



Vacuum Pre-Sealing Machine

Operation Manual

Model: AOT-VPS-200

Introduction

This equipment is mainly suitable for vacuum and heat sealing the pouch cell (medium and small size) after electrolyte filling and standing. This machine automatically completes the vacuum heat sealing of the pouch cell case (aluminum laminated film) by precisely controlling the main vacuum pumping box and pneumatic heat sealing components.

Main Feature

- *The head is made of copper material, which has good heat transfer effect, saves electricity consumption, improves work efficiency, and saves energy compared with similar products;
- *The pressure of the upper and lower heads can be adjusted by the pressure regulating valve to meet the requirements of different process parameters;
- *The upper and lower heads are driven by cylinders and guided by two linear guide sleeves, which can move up and down flexibly, and the guidance is accurate to ensure the parallelism requirements of the product after edge sealing;
- * Through the perspective window, you can observe the changes in the chamber while working;
- *The cover is driven by an air cylinder and guided by a rotating guide sleeve, which can move up and down flexibly, and the guiding is accurate to ensure the product's tightness requirements.
- *It can be applied to batteries with different specifications, and the adjustment is simple and convenient.
- *The main unit and the control box are separated design, so that the machine can work in the glove box or on the assembly line.
- *Easy to operate, beautiful appearance, small size and light weight.
- * Equipped with waste liquid tank to prevent pollution.

Usage

1. Disassemble the wooden box, hold it gently and place it in the working position.
2. The pipelines and wires are connected one by one according to the signs. Wire code corresponding connection, $\Phi 10$ tube is a vacuum tube.
3. If it is put into the glove box, the KF40 must clamped and sealed well, then epoxy water grease is poured and sealed.



4. Set battery fixing clip on a suitable position.
5. Turn on the power supply, set the air source pressure, sealing temperature, sealing time, vacuum value, and opening pressure (set at the factory).
6. When the temperature reaches the set value, put the product in, and start the left and right buttons with both hands at the same time. (The buttons are on the left and right sides at the bottom of the pre-sealing machine).
7. The cap is automatically goes down, pressing the O-ring on the bottom plate, so that the product can be packaged in a vacuum-sealed environment.
8. Automatically start the vacuum, when the vacuum reaches the set value range, start the sealing process.
9. The sealing knife is pressed down for packaging, the timer is started, and the sealing time is delayed.
10. After the sealing is completed, inflate the sealed chamber (break the vacuum in the sealed chamber, and the cover can be opened).
11. When the pressure in the inflation chamber reaches the set pressure, the cover is automatically opened, and the product can be taken out, the sealing is complete.

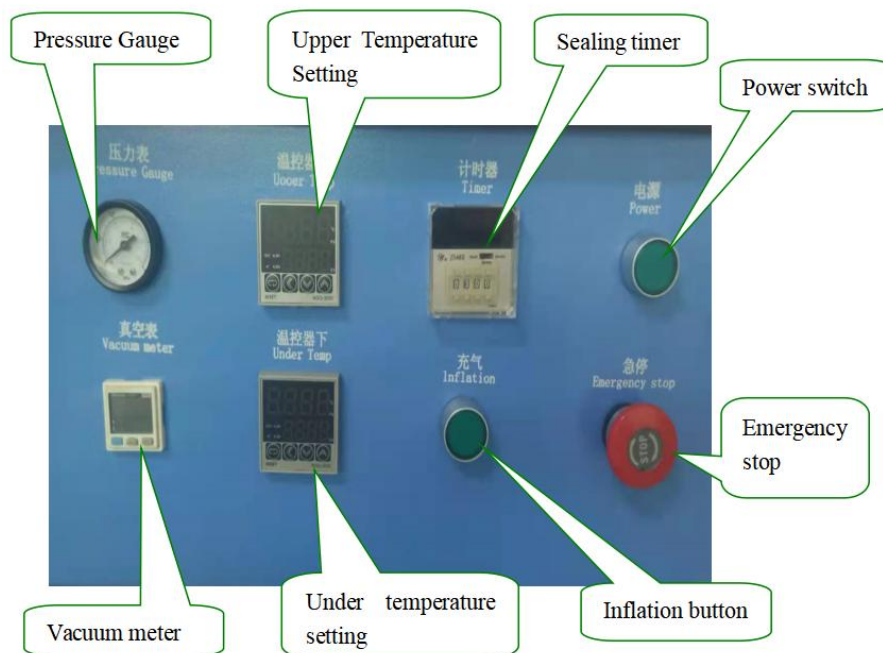


Figure 1

*Temperature setting: As shown in Figure 1, the green number displayed on the thermostat indicates the current temperature setting value. The red number indicates the current temperature detection value. Press the "up key" and "down key" keys to adjust the set temperature value.

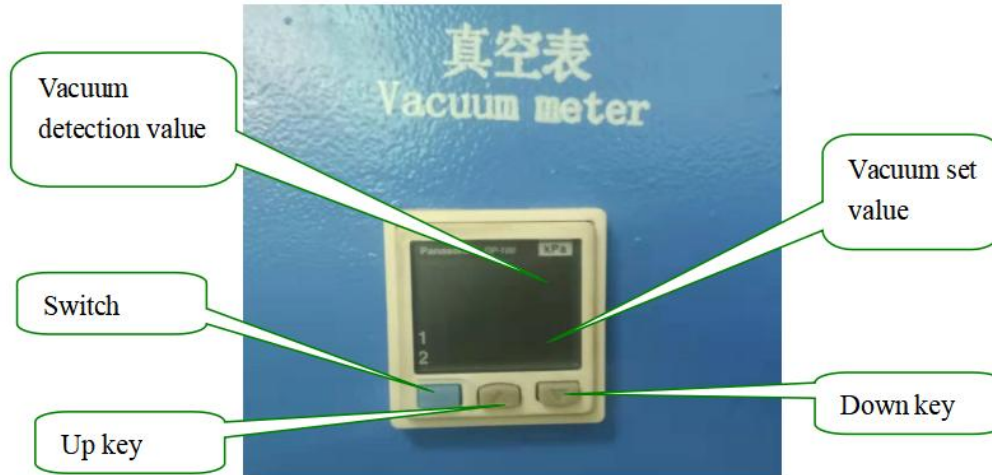


Figure 2

*Vacuum value setting: As shown in Figure 2, the upper line is the vacuum detection value, and the lower line is the vacuum set value. When vacuuming, when the vacuum in the sealed chamber reaches the set value, a signal is output to start the next process. Press the "blue key/switch" to display P1, which is to set the vacuum degree value, and then press the "up key" and "down key" keys to adjust the set vacuum value. (The setting range is generally around -85 to -90kpa)

*Supplementary air pressure setting: As shown in Figure 2, when supplemental air reaches the set pressure value, the signal will be output to start the opening work. Press the "blue key/switch" to display P1 first, and then display P2. The value of P2 is the pressure value for setting inflation. Press the "up key" and "down key" keys to adjust the set vacuum value. (The setting range is generally around -3~0kpa).

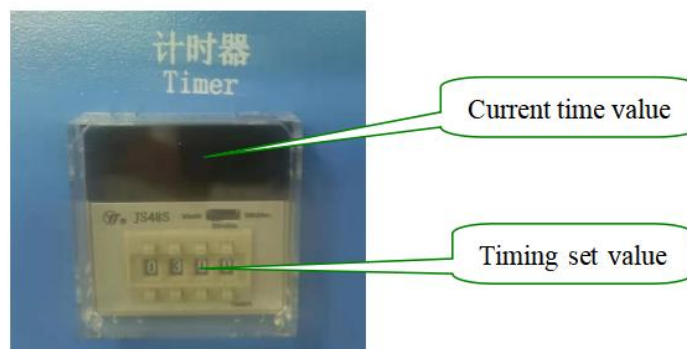


Figure 3

*Timer adjustment: As shown in Figure 3, press the dial code below to adjust the timer setting value.



Technical Parameter

- *The chamber is made of aluminum alloy, which is corrosion resistant and has a firm structure;
- *Vacuum degree can be adjusted within $-90\text{Kpa}\sim 0$ (the buyer shall provide the vacuum pump);
- * Head temperature: room temperature $\sim 250^{\circ}\text{C}$, temperature is adjustable;
- *Temperature control accuracy: $\pm 2^{\circ}\text{C}$;
- *Heat sealing pressure: $0\sim 7\text{kg/cm}^2$ adjustable;
- *Heat sealing time: $0\sim 99$ seconds adjustable;
- *Edge banding width: 5mm;
- *Maximum sealing size: 200mm;
- *Parallelism of the head: using triple carbonless copy paper, the pressure of the head is 0.6MPa, and the seal is uniform when the temperature is 200°C ;
- *Gas consumption: about 0.2L compressed gas/each time;
- *Pneumatic working speed: ≥ 180 times/h;
- *Power: Using 500w heating tube, the power consumption when heating is about 1KW;
- *Power supply: 220V/50Hz;
- *Compressed air source: $0.5\sim 0.7\text{Mpa}$;
- *Dimensions: Working part: $470\text{mm}\times 485\text{mm}\times 435\text{mm}$; Control box: $420\text{mm}\times 325\text{mm}\times 225\text{mm}$;
- *Equipment weight: about 50Kg

Maintenance methods and precautions

1. Frequently wipe the upper and lower plates and the vacuum chamber to keep it clean.
2. Lubricate the moving parts of the bearing to keep the movement smooth.
3. If not in use for a long time, wipe the surface of the moving parts of the mechanism clean and spray the surface with anti-rust oil for protection.
4. Regularly check the screws, nuts, pins and other fasteners of each part of the machine to prevent loosening and prevent machine quality accidents and personal accidents.

※ Caution:

1. During operation, it is strictly forbidden to extend hands and other parts into the vacuum chamber, the moving parts of the ball guide sleeve, and the working dangerous area to cause personal injury. During operation, two or more persons are not allowed to operate to avoid accidental injury.

Note: It has an electrical protection device and a safety shield to keep the moving parts inside the shield to ensure personal safety.

2. Outside technicians and designated personnel cannot disassemble and debug equipment arbitrarily.
3. Do not disassemble circuit components without authorization.s