

Easy Snap Packaging Machine

FTM-120

User Manual



Wenzhou Finetech Machinery Technology Co.,Ltd.,
PART

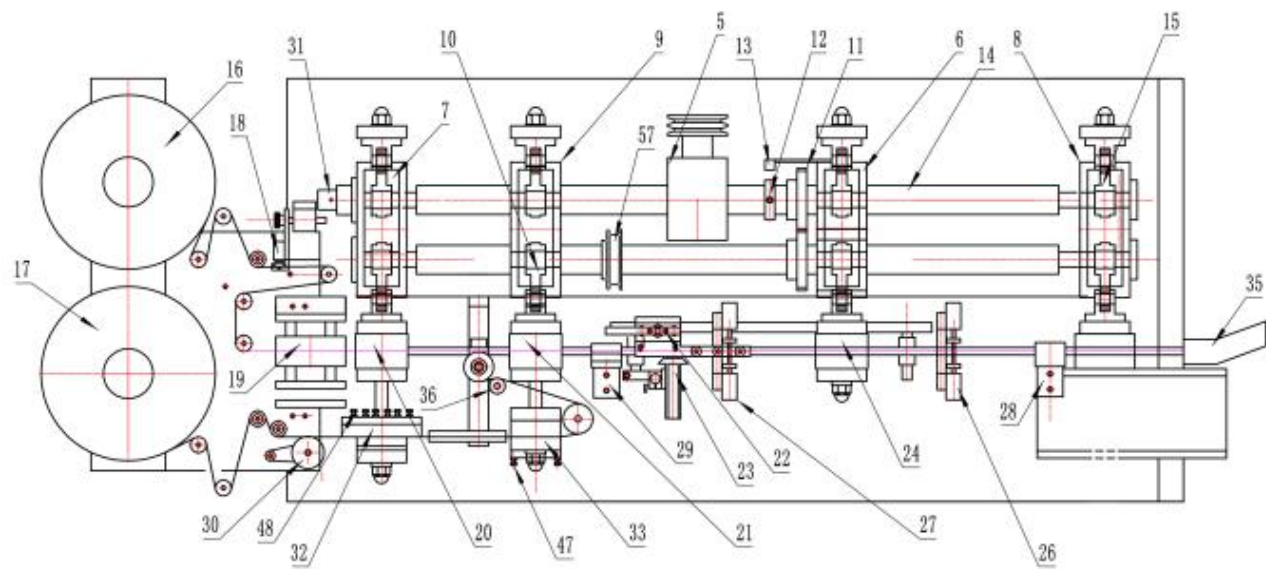
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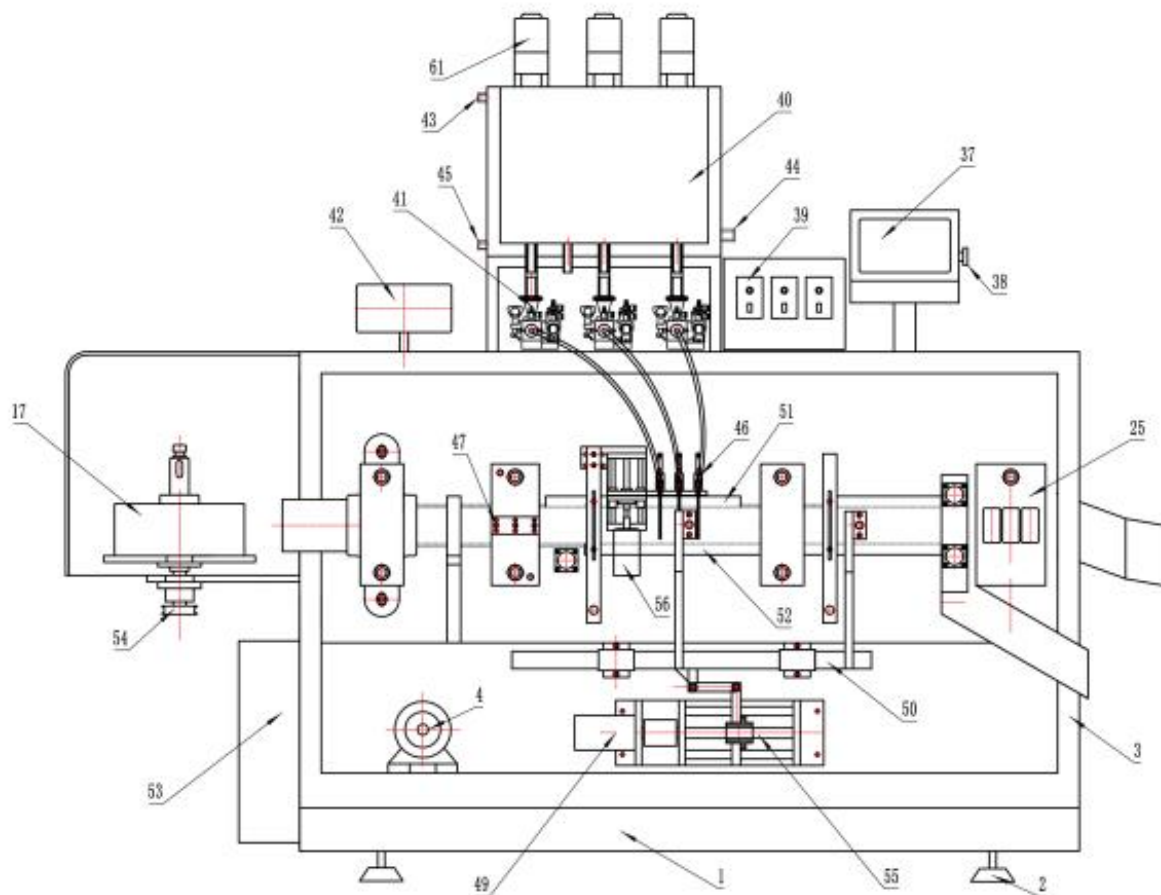
<https://pharmamachinecn.com/easy-snap-packaging-machine/>

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1. Machine layout





1	Machine base	31	Main encoder
2	Footplate	32	External easy tear line cutting
3	Machine frame	33	Internal easy tear line cutting
4	Motor	34	Conveyor belt
5	Gear reducer	35	Waste collecting
6	Box in sealing station	36	Adjustment wheel for hard film indentation positioning
7	Box in forming station		
8	Box in punching station	37	Touch screen
9	Box in forming and sealing station	38	Emergency stop button
10	Cam	39	Mixing speed regulator

11	Transmission shaft gear	40	Products feeding hopper
12	Inductive wheel	41	Piston pump
13	Inductive switch	42	Printer screen
14	Connecting sleeve	43	Water inlet
15	Eccentric wheel	44	Heating tube
16	Soft film (for sealing)	45	Water outlet
17	Hard film (for forming)	46	Filling head
18	Photoelectric tracking for eye mark	47	Internal easy tear line adjusting screw
19	Forming and heating plate	48	External easy tear line adjusting screw
20	Forming mold	49	Traction servo motor
21	Heat sealing for forming	50	Traction guide rail
22	Filling mechanism	51	Upper guide rail
23	Date printer	52	Lower guide rail
24	Sealing mold	53	Electrical cabinet
25	Punching blade	54	Brake wheel for film feeding
26	Rear traction cylinder	55	Traction screw rod
27	Front traction cylinder	56	Filling servo motor
28	Rear positioning cylinder	57	Brake wheel for main machine
29	Front positioning cylinder	61	Mixing motor
30	Coding encoder		

2. Overview

The card-type packing machine comprises a film (including soft film and hard film) placing mechanism, soft film unwinding with eye mark / pattern tracing, three-side seal, filling and sealing

(four-side seal) mold, cutter. Hard film passes through unwinding device, external and internal easy tear line indentation molds, then enter the three-side sealing station with soft film. Afterwards, they enter the filling, sealing and punching stations in turn. Simultaneously, the filling head is aligned with the opening position after communicating with the filling mechanism, the film traction is controlled by a servo motor. The machine is dedicated to automatic production of card type package, with high output is high and compact structure.

We specialized in automatic liquid filling and sealing machine. The machine is the latest small packing machine in China. Due to small floor space, low investment, no pollution and low noise, the machine is an ideal filling and sealing machine in purification workshop.

The application of the machine is aqueous agents, liquids, oral liquids, paste or sticky products for filling and sealing, etc.

The machine is suitable for roll film of PET/Al/PE/PE, hard film of PET/Al/PS/PE and soft film, forming, three-side heat sealing, filling, sealing, cutting, the external and internal indentations are controlled by the camshaft drive. The mold is installed on the guide plate, driven by the pushing rod roller with the double cams forward and backward. The forming mold blowing and the heat sealing mold sealing at the same time. Filling and sealing, indentation and punching are completed in an assembly line simultaneously.

3. Control system

- 1) Control: SCHNEIDER PLC
- 2) Human-machine interface: SCHNEIDER touch screen

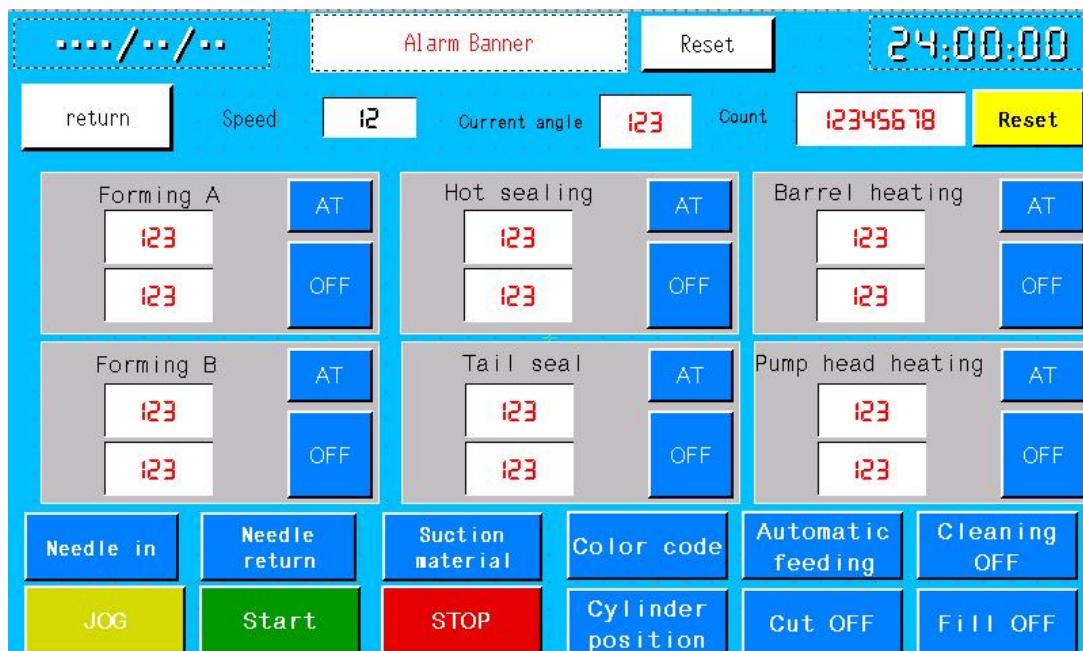
4. Technical parameters

Punching frequency	0~20 punches/min, 3 pcs per punching
Production capacity	3600 pcs/hour
Packing material	Soft film: PET/Al/PET/PE Hard film: PET/Al/PS/PE
Power supply	380V/220V, 50HZ, 6KW
Machine dimension	2300*850*1800mm (L*W*H)

5. Touch screen

Attention:

Since the touch screen is a relatively delicate component, it is strictly forbidden to use sharp objects or oily fingers to touch the screen.



return	Pulling length 123. 123mm	compensate 123. 123	Needle insertion distance 12	Start up filling 1	Stay Filling 1
Current angle 123	Search for advance angle 12	Needle entry speed 123	Needle retraction speed 123		
Starting point of piston pump 1 123	Piston pump 1 time 123. 12	Starting point of piston pump 2 123	Piston pump 2 time 123. 12		
Pre start 123	Fixed clamp starting point 123	Move clamp starting point 123	Cleaning time 1. 12		
heat end 123	Fixed clamp endpoint 123	Moving clip endpoint 123	Canned angle 123S		
Blowing angle 123	Shutdown angle 123	Close the blowing angle 123	Filling time 1. 12S		
Blowing time 1. 12S	Traction starting point 123	Traction endpoint 123	Pull material reset		
Cutting angle 123	Pull back to the starting point 123	Traction back to the finish line 123			
Cutting time 1. 12S	Starting point of intubation 123	End point of intubation 123	Material suction setting		

Discharge parameters

Discharge vacuum	123	1. 12S
Discharge extension	123	1. 12S
Discharge rotation	123	1. 12S

return

6. Mold installation

- 1) Install the first inner forming mold and put it parallel to the mold bottom above the guide plate.
- 2) Adjust the lower guide rail to the same level as the lower edges of the film, then adjust the upper guide rail height accordingly to clamp the film upper edge.
- 3) Then install the outer mold on the fixing plate after adjusting the guide rail. Firstly tighten the

screws and nuts in the fixing plate, then release the spring in the middle guide plate, pull down the lower guide plate to close to the external fixing plate mold. There is a fixing plate for positioning in the mold bottom, put the external mold on the fixing plate to align the up and down, left and right, then tighten the screws in the fixing plate.

- 4) After fixing the mold, install the guide rail and align the two molds in the middle position.
- 5) Install the sealing components: firstly adjust the sealing height to the top and bottom edge of the hard film, then release the spring again, put the two molds together and align them.
- 6) Install the punching mold: fix the up and down, left and right of the inside mold, and put it in the middle, then tighten the two screws diagonally, and then install the tightening screws on the outer mold.
- 7) The cutter for indentation and cutting is integrated, install the inner cutter and then outer cutter, tightening the fixing screws.

7. Precautions

7.1. For installation

- 1) The machine footings should be placed on a rubber pad and adjusted evenly.
- 2) Professional training for operation and maintenance.
- 3) The ground wire should be connected to the specified location.
- 4) Before the machine starting production, all moving parts must be lubricated, air filters must be filled with special oil for the cylinder and the marked position.
- 5) It is proposed to adopt an oil-free air compressor for this machine.
- 6) Forming, sealing, indentation and other stations should not be overstressed, to prolong the machine the service life.

7.2. For pre-operation

- 1) According to the regulations on electrical safety, turn on the 380V/50HZ three-phase four-wire power supply.
- 2) Water: According to the machine signage, the cooling water inlet and outlet are smooth.
- 3) Put the air pipeline into the joint, and start the air compressor at the same time. It can only be used if the air pressure is $\geq 0.6\text{Mpa}$.

8. Operating procedures

- 1) Turn on the touch screen, turn on the heating switch, set the forming mold A, B temperature to $80^{\circ}\text{C}\sim 90^{\circ}\text{C}$; Turn on the heating for three-sided sealing, and set the temperature to $130^{\circ}\text{C}\sim 150^{\circ}\text{C}$; Then turn on the sealing, and set the temperature to $145^{\circ}\text{C}\sim 155^{\circ}\text{C}$.
- 2) Pull the packing film behind the punching station, and turn on the traction switch again to clamp the film roll.
- 3) Turn on the cooling water and air source before starting, wait for 5 minutes after the temperature reaches the set temperature, then turn on the main motor to work. Do not turn on the filling switch until the forming station is normal, and then adjust the punching station accordingly after running for a few minutes.
- 4) When the packing film is used up during operation, stop the machine and connect the two ends of the films with transparent tape. Firstly turn off the filling switch, after the joint passing through the filling station, turn on the filling again.

9. Troubleshooting

Failure	Reason	Solution
Edge is different	Cutter deviation	Adjust the cutter position (Fig. 4)
Easy tear line is not easy to tear	Indentation depth is not enough, or the outer and inner indentations are not in the same position	Adjust the out indentation cutter position
Indentation leakage	Indentation is too deep	Adjust the indentation (Fig. 2 and 3)
Filling leakage	Filling volume is too large	Adjust the filling volume (Fig. 5)
	Stretch for forming is not enough	Adjust forming temperature and air pressure (Fig. 6-1, 6-2 and 6-3)
	Filling time is too long	Adjust piston pump filling time
	Filling head lifting speed is too fast	Adjust filling head lifting speed
Sealing leakage	Temperature is too low	Increase the sealing temperature
	Sealing pressure is too low	Increase the sealing pressure



Fig. 1 Adjusting eye mark position

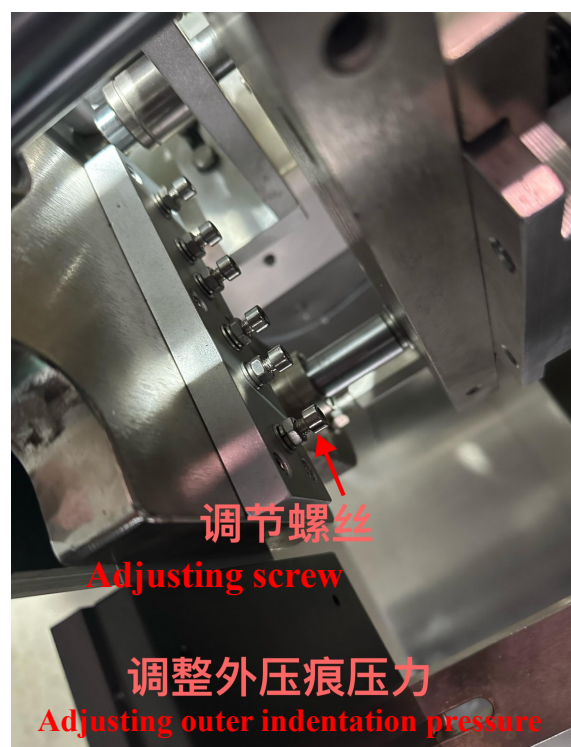


Fig. 2 Adjusting outer indentation pressure

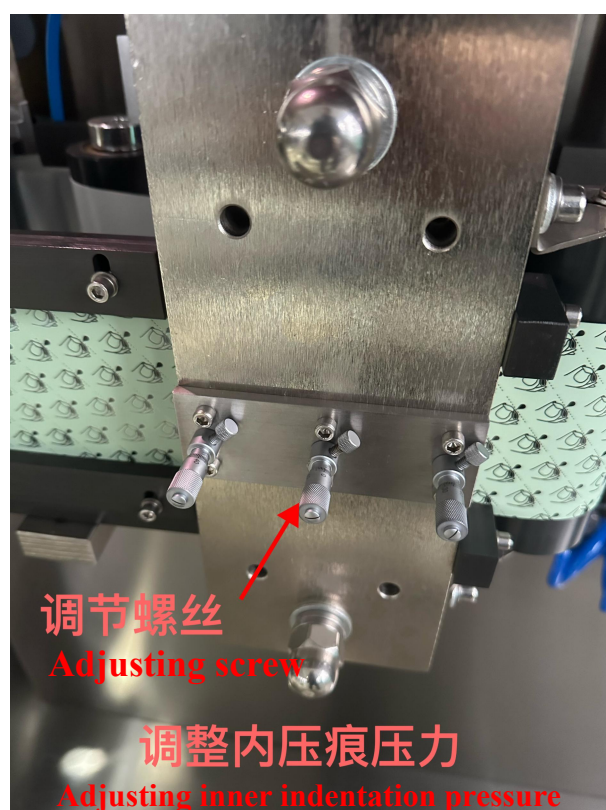


Fig. 3 Adjusting inner indentation pressure



Fig. 4 Adjusting cutter position



Fig. 5 Adjusting filing volume



Fig. 6-1 Adjusting forming stretch

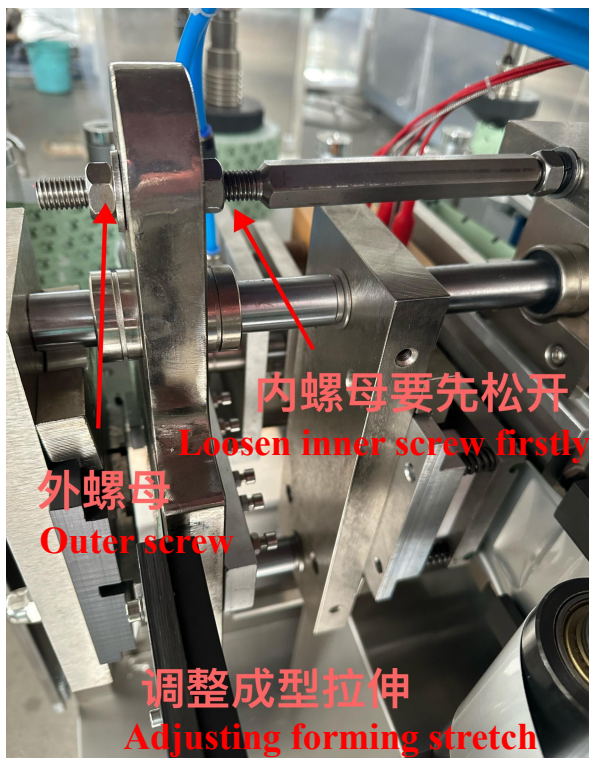
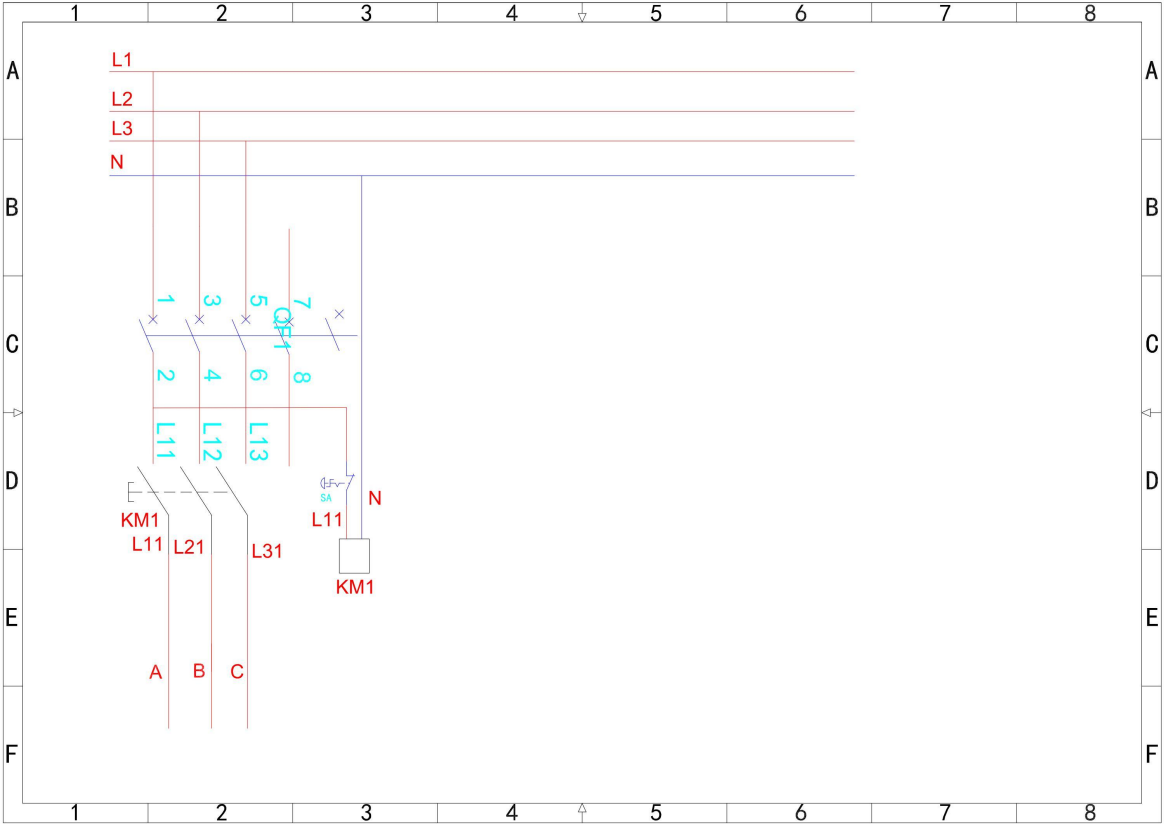
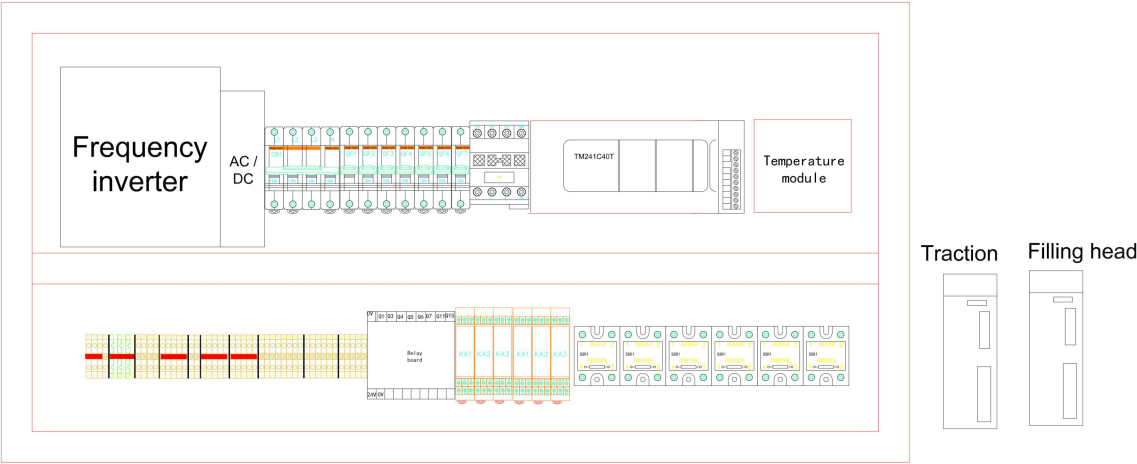


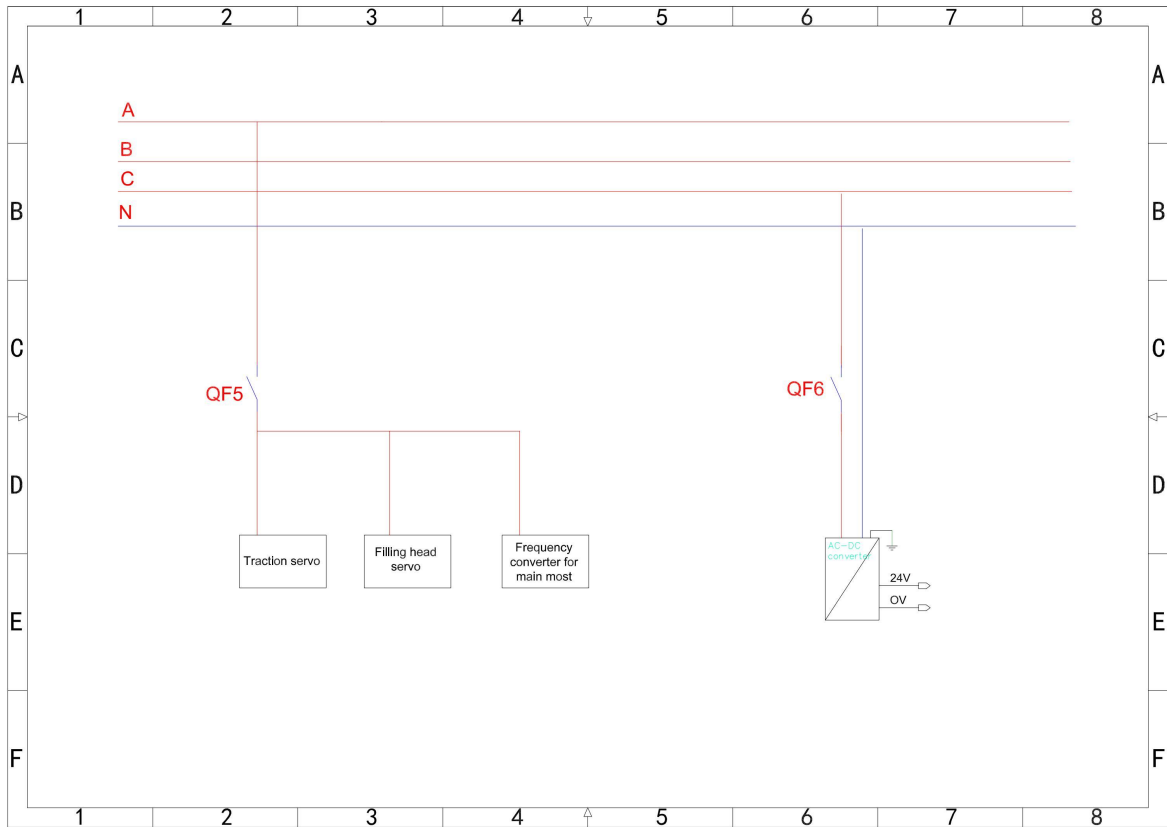
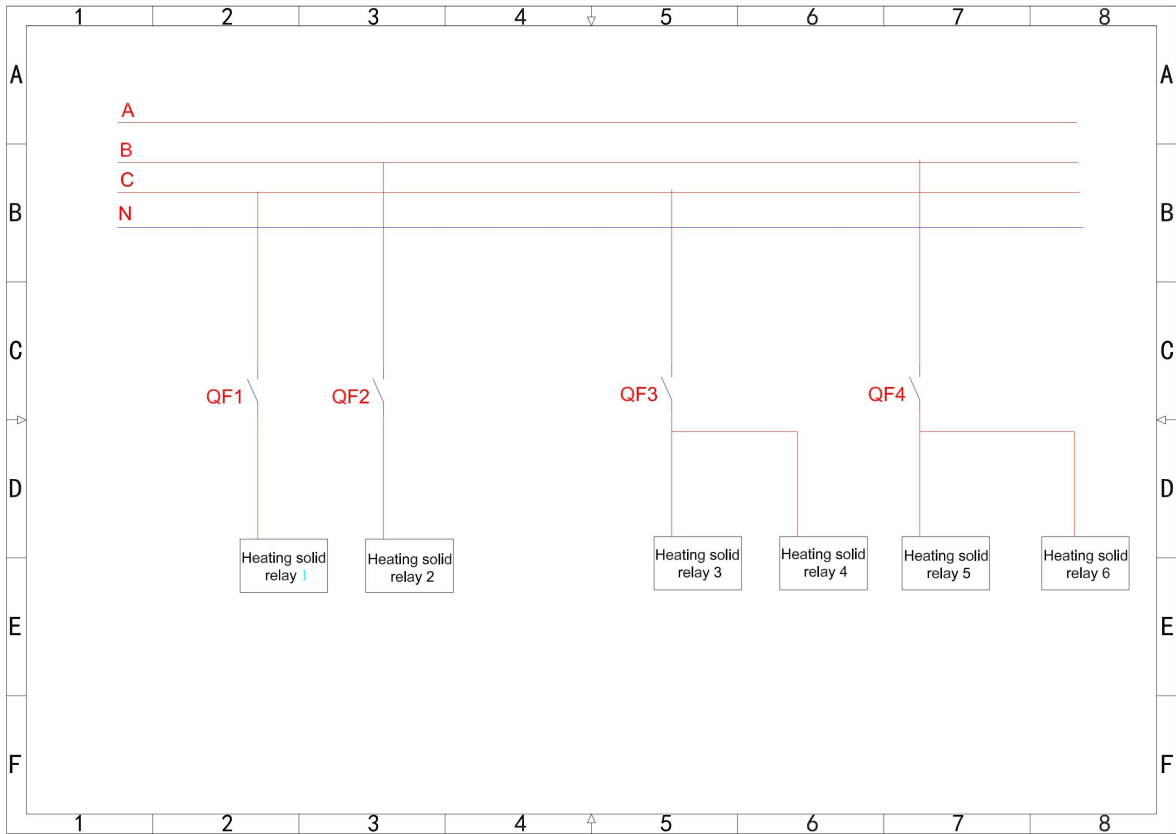
Fig. 6-2 Adjusting forming stretch

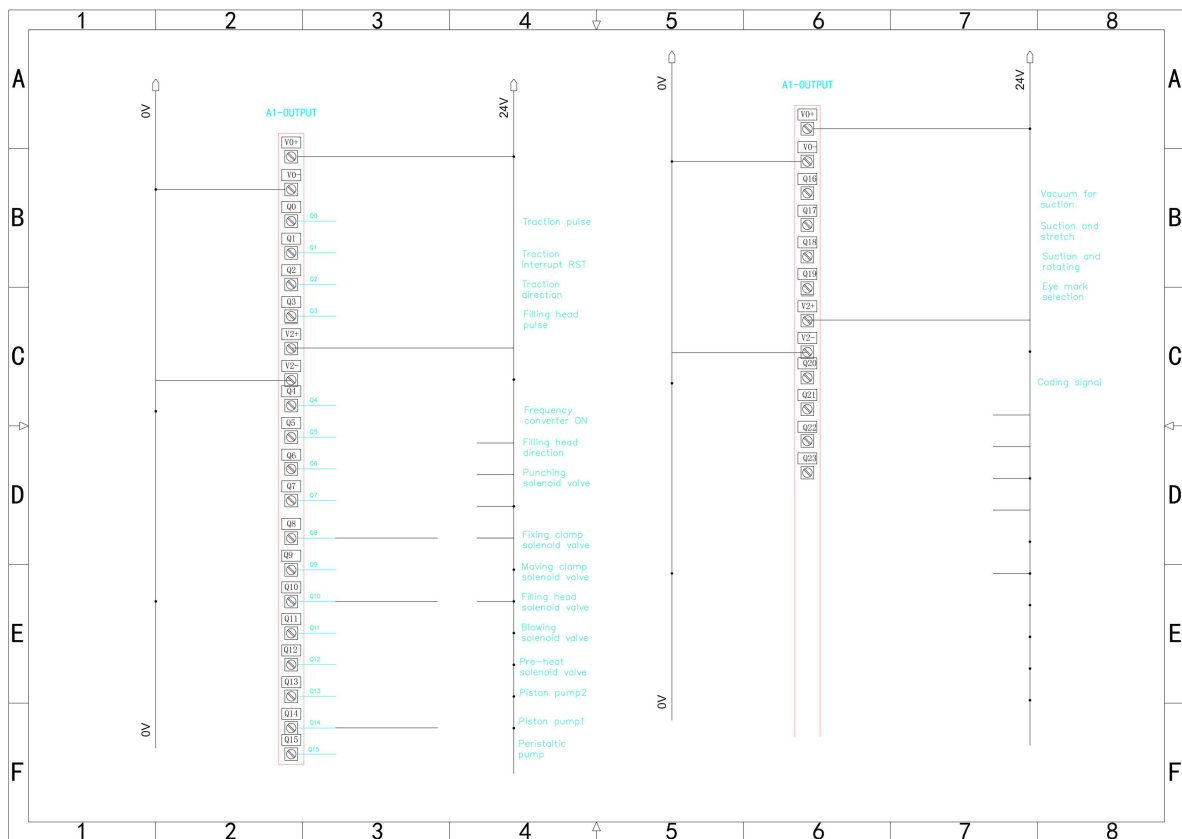
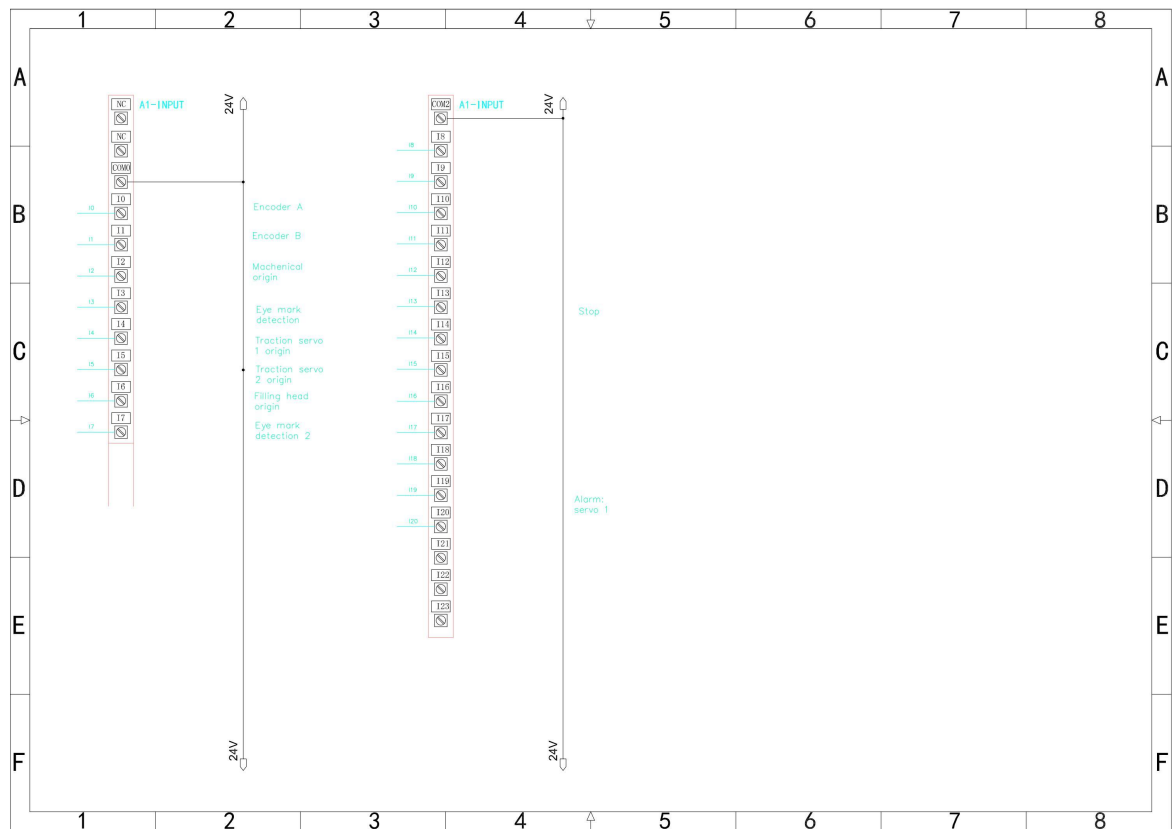


Fig. 6-3 Adjusting forming stretch

10. Circuit diagram







11. Tooling list

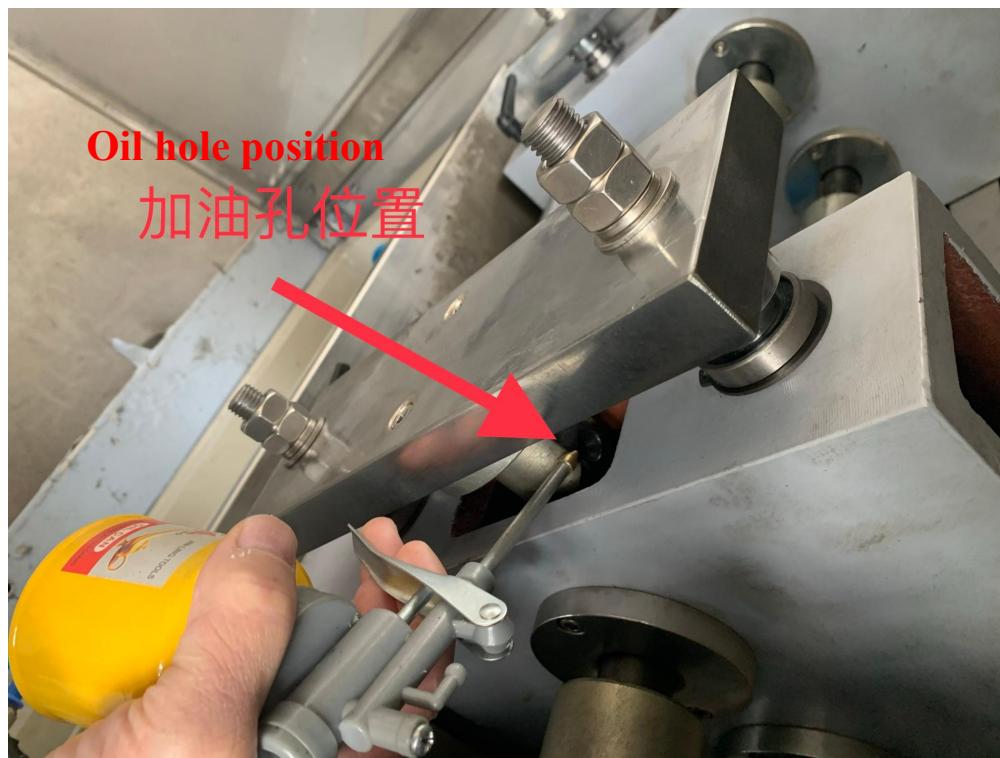
No.	Name and Size	Image	Unit	Qty
1	Steel wire brush		PC	1
2	Roller wheel and core		PC	2 for each
3	Roller pin 5*30		PC	30
4	Long nose pliers		PC	1
5	Screwdriver (straight and cross)		PC	1 for each
6	Inner hexagon spanner (5mm, 6mm, 8mm, 10mm)		SET	1

7	Oil pot		Bottle	1
8	PTFE tube		Meter	2
9	Electrical plan		Copy	1
10	Thermocouple K-type		PC	2
11	Solenoid valve		PC	1
12	QC		Copy	1
13	Inner indentation cutter		PC	6
14	Outer indentation cutter		PC	6
15	Spring for forming (12*2.5*30)		PC	10
16	Spring for cutter (12*2*30)		SET	10
17	User's manual		Copy	1

12. Maintenance

- 1) Add lubricant the front and rear forming heat sealing roller and cam once a day.
- 2) Add lubricant the front and rear forming roller and cam once a day.
- 3) Add lubricant the front and rear sealing cam and roller once a day.
- 4) Add lubricant the front and rear punching/cutting and the eccentric wheel once a day.
- 5) Add lubricant into the oil hole of the front and rear eccentric wheel of indentation and cutter once a day.
- 6) The filter requires adding special oil for the cylinder once a week, the oil displacement can be adjusted.

See the figures for your reference below:



Lubricate here





