

Vacuum packaging machine series

Vacuum packaging machine

OPERATION INSTRUCTION

(Before using the machine please carefully read the strictly follow the operation instruction)

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1. Description

Vacuum packaging machine is a novel packaging machine. It vacuumizes the packaging bag vacuum and automatically seals immediately. Highly vacuum and less residual air inhibit the propagation of bacteria and other microorganisms to prevent oxidation, mildew and roning and to extend storage time. In addition, vacuumized packaging of soft goods reduces the size, and is easy for transport and storage.

2. Main use

The vacuum packaging machine is applied to vacuumized and sealed packaging of composite film bag carry solid, powdery, doughy, liquid objects such as food, medicines, native products, aquatic products, chemical raw materials, hardware, electronic components and others. It can effectively prevent prenent oxidation and rotting by the propagation of bacteria and extend storage time.

3. Function and feature

Single-chamber machine is made of fully transparent plexiglass, packaging process can be seen clearly. Double-chamber machine has two vacuum chambers working in tum, connecting the sealing work and preparation to significantly improving the efficiency.

Vacuum chambers of the vacuum packaging machine are made of stainless steel (single-chamber machine is made of fully transparent plexiglas), and are of reasonable structure, good air tightness, beautiful appearance and durable feature, and meet the requirement of food hygiene and anti-corrosion.

Vacuum packaging machine can vacuumize, seal, and print in one operation. Adjustment devices, such as vacuum degree, sealing time, heat sealing temperature, are specially set for different packaging materials and different packaging requirements. Users can make the best choices and adjustments to achieve the best packaging results. In addition, printing device, which is convenient to change texts and prints clearly, can be installed as user required. The printing device is to print shelf life, production date, production number and other texts on the products when sealing to meet the national food labeling laws.

Vacuum packaging machine is ideal and has features such as advanced design, full functions, stable and reliable performance, wide range of application, good sealing strength, good packaging capacity, easy for maintenance, and high economic value.

4. Technical Data

1. The minimum absolute pressure in vacuum chamber ≤ 1 KPa
2. The vacuum chamber volume (L x W x H):
440x420x75mm (440 single room) 500x450x118mm (400 double room)
You can also change the size according to customer requirements.
3. Packing speed: 1 to 3 times per minute
4. Power source: Ford, 50 Hz
5. Input power: 1.55 kW (type 400, double room, single room)
6. Pumping rate: 5.5 l/min/sec (type 400, double room, single room)

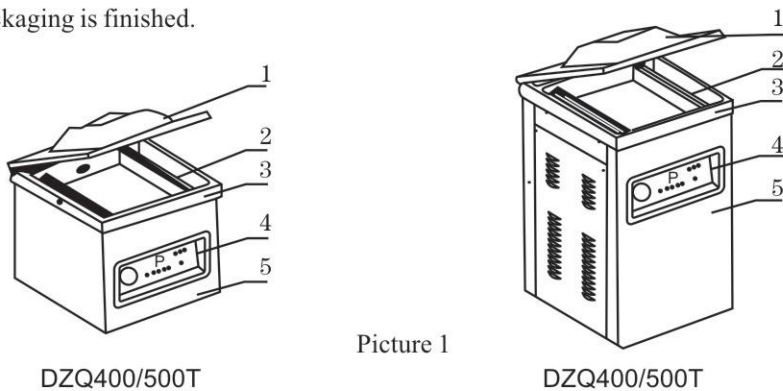
5. Structure and principle

The machine consists of vacuum cover, vacuum chamber, body, electrical control, and vacuum system. Single-chamber and double-chamber structures see Figure 1 and Figure 2.

Vacuum system of the single-chamber vacuum packaging machine consists of heat sealing magnetic valve YV1, discharge magnetic valve YV2 and vacuum pump (see Figure 5). Vacuum system of the double-chamber vacuum packaging machine consists of heat sealing magnetic valve YV1, discharge magnetic valve YV2 and vacuum pump (see Figure 6).

The vacuum pump is unipolar rotary vane vacuum pump. See the attached instruction for its technical property.

There is a heat sealing device inside the vacuum chamber. It is composed of nickel-chromium belts on the heat sealing bracket. There is a compression airbag under the heat sealing device. In the pumping stage, the airbag and vacuum chamber are simultaneously pumped, making the heat sealing device not pressed and the packaging bag vacuumized; in the heat sealing stage, the heat sealing magnetic valve YV1 is closed, the airbag is connected with air and differential pressure is produced. The heat sealing device is pressed and heated simultaneously to achieve heat sealing. The following processes are: heat preservation, closing discharge magnetic valve YV2, discharge and opening cover. Thus the whole packaging is finished.

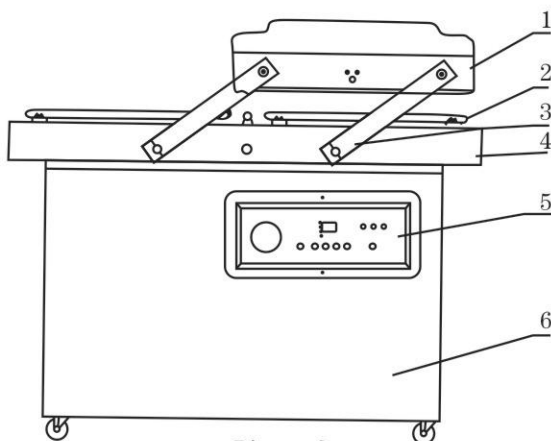


Picture 1

DZQ400/500T

DZQ400/500T

1. The upper cover part 2. The sealing part 3. The Part of the vacuum chamber 4. Control Panel 5. Chassis parts

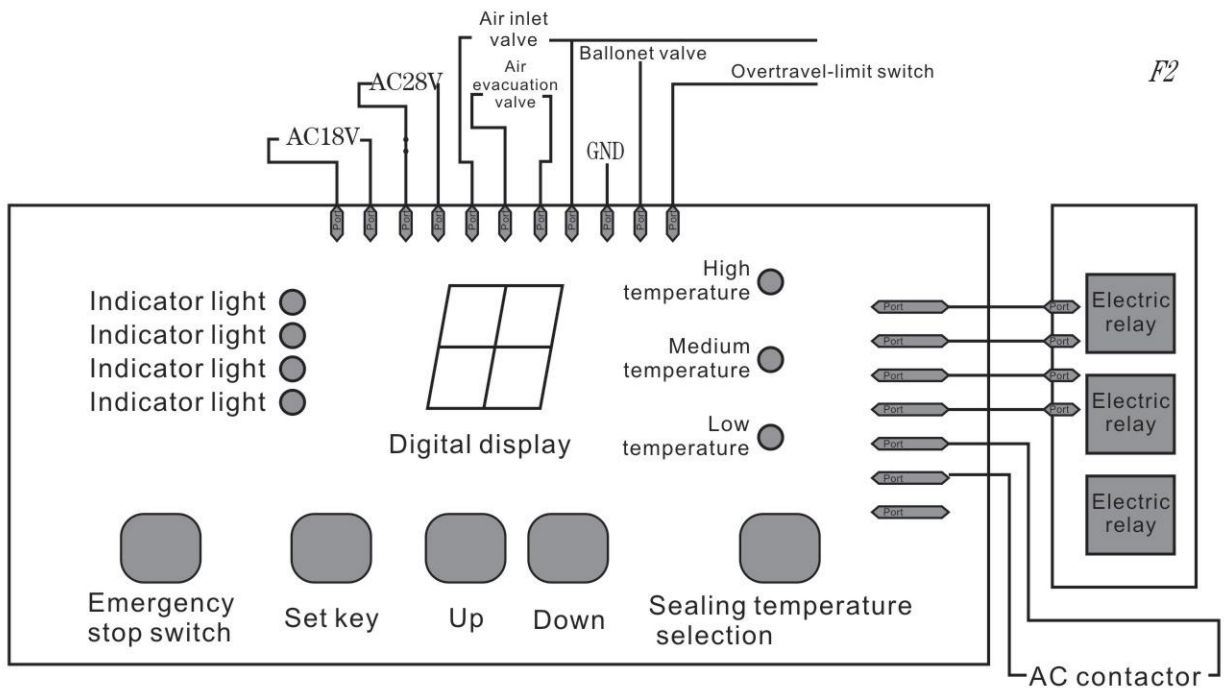


Picture 2

1. The upper cover part 2. The sealing part 3. Connecting rod
4. The Part of the vacuum chamber 5. Control Panel 6. Chassis parts

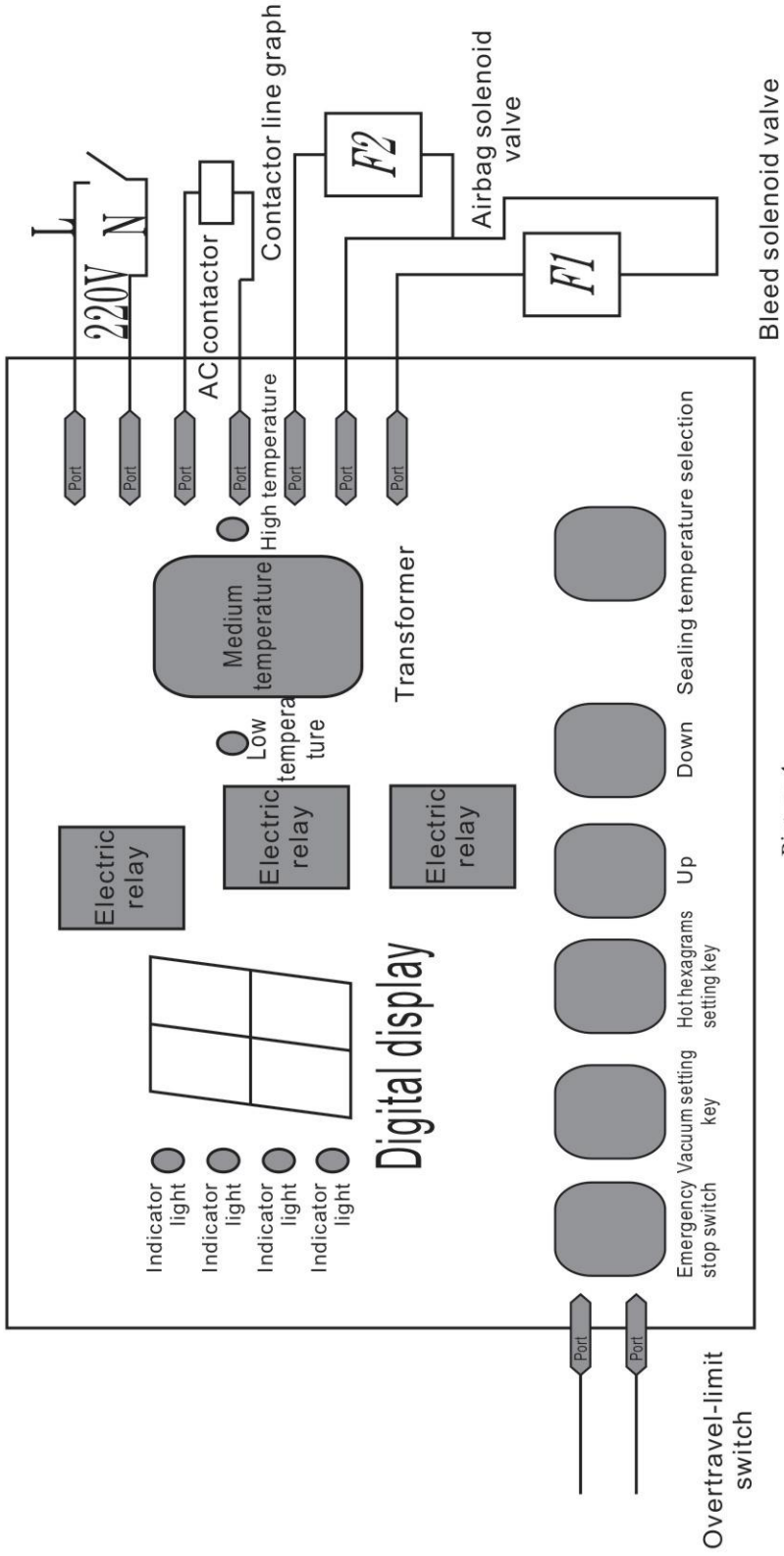
6. Electrical principle

The Vacuum packaging machine uses AC power supply (Single-phase 220 Ford, 50 Hz or three-phabe four-wire 380 Ford, 50 Hz). See section IV for input rated power. Power supply of the control dircuit uses control transformer for isolation and depressurization. Primary input of control transformer of the single-phase power supply model is AC 220 volts; primary input of control transformer of three-phase four-wire power supply model is AC 380 volts. Secondary input of control transformer of the single-phabe power supply model is AC 9 volts; secondary input of control transformer of three-phabe four-wire power supply model is AC 24 volts. Power supply of the heating'components uses control transformer for isolation and depressurization. Primary power supply of the heat sealing traisformer is the same as that of control transformer. Secondary power supply is AC 28 volts, AC 32 volts, AC 36 volts. Secondary voltage is gained by changing primary coil turns of the transformer (3-tap). Electrical principle of the single-phase power supply model is shown in Figure 4; electrical principle of the three-phase four-wire power supply model is shown in Figure 5. Figures are for refefence only and are subject to change without prior notice.



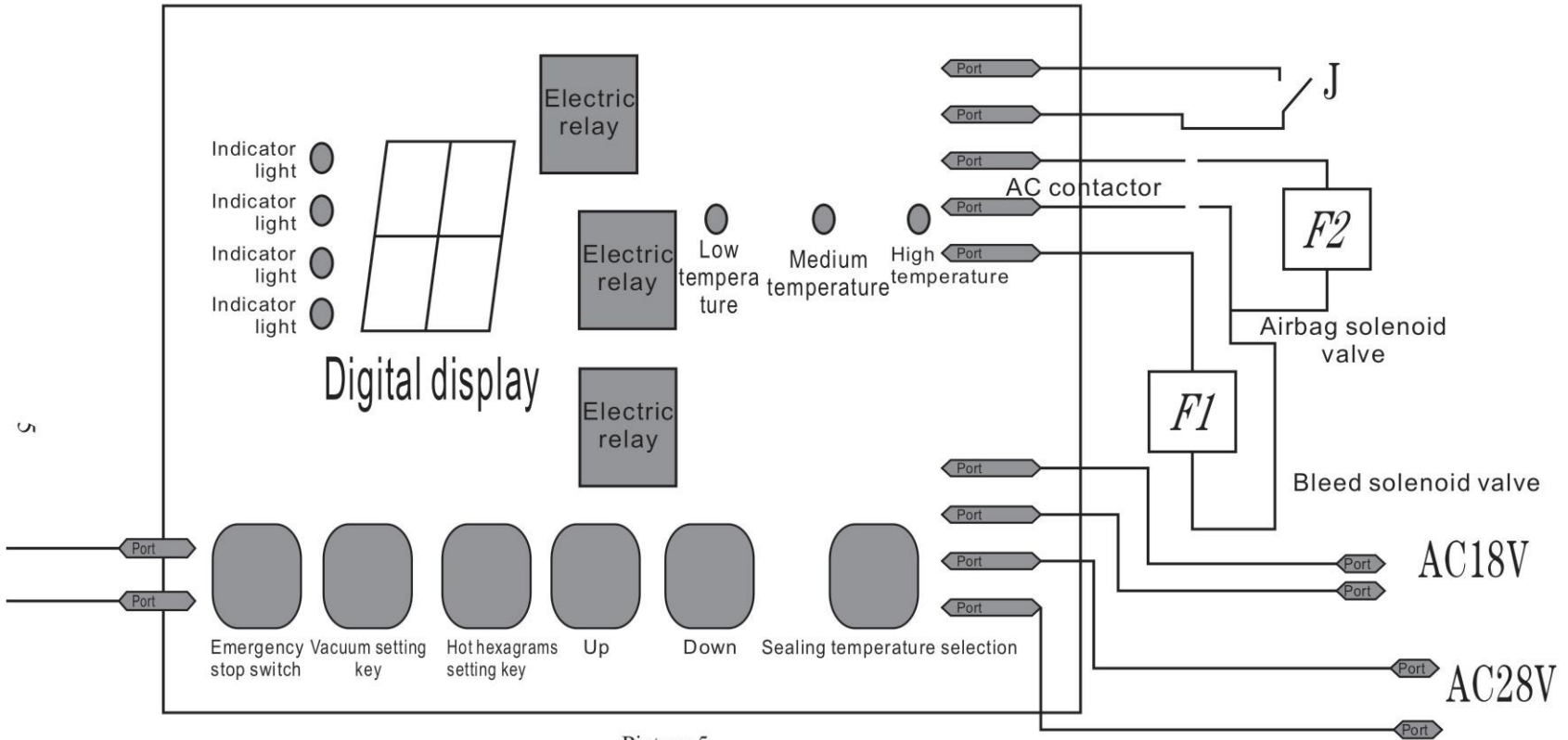
Picture 3

Modul DZQ260 the PC board wiring diagram of Vacuum packaging machine



Picture 4

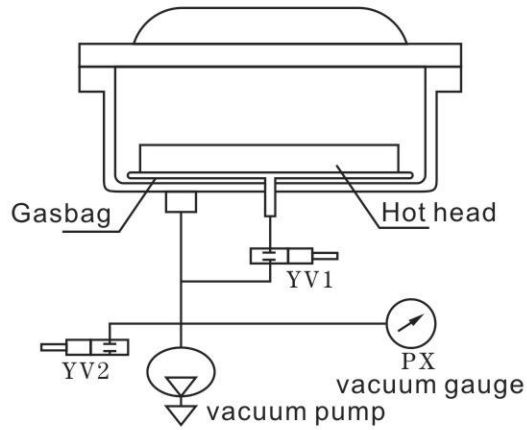
Model DZQ the PC board wiring diagram of Vacuum packaging machine



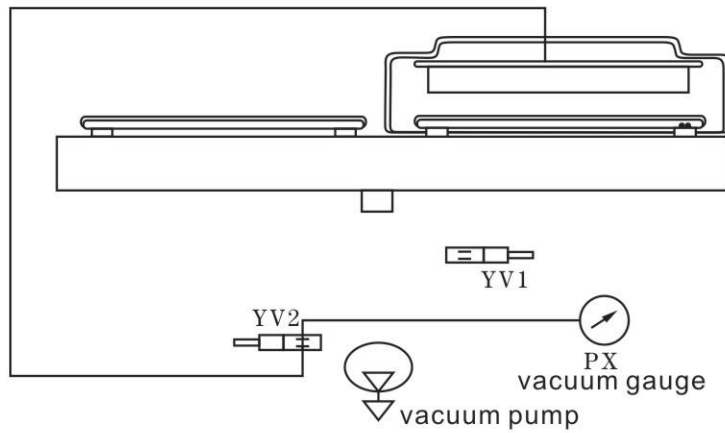
Picture 5

Model DZQ the PC board wiring diagram of Vacuum packaging machine

5

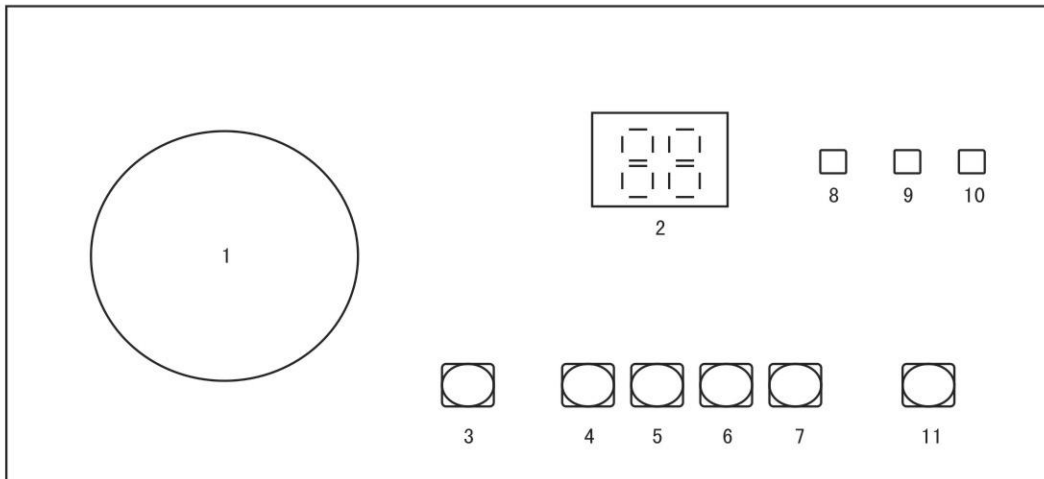


The vacuum system diagram of single-chamber vacuum machine
Picture 6



The vacuum system diagram of double-chamber flat vacuum machine
Picture 7

7. Operations Guide



Picture 8

ONE. Layout of operation panel as picture above and instructions as below.

1. Vacuummeter

2. Monitor of time and status. If monitor shows "--", it means standby; if monitor shows "□□", it means deflating status; if monitor shows digit, it means pump-down time or heat sealing time (press set key), or time display of corresponding operational process ("denate", "heat" sealing in turn)

3. Urgent stop key. If you press the key in the setup status, settings will be saved and it goes back to standby status; If you press the key in operating status, it will immediately begin denating working process until go back to standby status.

4. Setting pump-down time. In standby status, when you press this key once, it enters into vacuum pumping time setting. The indicator light flickers. then set time by pressing the multiply key and reducing key; Press this key again to go back to standby status.

5. Setting key of Hot sealing time. In standby status, when you press this key once, it enters into hot sealing time setting. The indicator light flickers, then set time by pressing the multiply key and reducing key; Press this key again to go back to standby status.

6. Multiply key. Under the vacuum pumping time setting or hot sealing time setting, press the key once, numerical value increases one; keep pressing the key, the numerical value increases quickly, which is quick setting. Under other status, it is wrong operation to press this key and it will alarm.

7. Reducing key. Under the vacuum pumping time setting or hot sealing time setting, press the key once, numerical value decreases one; keep pressing the key, the numerical value decreases quickly, which is quick setting. Under other status, it is wrong operation to press this key and it will alarm.

8. Low temperature indicator light.

9. Medium temperature indicator light.

10. High temperature indicator light.

11. Setting key of hot sealing temperature. Press this key to change hot sealing temperature gears

TWO. working parameter

1. Pump-down time range: 0-99 seconds, error ratio: < 0.1%.

2. Hot sealing time range: 0.0-3.5 seconds, error ratio < 0.1%.

3. Temperature gear: low temperature, medium temperature, high temperature, shut off

4. Heat preservation: heat preservation time is 2 seconds.

THREE. instruction

Start the machine, when monitor of time and status (Nixie tube) shows "--", it means standby.

1. Pump-down time setting

Under non-operating status, press pump-down time setting key 4 once, then indicator light flickers, and monitor shows primary set value. Now you can set time through multiply key 6 or reducing key 7, and press this key to go back to standby.

Under non-operating status, you can switch freely between pump-down time setting key 4 and hot sealing setting key 5.

2. Hot sealing time setting

Under non-operating status, press hot sealing time setting key 5 once, then indicator light flickers, and monitor

shows primary set value. Now you can set time through multiply key 6 or reducing key 7, and press this key to go back to standby.

Under non-operating status, you can switch freely between pump-down time setting key 4 and hot sealing setting key 5.

3. Hot sealing temperature gear setting

Set the hot sealing temperature gear by pressing hot sealing temperature setting key 11. The gear is low temperature, medium temperature, high temperature, "Shut off" in turn.

4. Usage of urgent stop key

If there is abnormal condition or you want to terminate the working process in advance, all you need to do is pressing urgent stop key 3. The machine will stop working and go back to standby status.

5. Working process

In standby mode, when the packing machine lid is closed, packaging machine enters into packing process, with procedures as follows:

- A. Pump-down: when pump-down process begins, the timer counts down from the set time value, and the monitor shows the countdown time. Keep timing until pump-down process ends, then it will enter into the next process.
- B. Hot sealing: when hot sealing process begins, the timer starts timing from 0.0 seconds, and the monitor shows time, time until hot sealing process ends, then it will enter into the next process.
- C. Heat preservation: preservation takes 2 seconds. Heat sealing time setting value shows in monitor during heat preservation. When heat preservation time is up, it will enter into the next process.
- D. Deflating: deflating takes 2 seconds. "□□" shows in monitor during denating. The lid opens automatically when deflating process ends and packing machine goes back to standby status.
- E. Standby: standby symbol "--" shows in monitor and packing process ends.

FOUR. notes

1. After opening the box, check whether accessories are complete according to the packing list, and check screws of all parts of the machine are tight. For one-chamber vacuum packaging machine, check whether plexiglass lid can move upward and downward flexibly; for two-chamber vacuum packaging machine check whether vacuum lid can move left and right flexibly.
2. Before starting the machine, fill lubricating oil into moving parts, oil hole and oil nozzle. Meanwhile, fill NO.6 gas oil into vacuum pump according to the vacuum pump instructions. From the oil window, you will know how much oil you pour. Please note that the minimum oil level should be no less than 1/4 height of oil window, the maximum oil level should not be higher than 3/4 of the height of the oil window.
3. Adjustment of vacuum degree
Choose best time for pump-down according to packed objects to gain suitable vacuum degree. The longer of the pump-down time, the higher of the vacuum degree. It depends on the actual operation results.
4. Adjustment of hot sealing temperature and hot sealing time
Set best hot sealing time and temperature gear according to objects and packing material to get best sealing. It depends on the actual operation results.

FIVE. Operation steps

1. Before starting the machine, check everything according to the notes.
2. Set the pump down time, hot sealing time and hot sealing temperature gear (low, medium, high).
3. Put all the objects which need to be packed into packing bag (plastic compound bag and aluminum foil

compound bag), then put them into the vacuum chamber. Lift the depression bar and put the bag opening on hot sealing shelf, then put down the depression bar to press the bag opening.

4. Put down vacuum lid. Packing process begins with pump down and then enter into hot sealing process. The packing process ends when vacuum lid open automatically.

8. Common fault and elimination methods

1. Failed in vacuum pumping or the vacuum degree is not high

A. Check if vacuum pump is reversed, which means if the rotation direction of the motor conforms with the direction marked on the motor. Otherwise it must be shut down and then adjust the phase position of the power line.

B. When using new machine, seal ring of the vacuum cover and the flat surface of working chamber are not well closed up, so exert a little pressure on the vacuum cover to make the vacuum cover and chamber completely close.

C. For single-chamber vacuum machine, check micro switch is well connected. For two-chamber vacuum machine, check overtravel-limit switch is in place. Otherwise you need make adjustment for position of micro switch or overtravel-limit switch.

D. Deflated solenoid valve is not closed tight, which leads to leakage. Check whether the valve core of solenoid valve is worn out or polluted or core center deviates, if you must promptly repair or replace it.

E. Check whether each part of the pipeline leaks or loosens.

2. Unsatisfactory hot sealing quality

A. Check if the packing bag opening is clean. Avoid dirt on seal.

B. Check if there is short circuit or circuit break of heater nickel-cadmium part

3. Electronic circuit boards fault

A. Electronic circuit board which is used for control in the machine should be kept clean, dry and without metallic foreign body on surface to avoid damage to device or disorder of procedure due to short circuit boards which lead to malfunction.

B. If the machine fails in vacuum pumping or hot sealing and jumps, check if the plug pin of corresponding relay is loose, or the relay is damaged.

C. If the incomplete digit shows or action indication is not showed, please shut down the power and start the machine again later. If the condition is not corrected, it means the Nixie tube or relay is broken.

D. If high temperature or medium temperature or low temperature gear of hot sealing doesn't work, check if the plug pin of corresponding relay is loose, or the relay is damaged.

9. maintenance

1. Review the instruction and get yourselves familiar with the usage before operation.

2. Provide periodic maintenance and refueling for vacuum machine according to the vacuum pump instructions. And pay attention to forbid vacuum pump to be reversed so as to avoid damage to the pump or gas-oil spraying into the pump and vacuum lines.

3. Check if the earth wire of the machine is connected well to guarantee electrical safety.

4. Regularly check high temperature adhesive tape of hot sealing holder seal. It should be kept clean to ensure the seal quality.

5. Press the urgent stop key when finding fault or abnormal condition and shut down the power after deflating. Seek help from the experts to find the cause and eliminate the fault.

10.List of Annexes

Name	Model / specification	Unit	Quantity	Remark
Operation instruction		Book	1	
Operation instruction of vacuum pump	XZD-020/040	Book	1	
Qualified certificate		Copy	1	
Screwdriver	6#	Handful	1	A cross screwdriver and a flat head screwdriver
Allen key	Φ6	Handful	1	
Heating cord	Φ1.2	Strip	2	
Sealing cloth	Φ1.5	Roll	1	

Examiner:

Packer:

Date:

Day, month, year