

# VACUUM PACKING MACHINE



OPERATION INSTRUCTION

## 1. Overview

Model TT-Z05A series vacuum package works in a brand-new way that is make the inside of the bag vacuum and then seals it at once, and just because of the high vacuum, extremely less air is left in the bag, resulting in restraining the propagation of bacterium etc. Microbe, avoiding the goods teing mildew and rotten by oxidation and, at the same time, some spongy goods can be made reduced in the volume after being vacuum packed and thus become easy to transport and store.

## 2. Purpose

This package uses compound film bags to do vacuum hot-sealing packing for various foods, medicines, native products, aquatic products chemical materials, hard wares and electronic components in the state of solid, power, paste or liquid, which can effectively prevent the packed goods from being totten and gone bad caused by the oxidation of grease goods or the propagation of the bacterium fond of oxygen, keep the quality, freshness, taste, color for an extended storage and make it easy to transport and export the packed goods.

## 3. Property feature

- 1) for the package with a single-chamber, the process of packing is shown in a very clear way with the organic glass cover equipped.
- 2) with the two vacuum chambers work in turn to heave the packing and sealing well linked up with the preparations, the efficiency is greatly enhanced. Both upper and lower work chambers are made of stainless steel, reasonable in the structure, good gas tightness, beautiful, durable and in line with the requirement of food sanitation and anti-rottonness.

This package is set with the function of combining vacuum, sealing, peinting in one process and, for different packing materials and requirements, with the adjustable devices for the vacuum, hot-sealing temperature and time so as for the users to get optimum selection and adjustment for an optimum effect of packing. The printing device with a convenient letter-ch ange and clear printing is available per the desire of the users, with which, users may print on the sealing at the same time for sealing the valid period, date of ex-factory, code of ex-factory etc. To meet with the provision of

the national food label law. The package features advanced design, full function, stable and reliable performance, good sealing strength, strong packing capacity, convenient operation and service, high economic benefit etc. And is the idealer machinery for the vacuum package.

#### 4. Major technical parameters

- 1) lowest absolute pressure intensity in the vacuum chamber 1KPa.
- 2) packing speed:1-3 time/min.

Model	Voltage	Power	Chamber Size	Pump Capacity
TT-Z05A	1phase,110V, 220V~240V/ 50~60HZ	0.9KW	440×420×75mm	20m <sup>3</sup> /h

#### 5. Structure and principle

This package consists of the upper and lower vacuum chambers, body, electrics, vacuum system five parts. The upper chamber's top is set with a group of hot-pressing sealing device and the lower one is set with the hot-pressing sealing device and the lower one is set with the hot-pressing sealing device. The heating element is the Ni-cr tape and mounted on the bake lite hot-pressing stand, which is absolutely insulated from the vacuum chamber and closely fitted on the gasbag, which, before hot-sealing, is in

a low vacuum state and, during hot-sealing, is made interlinked with air through the hot-sealing electromagnetic valve YV and enlarged with its volume so as to have the heating head(Ni-cr tape) pressing downward on the sealing while heating, both heating temperature and time are adjustable.

The power supply of the package: AC 110V, 60Hz, three-phase four-wire with the neutral input. Motor of the vacuum pump: AC 220V,  $2 \times 0.75\text{KW}$ , 2800 r.p.m. The heating system is Operated by the procedure by adjusting the sealing time from 0-9.9. That is to change the hot seal temperature.

vacuum system consists of hot seal electromagnetic valve YV3, Nitrogen electromagnetic valves YV2 and gas extrusion electromagnetic valve YV1.

Evacuation from the vacuum chamber starts once the vacuum pump is enabled and it will stop when the intended vacuum peaches, the whole control procedure turns into next one then. This packager uses a single-stage rotary-sheet type vacuum pump(see the manual for the details of the technical property of the pump.)

## 6. Operation procedure

- 1) Turn on the power: enable the power switch, the quick-stop indicator lights. Set the evacuation & hot-sealing and gas-flushing time..
- 2) Press down the cover, the evacuation(vacuum) indicator lights, the vacuum pump starts evacuation and the cover is automatically attracted. Vacuum can be adjusted by means of the vacuum time dial per the packing requirement and adjustment should be done from low to high with a small amplitude.
- 3) When the set time(the desired vacuum) reaches, evacuation ends and the evacuation indicator goes out. Set the power switch to the vacuum position, the vacuum packing bedins and the air-filling indicator goes out.
- 4) Along with the evacuation indicator goes out, the hot-sealing indicator lights to enter the sealing procedure. The adjustable knobs for both hot-sealing time and temperature on the panel are equipped with for the materials of different thickness. To adjust the knobs, use a small amplitude of rotation so as to prevent the hot-sealing temperature form being raised in a sudden, thus burning the hot-sealing fittings.
- 5) When the set time for hot-sealing reaches. The hot-sealing indicator goes

out and the hot-sealing ends, then air goes into the vacuum chamber via the electromagnetic valve till the cover lifted automatically, the process of vacuum, air-filling and packing ends and next such a process is ready.

## 7. Regulation and operation

1) When packed, check with the list of packing if the accessories are full, if the screws on every location are loose and if the upper vacuum chamber flexible to move left and right.

2) Properly lubricate every moving part, oil hole and oil nozzle and, in according with the manual for the vacuum pump, properly inject engine oil into it and observe the oil level at running when injecting No.6 engine oil via the oiling inlet till the 3/4 height of the oil window, which should not be lower than 1/4 height of the oil window and max. Oil quantity should not exceed 3/4 height of the oil window.

### 3) Regulation

#### A. Regulation of the vacuum in the vacuum chamber

Optimize the time of evacuation per the need of the packed goods, to get an appropriate vacuum, the longer the time for evacuation, the higher the vacuum to be gained.

#### B. Regulation of hot-sealing temperature and time

Optimize the hot-sealing temperature and time(0-9.9s)per the different bag material and packed goods to get an optimum strength of sealing. To regulate generally do it from low to high till the desired appearance and strength of sealing.

### 4) Process of operation

A. Place the goods to be packed in the bag(plastic compound or Al-foil compound bag), and put the bag into one of the lower vacuum chambers, lift the bag-pressing rod and evenly arrange the opening of the bags under the hot-pressing stand.

B. Turn on the power switch, the power indicator lights and then cover the lower vacuum chamber with the upper one for automatic sealing so as to enhance the efficiency of packing.

C. Set the power switch to "off" position and cut off the main power when the whole procedure of packing ends.

## 8. Maintenance

- 1) Before operation, carefully read the manual to get familiar with the way of regulation and operation.
- 2) Periodically maintain and lubricate the vacuum pump according to its manual and pay much attention not to let it reversedly run in order to prevent it against being damaged and the oil from reversedly spraying inside of it till the vacuum system.
- 3) Often check if the earth line well contacted to make sure of safety.
- 4) Often check if there is any foreign matter on the sealing dyeing cloth (PTFE) and if it is flat to make sure of the sealing strength.
- 5) Turn off the power on time in case of a failure and, if necessary, press the quick-stop button, then lift the cover after deflation and turn off the voltage to examine the cause and troubleshoot.

## 9. Common troubles and troubleshooting

### 1) No vacuum formed or low vacuum

- A. Reversed running of the vacuum pump. Check if its direction of running in line with the arrow of the pump motor and, if not, adjust the phase.
- B. When newly used, the sealing ring of the upper chamber may not be well fitted with the plane of the lower one, so slight pressure is required to be applied on the cover to make both completely mated.
- C. The position switch is not in place. Adjust the position of the limiting sheet of it.
- D. The deflation valve is not closed tightly and produces leakage. Check its valve core(rubber) if it is worn out, polluted or its center displaced.
- E. Check if there is leakage or looseness with every part of the pipeline.

### 2) Bad hot-sealing quality

- A. Check if the opening of the packing bag is clean and take care not to let it polluted.
- B. Check if the Ni-cr tape works properly, if there is short-circuit or circuit -breaking.

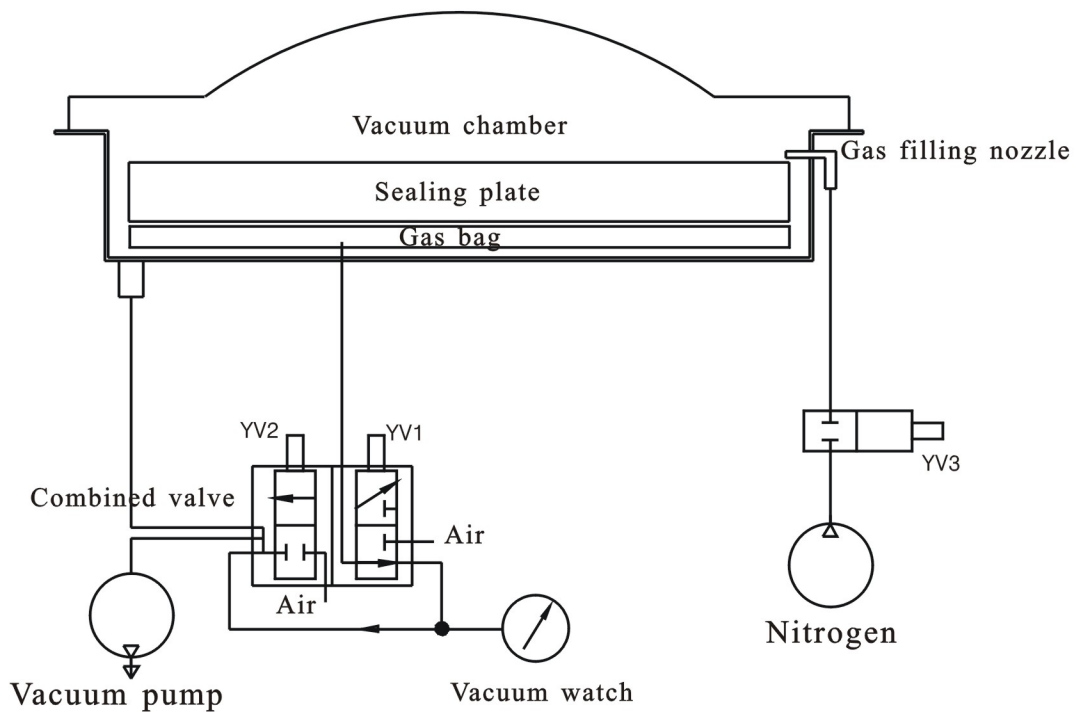
### 3) Failure of the master board

- A. The master board inside of the package should be kept clean, dry and no metal foreign matter on its surface in order not make its interior short-circuited or the procedure confused.

B. No vacuum formed or not hot-sealing done or jump action produced. Which is due to being not well plugged of the relative dial switch's feet or the dial being damaged.

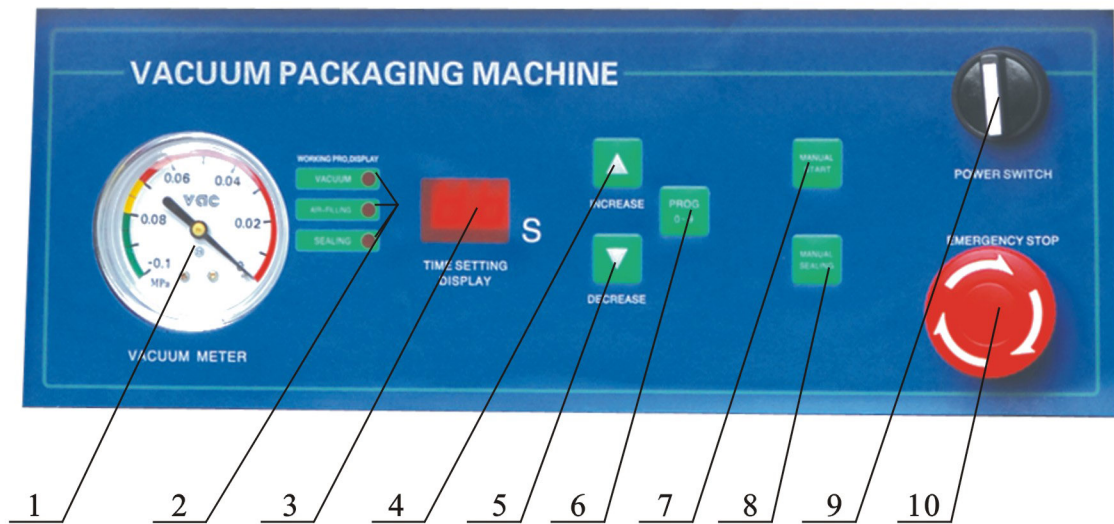
C. Lack of strokes on display with the digital display board or no display for action indication. Which is caused by the looseness or being not well plugged of the board feet or partial damage of the board.

D. Some shift of the high, middle and low shifts for hot-sealing doesn't work the feet of the high, middle and low 4138 relay relative to the middle phase become loose or the relay is damaged.



Principle figure of vacuum system

## 10. Computer vacuum packager's controller operation Keyswitch introduction



1. Vacuum meter

2. state light indicator

3. the setting display: P0-P9 indicates Sleep; r1 indicates gas extrusion; 5R indicates hot sealing, Pa Sleep after gas flushing.

4. increase key: press this key when set the time of vacuum, gas flushing, hot sealing and P0-P9 working state.

5. decrease key: press this key when set the time of vacuum, gas flushing, hot sealing and P0-P9 working state.

6. set key: when in Sleep, press this key once, the working position will change P0 to P1, and 9 times continuously to P9. Keep pressing the key for 10seconds, the indicated light of vacuum will be bright, the number indicates the setting time. Pressing again, indicating gas flushing, and again, hot sealing, again for the waiting time after gas flushing.

7. when in Sleep, press this key to start vacuum pump.

8. press this key to hot seal manually.

9. power switch.

10. Emergency stop: press this button when running, it will open the gas extrusion valve to let the machine to be on Sleep state.



## Technical parameters.

- 1.The scope of Air-extraction time:0sec.~9.9sec.
- 2.The scope of Thermal-sealing time: 0.0sec.~9.9sec.
- 3.Temperature time: 0-9.9sec.

## Use manual

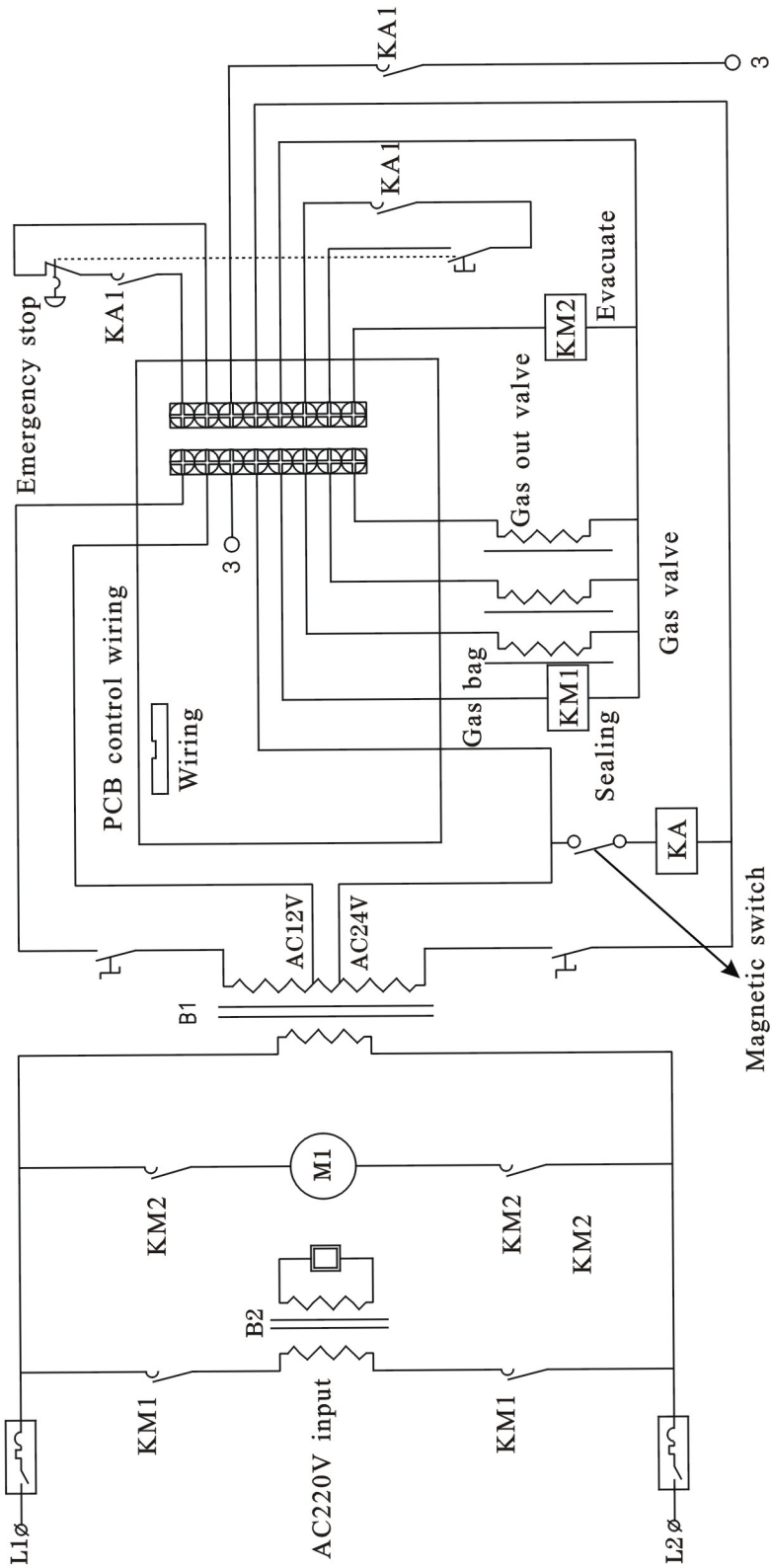
On the Sleep state,,close the vacuum cover, it will automatically start the program. The process is as below.

- (1) Air-extraction: The setting display begins to count time from 0 to Setting time, when the time reaches, it turns to (2).
- (2) gas flushing: The setting display begins to count time from 0.0 to Setting time, when the time reaches, it turns to (3).
- (3) waiting: the setting display indicates RA, when time reaches, turns to (4).
- (4) hot-sealing: the setting display indicates 5R, after finishing the vacuum and seal, the cove will open automatically, then turns to (5).
- (5) gas extrusion: indicates r1.
- (6) if the vacuum machine with gas flushing, another step should be in between (1) and (2): After step (1), filling the gas (say Nitrogen) into bags, when time reaches, turn to (2).,

## 5.Use of urgent stop.

On the working state, if there is any trouble unuual or you need stop working, you may press the button 10,, it will stop working at once and return to Sleep state. After opening the cover, returning to Sleep state, press the stop button again..

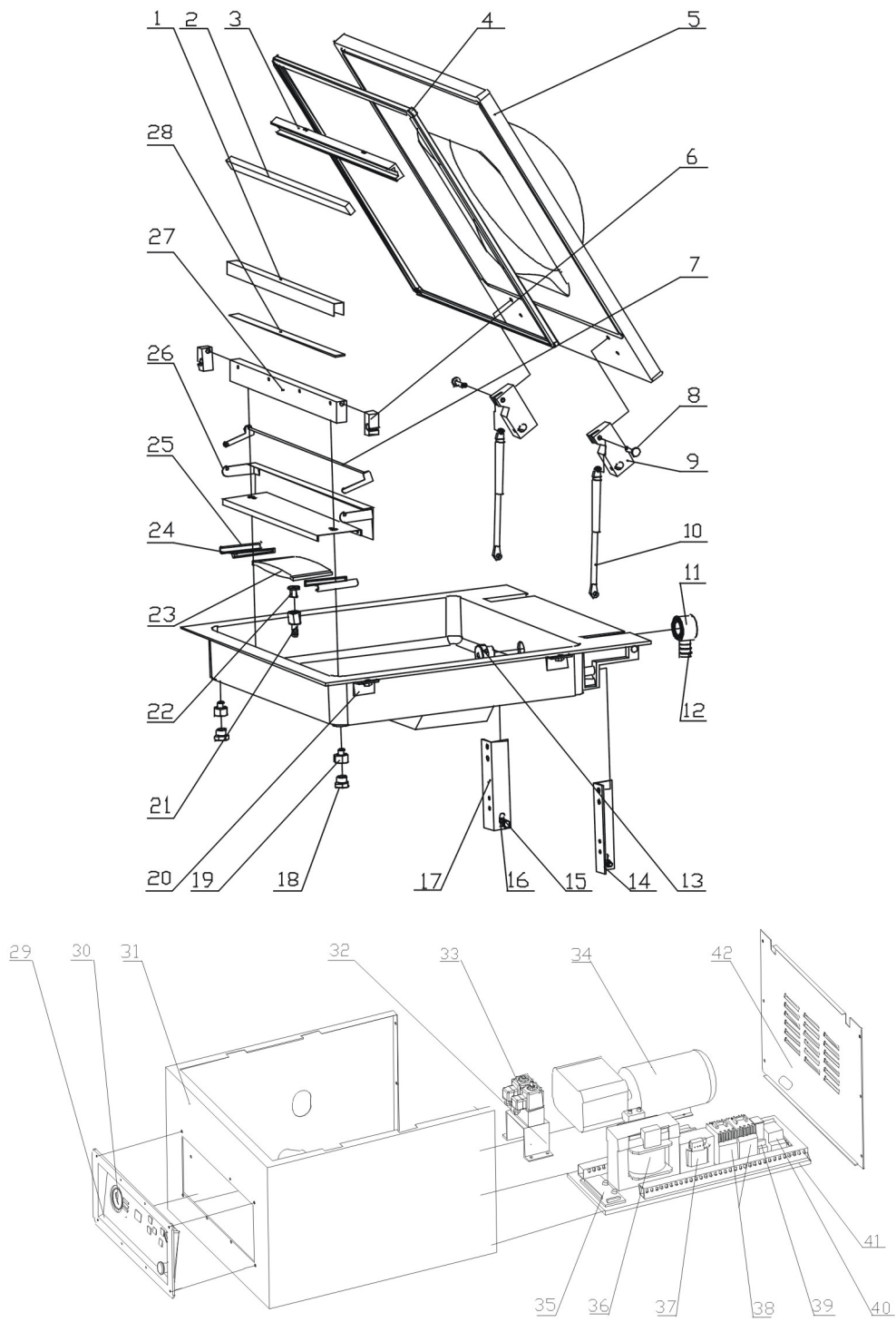
# 11. DZ\_E mode electronic drawing



## 12.Maintenance

1. Reading the manual carefully before operating ,to be familiar with the adjust and using method.
2. Basing on the regulations, on the vacuum pump manual maintain、 and filling oil into the pump regularly. And reverse the pump us not permitted to avoid damasing the pump, and spurting the oil on the vacuum room.
3. Checking the earth wire is working or not, to keep the electricity safe.
4. Checking the things on the teflon cloth on the sealing stand, it's flat or not, to keep the strength of sealing.
5. If there is something wrong with the machines, you must power the machine, essentially put the emergency stop button, then open the cover after bleeding the air, finally power off the machine, checking it and repairing it.
6. When there is something wrong with the electromagnetic valve: at first, to unload the control panel, then unload the electromagnetic valve frame the vacuum room, finally take the electromagnetic valve and change it.

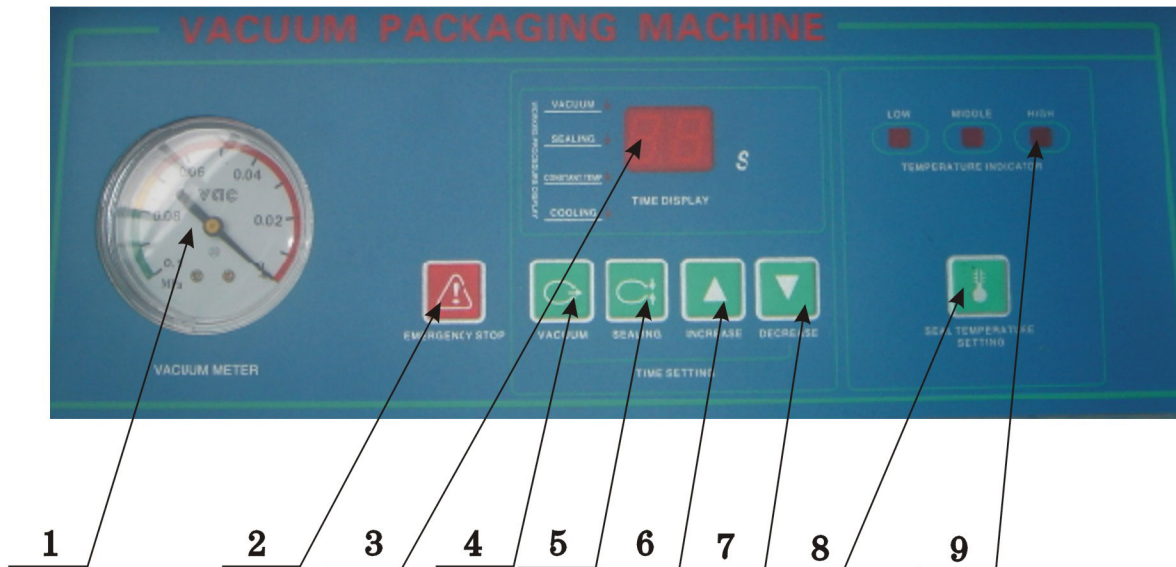
# 13.E-type parts



## 14. Machine parts list

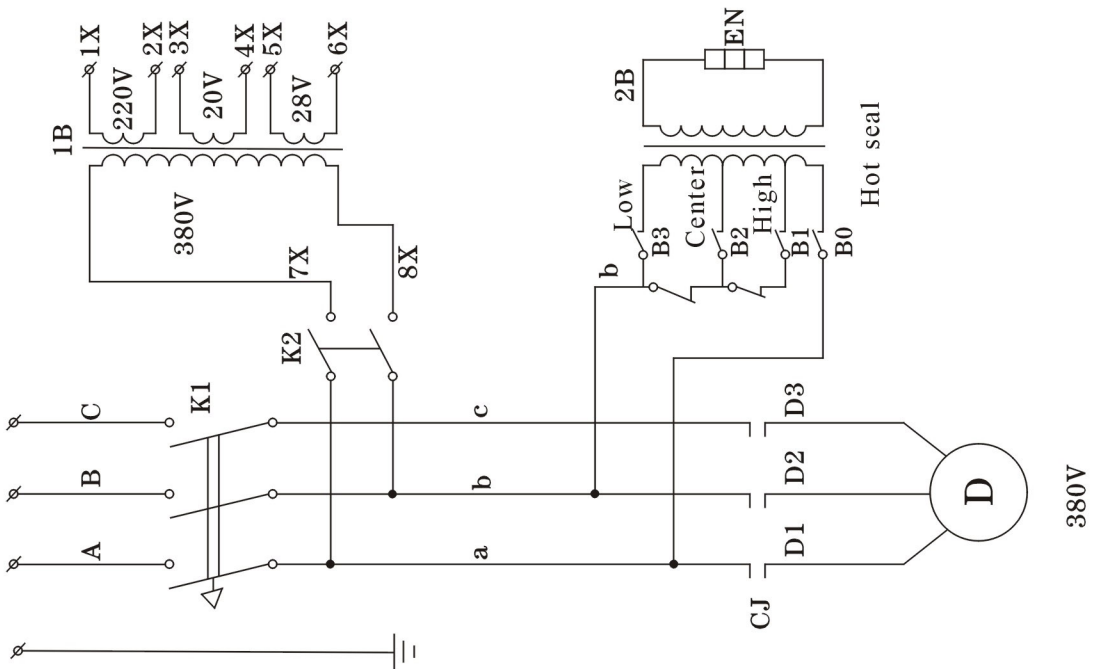
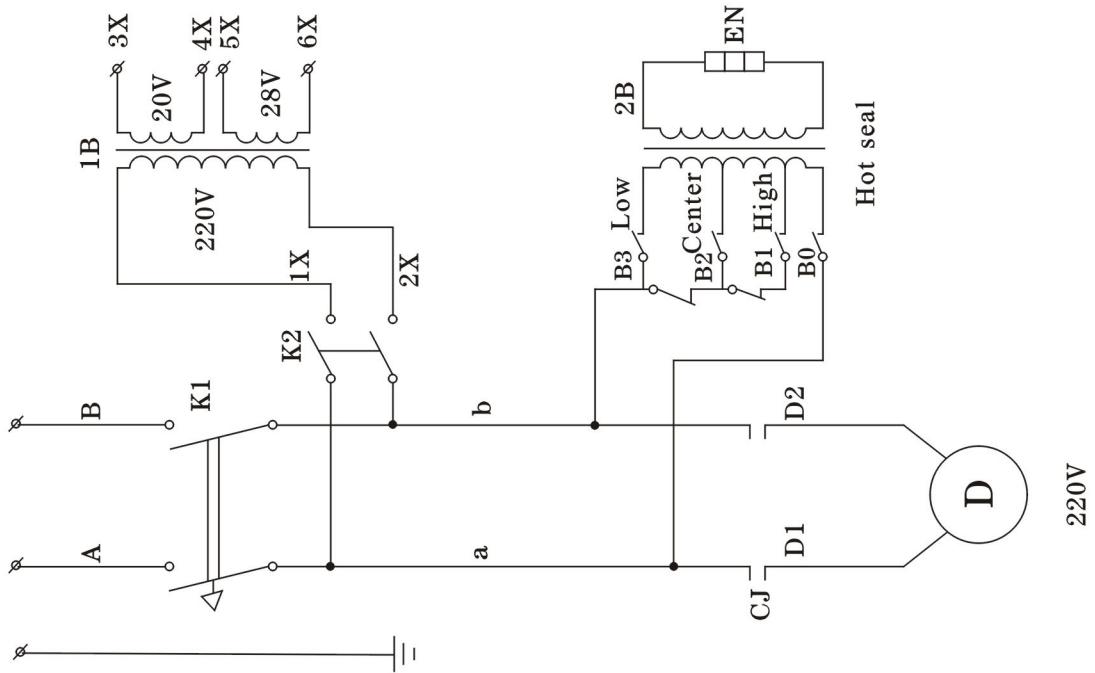
S/N	DESCRIPTION	Q'TY	REM.	S/N	DESCRIPTION	Q'TY	REM.
1	Teflon belt	1		22	Gas bag connection seat	1	
2	Silicon rubber	1		23	Gas bag	1	
3	Layering Block	1		24	Gas bag copper plate	2	
4	Sealing tape	1	Silicon rubber 11×16.5×410	25	Gas bag block	1	
5	Cover	1	Plexiglass	26	Heater frame	1	
6	Install block	2		27	Middle support	1	
7	Bag holder	1		28	Ni.Cr cushion	1	
8	Pin	2		29	PC board	1	
9	Top rotate plate	2		30	Vacuum meter	1	
10	Air spring	2		31	Machine body	1	
11	Connection seat	1		32	Valve frame	1	
12	Connector	1		33	Combined magnetic valve	1	AC24V
13	Gas cover	1		34	Vacuum pump	1	XD-020 2800r/min 220V
14	Right cylinder rack	1		35	Electronic control panel	1	
15	Hex Nuts	4		36	Transformer (sealing)	1	110/220/240VA OUT 9V-24V
16	Hexagon bolt	2		37	Transformer (control)	1	110/220/240VA OUT 9V-24V
17	Left cylinder rack	1		38	AC contactor	2	0910-AC24V
18	Wire bolt	2		39	Relay	1	
19	Wire seat	2		40	Air switch	1	2P25A
20	Vacuum chamber	1		41	Electronc fixing plate	1	Epoxy resin board
21	Gas bag connector	1		42	Back cover	1	

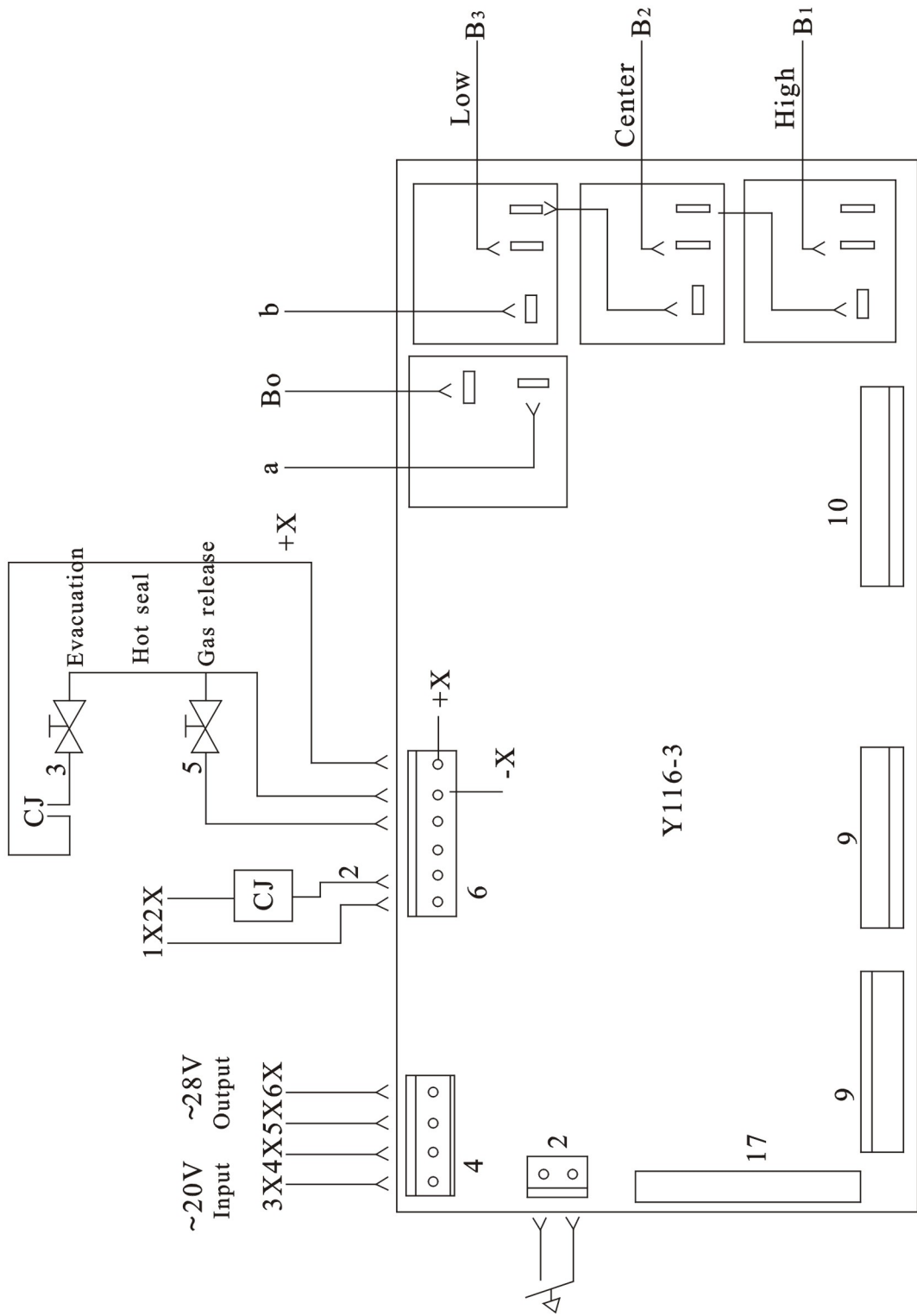
## 15.Computer vacuum packager's controler operation Keyswitch introduction



- 1.Vacuum watch.
- 2.Urgent stop .In any state,touch this keystroke,the machine will return to await order state.
- 3.Indicaator of time and state Display"--"means await orders,display "--"means Air-deflation state and display figure means Air-extraction or thermal-sealing state.
- 4.The time of Air-extraction enactment,in the await order state,press this keystroke one time,The Number of ten sec.wink;press two times, the number of sec.wink,and press three times,it return to await order state.
- 5.The time of Thermal-sealing enactment,in the await order state,press this keystroke one time,The Number of sec.wink,press two times,The Number of decimal fraction wink.And press three times,it return to await order state.
- 6.Addition keystroke\_in the Air-extraction or Thermal-sealing state, press this keystroke,The Number of wink add one.
- 7.Reduce keystroke.In the Air\_extraction or Thermal-sealing state,press this keystroke,The Number of wink reduce one.
- 8.The Temperature of Thermal-sealing enactment.Press this keystroke can change the Temperature of Thermal-sealing.
- 9.Temperature indicator.(Low、 Middle、 High)

16. electrical schematic diagram

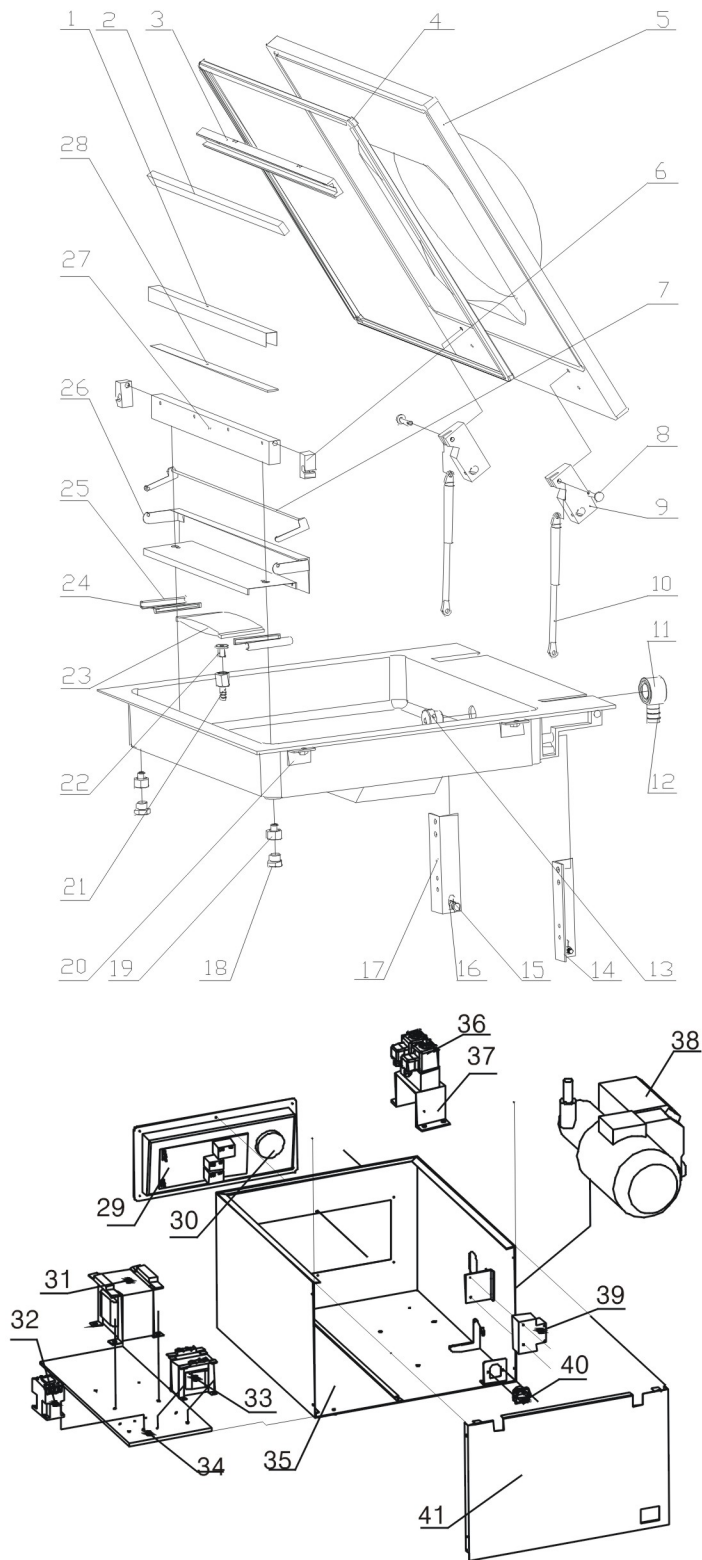




DZ\_N Mode seal temperature & stop control board



# 17.N-type parts



## 18. Machine parts list

S/N	DESCRIPTION	Q'TY	REM.
1	Teflon belt	1	
2	Silicon rubber	1	
3	Layering Block	1	
4	Sealing tape	1	Silicon rubber 11×16.5×410
5	Cover	1	Plexiglass
6	Install block	2	
7	Bag holder	1	
8	Pin	2	
9	Top rotate plate	2	
10	Air spring	2	
11	Connection seat	1	
12	Connector	1	
13	Gas cover	1	
14	Right cylinder rack	1	
15	Hex Nuts	4	
16	Hexagon bolt	2	
17	Left cylinder rack	1	
18	Wire bolt	2	
19	Wire seat	2	
20	Vacuum chamber	1	
21	Gas bag connector	1	

S/N	DESCRIPTION	Q'TY	REM.
22	Gas bag connection seat	1	
23	Gas bag	1	
24	Gas bag copper plate	2	
25	Gas bag block	1	
26	Heater frame	1	
27	Middle support	1	
28	Ni.Cr cushion	1	
29	Control panel	1	
30	Vacuum meter	1	
31	Element transformer	1	
32	Contacto	1	
33	Controller transformer	1	
34	Electronc fixing plate	1	Epoxy resin board
35	Machine body	1	
36	Combined magnetic valve	1	AC24V
37	Valve frame	1	
38	Vacuum pump	1	XD-020 2800r/min 220V
39	Air switch	1	2P25A
40	Power switch	1	
41	Back cover	1	

## 19. Packing list.

Model & spec.	Quantity.	
Machine	1 unit	
product manual	1 pcs	
Teflon doth	1 pcs	
Ni-cr tape	1 pcs	
Screwdriver	"+", "-" shape 1pcs/each	
socket head wrench	2 pcs	
receptacle	1 pcs	
SS holding disk	pc 2 1pc for single-chamber	
XZD-020	vacuum pump manual	1 pcs
	Oiler	1 pcs

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## QUALITY CERTIFICATE

The product has been well tested, the quality is approved both by factory standard and CE standard. It is permitted to be dispatched.

Model:

Voltage:

Production batch:

QC:

Date: