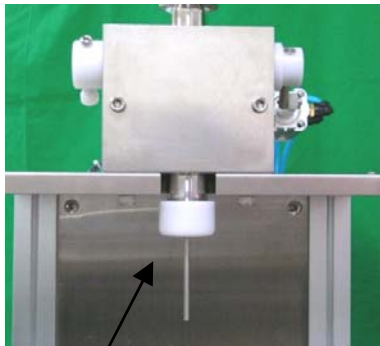
(separate view)

Disassembling Procedures:

Please note : Disassemble Only In Power Switch Off Condition

1. Adjust the button "hand/foot" to the hand operation.
2. Confirm that no material was left in the hopper. Then loosen the clamp to disassemble the hopper (1).

(The right photo is the separate view.)



(1)

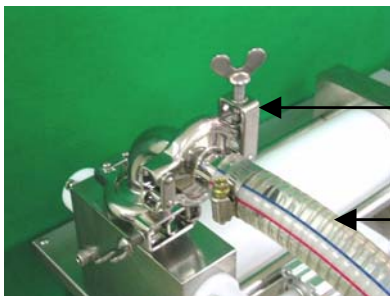


(The separate view)

3. Take the hopper (3) or the hose (2) away.

Above is the disassemble of intake hose and below is the disassemble of hopper.

(above)

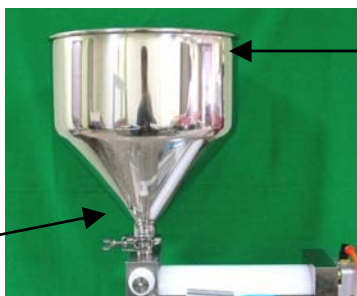


(1)

(2)

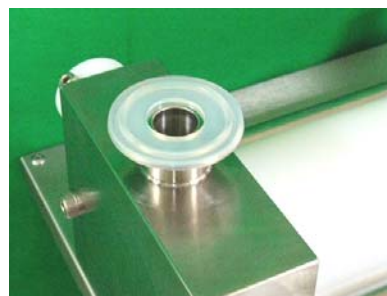


(below)

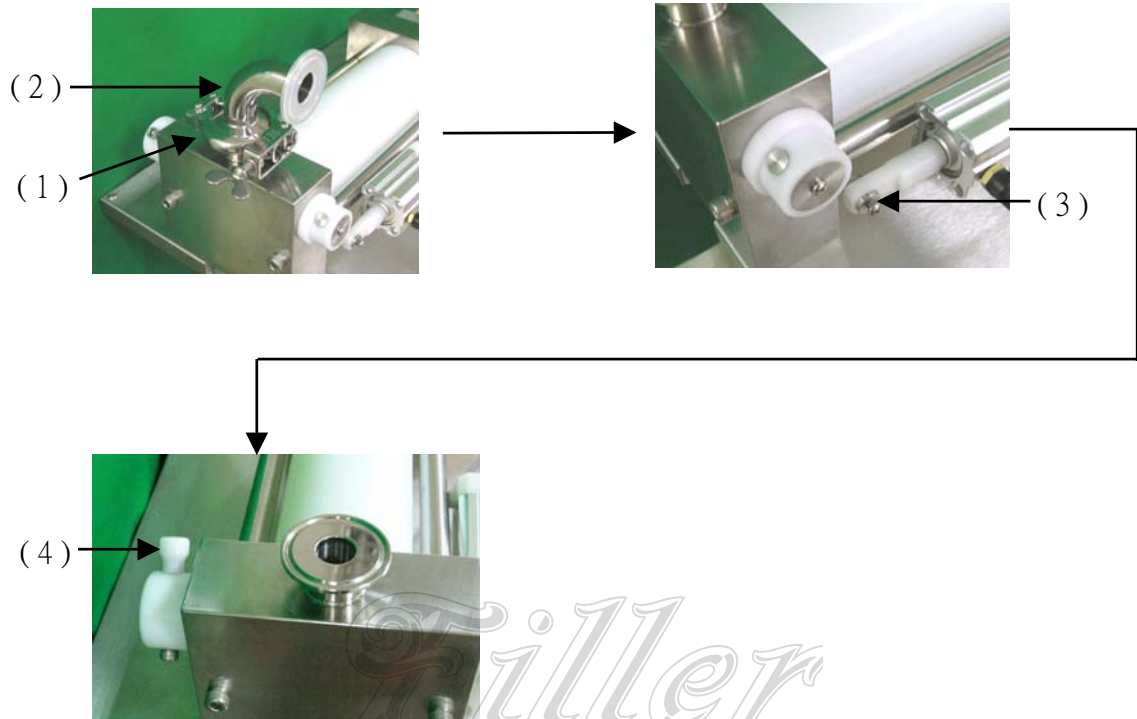


(3)

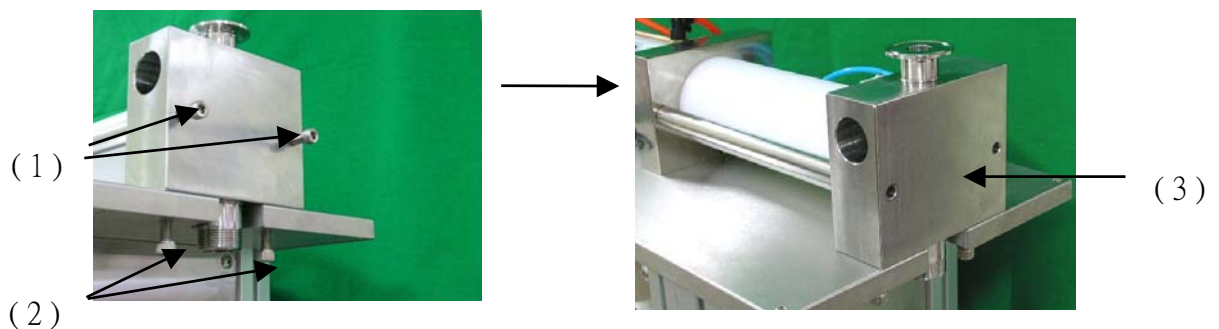
(1)



4. Loosen the clamp(1) that has been fixed on the 90° stainless steel joint and take it out. According to the chart (3) and (4) to loosen the joint of screw and the valve.

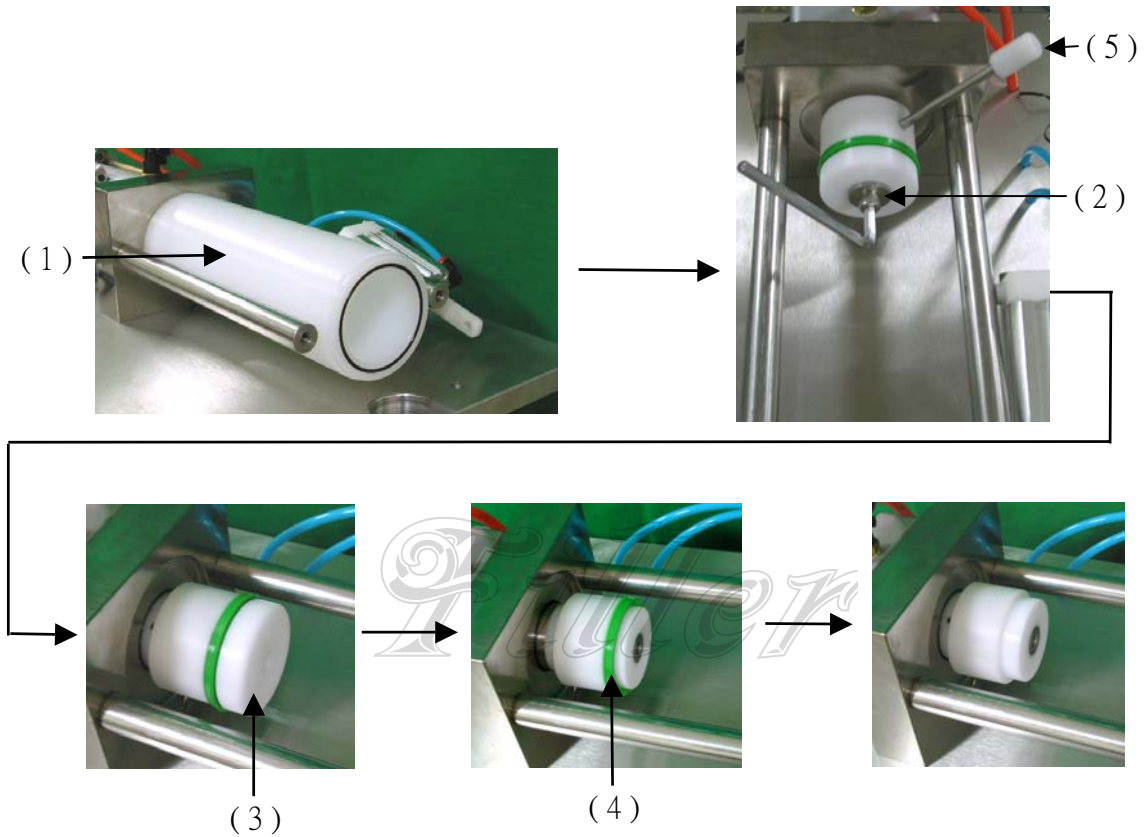


5. Loosen 4 screws (1)(2) of the main part. Using the 6mm hexagon wrench to loosen the screw(1) and 8mm hexagon wrench to loosen the screw(2). Then take out main part.



6. Take out the cylinder pipe from the machine(1). Loosen the screw(2) and the lid of cylinder(3). Finally take out the v-seal of cylinder pipe .

Assistance by tool (5) when loosen the screw.



Operation Procedures:

*Remember to always turn the Motor “off” when you’re away from the machine

1. At first, check if all parts are properly assembled.
2. Pour material into hopper.
3. Turn the power on.
4. Slide the switch of air filtration adjusting valve.
Please note: the air pressure should be kept above 5kg/cm.
5. Exhaust procedure” : (a) Put vessel under the extruding pipe.
(b) Adjust key 4 to “supply” function. (c) Adjust key 6. to “ hand” function or “ foot” function. (d) If by hand, press “start” key; if by foot, step the pedal switch to exhaust the air. (e) Repeat step d. until material extrude from the pipe. (f) Repeat step d. & e. for several times to make sure the air has been exhausted completely.
6. Adjust Filling Parameters & Function Mode (*Please see the page 18, 19*)
7. Place vessel under extruding pipe.
8. (A) Adjust key 4 to “Q’ty” (quantity) function or “ Supply” function.
(B) Adjust key 6 to “ Hand” function or “ Foot” function.
9. Filling number setting: filling quantity 300ml or less, set filling number as 01. If filling quantity more than 300ml, such 500ml, please adjust filling quantity as 250ml and set filling no. as 02. Machine will fill 2 times to reach 500ml.
10. (A) If choose “ Hand” function, press “start” key. Machine will start to fill quantitative volume that you set.
(B) If choose “ Foot” function, step the pedal switch.
(C) If choose “Single”, press “start” key or step pedal switch. (each action for one time filling).
(D) If choose “Auto” (automation), press “start” key or step pedal switch, machine will fill automatically. Press “start” or step pedal switch again, machine will stop.
11. Repeat steps 6 & 9 to continue the work.

Setting Up Filling Parameters & Function Mode

Three buttons on right panel:

1. **Filling Speed (Speed):** This is the function to adjust the filling speed. Turning this button to adjust filling speed fast or slow.
2. **Filling Deceleration (Deceleration):** This function is to slow down the filling speed during the filling process and avoid material to spout when approaching the top of vessel. Move the deceleration sensor to set the quantity. For example: if move the sensor to 100ml, filling speed will decelerate after reaching 100ml. Please note the deceleration sensor can't surpass the position of quantitative sensor or the deceleration doesn't work. When sensor's position at "0", means no deceleration.
3. **Inhale speed (Inhale):** This is the function to adjust the inhale speed. Turning this button to adjust inhale speed fast or slow.

Left side panel & others:

4. **Filling quantity sensor:** Move the quantitative sensor to the quantity number that you need. Filling quantity can be set from 3ml ~ 300ml. If the quantity is bigger than 300ml (ex. 400ml), please adjust filling quantity and filling number. (ex. set filling quantity as 200ml and filling no. as 02, Please refer to the page 17, item 9)
5. **Quantitative filling (Q' ty):** Adjust key 4 to this function. Machine will fill quantitative by each operation.
6. **Supply:** Adjust key 4 to this function. Press "start" button to fill, the material will be filled continually until release this button.
7. **Speed:** Adjust key 5 to this function. The speed will be same during each filling process.

8. **Deceleration:** Adjust key 5 to this function. Filling speed will slow down during the filling process. (please refer to the page 18, item 2)
9. **Hand:** Adjust key 6 to this function. (please refer to page 17, item 10)
10. **Foot:** Adjust key 6 to this function. (please refer to page 17, item 10)
11. **Automation (Auto):** Adjust key 7 to this function. (please refer to page 17, item 10)
12. **Single:** Adjust key 7 to this function. (please refer to page 17, item 10)
13. **Interval (Intrvl):** Turning interval button to set up the interval time of each filling. (0-10 sec.)
14. **Filling No. Setting:** Set up the filling times of each operation. (refer to the page 17, item 9)
15. **Counter:** Display the filling amount. (Set the number to zero before operating)

※Please contact us for further information in detail.

One (1) Year Limited Warranty – Worldwide

Filler Co. warrants their standard products against defects in their operation and non-consumable materials under normal use for a period of ONE (1) YEAR from the date of purchase by the original purchaser (“Warranty Period”). When a non-consumable hardware defect arises within the Warranty Period, a claim written in detail is to be received by Filler Co. within 30 days of the date the defect was discovered. At its option, Filler Co. will either (1) repair the hardware defect at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product. This Limited Warranty does not apply to the damage caused by failure to either (1) follow instruction relating to the product’s use, or (2) handle, fill, transmit, wash, clamp, and/or manufacture the materials that are feasible and agreed upon through product testing beforehand and under general industrial acceptance.

Except as provided in this Warranty and to the extent permitted by law, Filler Co. shall not be liable for any direct, special, incidental, or consequential damages of any kind, including, but not limited to any expenses for removal or reinstallation resulting from a defect; loss of use; loss of revenue; loss of actual or anticipated profits (including loss of profits on contracts); loss of the use of money; loss of anticipated savings; loss of business; loss of opportunity; loss of goodwill; loss of reputation; loss of, damage to or corruption of material; or any indirect or consequential loss or damage howsoever caused including the replacement of equipment and property, any costs of recovering, programming, or reproducing any material stored, filled, transmitted, handled, washed, clamped or used with Filler Co.’s products.

* Proof of Purchase *

Owner's Name			
Address			
Article			
Purchase Date			
Dealer			Signature
Model			
TEL			
FAX			
Manufacturer	Filler Co.,LDT.		
Model	BAL-4001		
TEL	886-2-2593-1616	886-2-2591-6873	
FAX	886-2-2586-4587		

In practical terms:

- 1) ***We warrant this machine with quality of performing steady operation in normal use (based on existing industrial standard) according to its design, for one year counting from the date of purchase. .***
- 2) ***Parts that are considered consumables (such as Filling Pipe, Hand-held extension Pipe, Intake Pipe, etc.) are not covered under this warranty.***
- 3) ***Parts & labor will be charged additional if the breakdown of machine is due to following:***
 - ***Unauthorized disassembling of the machine.***
 - ***Unauthorized operation based on instructions NOT included in User's Manual.***
 - ***Inappropriate power supply voltage applied.***
 - ***Damage from rats, insects, poor working condition, and natural disasters.***
 - ***Accident caused by failure in following instructions on assembling, disassembling, and cleaning procedures. (for example, sinking/soaking machine into water)***

