

# MODEL TT-Z12B

## **VACUUM PACKING MACHINE**



## **OPERATION INSTRUCTION**

## 1. Overview

Model TT-Z12B 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.

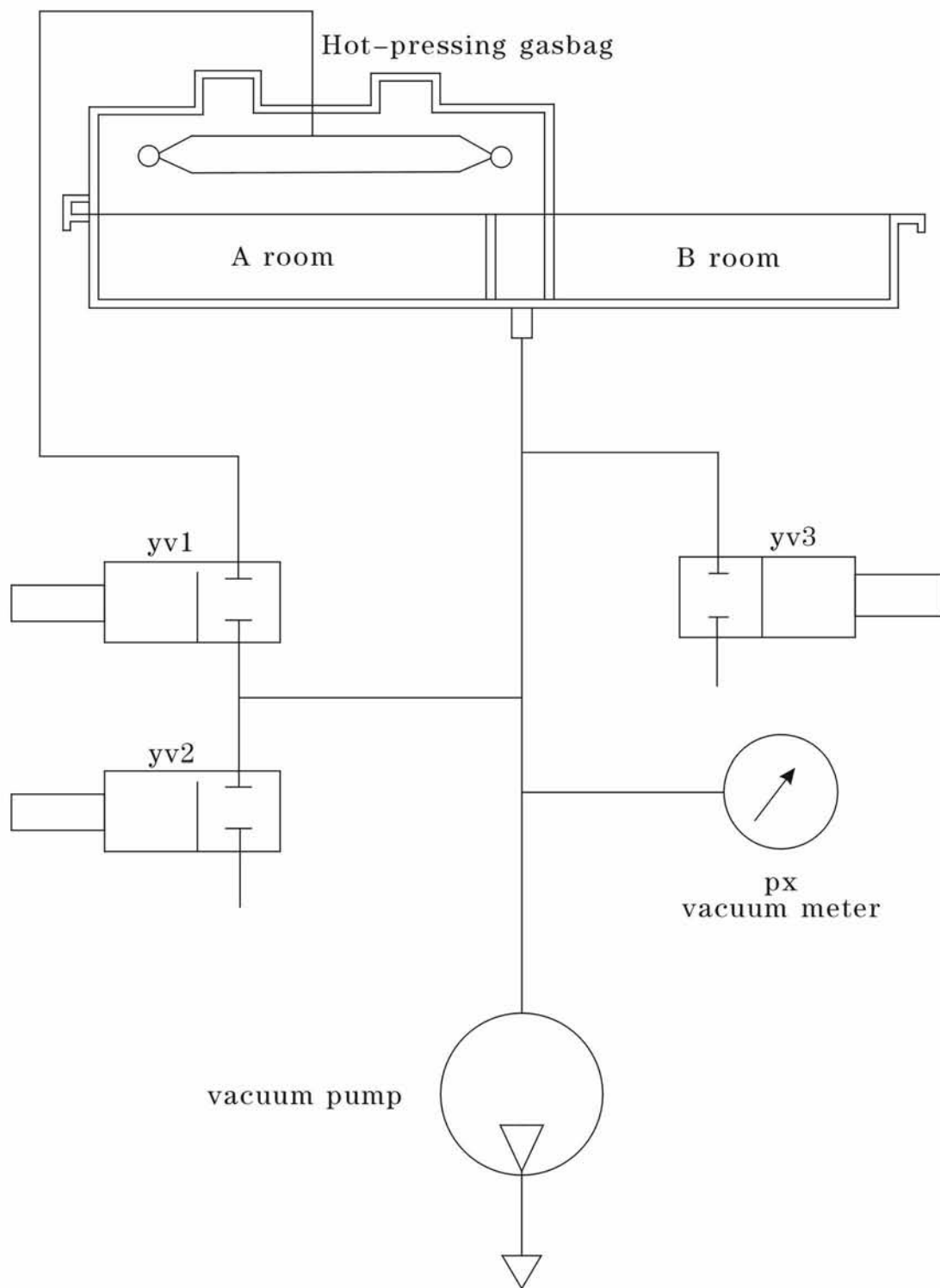
## 2. Purpose

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

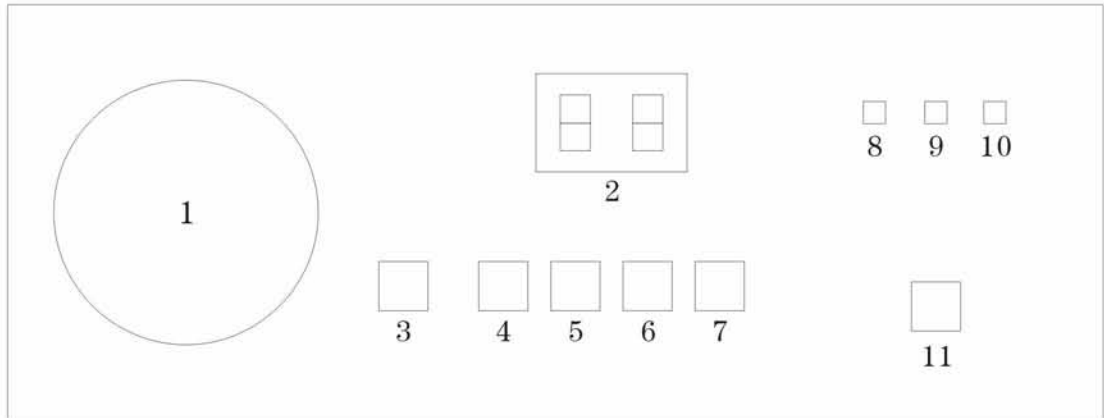
- 1) for the package with a single-chamber, the process of packing is shown in a very clear way with the organic glass cover equipped.
- 2) with the two vacuum chambers work in turn to heave the packing and sealing well linked up with the preparations, the efficiency is greatly enhanced. Both upper and 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-change 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



(Fig.4)principle figure of vacuum system

Model DZ400/500 computer vacuum packager's controller operation introduction  
Keyswitch introduction



(Fig5)

1. Vacuum watch
2. Indicator of time and state Display "-" means await orders, display "□□" means Air-deflation state and display figure means Air-extraction or thermal-sealing state.
3. Urgent stop. In any state, touch this key, the machine will return to await order state.
4. The time of Air-extraction enactment, in the await order state, press this key 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 key 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 key. In the Air-extraction or Thermal-sealing state, press this key, The Number of wink add one.
7. Reduce key. In the Air-extraction or Thermal-sealing state, press this key, The Number of wink reduce one.
8. Low-temperature indicator.
9. Middle-temperature indicator.
10. High-temperature indicator.
11. The Temperature of Thermal-sealing enactment. Press this key can change the Temperature of Thermal-sealing.

Technical parameters.

- 1.The scope of Air-extraction time:0sec.~99sec. Error rate: <0.1%
- 2.The scope of Thermal-sealing time: 0.0sec.~9.9sec. Error rate:<0.1%
- 3.Temperature enactment: High, middle, low-Temperature
- 4.Constant temperature: Fixation 2sec.
- 5.Deflation-air: Fixaction 2sec.

Use explains

- 1.Air-extroction time enactment:

In the await order state, press the Air-extraction keystoke 4, it display the Number of former-enactment, and the Number of the sec. wink, then press keystoke again. Enactment the Number of sec.

- 2.Thermal-sealing time enactment:

In the await order state, press keystoke 5, it display the Number of former-enactment, and the Number of sec. wink, then press keystoke 6 or 7, can enactment the you need, press keystoke 5 again, enactment the Number or 0.1 ses.

- 3.Thermal-sealing temperature enactment:

Press keystoke 11 and keystoke 6 keystoke 7 like (1)(2) com enactment the sealing temperature.

- 4.Working process:

In the await order state, press the vacuum cover, it will automatic finish the complete process.

(1) Air-extraction: The Number-tube begin take count of time from 0 to enactment Number.

(2) Thermal-sealing: The Number-tube begin take count of time from 0.0 to enactment Number.

(3) Constant temperature 2sec.

(4) Air-deflation 2sec. Display "□□", the cove will open automatic.

(5) Await order display"-".

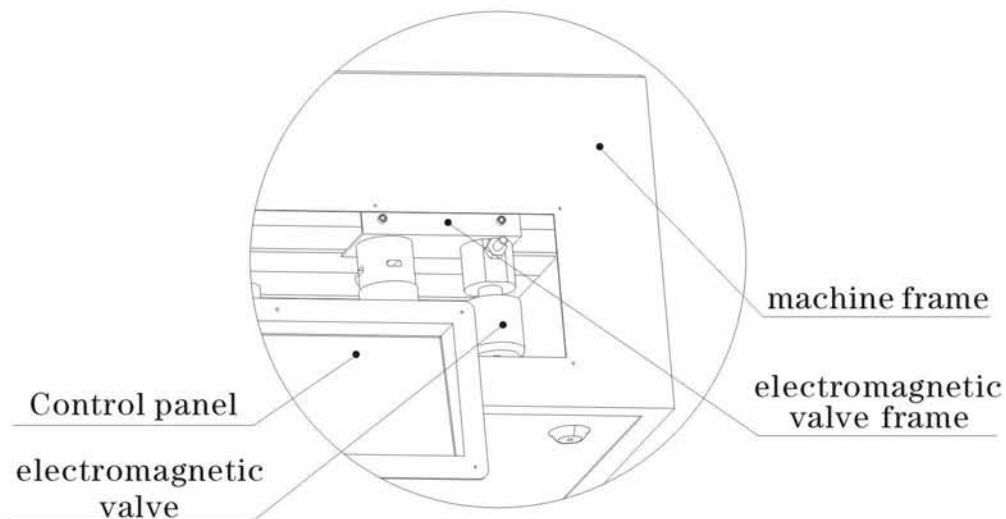
- 5.Use the keystoke of urgent stop.

In the working state, if there have something wrong or you need stop working, you may press the keystoke 3, it will stop working at once and return to await order state.

## 11.Maintenance

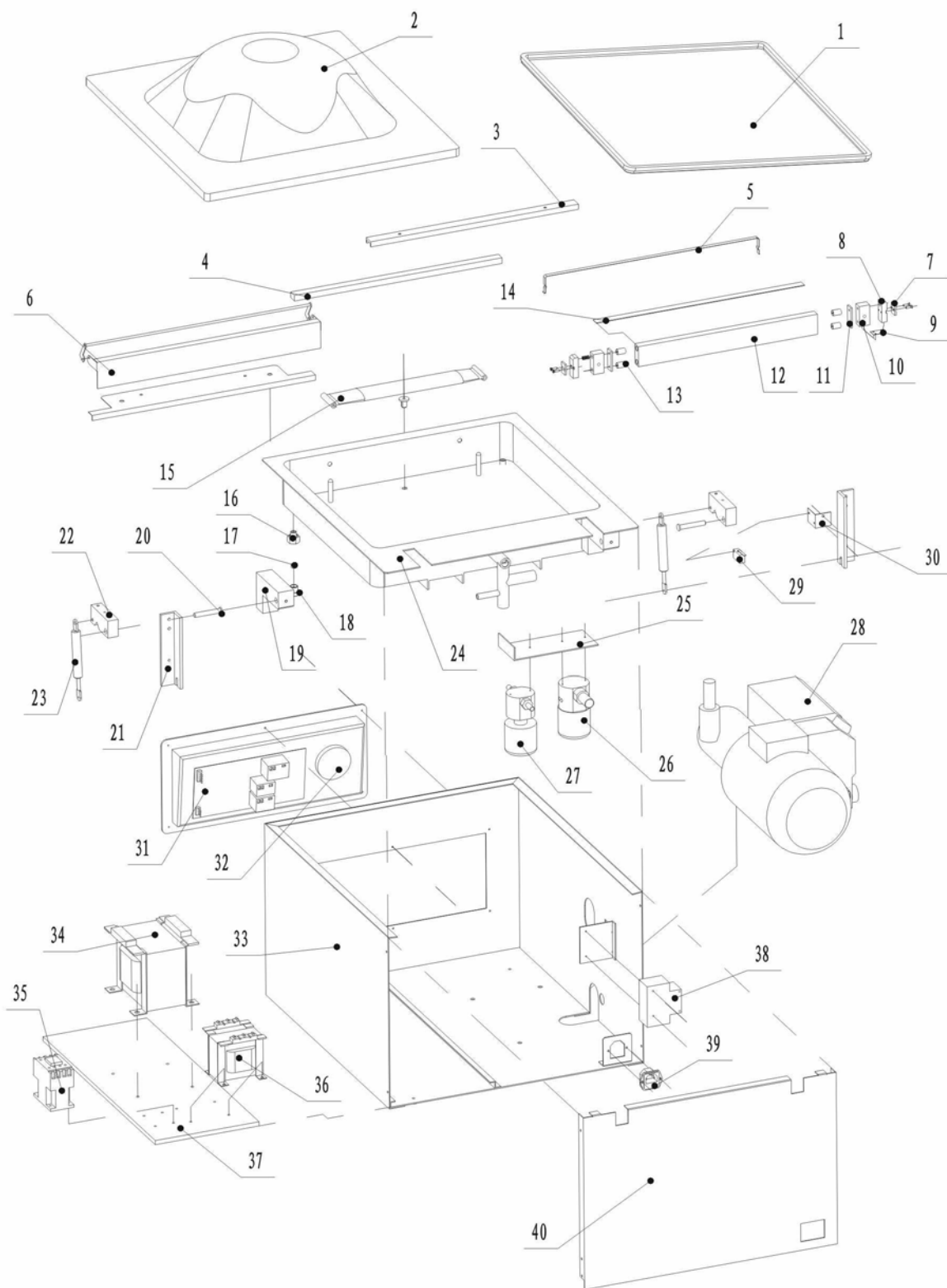
1. Reading the manual carefully before operating ,to be familiar with the adjust and using method.
  2. Basing on the regulations, on the vacuum pump manual maintain, and filling oil into the pump regularly. And reverse the pump us not permitted to avoid damasing the pump, and spurting the oil on the 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.
- (Fig6)

Remark: same electromagnetic valve.



(Fig6)

## 12. Machine parts( single-chamber)



### 13. Machine parts list

S/N	DESCRIPTION	Q'TY	REM.	S/N	DESCRIPTION	Q'TY	REM.
1	Airproof rubber	1		28	Vacuum pump	1	XD-020 2800r/min 220V
2	Cover	1	Organic glass	29	Switch	1	
3	Heater rubber holder	1		30	Switch frame	1	
4	Heater rubber	1	Heat-resistant Si. 11×16.5×410	31	Control panel	1	
5	Ni.Cr element	1	0.3×8×470 0.6 Ω/m	32	Vacuum manometer	1	
6	Heater holder	1		33	Machine frame	1	
7	Element press bar	2		34	Element transformer	1	
8	Moveble stand	2		35	Contactor	1	
9	connecting plate	2	Sn.br. QS6.5-0.1	36	Controller transformer	1	
10	Guide frame	2		37	Electronc fixing plate	1	Epoxy resin board
11	Cushion	2	Epoxy resin board	38	Power switch	1	
12	Middle stand	1		39	Power frame	1	
13	Insulation bolt	4	Nylon66	40	Cover	1	
14	Element cushion	1	Epoxy resin board				
15	Air bag	1					
16	Wire connection	2					
17	Sealing plate	2	NBR.				
18	Wire bolt	2					
19	Rotate seat	2					
20	Bearing	2					
21	Cylinder frame	各1					
22	Top rotate plate	2					
23	Air spring	2	F=200N L=175 S=55				
24	Vacuum chamber	1					
25	Electromagnetic valve frame	1					
26	Electromagnetic valve	1	24V ZKC22F-15C				
27	Electromagnetic valve	1	ZKC23-8-CO 24V φ8mm				



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 ideal machinery for the vacuum package.

#### 4. Major technical parameters

1) lowest absolute pressure intensity in the vacuum chamber 1KPa.

2) volume of vacuum chamber(L × W × H):

440 × 420 × 75mm(400T and 400single-chamber)

500 × 450 × 118mm(400dual-chamber)

520 × 525 × 100mm(500T and 500single-chamber)

570 × 540 × 118mm(500dual-chamber)

670 × 540 × 110mm (600dual-chamber)

3) packing speed:1-3 time/min.

4) power supply: three-phase 380V 50Hz, single-phase 220-240V 50Hz

5) motor power: 0.75KW × 2(500/600dual-chamber)

0.75KW(400 single-and dual-chamber)

6) hot-sealing power: 0.9KW(500/600dual-chamber)

0.8KW(400dual-chamber single-chamber)

7) evacuation rate: 11 L/S(500/600double-chamber)

5.5L/S(400single-and dual-chamber)

8) external dimension(L × W × H):

560 × 500 × 460mm (400T)

560 × 500 × 1050mm(400single-chamber)

630 × 620 × 460mm (500T)

630 × 620 × 1050mm(500single-chamber)

1100 × 790 × 1000mm(400dual-chamber) 1350 × 950 × 1050mm(500dual-chamber)

1580 × 870 × 1250mm(600dual-chamber)

9) weight:102kg(400T) 120kg(400single-chamber) 200kg(400dual-chamber)

110kg(500T) 140kg(500single-chamber) 267kg(500dual-chamber)

300kg(600dual-chamber)

#### 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,  $2 \times 0.75$ KW, 2800 r.p.m. The heating system is of voltage-regulation type, i.e. The primary of the hot-sealing transformer is 220V ,the secondary has three shifts of 28V 32V and 36V adjustable with the switch on the panel. The hot sealing temperature is changed by means of the voltage of the secondary while the hot sealing time is adjusted by the digital display time relay on the panel.

The vacuum system is consists of evacuation, hot-sealing and deflation electromagnetic valves YV and used as the executive mechanism.

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.)

See fig. 1,2,3,for the structure and panel, the electric principle and the vacuum system principle, respectively.

## 6. Operation procedure

- 1) Turn on the power: enable the power switch, the quick-stop indicator lights. Set the evacuation & hot-sealing dial to the relative 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 from 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  $\frac{3}{4}$  height of the oil window, which should not be lower than  $\frac{1}{4}$  height of the oil window and max. Oil quantity should not exceed  $\frac{3}{4}$  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(3-shift adjustable) 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.

10. Packing list.

Model & spec.		Unit qunty.	
		set	1
	product manual	copy	1
	certificate	copy	1
	lubricant	bottle	1
	Ni-cr tape	pc	1 2pcs for single-chamber
7. 87in	screwdriver	pc	2 "+" "-" shape each
7. 87in	monkey wrench	pc	1 none for single-chamber
	socket head wrench	pc	2
	input power cable	pc	1
	receptacle	pc	1
	SS holding disk	pc	2 1pc for single-chamber
XZD-020	vacuum pump manual etc	set	1
	powerful glue	pc	1 none for single-chamber
	oiler	pc	1 -diddo-
	Printing letters box	box	1

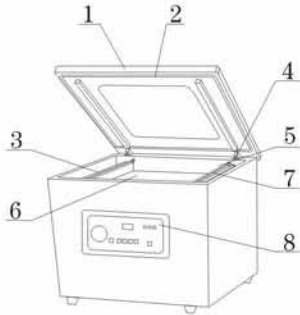
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Inspector: \_\_\_\_\_ packer \_\_\_\_\_  
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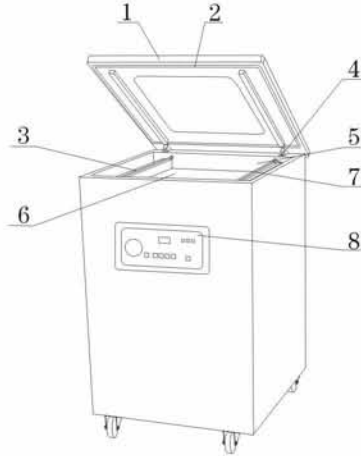
Fig. 1 construction

single-chamber

1. External and operation panel arrangement figure:  
part of the vacuum chamber:



With Table



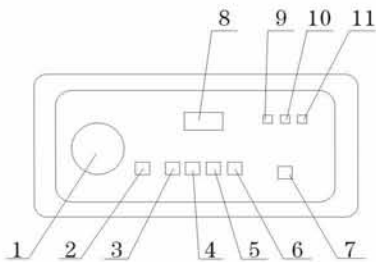
With Stand

- 1) organic glass cover 2) sealing ring 3) press bar 4) starting switch  
(upper, lower contacts) 5) vacuum filling plate 6) vacuum chamber  
7) hot-sealing device(upper press bar, lower holder) 8) control panel

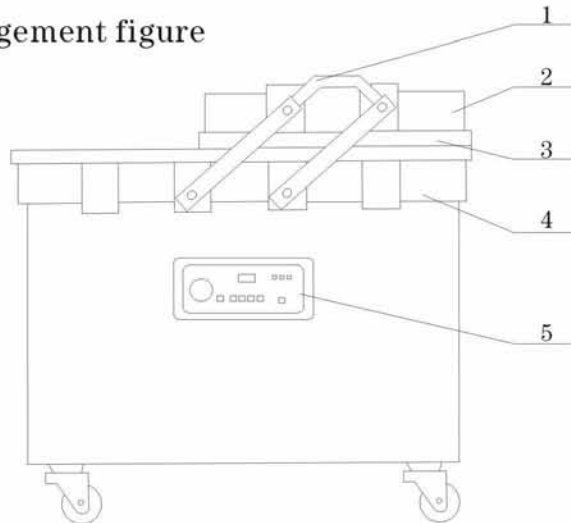
double-chamber

External and operation panel arrangement figure

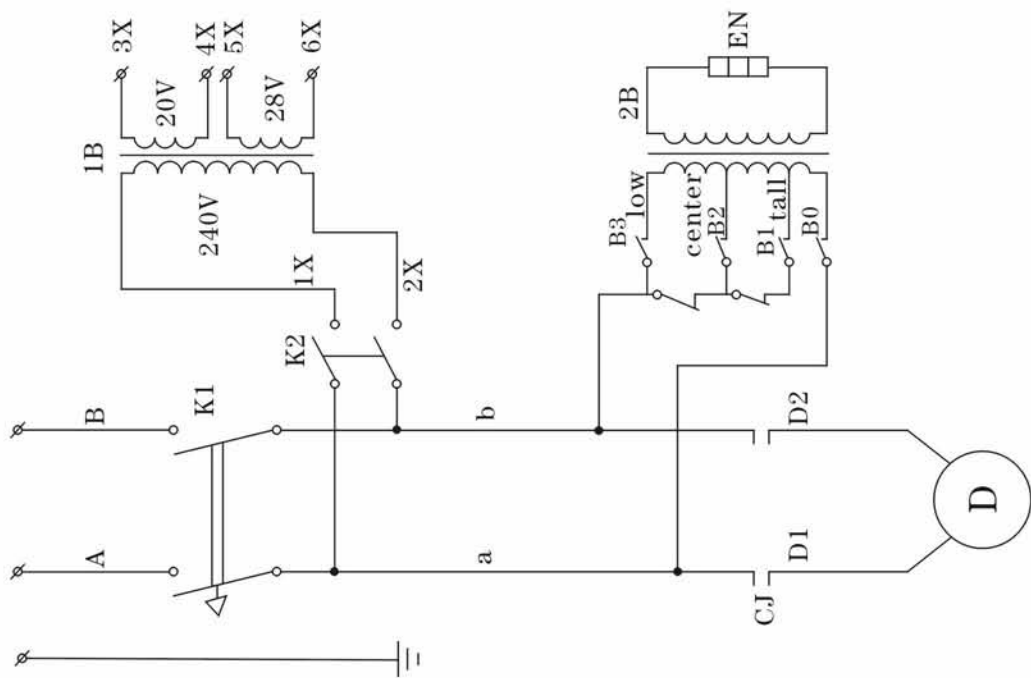
1. Swing rod  
2. Upper working chamber  
3. Sealing ring  
4. Lower working chamber  
5. Control panel



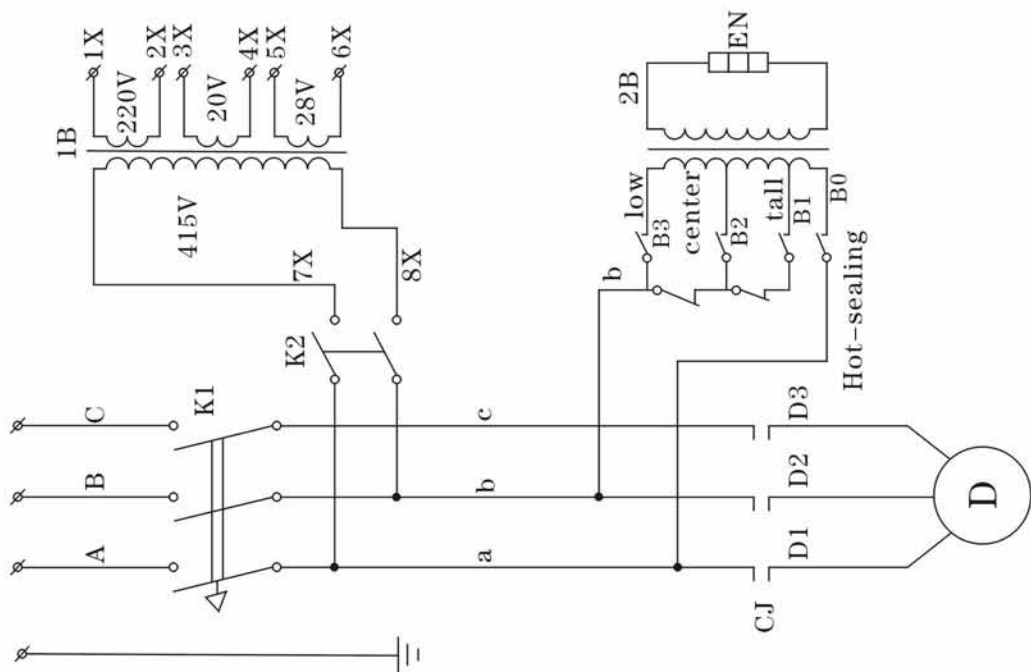
Control panel figure



1. Vacuum indicator meter 2. Stop knob 3. Vacuum time setting knob  
4. Sealing time setting knob 5. Time increase knob 6. Time decrease knob  
7. Sealing temperature setting knob 8. Vacuum & sealing time indicator  
9. Low temperature indicator 10. Middle temperature indicator  
11. High temperature indicator

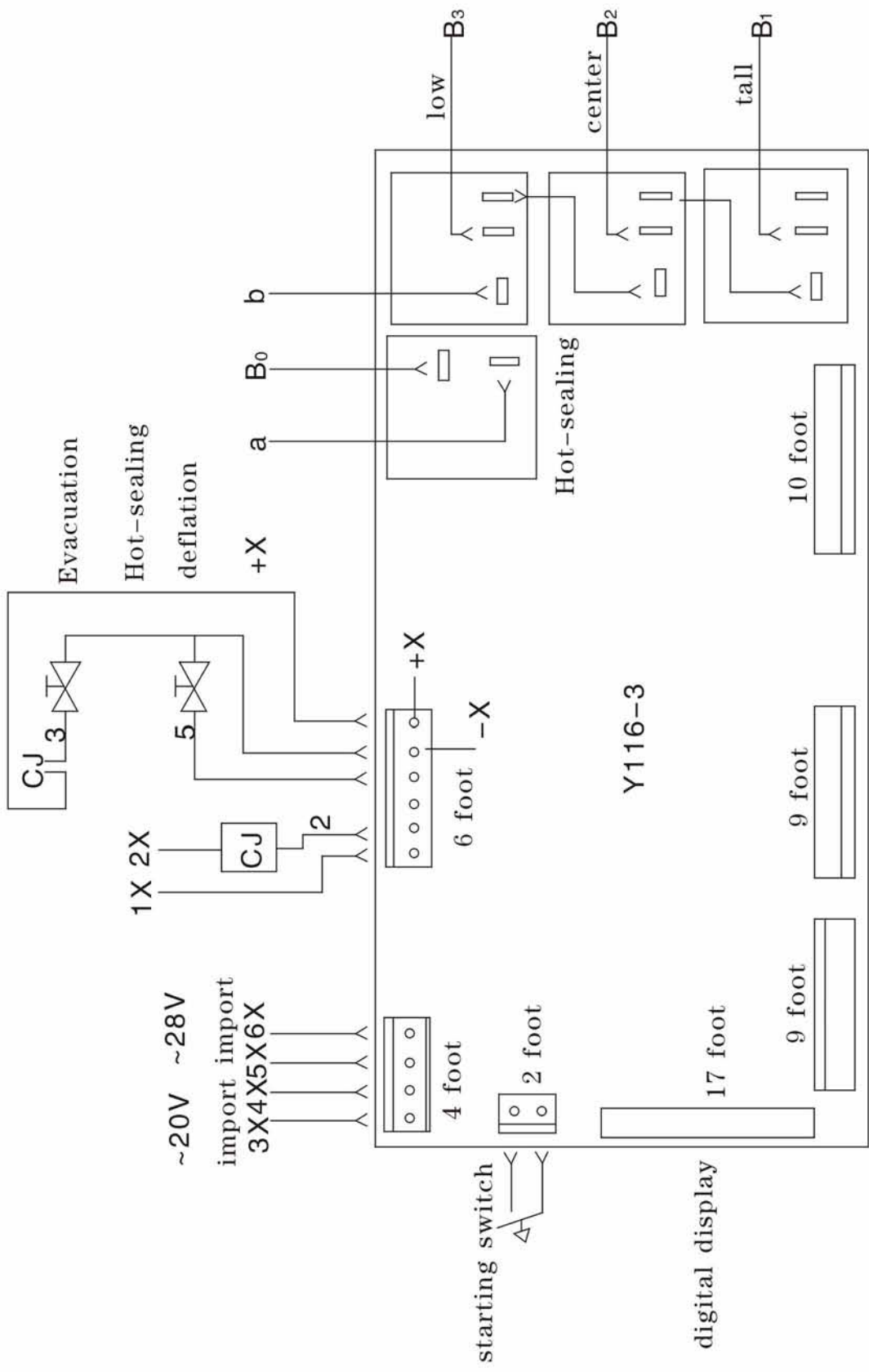


220-240V



380V

Electric principle  
(fig2)



hot-sealing temperature & quick-stop control panel  
 Vacuum dial hot-sealing dial(fig3)