

DPP-150 Automatic Blister Packing Machine

USER MANUAL



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**[https://pharmamachinecn.com/dpp-150-blister-packing-
machine/](https://pharmamachinecn.com/dpp-150-blister-packing-machine/)**

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Attentions

- A. Please read this note seriously when you begin to use the machine. In order to prevent the operation mistake and the damage.
- B. Please connect to the ground carefully.
- C. Forbid to touch to the circulating parts (especially the vertical and the horizontal heating parts), When the machine is working. Make sure the personal and machines' safeties.

1. General Introduction

DPP-150 multifunction automatic blister packing machine is an new product developed by our company and No.118 Hospital of CPLA, collecting the advantage of aluminum/plastic packing machines at home and abroad, and the important parts are adopted with our five patent technology. It is suitable for packing tablets, sugar-coated tablets, capsules as well as small food, hardware and electronic components. It combines ten functions to a whole such as web cutting, aluminum/plastic feeding, blister forming, filling, aluminum foil printing, aluminum/plastic heat-sealing, batch number printing, cross-hatching creasing, sheet cutting, counting etc. It's unnecessary to be operated by manual during production, the packed products have fine sealing, safe and hygienic. The performance and price of machine is better than the similar products abroad.

This machine was checked and approved by scientific and technological achievements evaluation of Zhejiang Province, listed as one of the key national new products and national improvement and GMP carried out in China. It is sold to the pharmaceutical factories, big and medium-sized hospitals throughout the nation, and exported to India, Pakistan, Malaysia, Burundi, Hongkong and Taiwan etc, and well appreciated by customers.

2.Main performance & Feature

- (1) With frequency stepless speed regulating, the punching frequency reaches 6-35times per minute.
- (2) The stroke can be adjusted within 30-110mm, which is easy to adjust with correct synchronization.
- (3) Adopts plate-type mould, positive-pressure forming, featured by batch number printing, creasing and cutting, aluminum-foil/plastics automatic feeding, automatic alarm for broken-piece and finished-piece and automatic stop etc.
- (4) Equipped with one set general feeder, which filling percentage reaches 99.5 and above. The feeder is fitted with dust exhaust joint so can overcome the dust problem during feeding.

(5) Adopts registering matching heating so that can reduce the heat energy loss of heater to the least, and the required temperature will be greatly reduced.

(6) This machine has small volume, light weight, cramped structure, easy operation and maintenance.

3. Min Technical Parameters

Description	Unit	Specifications
Punch Speed	Times/min	15-40
Adjustable stroke	mm	30-110(freely adjusted)
Max.Forming Area	mm×mm	150×110
Max.Forming Depth	mm	3-15
Main Motor Power	Kw	1.5
Upper Heating power	Kw	0.8
Lower Heating Power	Kw	0.8
Heating Power for Heat Sealing	Kw	1
Air Pump Volume Flow	m ³ /min	≤0.15
Air Pressure	Mpa	0.1-0.6
PVC for Medicine	mm×mm	0.25×160
Aluminum foil	mm×mm	0.02×160
Overall Dimensions (L×W×H)	mm×mm	2260×600×1540
Machine Weight	kg	750

4. Structure and Principle

Please see fig.1 for the structure of the machine. It is composed of frame, forming mechanism, feeder, heat-sealing & creasing mechanism, cutting mechanism, pulling manipulator and electric control etc.

The main transmission is driven by geared-down motor, the chainwheel on the output shaft of redactor drives the chainwheel of main shaft to run, and then the chain actuates the pulling cams so that accomplish the intermittent to-and-fro movement. The forming and heat-sealing hot plates adopts the cylinder as original power to accomplish lifting up and down of forming mould plate and cross-hatching mould plate.

The medicine PVC are heated and softened by heating plate and enter into forming

mould, positive-pressed to be form by compressed air, then be filled in capsules or tablets by general feeder. The aluminum-foil web is cut and transferred by minimotor, and enter into the heat-sealing mould to be cross-hatch heat-sealed with the plastic piece which is full of medicine, then through pressing, cutting, batch no. printing, finally enter into punching mould to be punched.

5. Starting Operation

1. PC Control operation

(1) Connect water inlet. Water outlet. Air outlet as shown on the nameplate of the machine. Referring to electric schematic diagram, connect to AC power 220V (L,N), and connect to protective grounding (The air compressor should be connected away from the machine).

(2) Switch on the air switch QS, and the power key   on the operation panel, then push on upper and lower heating and heat-sealing switches, the frequency converter will display 00, it shows the machine is stand-by (The parameters of DV700 frequency converter have been set already before dispatched from the factory, it also can be reset as per requirements). And then, adjust each temperature controller to have heat-sealing temperature at about 150 °C , upper and lower heating temperature at about 110°C. Please see the operation manual of temperature controller for adjustment. The temperature has been set already when the machine is dispatched from the factory. The exact temperature is concerned with many factors such as speed , plastics quality and ambient temperature etc, it should be determined by the actual requirements during production.

(3) The cam bearings and oil box of eccentric wheel should be filled with engine oil and should not be overflowed. Before starting the machine, every running parts should be filled with little engine oil.

(4) See 9 in Fig 9, softly lift up the aluminum-foil feeding swinging arm until the feeding motor 2 is started, restore it after enough aluminum foil have been fed, then put down the swinging am (Note: The plastic pulling key   is only used for laying plastic pieces, do not press it during normal working so can avoid effecting

synchronism.)

(5) If the preheating temperature is reached, open the compressed air, first press [0] manual switch to see whether the running is normal. If there is no abnormal condition, turn on automatic running switch [1], at this time, the heat-sealing hot plate will be fallen down automatically (Note: The heat-sealing lifting can not be actuated during inching, press lift switch [0] to run it). After forming, heat sealing, cutting are all normal, press speed regulating key [1] of feeder to properly adjust the speed, then open the charging valve, control the medicine dosage, and open the cooling water.

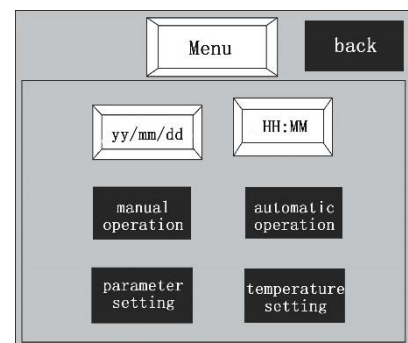
2. PLC Control operation

The controlling system adopts PLC control technic, it designed reasonable, the programme is agile as well as the characteristics of high bility of anti-jamming, low failure rate, convenient to maintain and high expansibility.

(1) Start and stop

1. Starting: turn on main power supply, close switch, control system is electricity, touch screen display our company trademark, click position of our company trademark then enter into operation menu.

2. Stop: control system stop working first, then cut off main power supply.



(2) Parameter setting

Enter main screen, display four exchangeable screen: manual operation, automatic operation, parameter setting, temperature setting.

Operation button function as follows:

Point "Power on" button turn on power.

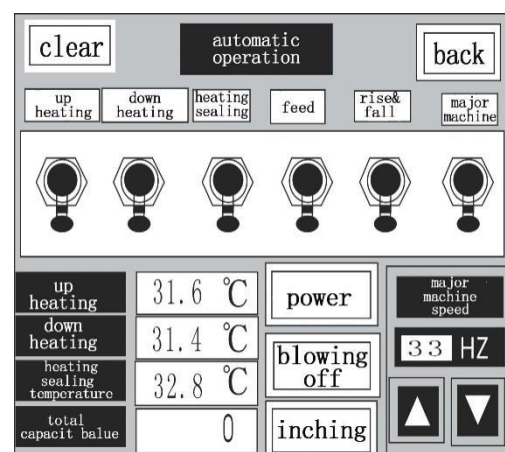
Point "Power on" again cut off power.

Point "Major machine", it will start working.

Point "Major machine", it will stop working.

Point "Rise & fall", heating- sealing cylinder rise.

Point "Rise & fall" again, heating- sealing



cylinder fall.

Hold “Inching” , it will inching run.

Loosen it will stop.

Point “Feeding”, the feeder has electricity, adjust rotary knob to adjust feeder speed.

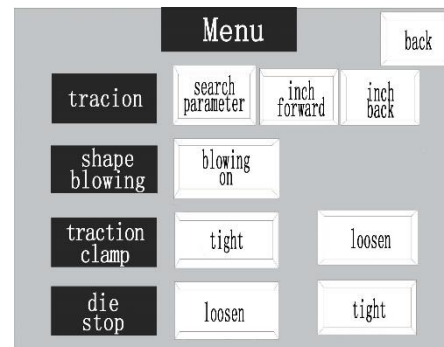
“ Up heating” “down heating” “heating sealing” display major machine’s factual temperature.

“Count” display total produce value

“Major machine speed” display major machine speed (how many HZ equal to how many times)

Point “Aligning” , photoelectricity eye turns on, take focus beam of light of light of photoelectricity eye aim at color mark midpoint of Aluminum foil.

Point it again, photoelectricity eye stop working.



Poit “ Manual operation” enter into “ Manual screen”

Shape blowing: blowing on.

Traction clamp: tight, loosen.

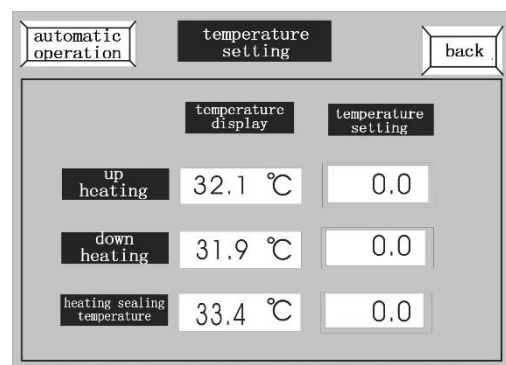
Die stop: loosen, tight..

Point “ Temperature setting” enter into setting screen:

“ Temperature set”is setting temperature request. First point “CLR” to eliminate original value, then enter into value request,

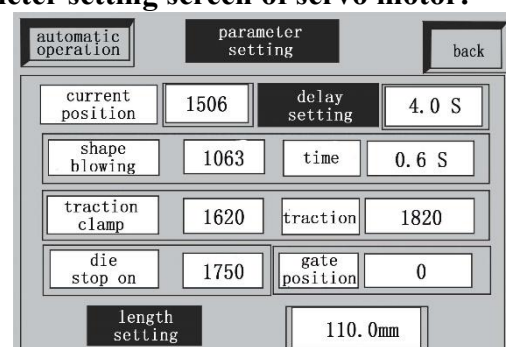
if require 80℃ , press 80, point “ENT” after

check it then back setting screen. If input erreor, point “CLR” input again.



Point “ Parameter setting” enter into parameter setting screen of servo motor:

Current position: coder position. Remark: shape blowing, traction clamp, die stop, etc control by PLC, signal by OSS-05-ZEHC



coder.

Delay setting: major machine runs delay, the time is second.

Shape blowing parameter setting: decided by current position, which will display correspond number when close of shape and air die. For example when it is 100, shape blowing value is input 100.

Time: shape blowing delay, for example: when require delay 6S, input 6S.

6 . Adjustment and Operation

(1) Forming

Installation of forming mould: When the forming bracket is at the bottom center, push the forming mould into the bracket, align with the blowing mould and tighten the clamping plate. Loosen the stroke regulating nuts of forming station, move them to front and back along with the slideway until the blister is matched with the heat-sealing mould, then lock in the stroke regulating nuts.

(2) Heat Sealing

Installation of heat-sealing mould: It should be matched with the blisters in forming plastic piece. If there occur the fore-and-aft deviation 4 as shown in fig.4, loosen the knurled nut 38 in Fig.1, rotate the knurled nut 39 adjust the forming mould to clockwise and move it to front that the blister will be moved to front, adjust the plate to anticlockwise and move it to back that the blister will be moved to back. If there occur the left and right deviation as 5 in Fig.4, loosen the clamping plate of heat-sealing mould, move the heat-sealing mould to left or right to match the blisters in forming plastic piece in good situation.

Adjustment of heat-sealing pressure: During adjusting, put one plastic piece between the heat-sealing mould and checker plate to prevent from damaging the cross hatch and heat-sealing mould. Lift cam 12, Fig 5 to the highest point to enable the cross-hatching matching matched with the heat-sealing mould. Adjust the location nut 6 to be 2-3mm away from the bottom surface of cover plate, then fasten the hexagon nut 6. during presetting, the pressure should not be too high. During normal running, the pressure should be fine adjusted according to heat-sealing effects. After adjusting,

rotate the location nut 6 up wards until the upper cover plate is locked. Correct the forming and heat-sealing mould, then adjust the track to make each one side of two tracks lean against the side of blister. Pay attention to not lose the long tracks too tighten as shown as fig.4.

(3) Pressing and Cutting

① The installation of pressing mould is as same as the heat-sealing mould, correct the center position, the pressure should not be too high, otherwise the knife and steel characters will be damaged. It should be adjusted from low to high until the cut sheet line can be torn off easily, the correct position of cutting line must be at the center between two blisters.

② When installing the cutting mould, take down the four ball head nuts from the vertical volumn, remove the cutting cover plate, install with assembled cutting mould, put on the cover plate, then fix the upper and lower moulds on the upper cover plate and punching guide plate by bolts. If the punched blister sheet deviates to left or right, it maybe caused by uncorrect track or center of forming mould, that must be recorrected; If the punched blister sheet deviates to front or back, use the adjusting handwheel

(3) in fig.1, move the punching mechanism to front or back by adjusting handle.

(4) Draw Gear

See Fig.6 for stroke regulation. First stop the swing link 3 at a vertical position, loosen the fastening screws 8 and turn the stroke regulating knob. Turn it to left to lengthen the stroke, turn it to right to shorten the stroke. After the required stroke is adjusted, fasten the fastening screw to start running.

(5) Position and adjustment of air distributing cams

The installation sequence of air distributing cams from inside to outside on the shaft are separately pulling holding cylinder cam, stopping back cylinder cam, forming blowing cam and forming cylinder cam, the air distributing cams should be installed as Fig8

① The heat-sealing cam links the heat-sealing mould see 8 in Fig.5, when it returns

to the lowest position, the pulling mechanism is at the position of the cam 5 in Fig.6, the pulling holding cylinder control valve should be opened earlier than the cam 12 as shown in Fig.5.

② When the pulling manipulator is stopped, the stopping back cylinder returns to the position and clamps.

③ When the forming mould is matched with the air-blowing mould, the air blowing cam starts the control valve to blow out compressed air to achieve the forming process.

④ The forming cylinder should be lifted with the heat-sealing cam in synchronism. The whole process are as follows: After clamping the plastic piece by pulling clip, the positioning cylinder of plastic piece will be loosened at once, the manipulator starts to pull and stop until it reaches the position, the positioning cylinder will clamp the plastic, the forming cylinder and cutting device will be lifted to work. Loosen the pulling holder, the pulling manipulator will be returned, the forming cylinder and cutting device will be dropped to original position, thus a period is completed.

(5) Aluminum-foil Automatic feeding Mechanism

See Fig.9 for this mechanism, namely: During running, the aluminum foil actuates the swinging arm 9 to lift until the button-head screws be aligned with the photo switch11, and motor 10 starts working. After the aluminum foil is fed, the swinging arm will be fallen with it, and the button-head screws contacts the photo switch, the motor will be stopped, thus accomplish one cycle feeding.

7. Installation and Maintenance

(1) Check the machine to see whether it is complete and damaged during transportation according to contents and list after unpacking.

(2) The machine should be stand leveled on the ground, with a rubber plate of 12mm thickness under it to avoid damage of floor and movement of the machine. If is unnecessary to fit with foundation bolts.

(3) The machine should be cleaned completely before starting. It's necessary to regularly wipe the oil and dust with a piece of soft cloth with soap water (or

detergent), and then dry it with a soft cloth.

(4) For safety, the machine should be earthed at the location as shown on earthing plate.

(5) It should be operated and maintained by a professional operator.

(6) Before operation, the operator must read the operation manual carefully, understand the structure and operation regulations in the main.

(7) Every gear, chainwheel, guide and cam should be oiled once every shift.

(8) The helical gear reducer should be filled up 3# molybdenum disulphide grease periodically according to the operation instructions from the manufacturer.

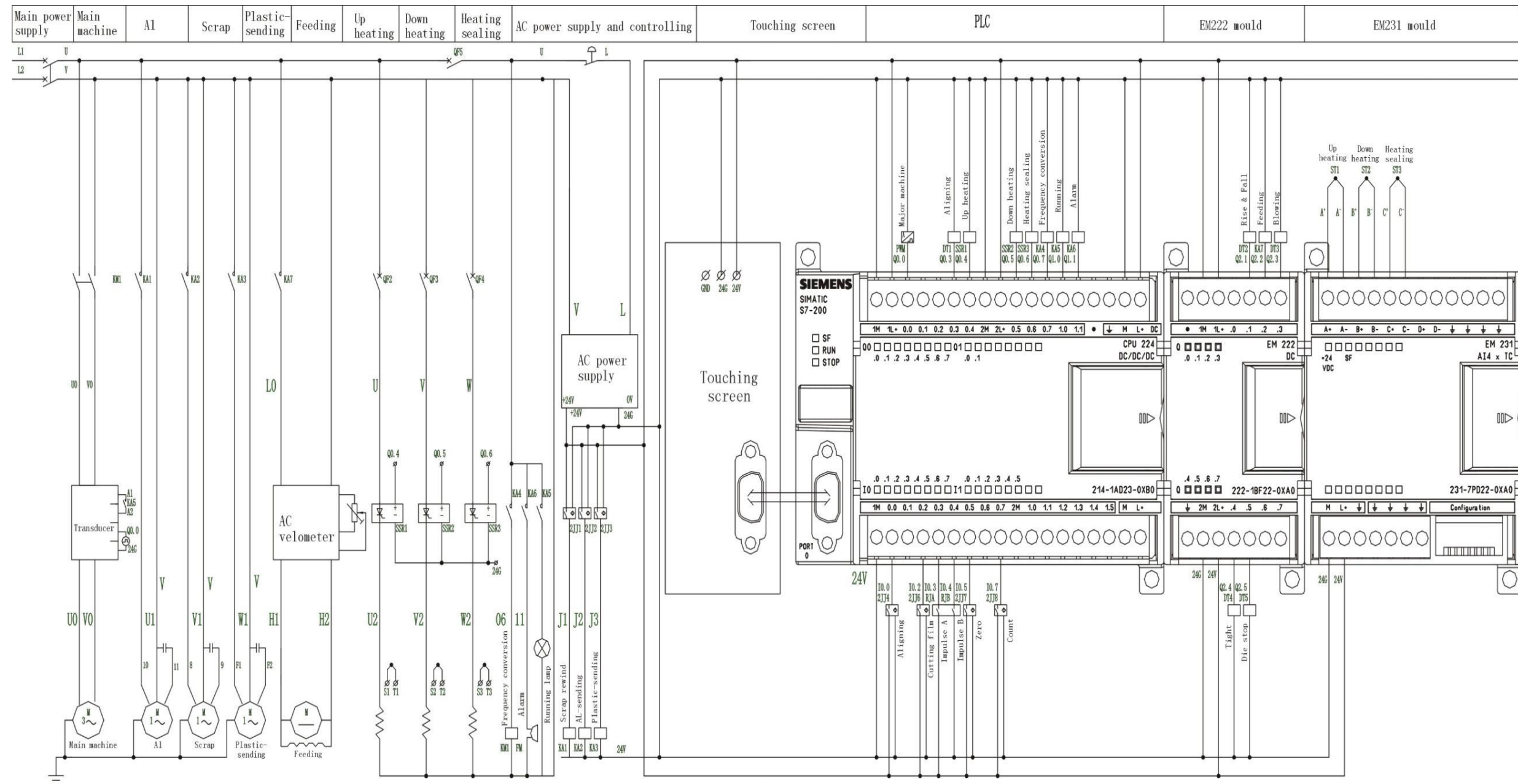
8. Common Troubles and Troubleshooting

	Troubles	Causes	Troubleshooting
The plastic blister are not in good shape	1.The bottom film of blister is punched.	1.Forming temp. is too high 2.PVC plastics is not of good quality which has small hole. 3.The blowing pressure is too high.	1.Reduce temp. 2.Replace PVC plastic pieces. 3.Reduce the blowing air pressure.
	2.The forming is not complete.	1.Forming temp. is too low. 2.The upper and lower moulds are not parallel. 3."O-shaped" sealing ring is damaged. 4.Gas hole & exhaust vent are blocked. 5.Improper air pressure 6.Improper gassing time	1.Raise temp. 2.Adjust the column box nuts to make upper and lower moulds in good sealing when matching. 3.Replace "O-shaped" sealing ring. 4.Dredge it with a steel needle. 5.Adjust pressure release valve, the pressure is normally kept at 0.5-0.6Mpa. 6.Adjust the position of blowing cam (Release air as forming mould closes).
The bubble caps of plastics are not in right position of heat-sealing mould.	1.Run over the position or doesn't the position	1.The stroke is uncorrect. 2.The stroke between forming and heat-sealing is uncorrect.	1.Check stroke length of every sheet to see whether there is gap. Adjust the adjusting handle (5, Fig 6 to clockwise to lengthen it. 2. Adjust the forming station (Fig.1) to move PVC to front or back.
	2.Lateral deviation or tight or loose at single side.	1. The installation of forming, heat-sealing moulds are uncorrect (uncorrect center or tilt). 2.The adjustment of track is improper. 3.Cooling for forming and heat-sealing moulds are not good and cause PVC deformed or extended. 4.PVC is not of good quality, the elasticity of two sides are not same after heating.	1.Correct the position of forming and heat-sealing moulds. 2.Readjust the track. 3.Increase cooling water flow. 4.Replace PVC (plastic pieces).
Unsatisfactory heat-sealing	1.Unfirm bonding	1.Too low temp. to cause glue on aluminum foil is not well distributed. 2.The heat-sealing pressure is not enough.	1.Adjust the temp. to keep it static at about 150 ° (concerned with room temp and speed) 2.Increase the heat-sealing pressure.
	Troubles	Causes	Troubleshooting
Unsatisfactory heat-sealing	2.Uneven cross hatch	1.Rust or dirt on cross hatch. 2.The heat-sealing temp. is too low. 3.The checker plate doesn't match the lower mould well. 4.The forming temp. is too high that the thickness between blisters is	1.Clean with wire-brush or needle. 2. Increase the heat-sealing temp. 3.Scrape with a shovel or grind some parts of lower mould surface (with red lead or printing ink). 4.Reduce the forming temp.

		thinned. 5.The pressure is not enough. 6.The upper and lower moulds are not parallel.	5.Increase the pressure. 6.Adjust them to be parallel.
	3.Aluminum foil is pressed to be broken.	1.The heat-sealing temp. is too high. 2.The heat-sealing pressure is too big.	1.Decrease the heat-sealing temp. 2.Reduce the heat-sealing pressure.
Aluminum foil wrinkles	Oblique wrinkle	1.The single side of aluminum foil is tight or loose. 2.The press roll of aluminum foil is not parallel. 3.Installation of heat-sealing and forming moulds are not in right position(tilt)	1.Adjust the front stroke regulating plate 15 in Fig.1, push it to front or back to change depth of parallelism of turn-up roller. 2.Adjust the knurled adjusting handle 28 in Fig.1 to make the press roll paralleled with the surface of track. 3.Install the heat-sealing mould and forming mould in right position (correct the center and then to be parallel).
Deviation of cutting	1.Longitudinal deviation	1. The stroke is not adjusted correctly.	1.Adjust the cutting movable handle to move cutting station to front or back.
	2.Lateral Deviation	1.The forming mould, heat-sealing mould or track is not in right position.	1.Readjust the forming mould, heat-sealing mould or track..
Unsatisfactory charging	1.Tablet jump out. (The tablet is jumped out of mould after heat-sealing.	1.The heat-sealing mould or the heat-sealing position is not adjusted well.	1.Correct the heat-sealing position to make the plastic blisters into the mould hole correctly.
Unsatisfactory pressing	1.Tablet jumps out during pressing.	1.The knife blade wears.	1.Replace the knife blade to reduce the pressure.

9. Electric Schematic Diagram

DPP-150 AL-Plastic (AL-PVC) Automatic Blister Packing Machine



10、 Structural Diagram (Fig.1--Fig.13)

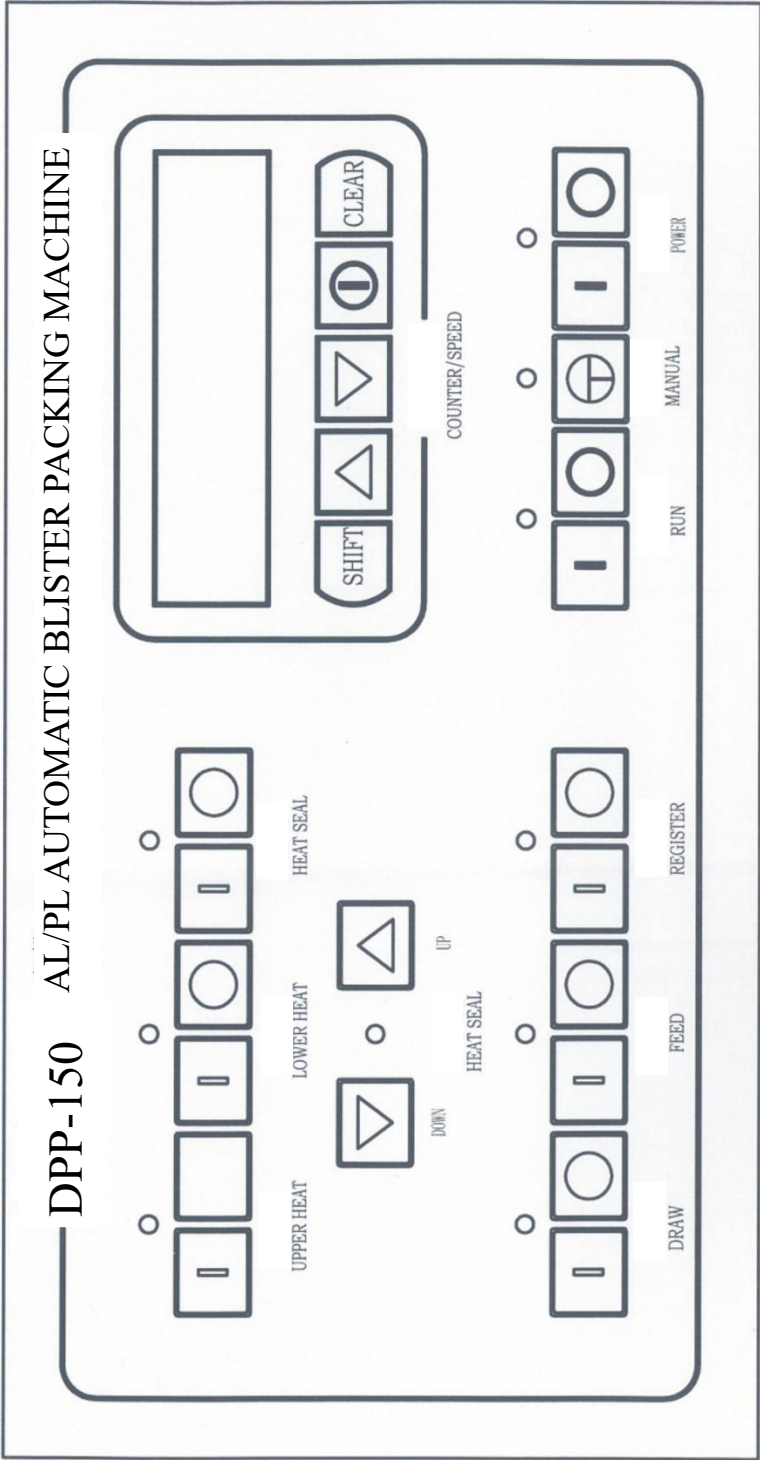
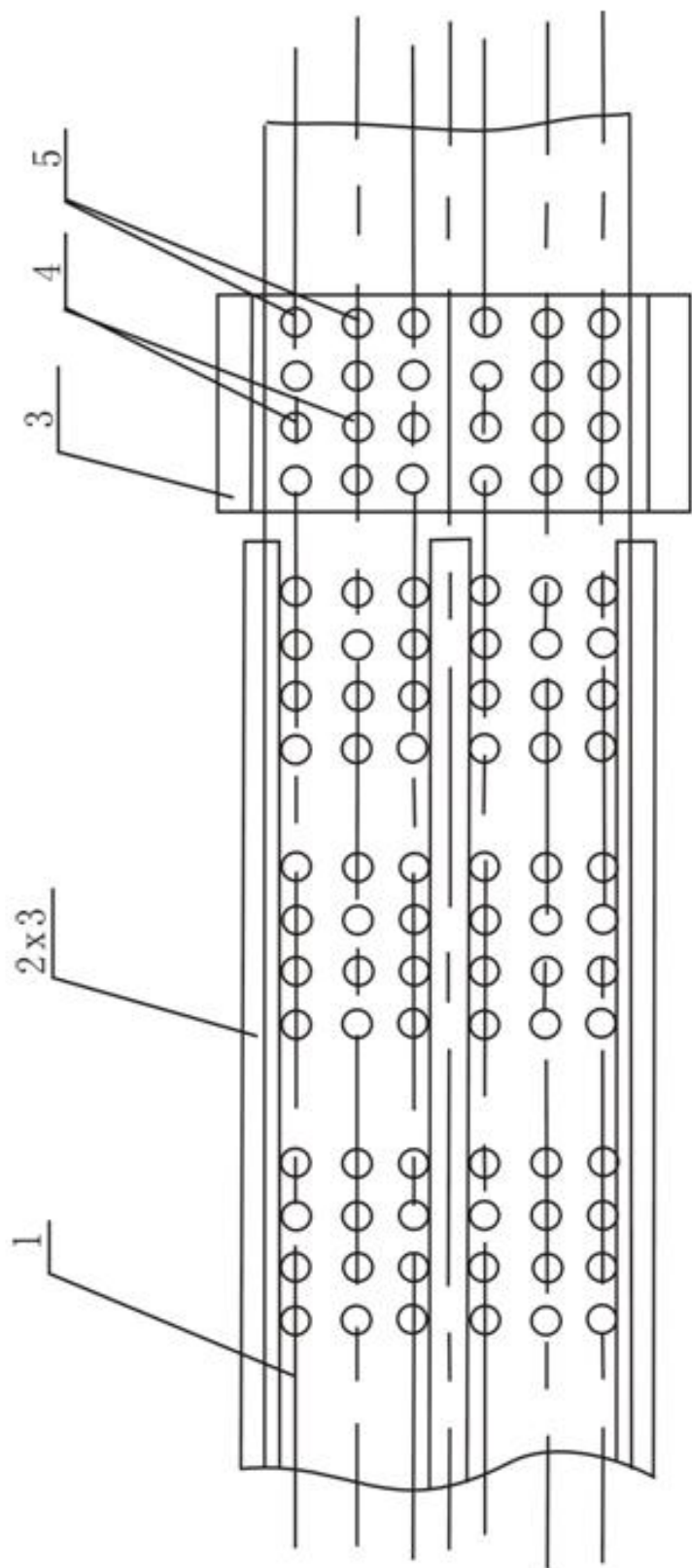
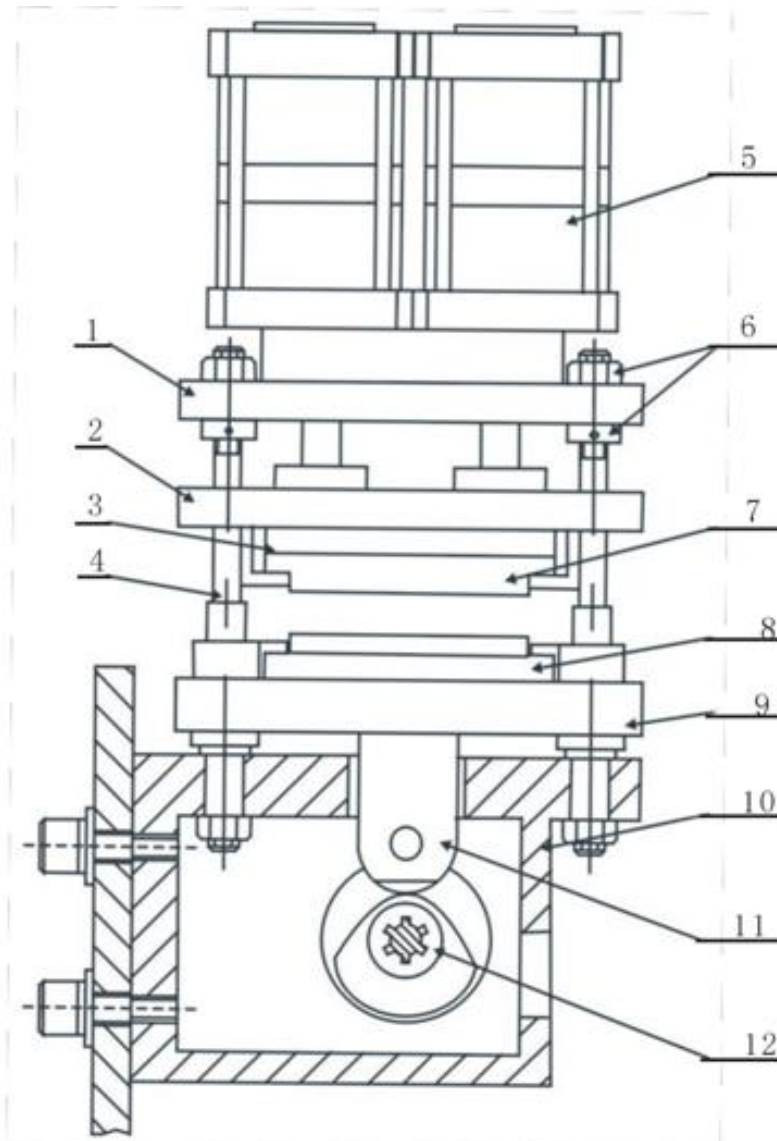


Fig. 2 Control Panel



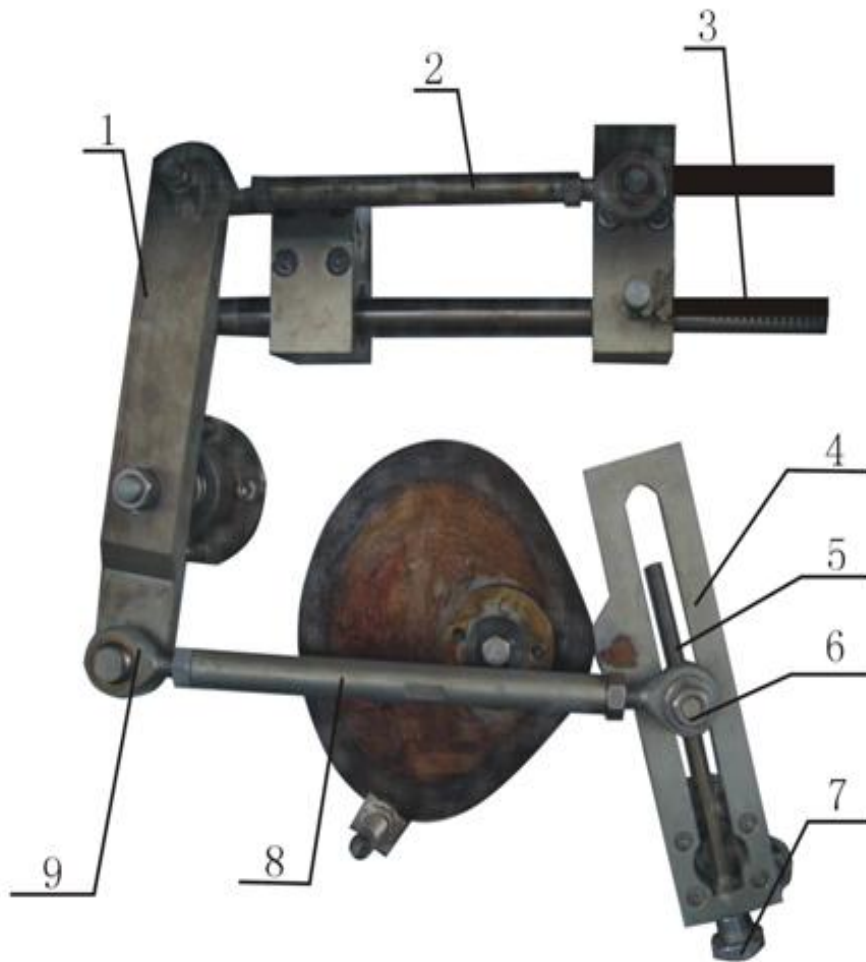
1.forming material 2.long rail 3.sealing mould 4.deviat ahead or behind 5.deviat left or right

Picture 4 Rail Schematic Diagram



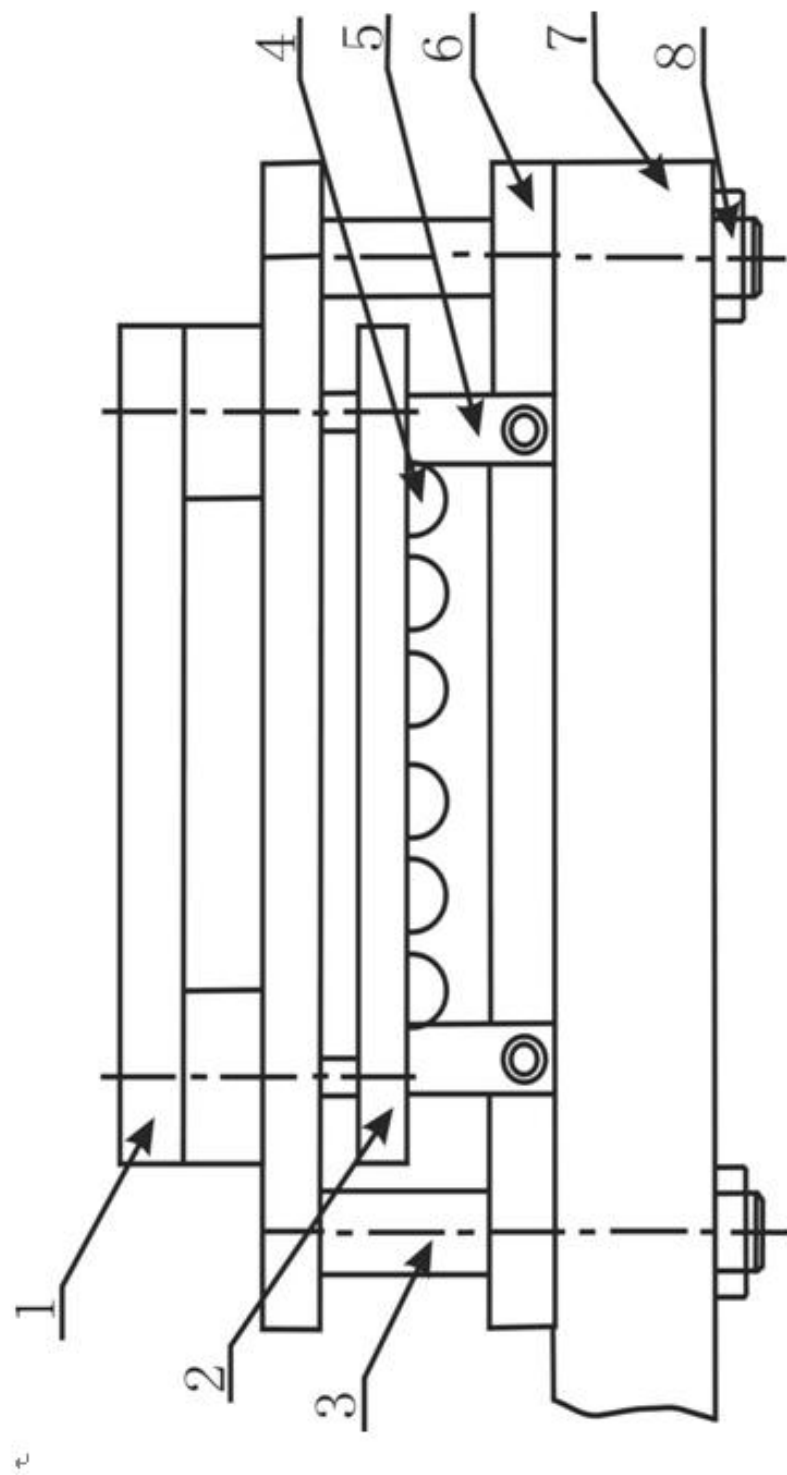
1.pneumatic cylinder block 2.cover plate 3.vertical column 4.heating plate
5.double-section cylinder 6.adjusting nut 7.netted plate 8.sealing mould
9.guiding plate 10.bracket 11.roller 12.cam

Picture 5 Sealing Part Diagram



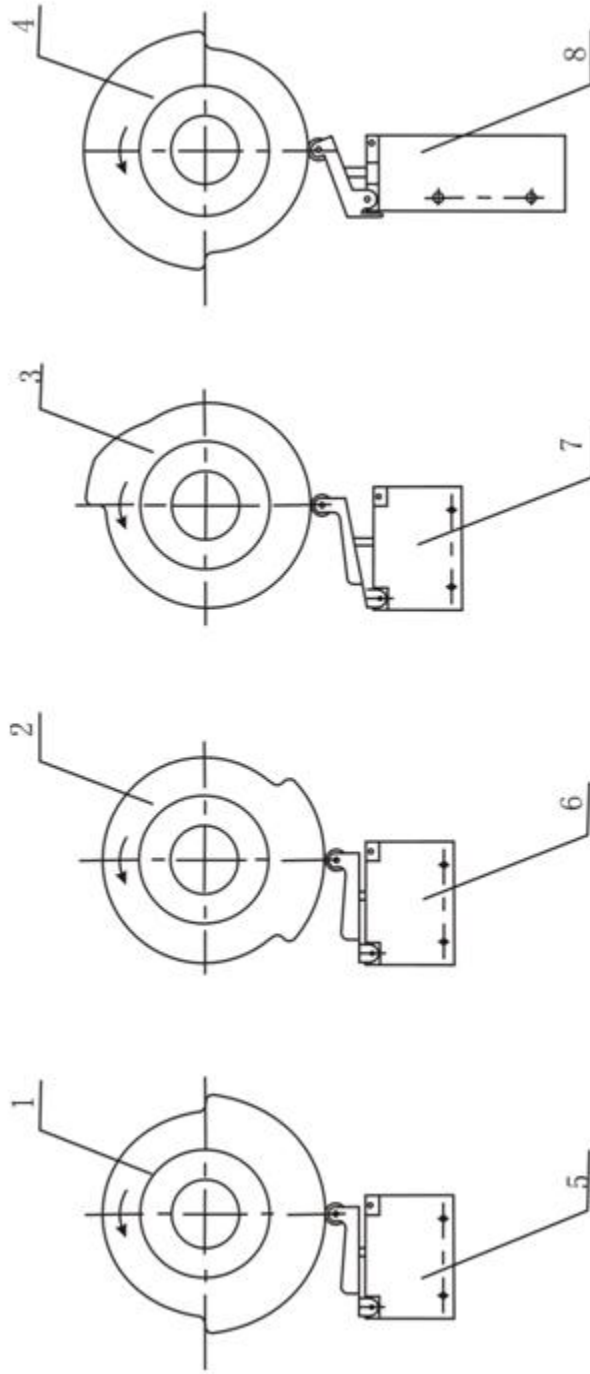
1.swing arm 2.connecting rod 3.direction-guiding shaft
 4.stroke-adjusting plate 5.adjusting screw 6.nut 7.adusting handle 8.connecting rod 9.joint bearing for external thread

Picture 6 Stroke Adjusting Schematic Diagram



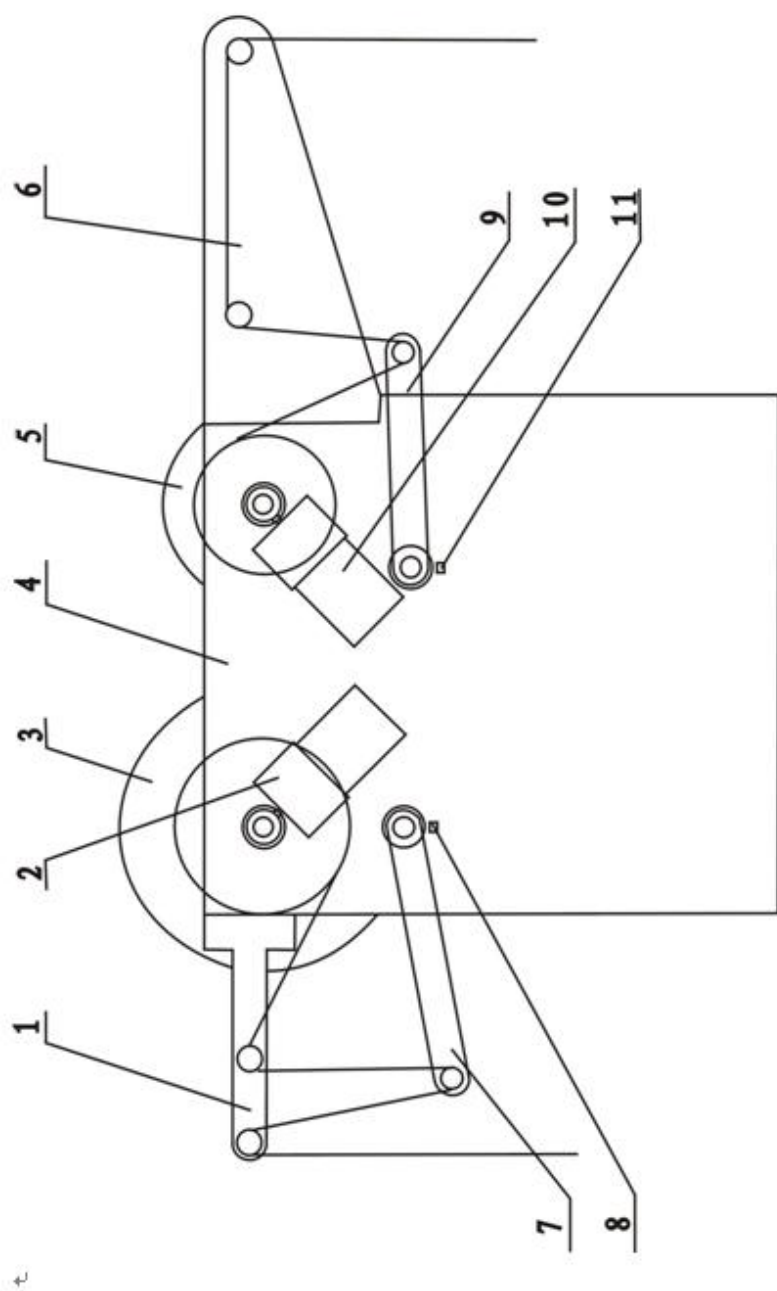
- 1.traction cylinder 2.traction clamp 3.fixed vertical column 4.formed blister
5.dovetail block 6.dovetail strip 7.traction arm 8.fixed nut

Picture 7 Traction Part Diagram



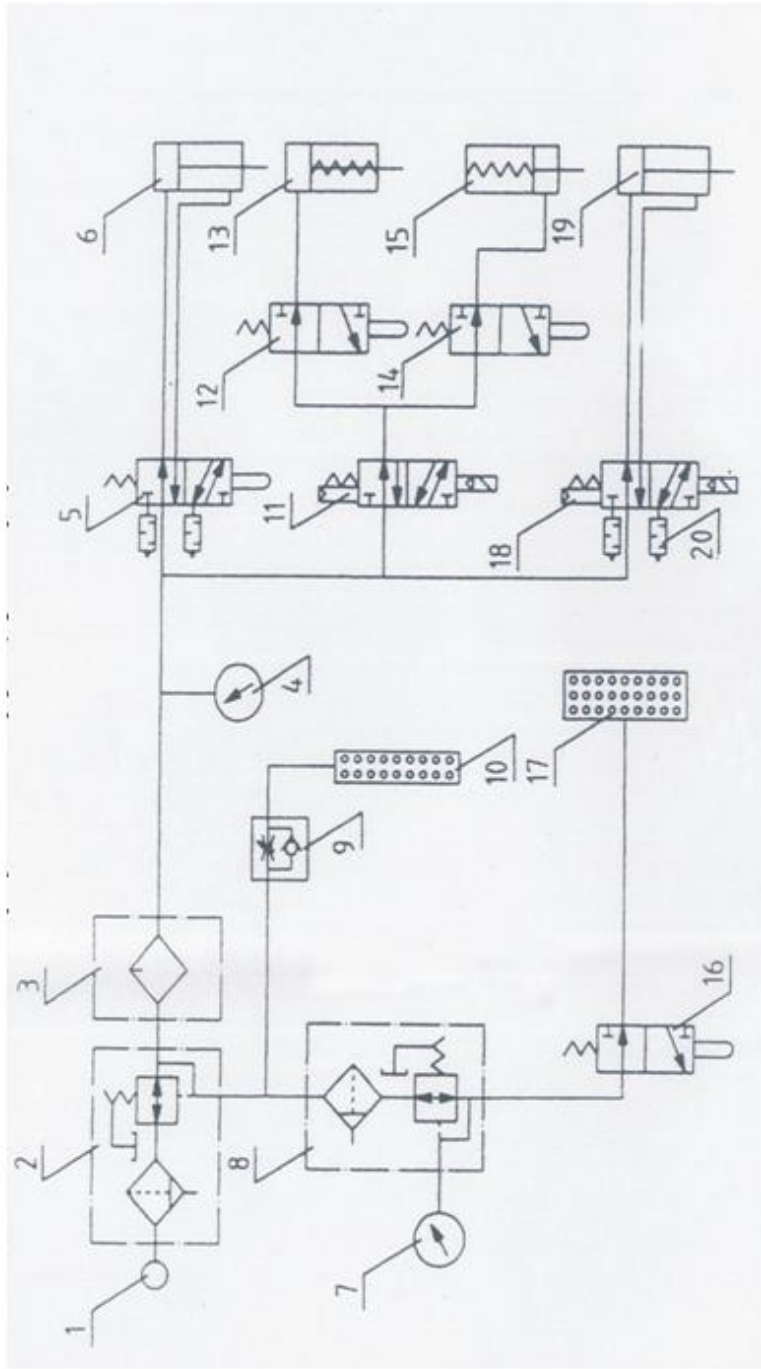
1.clamping cylinder cam 2.retaining cylinder cam 3.air blowing cam 4.forming cylinder cam

Picture 8 Valve Cam Diagram



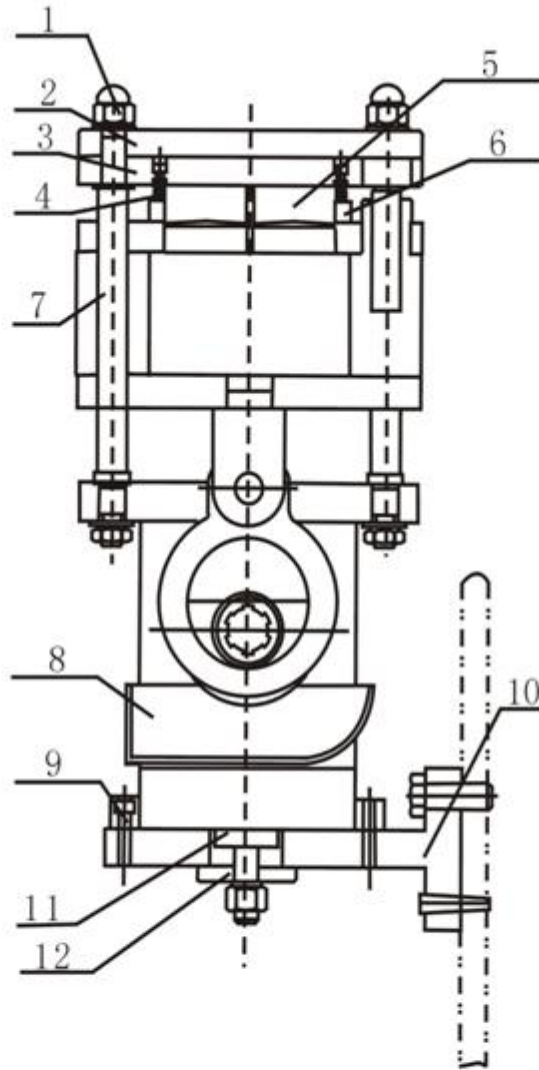
- 1.supporting arm 2.water recycling motor 3.waste recycling roller 4.small clapboard 5.Al foil
- 6.triangle supporting arm 7.long swing arm 8.light control switch for waste recycling 9.short swing arm
- 10.Al foil transmission motor 11.light control switch for Al foil transmission

Picture 9 Al Foil Waste Recycling Diagram



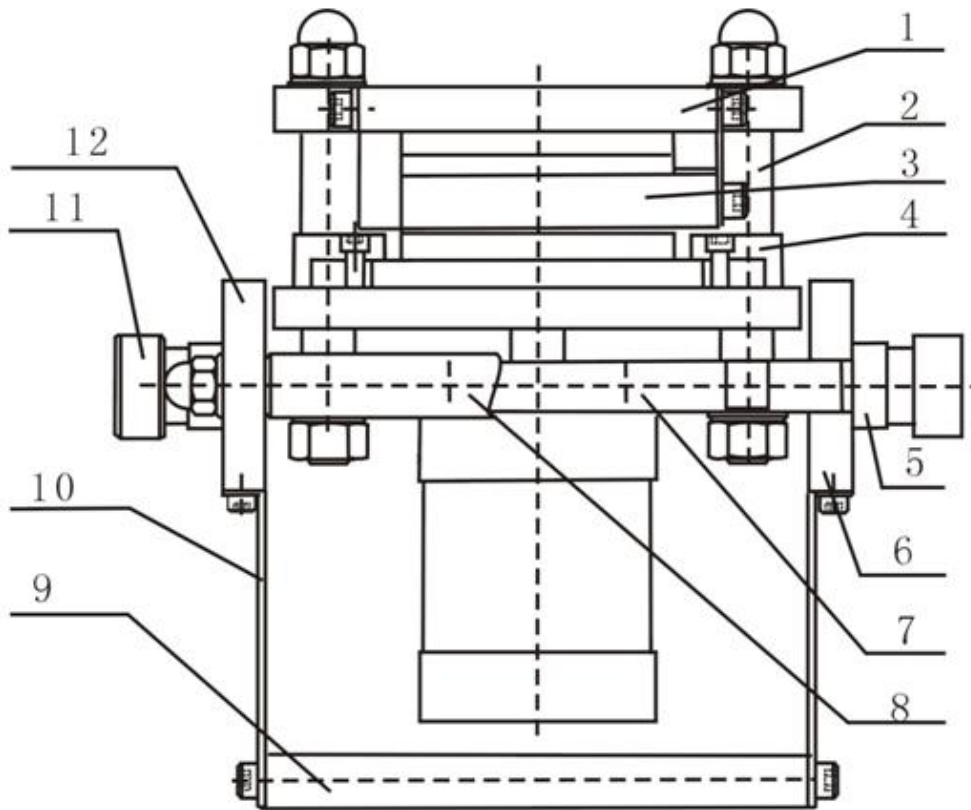
1.air source 2.filter regulator 3.atomized lubricator 4.total pressure meter 5.mechanical control valve for forming cylinder 6.forming cylinder 7.forming pressure meter 8.filter relief valve for forming part 9.throttle valve 10.air cooling pipe 11.magnetic valve for traction positioning 12.mechanical control valve for traction 13.traction cylinder 14.mechanical valve for positioning 15.positioning valve 16.mechanical control valve for forming 17.airway mould 18.magnetic valve for lifting 19.lifting cylinder 20.noise elimination

Picture 10 Pneumatic Control Schematic Diagram



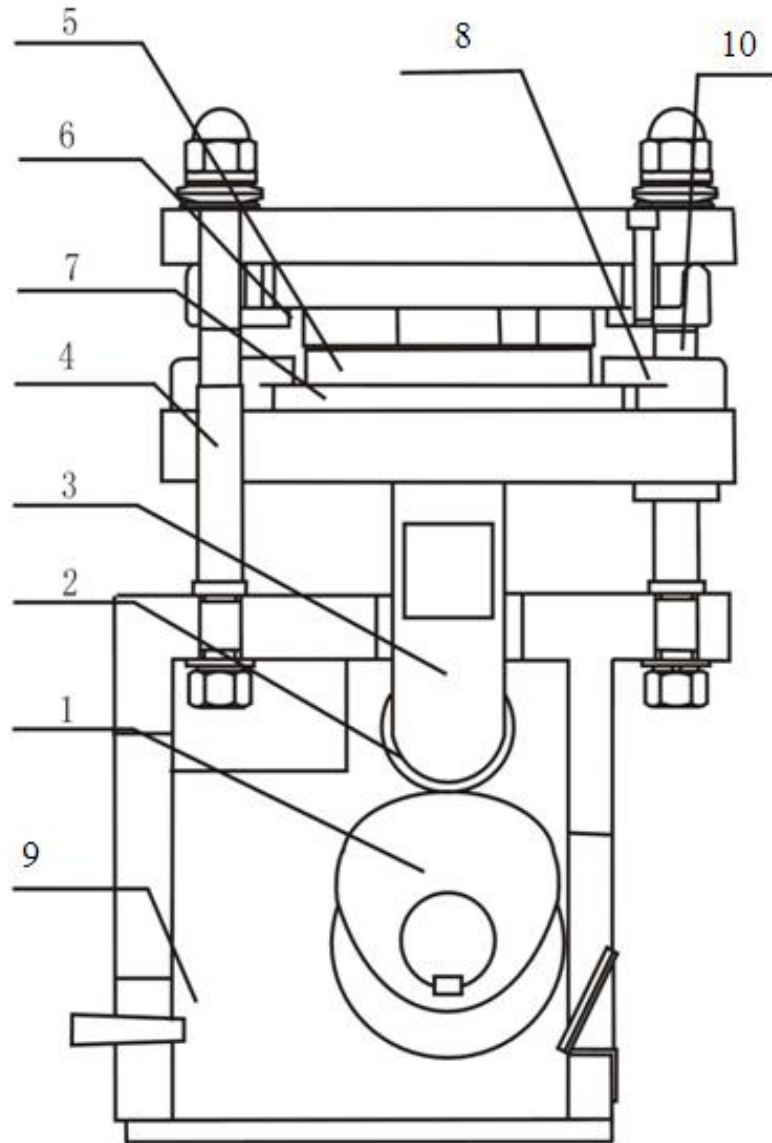
- 1.washer 2.cover plate 3.base plate of male mould 4.compression spring
 5.male mould 6.stripper plate 7.verticle column 8.oil box of eccentric gear
 9.fixed strip 10.bearing baseplate 11.positioning block 12.locking bottom plate

Picture 11 Cutting Part Diagram



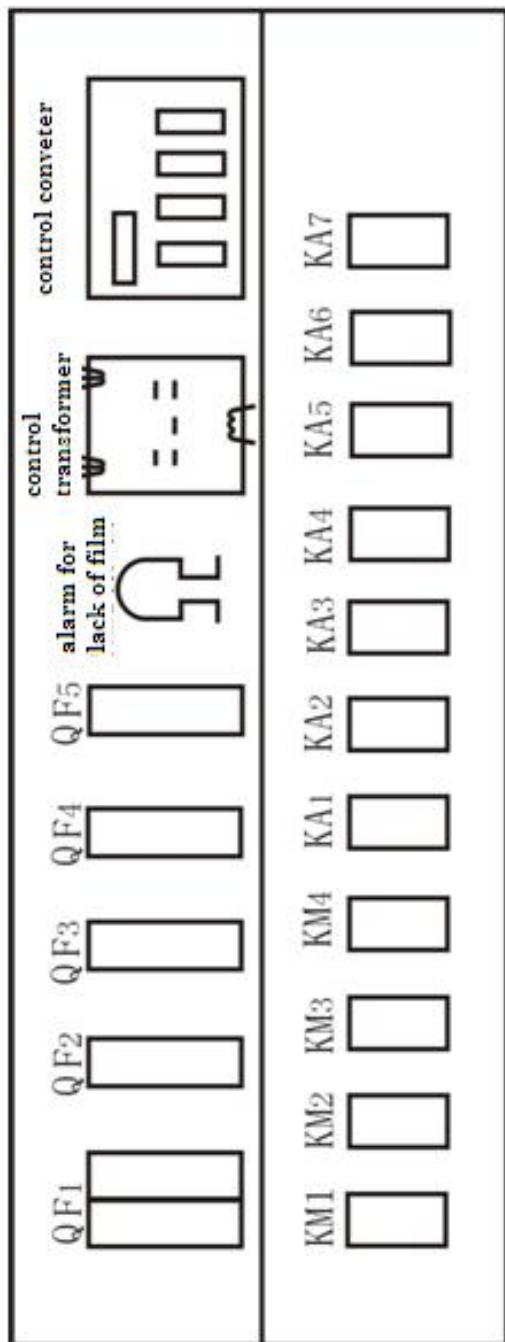
1.cover plate 2.verticle column 3.transferring stick 4.mould-pressing plate 5.fixed pressing plate 6.short bracket arm 7.slide plate 8.back positioning shaft 9.transferring stick 10.lowering support bracket 11.adjusting handle 12.long bracket arm

Picture 12 Forming Part Diagram



1.sealing and impress cam 2.roller and roller shaft 3.roller base 4.steel ball cover and base 5.upper pressing plate 6.base plate 7.lower mould 8.lower pressing plate 9.sealing bracket and bracket cover plate 10.vertical column

Picture 13 Impress Part Diagram



Electrical Appliance Installation Diagram

11. Consumables List:

Serial No.	Name of accessories and Specifications	Unit	Size	Quan.
1	Rolling wheels	PC		2
2	Rolling wheel pin	PC		2
3	Rolling needle	PC	Φ5X18	30
4	Sealing ring for forming	PC	Φ3.9	3

12. Packing List

Name	Type	Qty
Automatic aluminum-plastic blister packaging machine	DPP-150	1
Within the six Kok Wrench	2、 4、 5、 6、 8、 10	1
Activities Spanner	10 Inch	1
clamp	6 Inch	1
Level screwdriver	4 Inch	1
"Cross" screwdriver	4 Inch	1
High pressure oil tank		1
Hone		1
Gas joints	Φ8、 Through 、 Elbow	2
Steel code word	0~10	1
Copper wire brush		1
Product brochures, certification		1

Pack the member _____

Pack the date _____

Keynotes

The safety and alarm caution in the Table 1.1 will appear in different parts of this manual. Please pay special attention to them.

Safety & Alarm caution

Table 1.1



Caution

Danger alarm, may cause injury



Caution high temperature

High temperature danger alarm, may cause scald



Danger high pressure

Electric shock danger, may cause death or serious injury



Machinery danger

Machinery danger, may cause death or serious injury



Mind the gap

Gap danger alarm, may cause serious injury



Hot water and steam caution

Hot water and steam alarm, may cause serious injury



Attention

Operation notice and useful information



No touching

No touching in non-maintenance state, may cause injury.



Wear protective suit



Wear goggle



Wear protective gloves



May cause equipment fault or unexpected stop

Abiding by the regulations of this manual is the precondition that safeguards your health, property, quality and normal running of your equipment.

The manual includes the important information of correct installation, use and maintenance for this Machine. Please keep it properly near the installation place.

Safety Introduction

The following safety introduction involves this Machine transportation & storage, installation & debugging, operation & maintenance which may cause human injury or property (equipment, raw material or product) loss.

Meanwhile, please pay attention to the complementary safety introduction in chapters and parts of this manual.

General Description

Electric components, movement parts, heat generating parts are normal working while equipment running, only electric components working after equipment stopped.

Only trained professionals can do the following works:

- Transport
- Storage
- Installation/Assembly
- Operation
- Maintenance

Please read the following documents before operation:

- Attached drawings
- Other Random file
- Equipment mark plate
- Special regulations and requirements relative to the equipment
- Country or regional regulation relative to safety and prevention of accidents

The following situations will cause serious injury and property loss.

- Incorrect convey
- Incorrect installation
- Incorrect use or operation
- Remove necessary safety protection devices without permission.

Transport and Storage

——Check the product's safety during the shipping. On arrival, the product should be free of breach otherwise inform shipping company and our company, this is the

precondition of claim.

——Please strictly abide by relative convey regulations to avoid the equipment damage or human injure.

——The devices should be lubricated and antirust treated during long time parking. All these measures are done on the basis of the regulations. Protection of the electric control cabinet should take more care.

Machine working Condition

——The working temperature of this Machine is $5^{\circ}\text{C} \sim 40^{\circ}\text{C}$, when the surrounding temperature is 40°C , the relative humidity is no more 50%, when the surrounding temperature is 20°C , the relative humidity is no more than 90%, the normal working air pressure is $86\text{kPa} \sim 106\text{kPa}$, the alternative current POWER condition is 380V, 50Hz.

Installation & Debugging

——Please read carefully points relative to the equipment installation of this manual.

——This equipment must be installed and debugged by professional of the company or from the agent. Please do not unpack the package before professional not arrive; it is one precondition of compensation claiming.

——Operator must stop the machine immediately, if any abnormal phenomenon (such as vibration, noise, temperature rise out of range) during debugging process. Then check and eliminate the failure.

Operation & Maintenance

——Part of components of the equipment consists of electric components, high speed rotating components, straight reciprocating motion parts, negative pressure bearing parts, Please strictly abiding by the regulations of this manual avoids electric shock, mechanical injure during the operation.

——Operator must stop the machine immediately, if any abnormal phenomenon (such as vibration, noise, temperature rise out of range) during running process. Then check and eliminate the failure.

——Equipment cleaning process may involve electric components, chemical liquid or high temperature liquid. Please strictly abide by the regulations of this manual avoid electric shock, corrosion or high temperature burns.

——Equipment maintenance process may involve electric components, chain drives and mechanical spare parts. Please strictly abide by the regulations of this manual avoid electric shock, mechanical or hit injury.

——Start heater, first should drain off all the condensate water in the heat exchanger, or heating up slowly.

——Don't use sharp tools and fingernails touch screen.



Pay attention to

This machine must be operated and maintained by a full-time staff. Please read this manual carefully before operation and strictly follow the instructions during operation. Do not operate in violation of regulations.

——The grounding wire must be connected to the designated location on the grounding plate.

——Lubricant must be added before production.

——The operator should pay attention to the operation of each part of the machine during the operation of the machine, and is not allowed to leave the post when the machine is running.

——Clean only after the main power is off.