

ANHUI KOYO BEVERAGE .CO.,LTD
安徽蓬源饮料机械有限公司

ANHUI KOYO BEVERAGE MACHINERY .CO.,LTD
安徽蓬源饮料机械有限公司

Manual For Pouch Filling and Sealing Machine

**Before use,
Please read this manual
and Keep it for subsequent reference.**

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IMPORTANT

- ◆ In order to make this machine acquired the best capacity, please read this instruction book carefully before you do any adjustment to it.
- ◆ This machine must be operated by the personnel who have been trained up to grade.

PREFACE

Thank you for your selecting this machine. This “USER’S MANUAL” shows the function and operation method of the BD1410A also introduces the safe operation. Please read this manual carefully so as to let you know better and use well the machine before running. In order to consult with it in future, please preserve this instruction book carefully after you have read it.

	BEWARE ELECTRIC SHOCK
	BEWARE HOT SURFACE
	WATCH YOUR HAND

We have done our best to make this instruction book doesn't have the mistakes and the omissions. But because we improve our products continuously, some data can't exactly indicate the newest capability index of the product that it has introduced. If you need the more accurate technical information, please contact with LANGHUI Corporation to acquire the related newest information.

Chapter 1 Product Introduction

1-1. BD1410A structure schematic diagram

It is comprised of control system, filling and sealing system and feeding control system and etc.

- (1) Electrical control system: PLC, touch screen, temperature controllers, relays, fiber amplifiers, switching power supplies and other components.
- (2) Filling and sealing system: cylinders, filling nozzles, sealing parts.
- (3) Feeding control system: sanitary pneumatic forced pump.

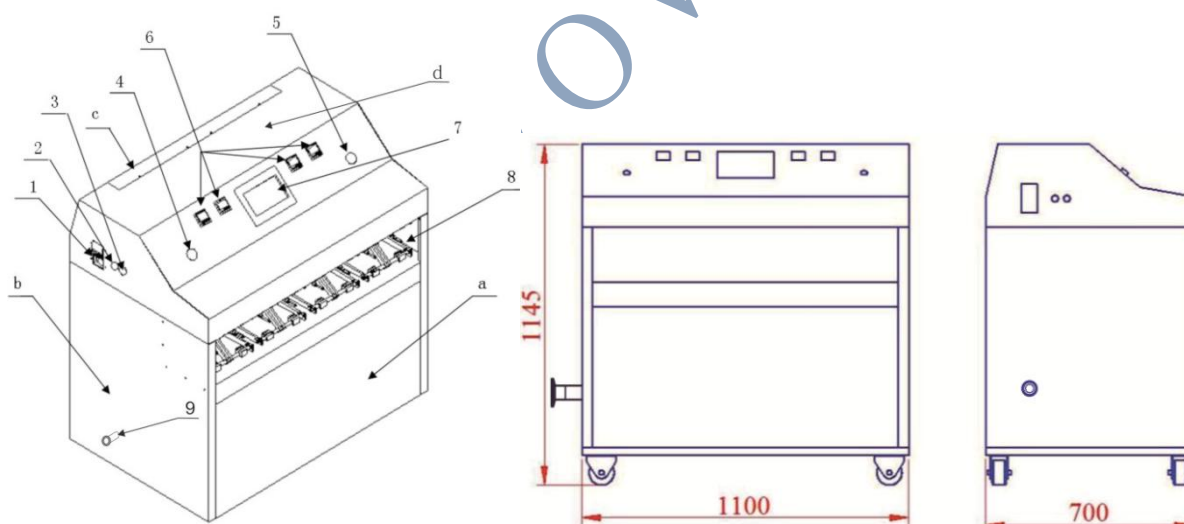


Figure 1-1BD1410Aview

- ①Power switch ②Start button (green) ③Sealing heating button (red) ④Start filling 1-4 button ⑤Start filling 5-8 filling button ⑥Station 1-4 temperature table ⑦Touch screen ⑧Filling-station 1-4 ⑨Quick feeding inlet
a.Panel b.Side board c.Rear board d.Electrical enclosures

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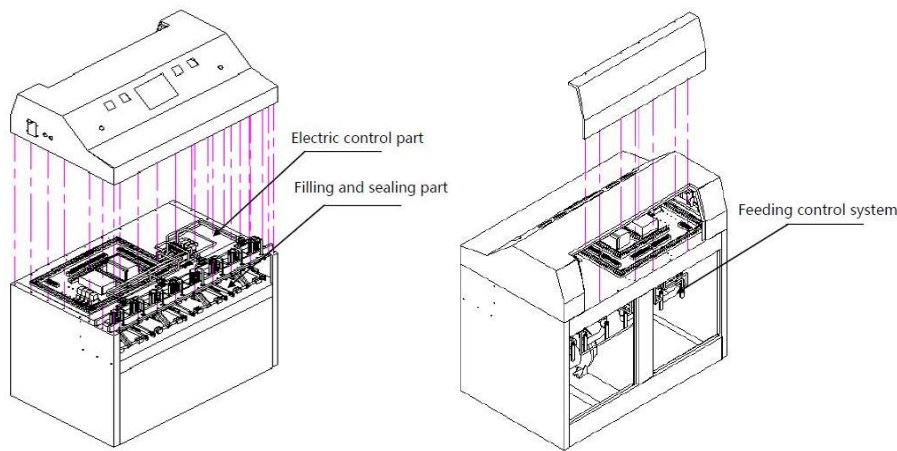


Figure 1-2 BD1410A Electric control system Figure 1-3 BD1410A Feeding control system

1-2. Applications

1. The stick bag is a popular international packaging shape. It is also called pre-shaped bags, expansion bags. It is a novel form of packaging, diverse modeling, reliable measurement, seal firm, easy to use, and low cost packaging materials, etc.
2. It is widely used in dairy products such as milk, yogurt, lactic acid drinks, Japanese tofu, soy sauce, cooking oil, drinks, mineral water, cleaning supplies, alcohol, etc.

1-3. Features

1. It adopts 304 stainless steel, and PLC system control.
2. Chinese and English man-machine interface, Visualization operation
3. It adopts pressurized filling in airless. And it can avoid secondary pollution.
4. It is automatic entire process by PLC control system, such as filling, sealing, dropping bags, etc.
5. Unique filling nozzles design, no drip filling.
6. Unique sealing part, seal firm bag and avoid squeeze hand.

1-4. Main configuration

1. SUS304 stainless steel

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2. WEINVIEW touch screen, MITSUBISHI PLC system, Other CHINT electrical equipment.
3. AIRTAC pneumatic components
4. Food - grade silicone tube
5. Sanitary pump

1-5. Selections help for plastic bag machine

1-5-1. Filling material viscosity

1. Standards: adopting sanitary centrifugal pump, mainly applied to low concentration liquid.
2. Viscous-type: adopting sanitary pneumatic forced pump, mainly applied to large viscosity liquid.

1-5-2. Bag material

1. Standards: BOPP laminated LDPE.
2. Special: PE or Nylon. It need add Teflon material in the sealed parts.

1-6. Technical data

Packing rate	2000-3500 bags/hr
Filling nozzles	8
Workstation	2
Bag material	BOPP laminated LDPE, various shapes pre-shaped bags
Film thickness	> 0.18mm
Filling volume	≤500ml (Custom)
Filling accuracy	±2%
Power input	220V 50Hz / 220V 60Hz / 110V 60Hz
Power	0.8-1.6 Kw
Air Pressure	0.6-0.8 Mpa
Air Consumption	0.25-0.50 m³/min
Net weight	≈80 kg
Dimension	1100×700×1050mm ³ (L×W×H)

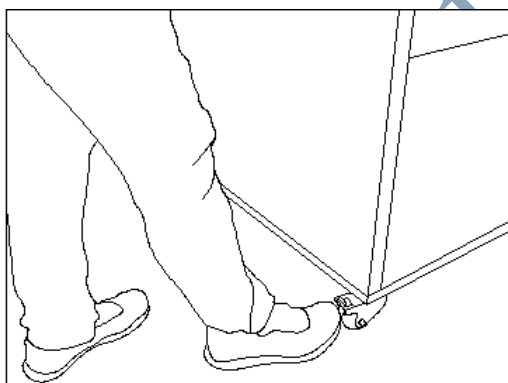
Chapter 2 Operation

2-1. Before run the machine

2-1-1. Check the wooden case for any breakage, such as collision, dumping and other broken. if find exception, please contact us in time. Open the case, remove all packaging materials. Please check the parts and machine is missing or damaged.

2-1-2. Before use this machine, check every transmission part is normal or not. Every fastener is loose or not.

2-1-3.After confirming the position of machine, brake the both end castors.



2-1-4. It must have a good ground wire connection. Please check the standards of the local electricity supply grid. The standard is 220V, 50Hz. Please check the cable lines to meet the power requirements of this machine, such as control switch, insurance, wire diameter, etc. The power supply cord must use 2.5mm² 3 core rubber sleeve line.

2-1-5.Please check and rinse the pipeline before connecting the delivery pipe to the quick connector of the sanitary pump. It does not allow foreign bodies into the fluid pump when the machine is running. If cannot assure it should be added a filter between the quick connector of the fluid pump and the delivery pipe. The trend of the pipeline should be easy to exhaust the air of the fluid pump cavity body. And it must ensure the pipeline and the connector seal airtight. It should be exhaust the air of the fluid pump cavity body before run the fluid pump if connect the delivery pipe temporarily.

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2-1-6. Please check the standards of the air supply. Air Pressure is in 0.6-0.8 Mpa.

2-1-7. Please connect the $\varnothing 8\text{mm}$ compressed air pipe to the FRL of the machine. And input cleanse and qualified compressed air.

2-1-8. Cleaning the machine and the cleaning shall include the pipelines and the surfaces.

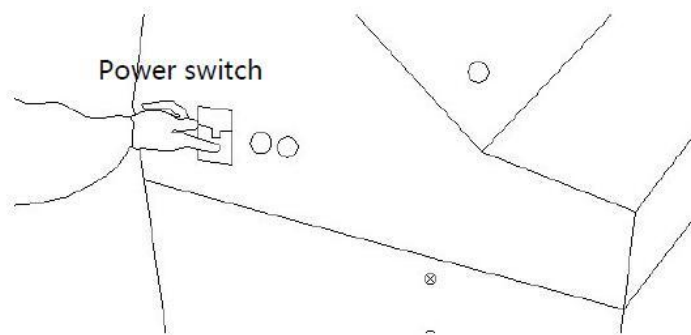
2-2. Run the machine

2-2-1. Please confirm the electricity, compressed air and liquid are qualified or not.

2-2-2. Connect liquid or water to the fluid pump and exhaust the air of the pump.

2-2-3. Unscrew the air valve of the air compressor. And set the pressure reducing valve from 0.3Mpa to 0.5Mpa.

2-2-4. Switching the main power switch.



2-2-5. Click the start button  , the touch screen is light and automatically enter

the main interface. **Please click ENGLISH and enter into the English**

FUNCTION SELECTION OPTION. Or click ESPAÑOL and enter into the Español FUNCTION SELECTION OPTION.

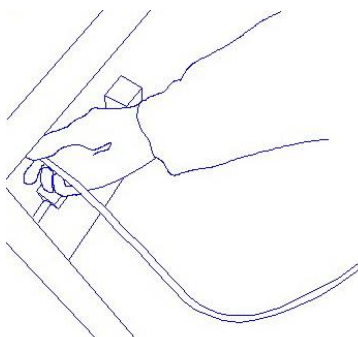
2-2-6. Click the sealing button  , the temperature controlled meter are light and heating the seal. It must set the temperature controlled meter. The general temperature is about 140°C . The correct temperature is based on the production speed, the thickness of the bags, working atmosphere. The preheating temperatures are constant and then produce.

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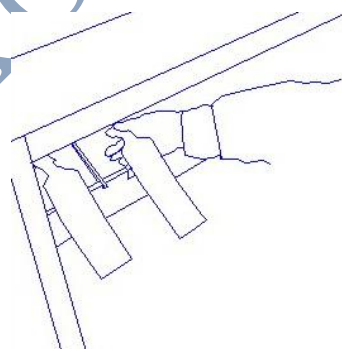
2-2-7. Air Exhaust. Take the air exhaust soft pipes connected to the filling nozzles,

long touch **STATION 1/2 EXHAUST** **STATION 3/4 EXHAUST** and until exhaust air. Then click **START** button and stop run.



2-2-8. After the completion of preparations, the operator can sit in front of the machine and sequentially put the bag into filling nozzle (The filling nozzle 1 to 4 is **STATION 1** and the filling nozzle 5 to 8 is **STATION 2** from the leftmost). Insert

one station and click **START FILLING** then automatically fill, seal and drop bags.



2-3. Touch screen key names and functions

2-3-1. Touch screen view



2-3-2. Set parameters. Click **PARAMETERS** and then set parameters.

SET PARAMETERS

FILLING TIME 1	FILLING TIME 2	FILLING TIME 3	FILLING TIME 4
SEALING TIME 1	SEALING TIME 2	SEALING TIME 3	SEALING TIME 4

CONFIRM

2-3-2-1. Filling time: According to the volume set the filling time.

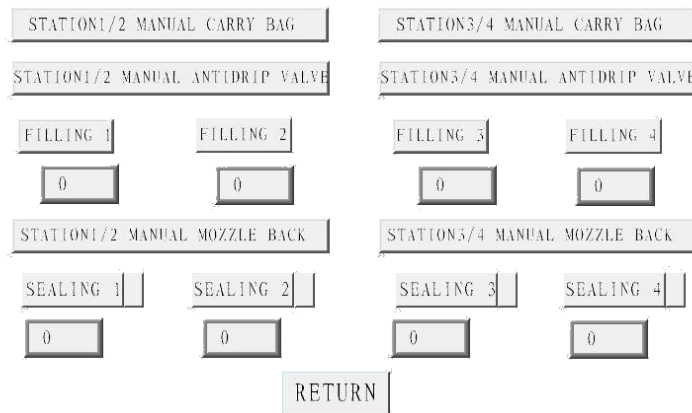
2-3-2-2. Sealing time: The correct temperature is based on the production speed, the thickness of the bags, working atmosphere. The preheating temperatures are constant and then produce.

2-3-2-3. Set up and click on "**CONFORM**", the system will save all setting parameters.

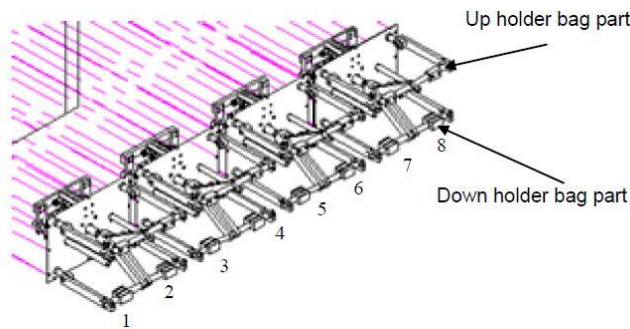
2-3-3. **MANUAL**: Click **MANUAL** and go to manual mode, then click on "DUBUG" and displays the following screen. It is mainly used to debug and maintain.

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2-3-3-1. STATION 1/2 MANUAL CARRY BAG: It control the holder bag parts open and close of the station 1 and station 2. And then manually adjust the filling and sealing action.



2-3-3-2. STATION 3/4 MANUAL CARRY BAG: It control the holder bag parts open and close of the station 1 and station 2. And then manually adjust the filling and sealing action.

2-3-3-3. STATION 1/2/3/4 MANUAL ANTIDRIP VALVE: It manually control the antidrip valve of the corresponding station opening and closing.

2-3-3-4. FILLING 1/2/3/4: It set of the filling volume corresponding station.

2-3-3-5. STATION 1/2/3/4 MANUAL NOZZLE BACK: Click on "Station 1/2/3/4 manual nozzle back", the corresponding filling nozzles will be pulled back; click on it again, the nozzles will be pulled out.

2-3-3-6. SEALING 1/2/3/4: Set the seal time.

2-3-3-7. RETURN: when finished setting, click on "RETURN" and return the main Interface. Then click on "MANUAL" to close manual mode.

2-3-3-8 RETURN: When finished debugging, click on "RETURN" and return the main Interface. Then click on "MANUAL" to close manual mode.

2-3-4. START: After the completion of preparations, close manual mode and exhaust air, then click on "START" to produce.

2-3-5. STATUS INDICATION: Green light mean in a working state, and no lights mean stop working.

Chapter 3 Maintenance

3-1 Cleaning Electrical part of the machine

Periodic cleaning of the electrical components. Brush the dust on the surface of electrical components by anti-static brush and absorb dust by the vacuum cleaner.

3-2 Cleaning the filling nozzles, pipes

Keep the machine each part and pipeline clean always. When stop using the machine or do not have long-term using, please rinse the every pipeline with clean water, the temperature above 85℃, and avoid residual liquid in the pipelines.

3-3 Lubricating the machine

It must add sufficient lubricant oil on all the transmission parts per shift. Otherwise, it is easy to increase the wear and caused machine fault and reduce the service life of the machine.

Chapter 4 Failure analysis and troubleshooting

Machine malfunction analysis: judge whether it meets the application requirements, fault belongs to which part of the mechanical, pneumatic or electrical, according to the working principle for inspection, repair and adjust it.

Press "**STOP**" button to stop when it overloading or motor idling. Run the machine again after troubleshooting.

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Common failure analysis, testing, exclusion list is as follows:

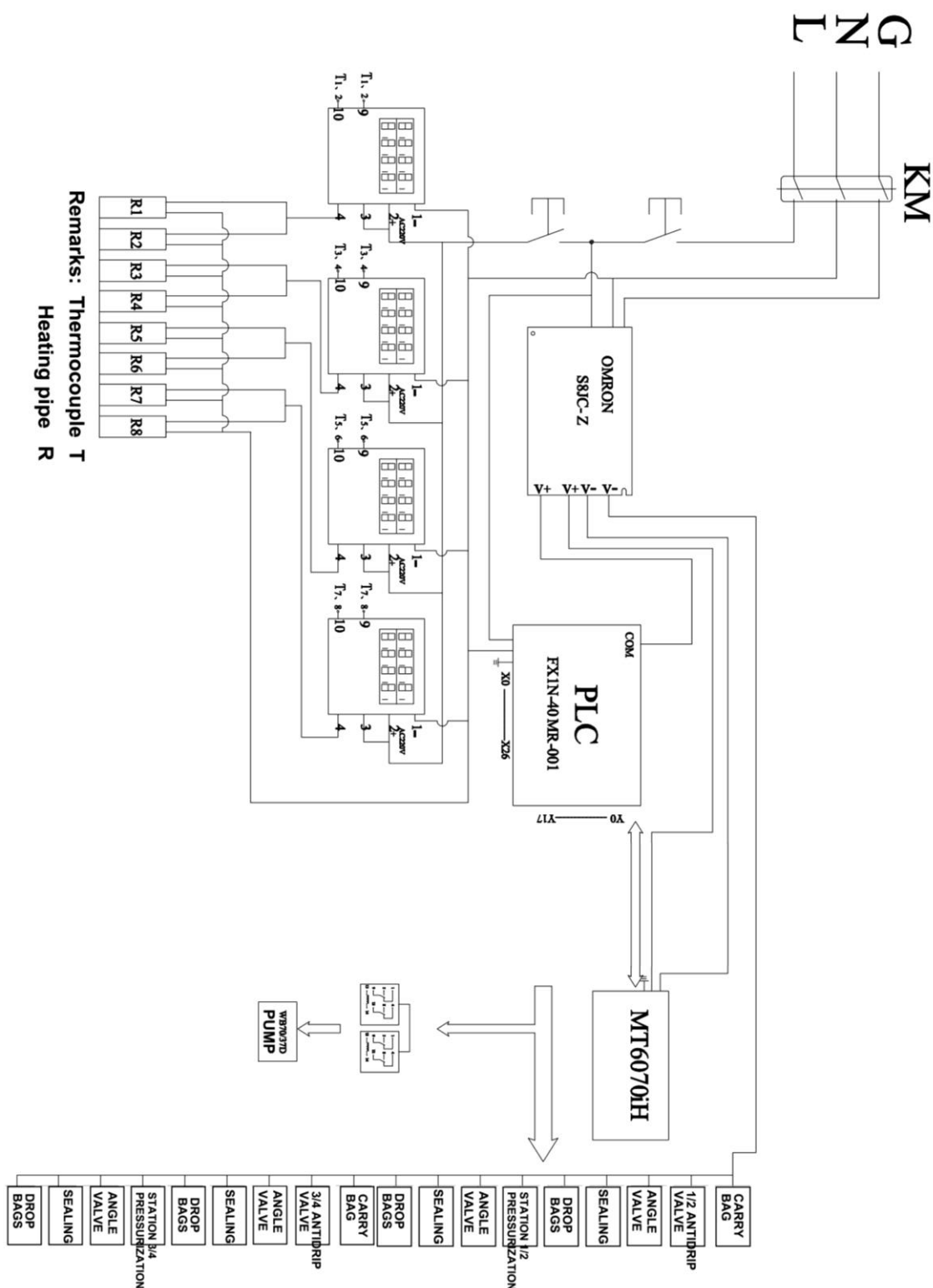
Fault	Analysis and Troubleshooting
Do not run or sudden shutdown	1. Power failure. 2. Fuse, cable, switches damage, repair or replacement. 3. It is leakage of electricity. Please debug and run it again. You also can click RESET button to reset. 4. The voltage is too low. The stable voltage is about 220V±10%.
Sealing bad	1. The bags quality is bad. Please replace the qualified bags. 2. The heating sealing temperature is not fit with the film paper required sealing temperature. Please reset the temperature of the temperature control meter. 3. The heating sealing parts are not clean. Please scrub them clean. 4. The voltage is instability or too low. Please adjust stable voltage. 5. The heating circuit is opening; the connector lug is loose and has carbon deposition. Please remove carbon deposition and tighten the wiring screws. 6. The heat-sealing head position is too high, and the pre-compression pressure cannot be formed on the lower die silicone mat. Please re-adjust the cylinder screw length to form a slight pre-compression pressure.
The motor sound is not normal	1. The power supply is not fit with the motor. Please adjust the power supply or replace the motor. 2. The motor bearing wears or lack of oil. Please replace bearing or add lubricating oil. 3. The fluid pump and filling pipeline has residual air. Please click each EXHAUST button and exhaust.
Filling drop	The sealing ring of the filling valve is damaged. Replace the sealing ring. Filling valve sealing ring is damaged, replace the seal.
Temperature meter shows heater tube not heating	1. Fuse is burnt out. Replace the fuse. 2. Temperature sensor is open circuit. Replace sensor. 3. Heater tube is open circuit. Replace tube. 4. Set temperature is error. Reset.

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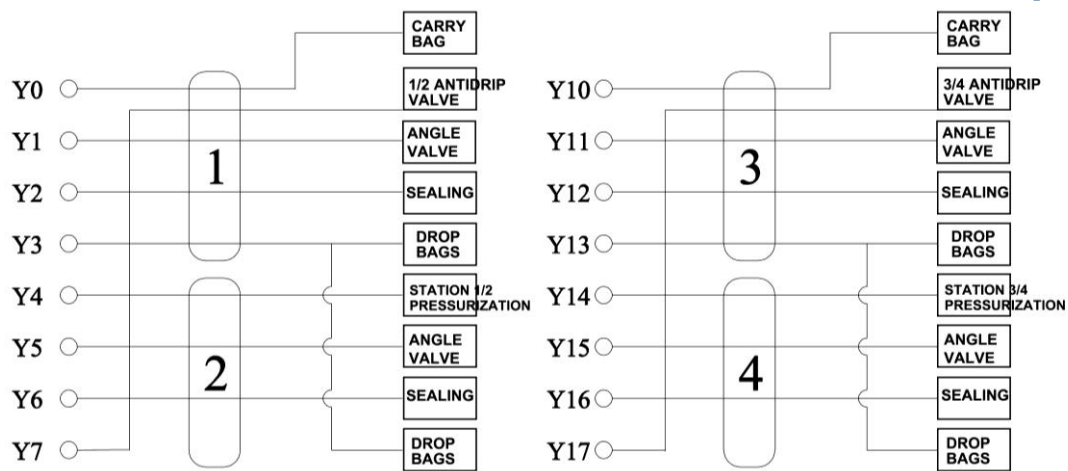
Appendix 1.Spare Parts and Tools List

SPARE PARTS LIST			
SN	Description	Standards	Quantity
1	O-ring	Φ16x2	10
2	O-ring	Φ24x2mm	10
3	Silicone pad	20x12x2mm	4
4	Silicone tube	Φ14x380mm	2
5	Silicone tube	Φ6x500mm	4
6	Single side seal pad	10cm	3
7	Double side seal pad	10cm	4
8	Thermocouple	Screw M6	2
9	Heating pipe	Φ10 x40mm	2
10	Socket set screw	M5×20	8
11	Socket set screw	M5x10	8
12	cable tie	3x150	10
TOOLS LIST			
SN	Description	Standards	Quantity
8	Spanner	8--10	1
9	Allen wrench	3mm	1
10	Allen wrench	4mm	1
11	Allen wrench	5mm	1
12	Flat Screwdrivers		1
13	Phillips Screwdrivers		1
14	Manual		1

Appendix2. Electrical Schematic Diagram



Appendix3. The Electromagnetic Valve



Appendix4. Y Output

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24+	○	R	○	D1-1	155
com	○	Y	○	D1-2	160
com0	○	Y	○	D1-3	150
com1	○	Y	○		
com2	○	Y	○		
Y0	○	B	○	D1-4	160
Y1	○	B	○	D1-5	160
Y2	○	B	○	D1-6	160
Y3	○	B	○	D1-7	155
Y4	○	B	○	D1-8	160
Y5	○	B	○	D1-9	155
Y6	○	B	○	D1-10	160
Y7	○	B	○	D1-11	155

com3	○	Y			
com4	○	Y			
com5	○	Y			
Y10	○	B	○	D2-1	180
Y11	○	B	○	D2-2	170
Y12	○	B	○	D2-3	175
Y13	○	B	○	D2-4	170
Y14	○	B	○	D2-5	190
Y15	○	B	○	D2-6	170
Y16	○	B	○	D2-7	180
Y17	○	B	○	D2-8	200
D1-3	○		○	D1-12	165

Note: COM0 Parallel COM1 Parallel COM2 40:
COM3 Parallel COM4 Parallel COM5 65