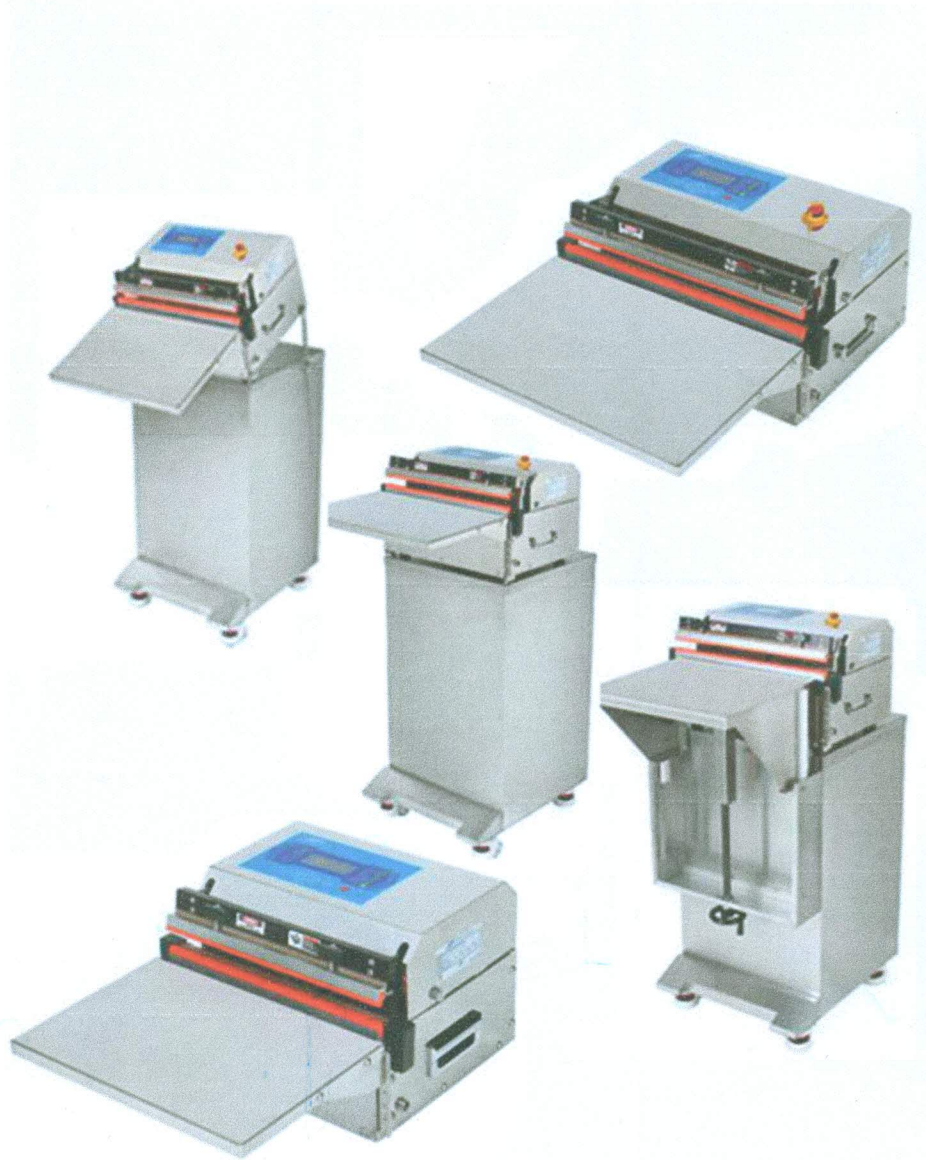


VACUUM SEALER MANUAL

MODEL: VS-450E-G



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1. INTRODUCTION

1-1 Introduction

Thank you for your purchase of nozzle type vacuum sealer.

The machine carries out vacuum and gas flushing using the nozzle and seals a vacuum bag by pressing power of the sealing bar and proper heat from the heat wire. There are electric motor driven model and air driven model. The application includes protection of packed goods from decomposition, oxidation, discoloration, foreign material and external germ.

Before the user starts to use the machine, please read this user's manual with full attention. And use the machine according to the right instruction and keep the manual always around the machine for use anytime.

For any accident or injury caused by use not conforming to this user's manual or by mistake or carelessness of the user, **we** have no legal liability. Also, we are continuous effort for best quality safety, quality maintenance and price competitiveness could result in any difference between the actual specifications of the machine actually sold to the user and the specification on this manual. So, if the user has any inquiry for the machine or manual, please contact the below.

1-2 The electricity type and electric plug for this machine





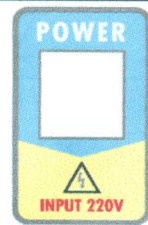
The input is AC and the output is DC24V.



1 PH, 220V

3 PH, 220V / 380V

1-3 Caution label and its location

CAUTION LABEL	CONTENTS	OTHERS
   	<ul style="list-style-type: none"> ● Machine : Main Fuse ● Controller : PLC Fuse 	<p>Guide Back side</p>
	<ul style="list-style-type: none"> ● Danger : DANGER High temperature on sealing bars Risk sign 	<p>Risk Upper sealing bar</p>
	<ul style="list-style-type: none"> ● Warning : WARNING Prohibit inserting finger between sealing bars Warning sign 	<p>Warning Upper sealing bar</p>
	<ul style="list-style-type: none"> ● Gas connection : GAS (N2, CO2, Mixed gas, etc) 	<p>Guide Back side</p>
	<ul style="list-style-type: none"> ● Power supply: 1 ph., 220V 3 ph., 220V, 380V 	<p>Guide Back side</p>

2. CHECK POINT RECEIVING DELIVERY OF THE MACHINE

2-1 The packing state

- *It must be checked before opening the packing box.
- * Is there any damage on the packing box? If so, the buyer may not accept the machine or must open the box with agreement of the delivery person and must take some photos before opening the box and keep those. This is needed to judge the responsibility of the delivery company. The above is not applied in the case that the machine is delivered directly by WELCOMEPACK™.

2-2 The contents inside of the packing box

- * Check the contents inside the packing box after checking the packing state.
- * Are there any missing parts or any damage? If so, take some photos for that and keep those.

2-3 For any defect

- * For any problem, please follow the above procedure and contact WELCOMEPACK. WELCOMEPACK will respond it ASAP.

3. CAUTION FOR USE

3-1 Caution for safety

- 1) **In case of emergency, please pull off the electric cord.** The machine has the noise filter and the fuse to cut off any irregular electric shock. Nevertheless, if there is any emergency such as breaking out of a fire on the Teflon tape, please cut off electric inflow from the machine.
- 2) **The electricity specified in the manual must be used and use of multi tap is not recommended.** Especially, Home-use multi tap could be cause of overheat, short machine life, quality degradation and a fire. If the user has no choice but to use multi tap, please consult with electric expert.
- 3) **In case of exchanging any part of the machine, the electric cord must be pulled off.** And, to prevent any malfunction or accident, it is prohibited for the user to use any machine parts different from the specification stipulated by the manufacturer.
- 4) **It is prohibited for the user to re-build the machine and its parts without permission from the manufacturer**
- 5) **It is prohibited for anything except for vacuum bag to be inserted between sealing bars.**
 - * There is electric flow between sealing bars so that inserting metal material could lead to electric shock.
(This machine uses earth wire to reduce the risk of safety accident.)
 - * Especially, Long time use of machine could accumulate heat on heat wire so that if the finger is caught between the sealing bars it could result in burn as well as hurting.
- 6) **If the N.F.B turns off automatically, the cause must be checked and solved before turning the N.F.B on again.**(Refer to 17-3)
- 7) **The user must avoid installing the machine in the place full of dust, high temperature or high humidity.** The temperature of work place suitable for this machine is 0°C ~ 40°C; 30° and the machine must avoid any direct or continuous air from air conditioner located within 10 m from the machine.
- 8) **For any wrong work, press the STOP button or EMERGENCY button. Then, all work is stopped and the nozzle moves back and the upper sealing bar go up.**
- 9) **Please check up whether there is any damage on the Teflon sheet, Teflon tape and sealing rubber, compression sponge, the between sealing bars and heat wire holder before use of the machine.** Any damage on these parts could result in short circuit around heat wire. Or, it could lead to wire's exposure to air during sealing resulting in overheat.

- 10) **This machine must be used by any adult person who is trained well and can use it without problem.**
- 11) **When you move this product, you have to move carefully and safety.**

3-2 How to make a good sealing

- 1) **Please check up whether there is any damage on the Teflon sheet, Teflon tape sealing bars and heat wire.** If there is any damage, exchange it with new one.
- 2) **Please check up whether the sealing bars are clean.** Any alien substance on there can make bad sealing result and can give damage to Teflon sheet, Teflon tape and Heat wire
- 3) **Before mass operation, please find out the proper vacuum, sealing and cooling time through enough sealing tests**
- 4) **Please set sealing time as short as possible in the range that sealing is possible.** Too long sealing time can give damage to the Teflon sheet, Teflon tape, heat wire, etc., which makes bad sealing result and causes low productivity and high electric consumption
- 5) **Please set enough cooling time 3 times or more than sealing time.** Long cooling time makes clean sealing result and avoids accumulation of heat on heat wire leading to longer machine life.
- 6) **Long and continuous sealing could raise the temperature of sealing bar. In that case, please reset sealing time shorter and cooling time longer**
- 7) **In the case of use of pure PE bag or vacuum bag with thick PE film, set cooling time 5 times more than sealing time.** For pure PE bag with 200 μ , about sec. of cooling time is needed.

4. DEFINITION OF THE MACHINE

4-1 Definition

This machine is a nozzle type vacuum and gas flushing packing machine and there are electric motor driven model and air driven model. It carries out vacuum and gas flushing inside a vacuum bag and seals it. The application includes protection of packed goods from decomposition, oxidation and discoloration.

4-2 Basic function

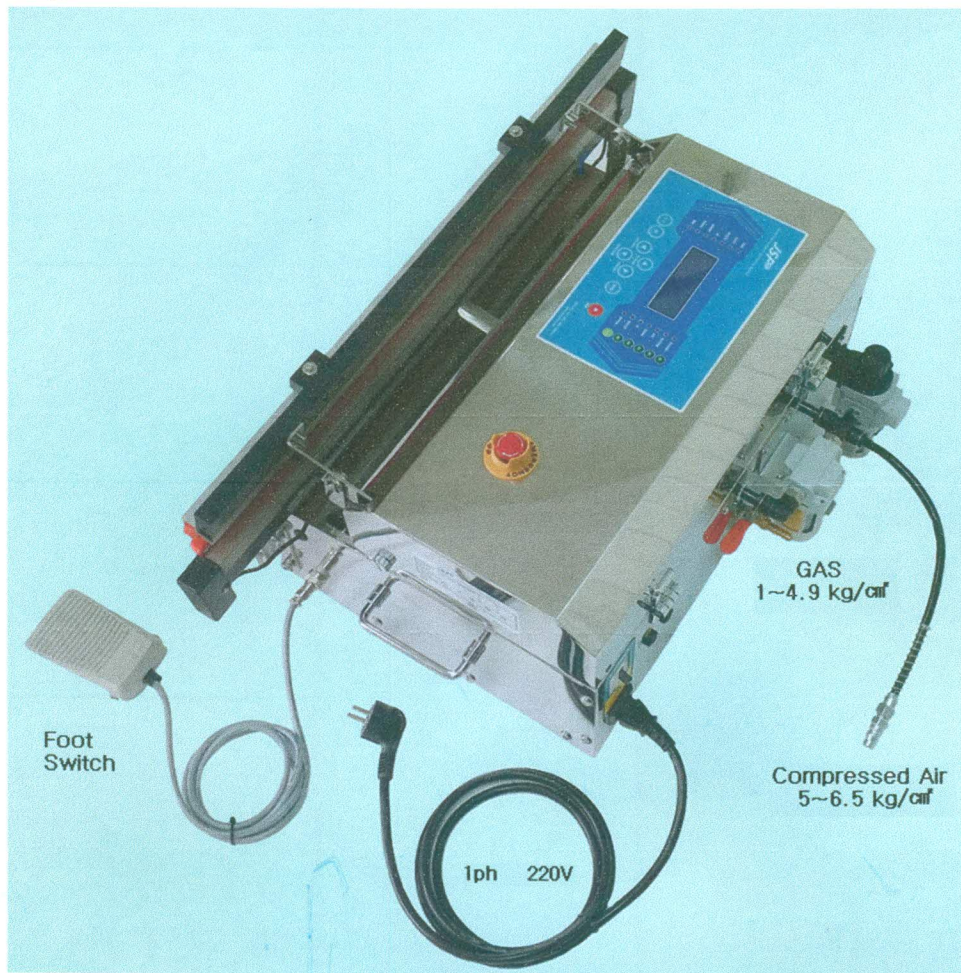
Press MODE button on the controller. Then, the user can select a mode among the below.

- 1) S Mode: Sealing
- 2) V Mode: Vacuum ->Sealing

- 3) M1~M5 Mode: Gas means gas flushing.
- (1) Vacuum ->Sealing
 - (2) Gas flushing ->Sealing
 - (3) Gas flushing ->Vacuum ->Sealing
 - (4) Vacuum ->Gas flushing ->Sealing
 - (5) Set and use among vacuum 4 times gas flushing 3 times sealing 1 time cooling 1 time as the user likes. Set any unnecessary work at 0 then it is skipped.

5. INSTALLATION OF THE MACHINE

5-1 Image



5-2 Installation of the machine

1) Basic setting

Install the machine horizontally in any place with no humidity, no external shock, no vibration and good ventilation.

- 2) For electric motor driven model
 - (1) Connect the electric cord to the noise filter of the machine and provide **1ph 220V** and connect any earth wire. (This machine uses the electric cord with ground connection. But, if the electric outlet connected to the machine has no ground connection, the user must connect any earth wire to the body of machine)
 - (2) Connect gas line at proper gas pressure using the pressure controller.
 - * The proper gas pressure is among **1~4.9 kg/cm²**. Set gas flushing quantity and time according to the vacuum bag size.
 - * Don't set gas pressure over **5 kg/cm²**.
 - (3) Connect the foot switch.

- 3) For air driven model
 - (1) Connect the electric cord to the noise filter of the machine in the same way for electric motor driven model.
 - (2) About **250NI/m** For **VS-series** and **above 350NI/m** for **VSV-series** of compressed air is needed to be connected.
 - * the external diameter of the air hose connected to the machine is **8ø**. The required air pressure is **5~6.5 kg/cm²**. 7kg/cm² and more could give damage to the pneumatic parts while 4.5 kg/cm² and less could lead to malfunction of the machine. (To increase the pressure of the compressed air, pull up the head of air regulator and turns right (clockwise). To decrease the pressure of the compressed air, pull up the head of air regulator and turns left (counterclockwise). Set it at about **6 kg/cm²** and press the head of air regulator to lock it)
 - * Remove any liquid from the compressed air for clean compressed air supply. Any compressed air with a lot of liquid can give damage to the machine. Remove any liquid from the air regulator by pressing the pin on the bottom of the air regulator.
 - (3) Connect the gas line to the machine in the same way for electric motor driven model.
 - (4) Connect the foot switch.

- 4) For vertical model
 - (1) Select electricity type according to the ordered machine type among 1ph 220V, 3ph 220V, 3ph 380V.
 - (2) Some vertical model might need any special distribution box or circuit breaker.

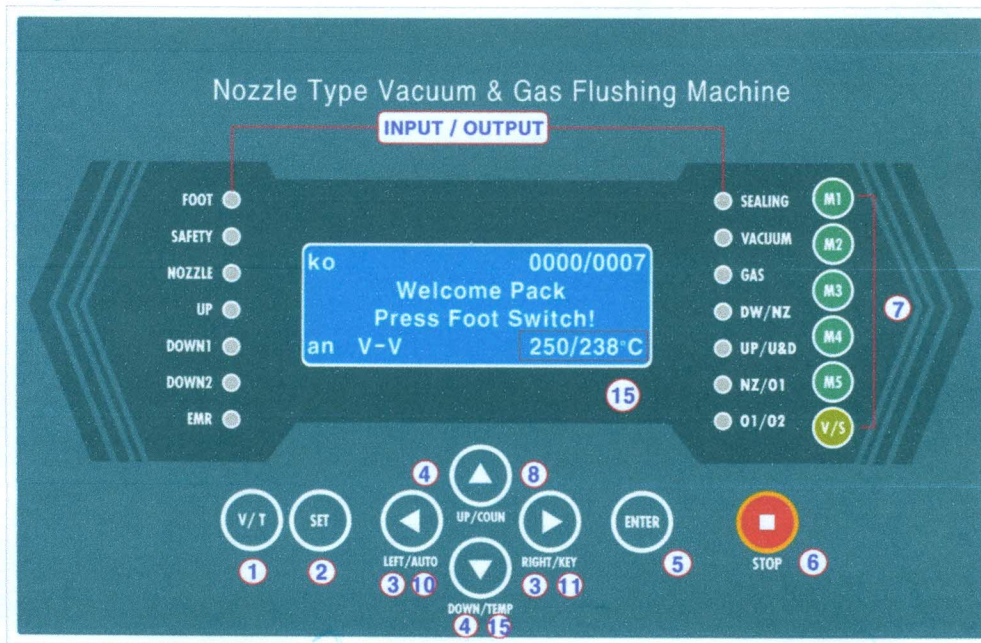
- (3) This machine selects 3ph 5 lines (4 lines + earth line) in 3ph 380V for safety.
- (4) Connect the compressed air to the machine in the same way for air driven model.
- (5) Connect the gas line to the machine in the same way for electric motor driven model.
- (6) Connect the foot switch.

5-3 Preparation of operation

- 1) After understanding of precaution, training of machine use and checking if the installation condition is fulfilled, turn the N.F.B. on.
- 2) Check and set compressed air at **5~6.5 kg/cm²**.
- 3) Select packing processing mode and set vacuum degree/time and start the work.
Refer to chap. 6 and chap.7 for this.

6. FUNCTION AND USE OF THE CONTROLLER

6-1 Image



6-2 Explanation and setting of each button

1) V/T(VACUUM/TIME)

This button is to select whether you control vacuum procedure **by time** or **by vacuum degree**. With each pressing on the button, V and T switch. (V means Vacuum degree (0~90 Kpa) while T means vacuum time (by 1 sec).

* V mode is used a lot for packing of semi-conductor, metal product and food without water.

* T mode is used for packing of watery product or powder.

2) SET

Press more than 3 sec. Then, Vacuum (vacuum degree) /Vacuum time (time), Gas flushing (gas) time, Sealing (sealing) time and Cooling(cooling)time appear on LED screen according to the selected mode. Press LEFT/RIGHT button to select among the above and use UP/DOWN button to increase/decrease the set value.

3) LEFT/RIGHT

This is to select the item appeared on LED screen according to the already selected mode.

4) UP/DOWN

This is to increase/decrease the set value of vacuum degree, vacuum time, gas flushing time, sealing time and cooling time.

5) ENTER

After deciding set values at selected mode and item, press "ENTER" button. Then, set values are saved and the machine is moved on the workable state.

6) STOP

This is to stop the machine's operation

7) M1~M5, V/S

* M1~M5 can set vacuum 4 times, gas flushing 3 times respectively. Set any unnecessary work at 0 then it is skipped.

* V/S: V-vacuum → sealing →cooling,
S-sealing→ cooling

With pressing V/S button, V and S switch.

* Gas must be bought separately This machine needs gas hose with the inner diameter of 6.5ø.

8) COUNT –Press this more than 3 sec. to set

It increases with each packing and is shown on the upper right of LED screen. Press the button to set the required packing times number. Then, when it is reached, the alarm rings.

9) Precision vacuum sensor built in.

It enables same vacuum result for each packing.

10) AUTO - Press this more than 3 sec. to set

Press this button. Then, the nozzle moves forward automatically after one packing cycle. Press STOP button and press this button. Then, the nozzle moves forward with one pressing foot switch after one packing cycle. [It is shown on the lower left side of LED screen as an (auto nozzle) or mn (manual nozzle)]

11) KEY(Key lock/unlock)

This is to lock/unlock the set value. The detail of use this button is informed to the specified administrator and the person in charge of the work.

12) EMG(Emergency button)

For air driven model, it is attached on the right side of the controller.
For electric motor driven model, STOP button replace it.

13) Operation/ State Lamp

Left is green and for input. Right is red and for output.

14) Middle side of LED screen(Second and Third line)

The second line is to show Welcome Pack name. The third line is to show packing process to do and any cause of malfunction.

15) TEMP(Temperature button)- Press this more than 3 sec. to set

This is to measure the temperature between outer Teflon sheets during the sealing time and show on the lower right side of LED screen.

* Set the max. Sealing temperature according to the goods type to pack...

* This machine's max. sealing temperature available to set is **250°C**.

7. SETTING VACUUM DEGREE AND TIME

7-1 setting by vacuums degree

In the controller image NO 6-1, press ① V/T button to select **V**. Select one among M1~M5. Press ② SET button around 5 sec. Select Vacuum1, Gas1, Vacuum2, Gas2, Vacuum3, Gas3, Vacuum4, Sealing and cooling with use of LEFT/LIGHT button. Set **vacuum degree** value with use of UP/DOWN button.

7-2 setting by vacuums time

In the controller image NO 6-1, press ① V/T button to select **T**. Select one among M1~M5. Press ② SET button more than 3 sec. Select Vacuum1, Gas1, Vacuum2, Gas2, Vacuum3, Gas3, Vacuum4, Sealing and Cooling with use of LEFT/LIGHT button. Set vacuum **time** value with use of UP/DOWN button.

8. OPERATION OF THE MACHINE

8-1 Operation method

1) Before starting operation

- * Check and remove any foreign material between sealing bars.
- * Check if all installation is done up to the manual

2) Operation procedure

- (1) Turn the N.F.B on. →The controller turns on, the nozzle moves back and the upper sealing bar goes up.
- (2) Set the controller. →Refer to chap.6-2 and chap. 7.
- (3) Press the foot switch.

The nozzle moves forward. Insert the bag between sealing bars while the nozzle is inserted into the bag. Pull the packing bag to both sides with full tension by the user's hands for no wrinkle on the bag. No wrinkle makes better vacuuming and sealing result by preventing any vacuum leakage and wrinkle.

(4) Press the foot switch.

The upper sealing bar goes down. Arrange the goods inside the bag neatly and within 15 mm from the nozzle but not touch the nozzle.(If the goods inside the bag is very big, additional distance will be needed between the nozzle and the goods.

(5) Press the foot switch.

Vacuum, gas flushing, sealing and cooling are carried out automatically completing one cycle.

- * For use of auto nozzle function, refer to chap. 10) of 6-2.

8-2 Each packing processing mode

1) Sealing mode (S, Sealing)

Welcome Pack
Press the Foot SW

(1) Insert the packing bag. Arrange the goods.
Press the foot switch..

Upper sealing bar

(2) The upper sealing bar goes down. The sealing is carried out.

Cooling

(3) The cooling is carried out.

Upper sealing bar

(4) The sealing bar goes up. One packing cycle is completed.

2) Vacuum mode (V-S, Vacuum & Sealing)

Welcome Pack
Press the Foot SW

(1) Press the foot switch. The nozzle moves forward.

Nozzle moves forward

(2) Insert the packing bag. Arrange the goods.
Press the foot switch.

Upper sealing bar

(3) The upper sealing bar carries out 1st descent. Arrange the goods. Press the foot switch.

Vacuum

(4) The vacuum is carried out.
(If the user wants to stop vacuum even before it reaches the set value, just press the foot switch.)

Nozzle moves forward

(5) The nozzle moves back.

Upper sealing bar

(6) The upper sealing bar carries out 2nd descent. The cooling is carried out...

Upper sealing bar

(7) The upper sealing bar goes up. One cycle is completed.

3) Vacuum & Gas substitution mode (M1~M5 mode)

Welcome Pack
Press Foot SW

(1) Press the foot switch. The nozzle moves forward...

Nozzle moves
forward

(2) Insert the packing bag. Arrange the goods. Press the foot switch.

Upper sealing

(3) The upper sealing bar carries out 1st descent

Vacuum 4 times
Gas flushing 3
times

(4) Press the foot switch. Vacuum 4 times, gas flushing 3 times is carried out. The nozzle moves back. Sealing and Cooling are carried out. The upper sealing bar goes up.

* The procedure is ①vacuum1 ②gas flushing1 ③vacuum2 ④gas flushing2 ⑤vacuum3 ⑥gas flushing3 ⑦vacuum4 ⑧nozzle moves back ⑨sealing ⑩cooling

Nozzle moves
back. Upper
sealing bar

(5) Nozzle moves back. Sealing and cooling are carried out. One cycle is completed.

8-3 End of operation

- 1) Press the STOP button on the controller.
- 2) Turn off the N.F.B.
- 3) Pull out the electric cord from the outlet.
- 4) Cut off the supply of compressed air and gas.
- 5) Check the machine state and remove any dust, water, foreign material.

9. SPECIAL FUNCTION

9-1 For convenience

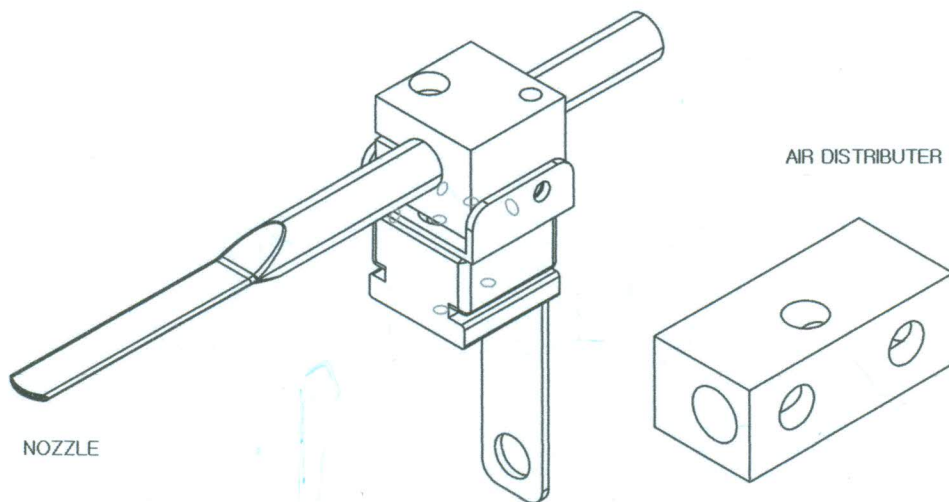
- 1) Auto nozzle - Press this more than 3 sec. to set.
- 2) Count - Press this more than 3 sec. to set.
- 3) Key lock - The details of use of this button is informed to the specified administrator
- 4) Temperature indication - Press this more than 3 sec. to set. (This function is option)
- 5) Alarm - Button sound and warning sound ring properly.
- 6) If the user wants to stop vacuum even before it reaches the set value, just press the foot switch. When V-V mode times.

9-2 For safety

- 1) Work stop - With 20 sec. of hold of work, the machine returns to the original work state.
- 2) Safety sensor - This is to make the upper sealing bar go up when any finger or any foreign material is caught between sealing bars...
- 3) Between each operation - If there is no move in 20 sec. between each operation, it returns to its original state.
- 4) Malfunction check - The cause of main malfunction is shown on LED screen...

10. MAINTENANCE OF VACUUM LINE TO KEEP THE QUALITY

10-1 Clear-up of nozzle and bifurcated penstock



- 1) Remove the tie on the backside of the nozzle. Separate Silicon hose from the bifurcated penstock. Clean any foreign material in the nozzle, silicon hose and bifurcated penstock. Do this on regular basis up to the packing quantity.

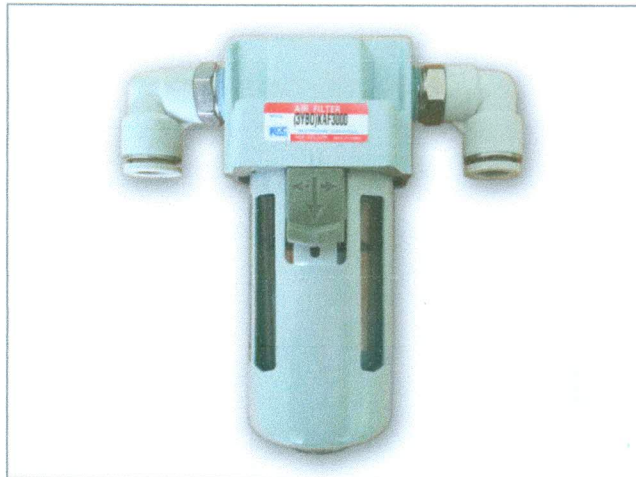
- 2) The clean-up way includes just blowing compressed air or soaking in warm water & blowing compressed air. If the foreign material can't be removed by any way, replace it with new one.
- 3) Re-assemble it in the reverse order of disassembling.

10-2 Separation and clear-up of vacuum hose

Any foreign material hardly gets into the vacuum hose. But, up to the degree of malfunction, in the case of replacement of broken parts, the front and back part of vacuum hose need to be cleaned up.

10-3 Clear-up of vacuum filter

The vacuum filter is between the nozzle and the vacuum pump. It filters any foreign material from the nozzle. Check this frequently and clean it up every time there is any foreign material.



- 1) Turn the dust kit to the left (counterclockwise) and separate it. Be careful not to lose the rubber ring which is stuck on the upper side of dust kit.
- 2) Clean the filter and the dust kit up using compressed air.
- 3) Re-stick the rubber ring on the upper side of dust kit and turn the dust kit to the right (clockwise) to re-assemble it. If the rubber ring is not on the upper side of dust kit, the vacuum cannot be carried out properly due to some leakage of vacuuming power in the vacuum filter

10-4 Removal of water and foreign material inside air regulator

For air driven model, an air regulator is attached.

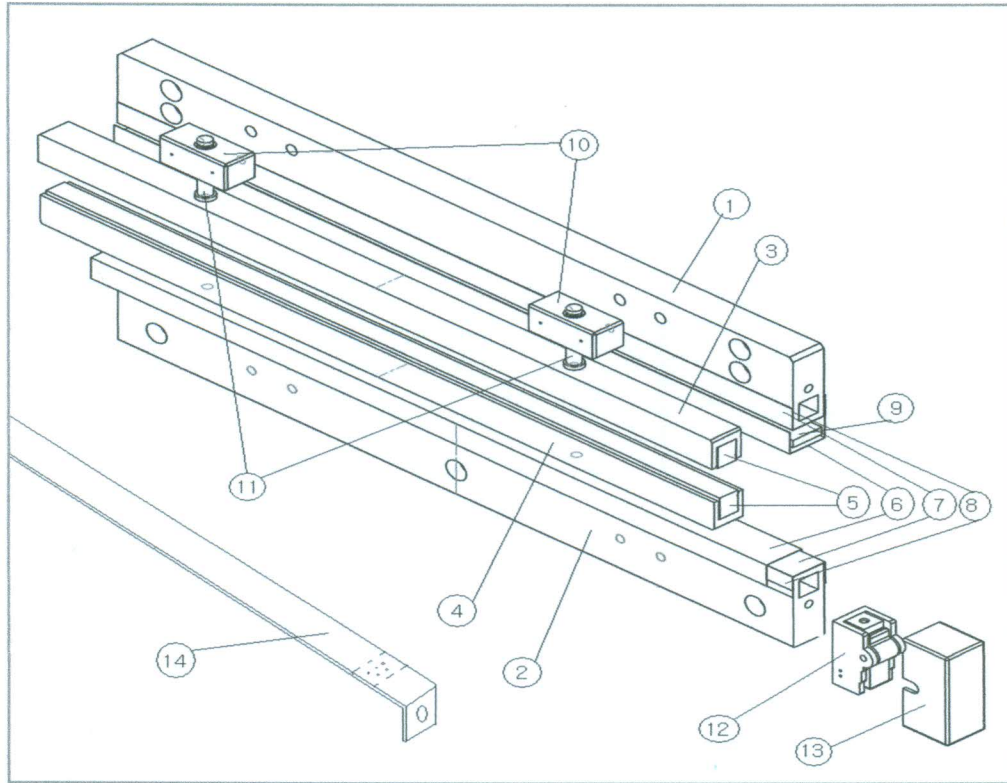
- 1) Remove any foreign material or water from the air tank of the compressor by opening the cock before connecting the compressed air line to this machine.
- 2) Lots of water could be made up to temperature and change of circumstance. Check

the air regulator frequently. Remove any water from it by pressing the pin below it. Remove any foreign material from it in the same way as chap. 10-3.

- 3) **If any water or foreign material from the air regulator gets into the machine, it could give damage to the machine. Check the air compressor and the air regulator frequently.**

11. CHANGE OF CONSUMABLES

11-1 Drawings for change of consumables



11-2 Name of each consumable

①	Upper sealing bar	⑥	Teflon sheet	⑪	Sponge bar pin
②	Lower sealing bar	⑦	Teflon tape	⑫	Heat wire holder
③	Upper sponge bar	⑧	Double sided tape	⑬	Heat wire holder cover
④	Lower sponge bar	⑨	Silicon rubber	⑭	Heat wire
⑤	Compression sponge	⑩	Sponge bar fix	⑮	

11-3 Change of heat wire

The Heat wire is under the Teflon sheet⑥ of the lower sealing bar ②.

- 1) Separate both heat wire holder covers ⑬. Disassemble the heat wire fixing bolt.
- 2) Unbend one end of heat wire. Pull it out.
- 3) Re-assembling is in the reverse order of disassembling.

11-4 Change of Teflon sheet

The Teflon sheet is attached on the doubled side tape...

- 1) Separate the upper sponge bar ③ and the lower sponge bar ④. Don't separate the double sided tape as much as possible. If it has to be separated, same type of new double sided tape has to be used.
- 2) Attach a new clean Teflon sheet neatly without wrinkle. (Any wrinkle on the Teflon sheet can cause bad sealing resulting in imperfect vacuum.)

11-5 Change of double-sided tape

The double sided tape is between the Teflon sheet and the Teflon tape.

- 1) Separate the upper and lower sponge bars and the Teflon sheet. Separate the double sided tapes from the four white points.
- 2) Attach new double sided tapes neatly and cleanly.

11-6 Change of silicon rubber

The silicon rubber is between the Teflon sheet of the upper sealing bar and the Teflon tape.

- 1) Separate the upper sponge bar and the Teflon sheet. Clean any dust up...
- 2) Attach a new silicon rubber neatly. Don't pull it too strong but smoothly. (Too pulled out silicon rubber could get thin which makes space between sealing bars during sealing resulting in bad sealing.)

11-7 Change of Teflon tape

The Teflon tapes are between the upper sealing bar and the silicon rubber and between the lower sealing bar and the heat wire respectively.

- 1) Separate the upper and lower sponge bars and the upper silicon rubber and the heat wire. Remove any foreign material. Attach a new Teflon tape neatly.
- 2) Attaching the double sided tape badly could make the sealing bars contact the heat wire resulting in short circuit.**

11-8 Change of compression sponge

The compression sponge ⑤ is inside the upper and lower sponge bars. Pull it out. Insert a new one into the sponge bars neatly from both sides to the middle and then between both sides and the middle.

12. VACUUM BAG

12-1 Vacuum bag for this machine

WELCOMEPACK nozzle type vacuum sealer seals bag or film using heat from heat wire where electricity flows. This machine is fit for general packing materials. But, if the bag is too thick or has too high melting temperature, the sealing may not be done.

- 1) Nylon bag (NY+PE+L-LDPE), Aluminum bag (PET+PE+AL+PE+L-LDPE), PE bag, Anti-static bag) will be available up to the specification of the machine.

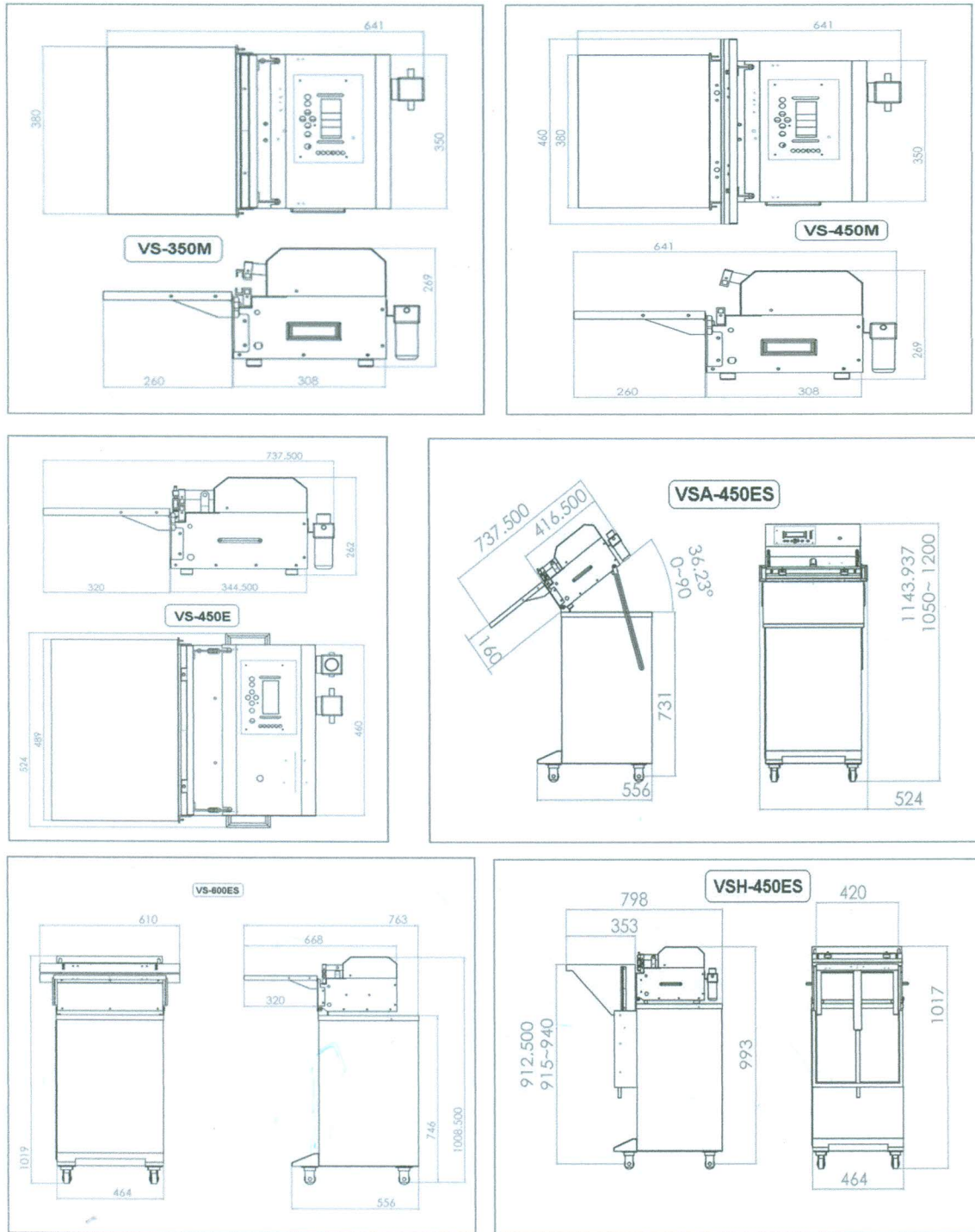
12-2 The film thickness of vacuum bag for this machine

Use of any bag beyond the below range by force could give damage to the machine. There could be some deviation of the limit of thickness of film to be sealed according the film's material

Heat wire	Width of Heat wire	The thickness of packing film (In terms of all layers of film folded)
Single	5 mm	less than 0.25 mm
	10 mm	less than 0.3 mm
Up and low double	5/10 mm	less than 0.4 mm

13. OUTSIDE VIEW OF THE MACHINE

13-1 Image



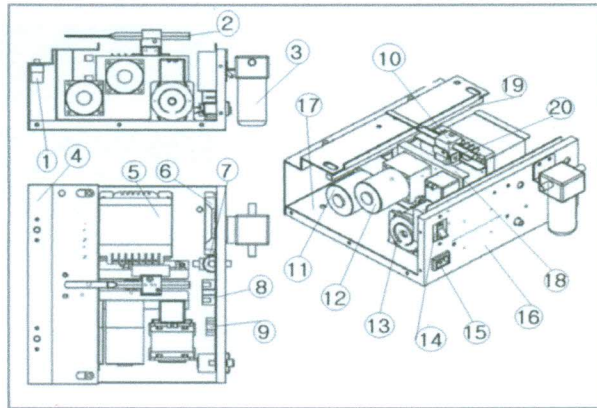
13-2 Explanation

The upper and lower sealing bars' specification is changed up to the model.

14. INSIDE VIEW OF THE MACHINE

14-1 For electric motor driven model

1) Inside Image

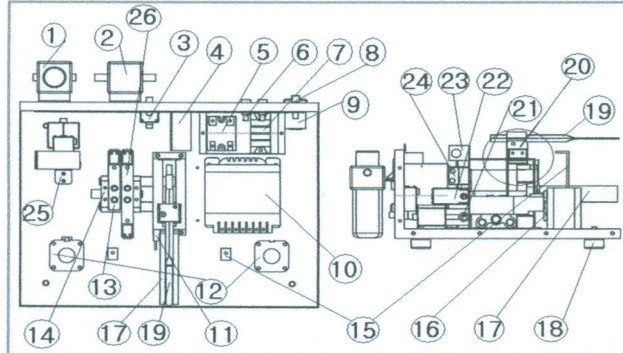


2) Name of each part

1	Safety sensor	2	Nozzle	3	Air filter
4	Front body	5	Transformer	6	SMPS
7	Gas sol	8	SSR	9	Terminal block
10	Nozzle fix	11	Up/down motor	12	Nozzle motor
13	Motor pump	14	N.F.B	15	Noise filter
16	Rear body	17	Under Plate	18	Slide
19	Down bar	20	Nozzle slide bracket	21	

14-2 For air driven model

1) Inside image

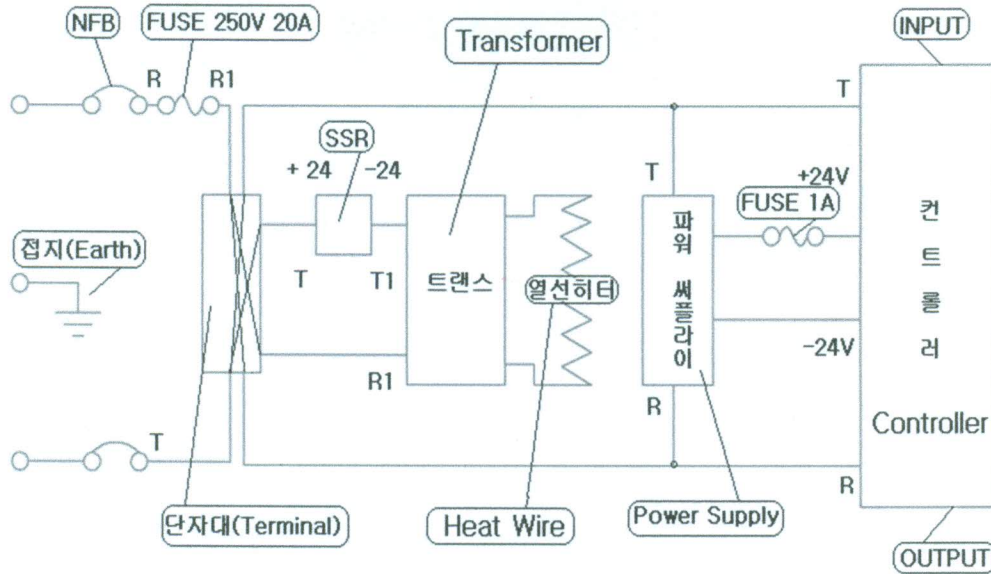


2) Name of each part

1	Regulator	10	Transformer	19	Nozzle
2	Air filter	11	Nozzle sensor	20	Nozzle block
3	Gas sol	12	Jig cylinder	21	Vacuum sol
4	Power supply	13	Single acting sol	22	Air sol
5	SSR	14	Manifold	23	Bifurcated penstock
6	Fuse holder	15	Body support fix	24	Ejector
7	Terminal block	16	Sensor(Up/down)	25	Pneumatic bracket
8	N.F.B	17	Nozzle cylinder	26	Double acting sol
9	Noise filter	18	Rubber foot	27	

15. ELECTRICAL SCHEMATIC DIAGRAM

15-1 Electrical schematic diagram

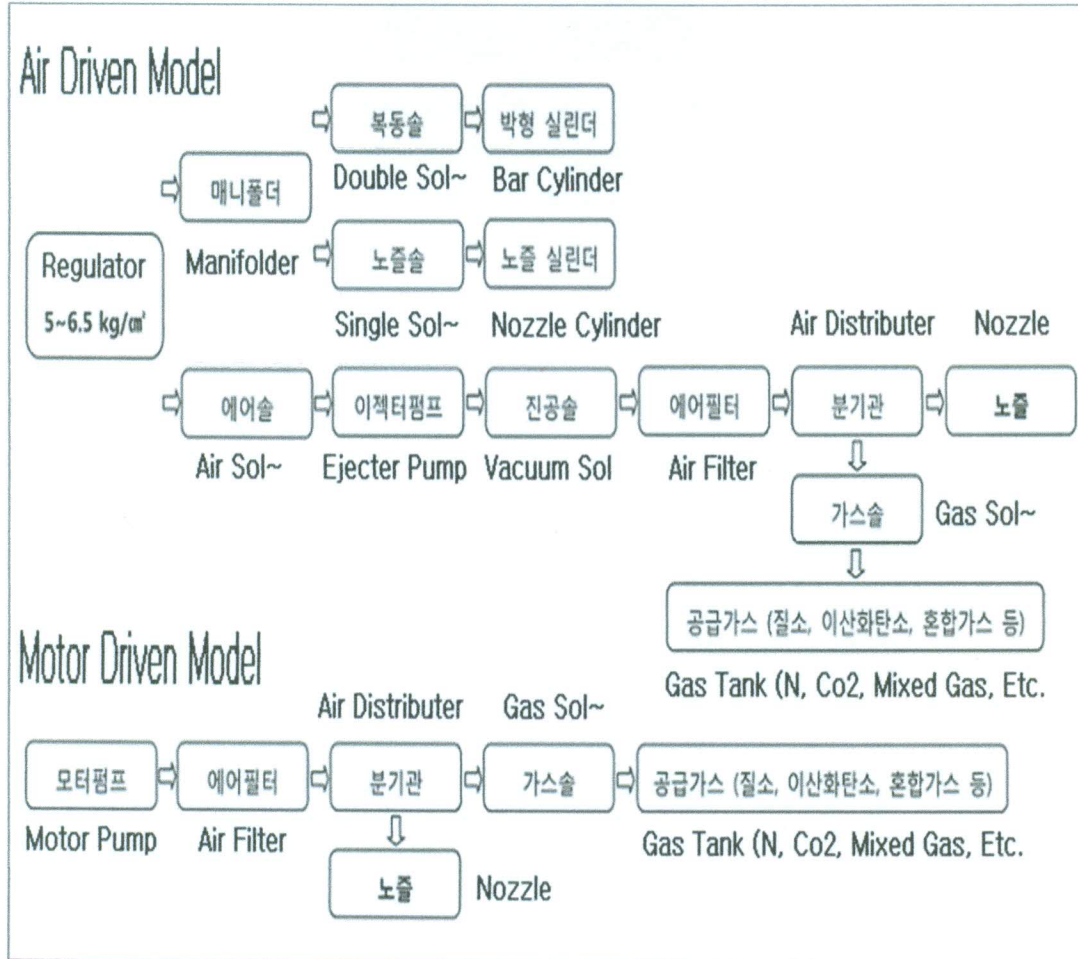


15-2 Input / Output signal

Air driven model		Electric motor driven model	
Input	Output	Input	Output
Emergency switch(EMG)	Up/down sol (double acting solenoid)	Foot switch	Up/down motor
Foot switch	Gas sol	Up sensor	Nozzle motor
Up sensor	Vacuum/air sol (Common use)	Safety sensor	Vacuum motor pump
Safety sensor	Nozzle sol	1 st and 2 nd descent sensor	Gas sol
1 st descent sensor		Nozzle forward sensor	
Nozzle sensor		Nozzle back sensor	
2 nd descent sensor			

16. VACUUM FLOW

16-1 Image



16-2 Explanation

- 1) This vacuum flow drawing is used to figure out which part is blocked or broken for bad vacuum.
- 2) Vacuum line clean-up is carried out in the reverse order of vacuum flow, from the nozzle.
- 3) For air driven model, vacuum line clean-up is carried out from air compressor and air regulator.

17. TROUBLE SHOOTING

17-1 Basic method

- 1) **The 1st sealing after turning on this machine might not be done up to the state of warm-up of heat wire and compressed air supply. This is normal phenomenon. From the 2nd sealing, the vacuum and sealing will be carried out without problem.**
- 2) Is the electricity cord is connected well?
Is the compressed air connected properly (5~6.5 kg/㎠)? –for air driven model
Isn't the emergency switch pressed?–for air driven model
Is the foot switch connected well?
- 3) Follow the below. But, despite that, if the user can't fix the trouble, contact **Manufacturer** or its distributor.

17-2 If the machine's power doesn't turn on

- 1) Is the electric outlet of the work place ok?
- 2) Is the electric cord connected well to the electric outlet?
- 3) Is the electric cord cut off?
- 4) Is the noise filter ok?
- 5) Is the N.F.B on?(1) If not, refer to chap. 17-3
- 6) If the N.F.B is on, is the safety fuse ok?
* N.F.B (No Fuse Breaker) = MCCB (Mold Case Circuit Breaker)

17-3 If the N.F.B turns off

- 1) Isn't there short circuit due to damage on the Teflon tape?
- 2) Is the proper rate voltage provided?
- 3) Is there bad contact or short circuit on the electric line of machine?
- 4) Is the N.F.B ok? When it is on, if the user switches it, does it turn off?

17-4 If the first movement doesn't start while the machine's power is on

- 1) Do **WelcomePack** and the model name of the machine appear on the middle of LED screen?
(1) If not, check the state and pressure of compressed air (Refer to 5-2)
- 2) If **WelcomePack** and model name appear, is the foot switch ok?
* **Foot SWITCH CHECK:** Check if the foot is on in LEDs (green) when the foot switch is pressed. If it is on, it means ok. If off, it means the foot switch is out of order. Replace it.)
- 3) If the nozzle doesn't move forward despite pressing the foot switch at V mode, and M1~M5 mode

[Air driven model]

(1) Is UP and BACK on among the input signs (green) in LEDs?

If not, re-locate the up sensor and the nozzle sensor. (Refer to chap. 18)

(2) If on, is NOZZLE on among the output signs (red) in LEDs?

If on, it means the solenoid valve is out of order. If not, it means the controller is out of order.

[Electric motor driven model]

(1) Are UP and NOZZLE on among the input signs (green) in LEDs?

If not, re-locate the nozzle sensor no.1, no.2 and no.4. (Refer to chap. 18)

(2) If on, is NOZZLE on among the output signs (red) in LEDs?

If on, it means the nozzle sensor and/or the nozzle motor is out of order.

If not, it means the controller is out of order.

- 4) If the upper sealing bar doesn't carry 1st descent out fully despite pressing the foot switch

[Air driven model]

(1) If the upper sealing bar carries out 1st descent a little but goes up soon

(1)-1 Is DOWN1 on temporarily among the input signs (green) in LEDs?

If on, re-locate the 1st descent sensor (Refer to chap.18)

(2)-2 If not, check if the compressed air is **5~6.5 kg/cm²**)

(2) If the upper sealing bar doesn't carries out 1st descent at all

(1)-1 Is UP on and is NOZZLE off among the input signs (green) in LEDs? If not, re-locate the up sensor and the nozzle sensor (Refer to chap.18)

(2)-2 If UP on and is NOZZLE off among the input signs (green) in LEDs, is DOWN on among output signs (red) in LEDs? If on, it means the descent solenoid is out of order. If not, the controller is out of order.

[Electric motor driven model]

(1) If the upper sealing bar carries out 1st descent a little but goes up soon

(1)-1 Is DOWN1 on temporarily among the input signs (green) in LEDs?

If on, re-locate the up/down sensor no.1 and no.2 (Refer to chap.18)

(1)-2 If not, check if the connection of the up/down motor and the up/down link is ok

- (2) If the upper sealing bar doesn't carries out 1st descent at all
 - (2)-1 Is UP on and is NOZZLE off among the input signs (green) in LEDs? If not, re-locate the up sensor and the nozzle sensor (Refer to chap.18)
 - (2)-2 If UP on and is NOZZLE off among the input signs(green) in LEDs, is UP/DOWN on among output signs(red) in LEDs ? If on, it means the up/down motor is out of order. If not, the controller is out of order.
- 5) If the vacuum is not carried out after the nozzle moves forward and the upper sealing bar carries out its 1st descent
 - (1) Does V-V or V-m1~m5 appear on the mode column on LED screen?
 - (2) If so, does VACUUM on among output signs (red) in LEDs?
If so, check the compressed air at the vacuum pump. If it is ok, check the vacuum solenoid. If no compressed air is provided there, check the air solenoid (air driven model)
 - (3) If VACUUM doesn't turn on among output signs (red) in LEDs, the controller is out of order.

17-5 If the vacuum is not going well

- 1) Are the vacuum degree/time and the compressed air set properly? (Refer to chap.5 and 7)
- 2) Is the nozzle inserted into the packing bag properly?
- 3) Be the distance and the goods to pack proper?
- 4) Is the vacuum filter clean? (Refer to chap.10)
- 5) Is the vacuum line ok? (Refer to chap.10)
- 6) Are the ejector pump and the vacuum solenoid ok? **(Air driven model)**
- 7) Is the vacuum motor pump ok? **(Electric motor driven model)**

17-6 If gas flushing is not going well

- 1) Is the mode column at V-m1~m5on the controller?
- 3) Is the gas supply ok? Is the gas cock open?
- 4) Is the gas valve ok?
- 5) Isn't there any blockage in the gas line?
- 6) Is the gas solenoid ok?

17-7 If the sealing is not done after vacuum

- 1) Is DOWN2 on among the input signs (green) in LEDs?
If not, re-locate the 2nd descent sensor. (Refer to chap. 18)

For the electric motor driven model, the up/down sensor no.1 and no.2 and the up/down motor are out of order.

- 2) Are the sealing time, the cooling time and the air pressure ok?
- 3) Isn't the heat wire cut off? If so, replace it.
- 4) Are the heat wire and the electrodes (the heat wire holder) connected well?
- 5) Is the transformer ok?

17-8 If the sealing is not done at S mode

- 1) Firstly, refer to chap.17-4
- 2) Are UP and NOZZLE on among the input signs (green) in LEDs?
If not, the up sensor, the descent sensor and the nozzle sensor are out of order.
- 3) If on, refer to chap. 17-7.

17-9 If the sealing result is not good

- 1) Are the sealing time, the cooling time and the air pressure ok?
- 2) Are the Teflon sheet, the Teflon tape, the silicon rubber, the compression sponge and the heat wire ok? (If not, refer to chap. 11)

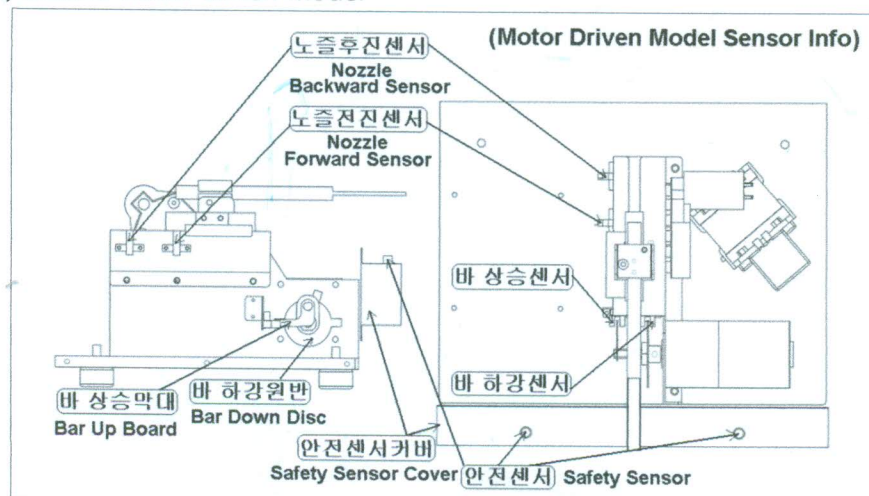
17-10 If the heat wire's state is not good (cut off or bent)

- 1) Is the sealing time too long or is the cooling time too short?
- 2) Are the Teflon sheet and the Teflon tape ok?
- 3) Are the electrodes ok?
- 4) Is the silicon rubber's shape ok?
- 5) Is the heat wire cut off or damaged?

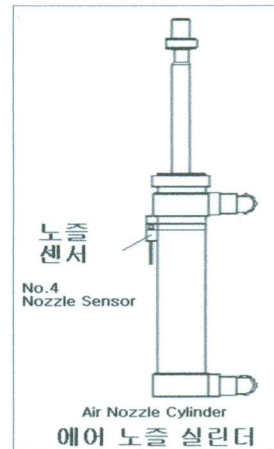
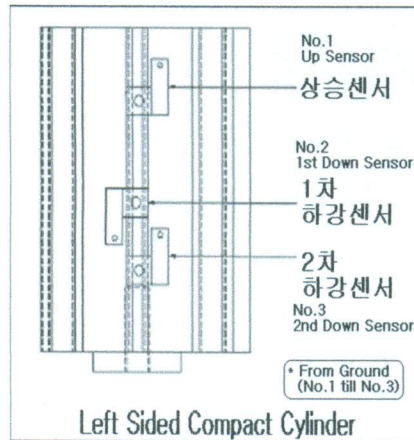
18. SENSOR SETTING

18-1 Image

- 1) Electric motor driven model



2) Air driven model



3) Safety sensor

It is located on the same place for both the electric motor driven model and the air driven model.

18-2 Setting method of each sensor

1) Electric motor driven model

The sensor's location is fixed. The user just needs to fasten the bolt if it is loose.

2) Air driven model

- (1) The nozzle sensor should be located to be on when the nozzle is back and to be off when the nozzle is forward
- (2) If the compressed air pressure is **5~6.5kg/cm²** and the N.F.B is on, the nozzle moves back and the upper sealing bar goes up. At this time, the up sensor should be on. The right location of the up sensor is in the middle in the range where the sensor is on. (When it is on, WELCOME PACK and the machine name appear on the middle of the controller. The work time should be set before re-locating the up sensor
- (3) If the foot switch is pressed at V-V or V-m1~m5 mode, the nozzle moves forward. If the foot switch is pressed once more, the upper sealing bar carries out its 1st descent. At this time, if the location of the 1st descent sensor is wrong, the upper sealing bar goes up soon. So, re-locate the 1st descent sensor it in the same way as the re-locating the up sensor
- (4) After the 1st descent of the upper sealing bar, if the foot switch is pressed once more, the vacuum is carried out. Then, the nozzle moves back and the upper sealing bar carries out its 2nd descent. At this time, if the location of the 2nd descent sensor is wrong, the state of 1st descent of the upper sealing bar continues. So, re-locate the 2nd descent sensor in the same way as the re-locating the up sensor

19. MACHINE SPECIFICATION

Model	VS-450E-G
Body	Stainless steel
Cover	Stainless steel, hinge type, fixed bolt
Sealing length(mm)	460mm
Sealing width(mm)	10mm
Vacuum pump	Ejector Pump
Electricity	Input: 1 ph220V Output(Electric parts): DC 24V
Compressed air	5~6.5kg/cm ² (No need for electric motor driven type)
Gas	1~4.9kg/cm ²
Net Weight	27Kg
Dimension	
Type	Air Driven Model
Option	

20. WARRANTY PAPER

1 Air driven model			
<ul style="list-style-type: none"> * Its free repair period is 1 year. * After free repair period, the repair cost is charged as little as possible. * Free repair period is not applied for any repair due to the user's negligence or mistake or the remodeling of the machine by the user. 			
2 Electric motor driven model			
<ul style="list-style-type: none"> * Its free repair period is limited to 1 year. * Free repair period is not applied for any repair due to the user's negligence or mistake or the remodeling of the machine by the user. 			
3 For repair of the machine, contact WELCOMEPACK™ or the sales agent. We will response to your request ASAP. At this time, please check the serial no. and the purchase date.			
4 The free repair period starts from the purchase date.			
5 Remarks			
Manufacturer		Signature	
Sales agent		Buyer	