



VACUUM PACKAGING MACHINE

—INSTRUCTION & OPERATION MANUAL—



Suitable for model:
VM300TE, VM(Q)400, VM(Q)500, VM(Q)600

ZHEJIANG BROTHER PACKING MACHINERY CO., LTD.

USER GUIDE

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Summarization

Usage:

Our company manufactured whole range of vacuum packaging machinery. We have our own R&D team to ensure our products are capable of: Easy operation, Easy maintenance, User friendly and also to cope with wide range application. Especially suitable for soft packing material such as complex film, aluminum-foil complex film etc.

It can also pack products in vacuum form or inserting gas after vacuum form to solid, powder and even liquid, paste, seed, fragrant article, medicine, chemical, electronic, precision instrument, meter and rare expensive metal etc.

The articles packed in vacuum condition ensure to the quality and freshness for a longer period as it can prevent oxidation, mildew, moth, rotten and damp, vacuum machine have different working environment.

Characteristics:

This machine is user friendly. From the flow chart: Close the machine cover, air exhaustion (vacuum), gas filling, heating, sealing, label printing, cooling, return-air, to the re-opening of cover, the whole processing is done automatically.

The sealing temperature and sealing time can be set flexibly with a wide adjustable range so as to suit various packing bags with different materials and specifications.

This machine is equipped with safe grounding protection and E-Stop Button protection to deal with sudden accident. The E-Stop Button can be pressed to stop packing procedure immediately if there is any emergency arisen during processing.

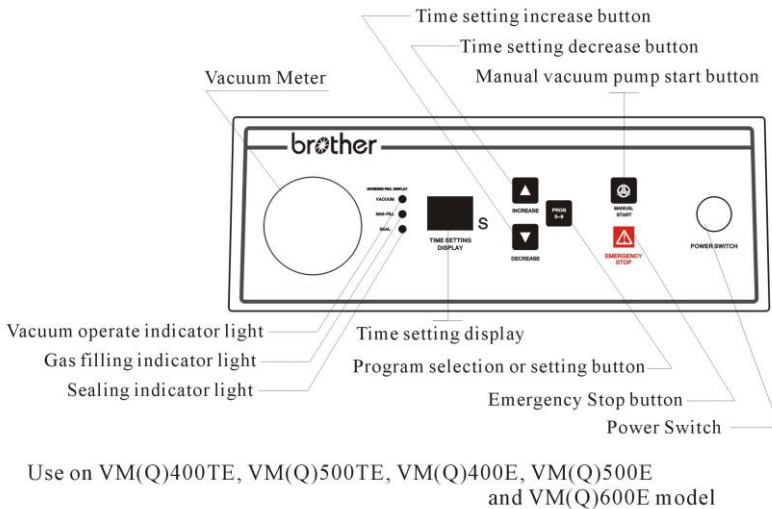
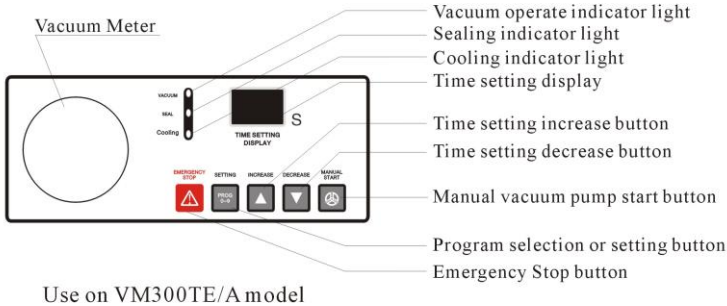
Model Number and Specification

Model	Chamber Size (mm)	Sealing Bar Size (mm)	Pump (m³/hr.)
VM300TE/A	405x300x50	Single bar L260xW8	10
VM(Q)400TE/A	430x430x75	Single bar L400xW8	20
VM(Q)400TE/B	430x430x75	Double bar L400xW8	20
VM(Q)500TE/A	525x525x100	Single bar L500xW8	20
VM(Q)500TE/B	525x525x100	Double bar L500xW8	20
VM(Q)400E/A	430x430x75	Single bar L400xW8	20
VM(Q)400E/B	430x430x75	Double bar L400xW8	20
VM(Q)500E/A	525x525x100	Single bar L500xW8	20
VM(Q)500E/B	525x525x100	Double bar L500xW8	20
VM(Q)600E/A	625x625x100	Single bar L600xW8	40
VM(Q)600E/B	625x625x100	Double bar L600xW8	40

* All the VM__E model machine are suitable for standard vacuum packing, and all the VMQ__E model machine are suitable for vacuum packing and gas flush function.

* This Manual is suitable for single chamber series vacuum packaging machine as above models. If the machine model your bought is not stated in above list, please contact with manufactory for assistance.

Control Panel



1. In case of emergency arising during the operation of the machine, the machine stops all operations and open the vacuum cover once the emergency stop button is pressed.
2. When the emergency stop button is pressed, the machine will immediately stop the running of all program,inflate and cover opening procedures.
3. PC control panel with ten groups of memories, the control panel provides the above two control functions as well as ten different programs of memories of control program for user' free selection in operation.

Preparation Before Use

Installation

1. Before operation, please read through the Instruction Manual about each operation rules and the safety precaution
2. You must fill the vacuum pump with N0.68 or NO.100 vacuum oil before use (When the machine is placed at a horizontal position, the oil level should keep at 1 1/3 of oil window.)When running, the oil level should not be lower than 1/3 height of oil window. Do not fill with too much oil to avoid over flow.
3. The machine should be placed horizontally in good ventilation and Light without corrosive gas and heavy dust.
4. The power connection position maybe located at different side, so be sure to do grounding protection before use.
5. Always ensure top cover is open before turning the power on. Start the machine by pressing the top cover and the process start automatically. For 3-phase vacuum machinery, please be sure the vacuum pump is running in correct direction. If the direction is wrong, simply switch the phase of the power.
6. Preheat of vacuum pump must be done in low temperature working area. Turn off the heater selection switch at the control panel to off position. This is to prevent heating process and cut down wear and tear losses. Run the vacuum pump a few time and machine will be ready to use.

Setting

Please set every parameter firstly before starting machine.

7. Turn on the power supply, check through the setting shows on the panel and make sure “P0” must be shown after setting is done. Otherwise, operation of this machine cannot be function if the setting is not on this model.
8. Press increase or decrease button to choose program of P0 to P9.

9. Long press the setting button, into one program setting; the indicator Lamp of vacuum lights to enter into the setting state of vacuum timing, Press the increase or decrease button to set vacuum time in the range of 0-99 sec.
10. After the vacuum time is set, press the setting button and the filling indicator lamp lights to enter into the setting state of nitrogen filling. Press increase or decrease button to set nitrogen filling time in the range of 0-9.9 seconds. (Note: some models of our machine don't have filling function, so after setting the vacuum time, it enter sealing time directly.
11. Press setting button, sealing indicator lamp lights to enter into the Setting state of heat sealing, press increase or decrease button to set heat sealing time in the range of 0-9.9 seconds.
12. After sealing time is setting, press the setting button again, the three indicator lamp lights to enter into the setting state of cooling time, Press the increase or decrease button to set cooling time in the range of 0-9.9 seconds.
13. After cooling time is setting, long press the setting button to finish The parameter setting, and "P0" is shown in the panel.
14. If you have different products or different size vacuum bag, you can Press the increase button to choose "P1", then do step 9 to 13 finish program of "P1" setting. So, "P2 - P9" same setting.

Remark & Tips: Ways to fast process of vacuum a small item or product using a bigger chamber is to place a solid block into the chamber as to occupy the chamber space so as to allow less vacuum time needed due to compact space. You can buy the PP or Nylon board as solid block from us.

IMPORTANT: DO NOT BLOCK THE AIR HOLE IN THE CHAMBER.

Operation Instructions

1. Turn on the power supply and select a suitable vacuum packing bag for the product.
2. Select a program and set the processing parameter, For the details, please refer to Pages 6-8.
3. Place the vacuum bag at the chamber with the opening end on top of the sealing bar. Clamp it with the hook provided.(Option).
4. Close the acrylic cover and the machine will complete the processing procedure automatically.
5. During processing, the vacuum chamber will form a vacuum self-lock state, the whole heating and sealing procedure are completed in a vacuum environment, and the LED display on panel shows the flow process.
6. When the vacuum indicator on panel lights, the equipment is under vacuum state, the LED display shows the timing of vacuum time, and it will enter into the next work state automatically after the timing is finished.
7. When the nitrogen filling indicator on panel lights, the equipment is under filling state, the LED display shows the reverse timing of filling time, and it will enter into the next work state automatically after the reverse timing is finished.
8. When sealing indicator lights, the equipment enters into sealing work state, and the panel shows the reverse timing of sealing. It will enter into cooling state automatically after the timing is finished.
9. According to time setting, the machine doesn't act when cooling, the panel shows "PA" till the reverse timing is finished, air is returned, the cover opens automatically, and the whole processing is finished. Then prepare the next cycle.

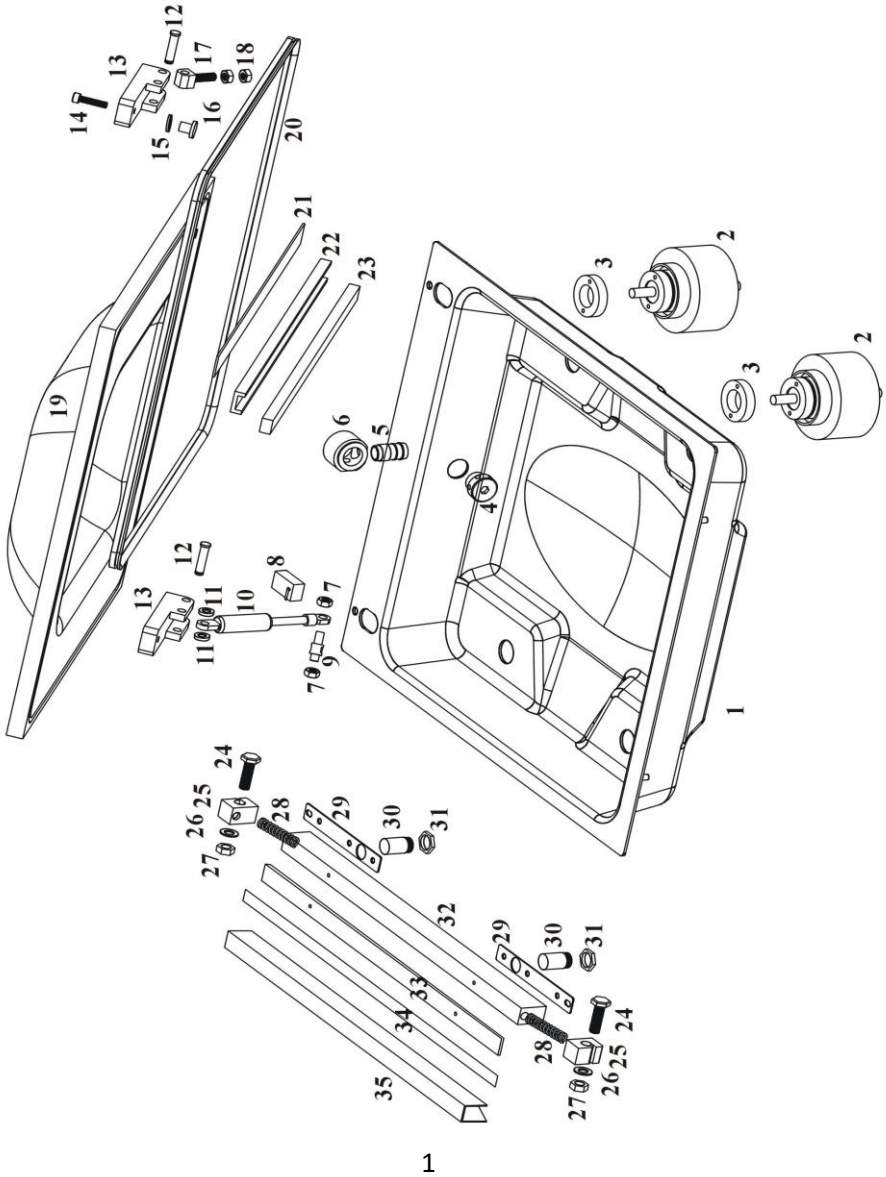
10. Press the E-Stop Button for a sudden condition under processing state , the machine will go to return-air action automatically , the cover opens automatically after return-air action , so the processing ends.

Note:

1. Silicone rubber strip come with one side nerving and the other for letter and number inserting. It will have embossed effect on sealing surface.
2. Please do not run the machine without any vacuum bag attach. Otherwise, the heating element will have higher wear and tear.
3. Cut off the power supply and pull out external plug when no use.
4. The vacuum gauge/meter reading may be different due to different area. At high altitudes, the data in vacuum meter goes down.
5. Please adopt suitable cooling measure when processing is done in a high temperature occasion.
6. Please use the vacuum bag whose material does not bring any poisonous gas in the sealing.
7. The machine should be placed horizontally in the transportation, the inversion is not allowed. The transportation must be proceeded strictly according to the instructing marks on the shipping case.
8. The machine should be stored in dry, ventilated, normal temperature place.
9. Mind your head when the lid open, avoid the lid striking your head.
10. Please ask the professional to solve the problem, do not do some repair works by yourself.
11. The spare parts should match our machine in the replacement.

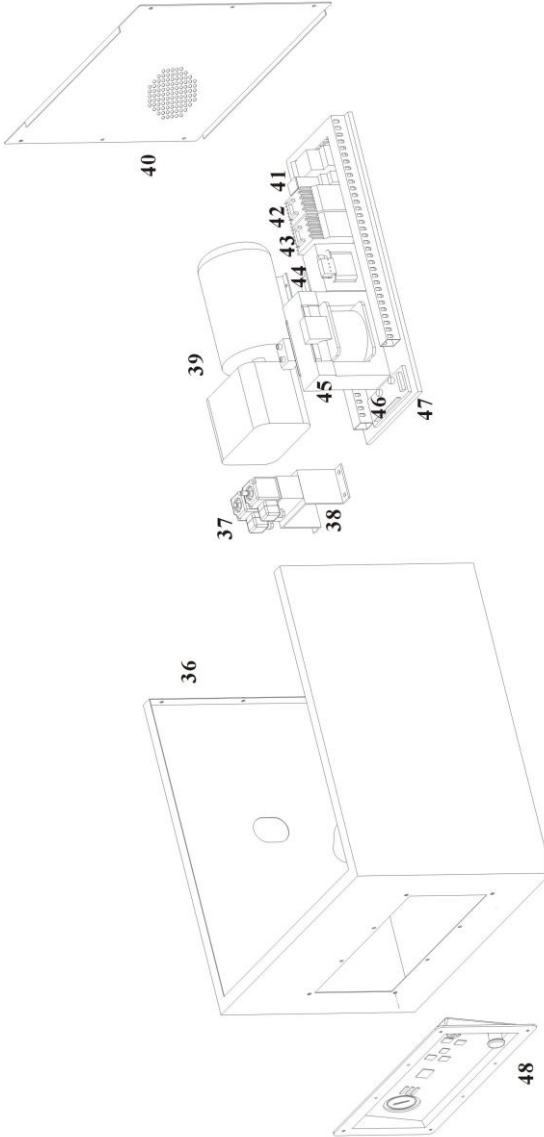
Spare Parts

Spare Parts Drawing 1(Suitable for VM400 & VM500)



Spare Parts

Spare Parts Drawing 2(Suitable for VM400 & VM500)



Spare Parts List 1

S/N	Parts Name	Q'ty	Parts Number	Suitable model
1	Vacuum Chamber	1	2.13.VMX400.A-02-00	VM400 Single bar
	Vacuum Chamber	1	2.13.VMX400.B-02-00	VM400 Double bar
	Vacuum Chamber	1	2.13.VMX500.02-01A	VM500 Single bar
	Vacuum Chamber	1	2.13.VMX500.02-01B	VM500 Double bar
2	Air piston assembly	4	2.13.VMX400.06-00	All model
3	Plastic screw nut	4	2.13.VMX400.06-11	All model
4	Air terminal stud	1	2.13.VMX400.02-06	All model
5	connector	1	2.13.VMX400.02-05-02	All model
6	Air terminal connector seat	1	2.13.VMX400.02-05-01	All model
7	Screw nut	4	2.01.LM.009	All model
8	Limit switch	1	2.03.KZ256	All model
9	Air spring mounting base	2	2.13.VMX400.02-04-01	All model
10	Air spring	2	2.17.QT234B	All 400 size model
	Air spring	2	2.17.QT234A	All 500 size model
11	Nylon Washer	4	2.13.VM400.01-14	All model
12	Shaft	2	2.13.VMX400.01-09	All model
13	Cover connection block	2	2.13.VMX400.01-05	All model
14	Screws	2	2.01.LS.354	All model
15	Rubber washer	2	2.13.VMX400.01-07	All model
16	Lo sets	2	2.13.VMX400.01-06	All model
17	Shaft fix block	2	2.13.VMX400.01-08	All model

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18	Screws	4	2.01.LM.043	All model
19	Acrylic cover	1	2.17.QT3510	VM400 Single bar
	Acrylic cover	1	2.17.QT350A	VM400 Double bar
	Acrylic cover	1	2.17.QT362B	VM500 Single bar
	Acrylic cover	1	2.17.QT362C	VM500 Double bar
20	Air-proof rubber	1	2.13.VMX400.02-03	All model
21	Double-sided tape	1	2.06.BQ009B	All model
22	Silicon rubber base	2	2.13.VMX400.01-12	All VM400 model
	Silicon rubber base	2	2.13.DZ500.01-04A	All VM500 model
23	Silicon rubber	2	2.13.VMX400.01-13	All VM400 model
	Silicon rubber	2	2.17.QT363	All VM500 model
24	Tension Screw	4	2.13.VMX400.04-07A	All model
25	Heat element fixed block	4	2.13.VMX400.04-06	All model
26	Cooper washer	4	2.01.PD.054	All model
27	Screw nut	4	2.01.LM.048	All model
28	Pression spring	4	2.13.VMX400.04-05	All model
29	Electric connecting piece	4	2.13.VMX400.04-03	All model
30	Guide sleeve	4	2.13.VMX400.04-04	All model
31	Screw nut	4	2.13.DZ400.02-24	All model
32	Heating base bar	2	2.13.VMX400.04-01	All VM400 model
	Heating base bar	2	2.13.VMX500.04-01	All VM500 model
33	PTFE pads	2	2.13.VMX400.04-02	All VM400 model
	PTFE pads	2	2.13.VMX500.04-02	All VM500 model

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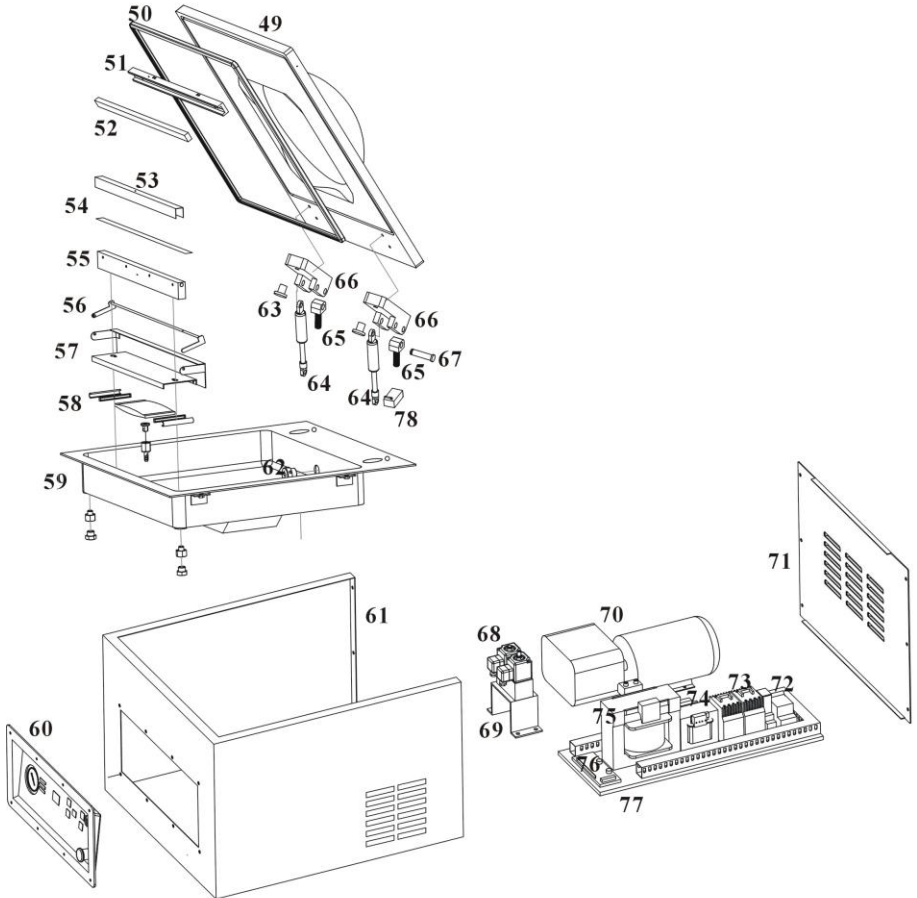
34	Heat element	2	2.17.QT3830	All model
35	Teflon cloth	2	2.17.QT227	All model
36	Body	1	2.13.VMX400.T-01	VM400TE model
	Body	1	2.13.VMX500.T-01	VM500TE model
	Body	1	2.13.VMX400.03-01	VM400E model
	Body	1	2.13.VMX500.01-01	VM500E model
37	Combination solenoid valve	1	2.04.QD062	All model
	solenoid valve	1	2.04.QD045	With gas filling model
38	Valve base	1	2.13.DZ400.03	All model
39	Vacuum Pump	1	2.02.BA04	All model
40	Body cover sheet	1	2.13.VMX400.T-01-04	VM400TE model
	Body cover sheet	1	2.13.VMX500.T-01-03	VM500TE model
	Body cover sheet	1	2.13.VMX400.03-03	VM400E model
	Body cover sheet	1	2.13.VMX500.01-03	VM500E model
41	Circuit break switch	1	2.03.KZ590	All model
42	Contactora	1	2.03.KZ1221	All model
43	Contactora	1	2.03.KZ1221	All model
44	Control Transformer	1	2.03.BY084	All model
45	Sealing transformer	1	2.03.BY038	VM400/A
	Sealing transformer	1	2.03.BY085	VM400/B, VM500/A
	Sealing transformer	1	2.03.BY120	VM500/B
46	Control PC board	1	2.03.KZ596	All model
47	Electric base board	1	2.13.VMX400.T-01-03-01	All model

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48	Control panel base	1	2.13.VMX400.03-11	All model
49	Nylon plate	1	2.13.VMX400.B-06-14	VM400
	Nylon plate	1	2.13.VMX500.06-14B	VM500
50	Fascia stick	1	2.06.BQ0675A	
51	Filter for 020 pump	1	2.07.NT.002	All model
52	Filter for 040 pump	1	2.07.NT.001	All model
53	Shaft connector	1	2.07.QT.122	020 Pump
54	Glass cup for vacuum pump	1	2.07.QT.137	020 Pump
55	Gas filling Nozzle	1	2.13.DZ400.02-25	All model
56	Gas filling connect	1	2.17.QT359	All model

Spare Parts

Spare Parts Drawing 3(Suitable for VM300TE/A)



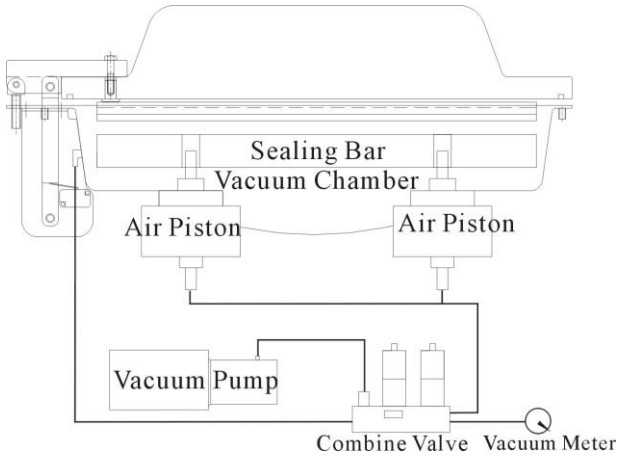
Spare Parts List 3

S/N	Parts Name	Q'ty	Parts Number	Suitable model
49	Acrylic cover	1	2.17.QT371A	VM300TE/A
50	Air-proof rubber	1	2.13.VM400.02-03	VM300TE/Ar
51	Silicon rubber base	1	2.13.VMX300.01-10	VM300TE/A
52	Silicon rubber	1	2.13.VMX300.01-11	VM300TE/A
53	Teflon cloth	1	2.17.QT227	VM300TE/A
54	Heat element	1	2.17.QT3830	VM300TE/Ar
55	Heating base bar	1	2.13.VMX300.04-01B	VM300TE/A
56	Bag fix bar	1	2.13.VMX300.04-05B	VM300TE/A
57	Heating assembly base	1	2.13.VMX300.04-04B	VM300TE/A
58	Air bag assembly	1	2.13.DZ300.2	VM300TE/A
59	Vacuum Chamber	1	2.13.VMX300.02-00B	VM300TE/A
60	Control panel base	1	2.13.VMX300.03-11	VM300TE/A
61	Machine body	1	2.13.VMX300.01-01	VM300TE/A
62	Air terminal stud	1	2.13.VMX400.02-06	VM300TE/Ar
63	Lo sets	2	2.13.VMX400.01-06	VM300TE/A
64	Air spring	2	2.13.VMX300.02-05	VM300TE/A
65	Shaft fix block	2	2.13.VMX300.01-08	VM300TE/A
66	Cover connection block	2	2.13.VMX300.01-05	VM300TE/Ar
67	Shaft	4	2.13.VMX300.01-09	VM300TE/A
68	Combination solenoid valve	1	2.04.QD062A	VM300TE/A
69	Valve base	1	2.13.DZ400.03	VM300TE/A

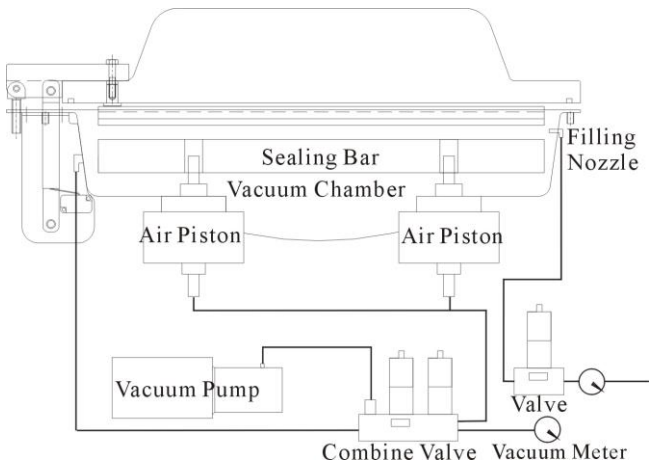
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70	Vacuum Pump	1	2.02.BA50	VM300TE/Ar
71	Body cover sheet	1	2.13.VMX300.01-03	VM300TE/A
72	Circuit break switch	1	2.03.KZ590	VM300TE/A
73	Contactora	2	2.03.KZ1221	VM300TE/A
74	Control Transformer	1	2.03.BY084	VM300TE/Ar
75	Heat transformer	1	2.03.BY038	VM300TE/A
76	Control PC Board	1	2.03.KZ630B	VM300TE/A
77	Electric base board	1	2.13.VMX300.01-04	VM300TE/A
78	Limit switch	1	2.17.QT252	All model
79	Main PC board	1	2.03.KZ630A	VM300TE/A
80	Sealing bar assembly	1	2.13.DZ300.1	VM300TE/A
	Sealing bar assembly	1	2.13.DZ400.1	VM400TE/VM400E
	Sealing bar assembly	1	2.13.DZ500.1	VM500TE/VM500E
81	Power switch	1	2.03.KZ732	All model
82	Vacuum meter	1	2.17.QT266	All model
83	Filter	1	2.04.QD127	VM300TE/A
84	Fascia stick	1	2.06.BQ06743	VM300TE/A

Gas Circuit Schematic Diagram

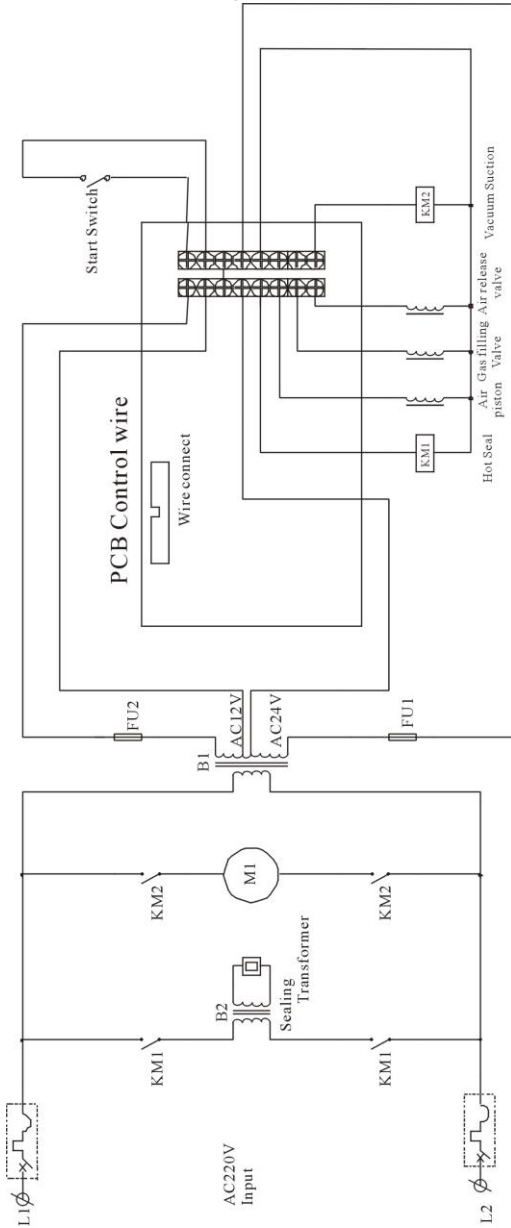


Schematic Diagram for standard vacuum packing

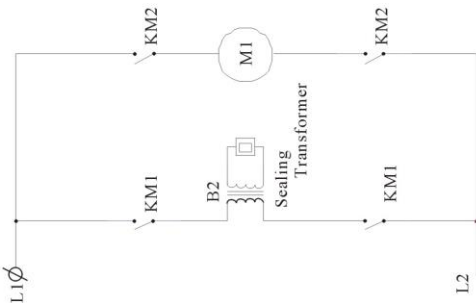
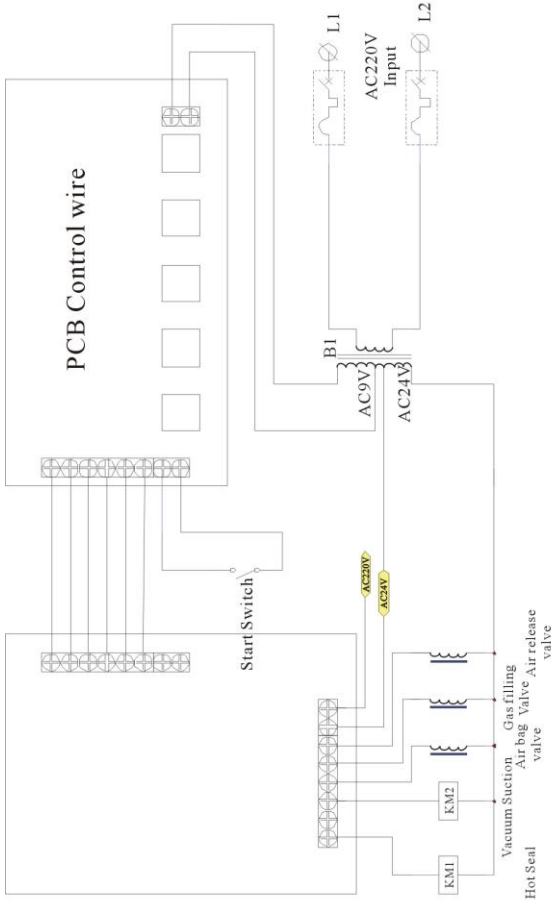


Schematic Diagram for vacuum packing with gas filling

Electric Circuit Diagram



Electric Circuit Diagram suitable for All vacuum machine except VM300TE



Electric Circuit Diagram suitable for VM300TE

FAQ

Can this machine seal foil or laminated bags?

Yes, it is designed to seal barrier laminations including laminations containing foils.

How much longer will my products last?

Typically shelf life may be extended three to five times. Results will vary, though, depending on the nature of the product, cleanliness, handling, temperature, and pre and post packaging conditions, among others.

What type of bag do I need to use?

You need bags capable of offering a full gas barrier. Bags come in different sizes, and minimum order is typically only one thousand bags. Contact of us pricing and availability.

What are the advantages of vacuum packaging my products?

Extended shelf-life

No freezer burn

No loss of volume or product weight due to evaporation

Reduced action by aerobic bacteria

Ease keeping control of inventory

Cost-reduction due to volume purchasing of products to be packaged

Capacity of producing in large batches

Excellent product appearance

Increased Product Safety from theft, vandalism and contamination.

Increase ease of product handling

Improved product quality perception from clients and consumers

How do these machines work?

Turn on the power of machine; Set working parameter as vacuum time, heating time, cooling time, temperature; Put the packing bag into the vacuum chamber, lay the bag mouth on the sealer; Close the lid, machine start working by itself; After a while, the lid open automatically when the working ends, take the bag out, it is ok.

Can I vacuum- pack liquids ?

Absolutely. Many clients use these machines to packing salsa, soups, broths, stocks, and/or consommés.

Do you recommend any parts we should keep instock?

You should keep a few Heating Elements and Teflon Strips, as these have a limited life span. The machines come with a kit of spares, but keep an eye on how many you have left.

If I vacuum package my food products, will I still need to refrigerate them
Yes, vacuum packaging is not a substitute to refrigeration.

I need something faster than what you are offering here...

We offer single and double chamber machines, equipped with single and double seal bars, and different chamber volumes; as well as fully automatic machines designed to cover the most rigorous productions schedules. Check our other listings or contact us for more information.

We do not list all of our offerings.

Breakdown analysis

I. Vacuum pump and vacuum system

1. Vacuum pump does not act, the possible reasons are as follows:

- Limit switch is not pressed on
- close the machine cover and adjust the limit switch.
- adjust the pull-rod for electric cover opening machine.
- Replace it.
- Electric Motor of vacuum pump is damaged.
- Replace it.

2. Vacuum chamber cannot reach the vacuum degree, the possible reasons are as follows:

- Vacuum degree cannot be reached because vacuum pump is worn or damaged.
- Loose air pipe joint, broken pipe, damaged sealing ring of vacuum chamber or damaged solenoid valve causes the entry of air into vacuum chamber.
- Insufficient oil in vacuum pump.
- Vacuum time setting is not enough.

3. Vacuum chamber cannot be opened, the possible reasons are as follows:

- Air-bleed solenoid valve is not turned on.
- Limit switch change the position during the vacuum operation.

4. Air remains in bag after processing is finished, the possible reasons are as follows:

- Wrong position resting on sealing bar.
- Redo it.
- Product get too few space inside of bag, and uneven sealing pressure bar presses the bag opening side so that air cannot escape.

5. Abnormal sound or tripping when running, black smoke.

- Abnormal sound of fan of pump motor, it should be repaired.
 - Blockage may be seen in *air* intake pipe.
 - Insufficient oil of vacuum pump or the use of non-standard lubricant.
 - Long-time running of pump or overheat running under high temperature, please keep the machine ventilated and radiating.
 - Faulty vacuum pump motor or solenoid valve of vacuum pump wear and tear due to usage.
- Replace parts or contact the manufacture factory.

II .Breakdown of heating sealing.

1 .Incapable sealing, the possible reasons are as follows:

- The heating element is damaged and the power connecting position of heating element is cut off.
- The heating time is set at "0".
- The sealing solenoid valve does not act and Air piston(or air bag) does not bulge (or air bag is damaged).

2. Uneven sealing veins, air bubble or not firm sealing, the reasons are as follows:

- Sealing rubber bar is unclean.
- Heating time is too short or temperature is too low.
- Sealing can't be pressed tightly caused by insufficient bulge of air bag or air piston.
- Air bubble shrinks caused by insufficient cooling time.
- Heating sealing bar is damaged and the surface is not flat.

Note: The above breakdown analysis *is* only for reference. It's different for special model configuration, and here no additional instructions.