



QOMOLANGMA® LIQUID COATING MACHINE



FMJ-3300-WL User Manual

Please read this manual carefully before operation

INTRODUCTION

Liquid laminator is one kind of machine, which uses special water-soluble liquid to spread on picture surface and drying it quickly; thereby forming a protecting film on the picture surface. It is widely used in the post-production of outside / inside advertisement and vehicle body advertisement.

Liquid film is formed directly on the picture surface, so the film thickness can be controlled as thick as it can, and affixed firmly.

FMJ-3300-WL liquid laminating width could reach 3.2 meters (126in), especially fit for the wide-breadth advertisement picture. In order to save energy, you may use right part of the heating box to reduce the power (50%) when the picture width is less than 1.6 meters.

This machine works simply and safely with low noise. It uses liquid water-soluble film, which is innocuous and flavorless, also be clean out without pollution. It is good for protecting environment very well.

This machine can carry out laminating, drying and winding-up in one process, thus it save time and space greatly. Due to the price of liquid film is lower than cold laminating film, this make output rate is very high. Using liquid laminator can reduce the film laminating cost much more than ever before. You can get back your investment in a short time.

The picture laminated will show more bright-color and beautiful, with the function of waterproof, sun proof, and anti-ultraviolet radiation, hence prolong its lifetime much more, of course the liquid film quality, which you select, is vital to the picture.

Choosing this liquid laminator and liquid film with high quality, you will get a first-level advertisement picture and benefit from it greatly.

Before operating FMJ-3300-WL liquid laminator, please read the instruction carefully in order to operate correctly the machine. Our company will also provide free-charge training for operator.

I. Mounting (Installation)

1. When opening the package, please first remove the attached fittings for this machine, and then dismount the fixed chassis's bolt and clamping-plate, then remove the wood chassis supporters, let the four truckles falling on the floor. After that, you can use crane or manpower to move the machine to the ground, and put it in its work area.

Notice:

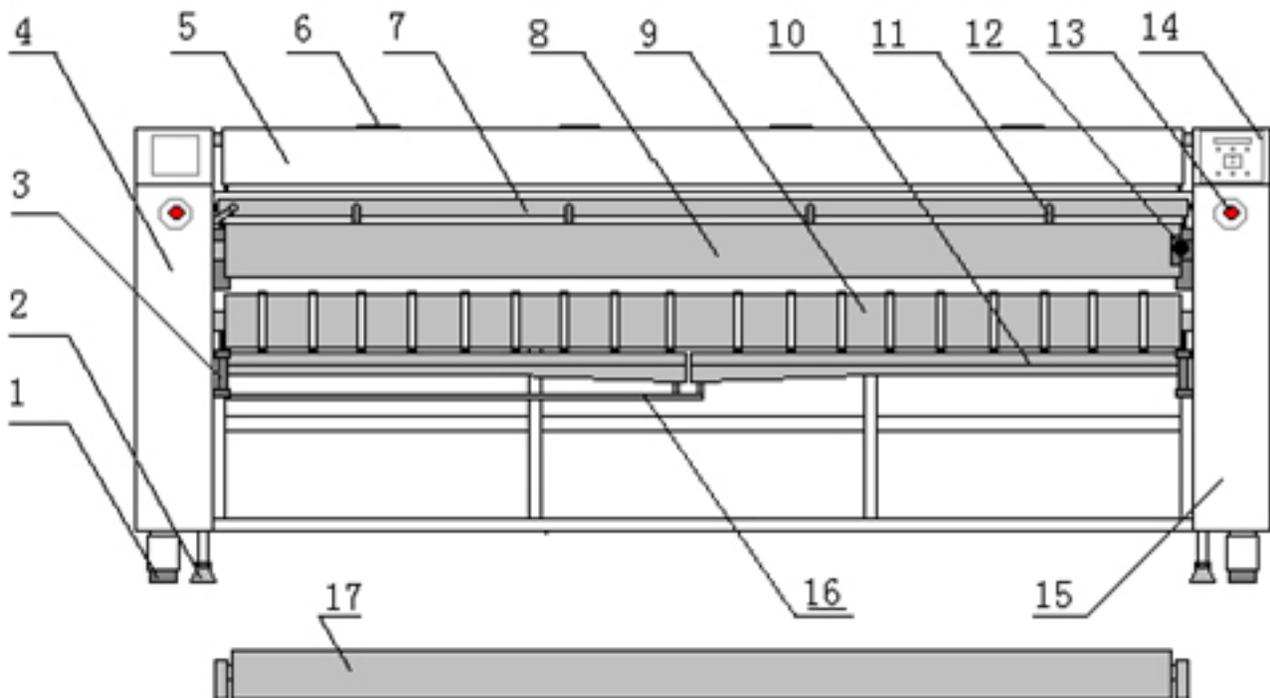
- ① For its huge body and heavy weight, careless removing may injure human body or make damage to the machine. Moving the machine should be in charge by someone who has practice experience.
 - ② Try not to move this machine on unevenly ground.
2. Place this machine in an area with sufficient operating space. The operation area should keep cleanness, ventilation, lighting sufficient and far from dirt, dampness and causticity, also conform to the safety requirement of fireproof.
 3. After the machine placed in the work place, please mount and adjust the four foundation bolts for leveling the machine in ground.
 4. Switch on power supply: This machine uses 230 / 400V, 3W+N+PE, 50Hz. Its power is 12 kW, rated current 32A. Before switch-on, please check if voltage and current-carrying capacity of local power supply system conforms to the requirement on the machine nameplate to ensure safety.
 5. The wire of this machine should directly connect with air-breaker (user self-supply, 60227, IEC53, 5core, Cross area over 4.0mm²), and PE wire must connect well with earth wire. It should not be connected with plug or socket.
 -  The power cord shall be earthed reliably, and the reliability of protective earth should be checked. Ought to use the flexible circuit conductor of more than 4.0mm² to earth the equipment (the earthling resistance < 0.1Ω) so as to insure safety in operation and to avoid static electricity.
 - Notice: the machine is equipped with earth-leakage circuit breaker; however the reliable earth wire is needed. Don't lay the power cables on the walkway or put things on them.
 6. The machine shall be used below the ambient temperature 40°C.
 7. Environmental humidity: 30%-70%. Avoid using in place with higher temperature, humidity, and more dusts.

II. Data Sheet

Model	FMJ-3300-WL
Max. Coating Width	3200mm (126in)
Max. Laminating Thickness	32 microns
Max. Laminating Speed	0.5m - 1.5m (19.685in - 59in) / min
Laminating Temperature	100°C - 120°C (212°F - 248°F)
Max. Heating Temperature	150°C (302°F)
Forward / Reverse	Yes
Emergency Stops	Yes
After Laminating Pickup	Yes
Heating Power	6KW + 6KW
Film Supply Mode	Magnetic suspension liquid pump, circulation supply
Heating Method	Infrared heating lamp
Motor Power	100W
Power Supply	AC 380V; 50Hz or 60Hz
Machine Weight	700kg (1543lbs)
Machine Dimension	3810mm x 1100mm x 1084mm (150in x 43.3in x 42.7in)
Package	Fumigation free package
Packing Size	3980mm x 1330mm x 1310mm (156.7in x 52.4in x 51.6in)
Gross Weight	960kg (2116lbs)

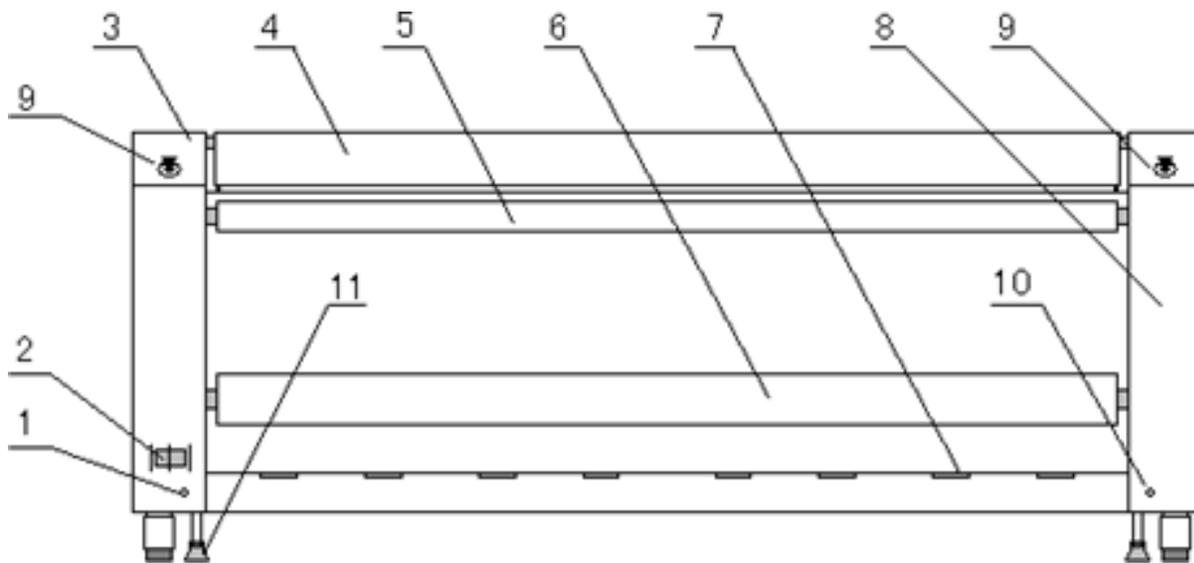
III. Structure

Fig. 1 (Front View)



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|-----------------------------|--|--|
| 1. Truckle | 2. Bolt | 3. Lift cylinder for guiding roller |
| 4. Left side cabinet | 5. Drying box | 6. Air inlet for drying box |
| 7. Wiping rod component | 8. Upper guiding roller | 9. Lower guiding roller |
| 10. Liquid collector | 11. Valve for liquid film supply | 12. Damp hand wheel for guiding roller |
| 13. Emergency switch | 14. Control panel | 15. Right side cabinet |
| 16. Liquid film return pipe | 17. Picture supporting roller (2, fixed below machine) | |

Fig. 2 (Back View)

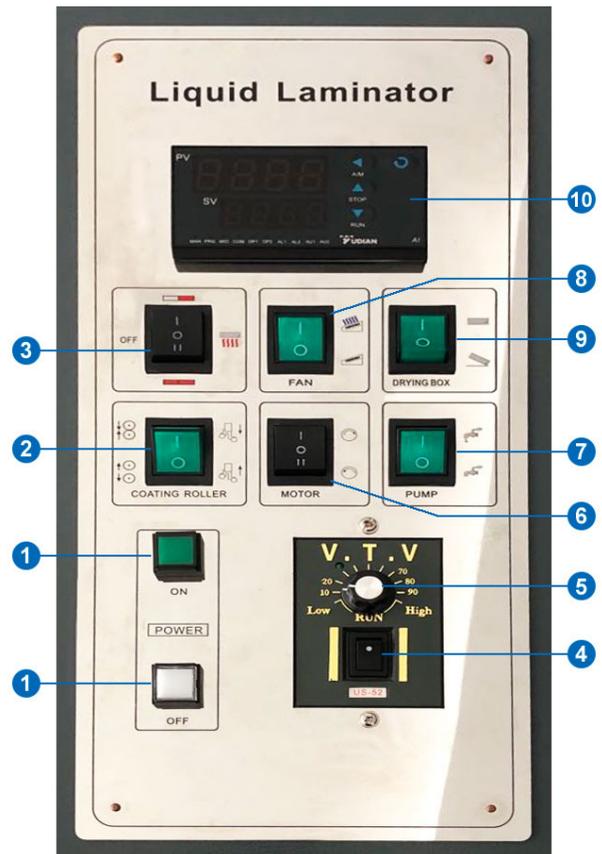


Photograph Illumination

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|---------------------|------------------------------------|---------------------|--------------------|
| 1. Power wire | 2. Main switch | 3. Right side frame | 4. Drying box |
| 5. Guiding roller | 6. Roller for collecting picture | 7. Cooler | 8. Left side frame |
| 9. Emergency switch | 10. joint inlet for air compressor | 11. Bolt | |

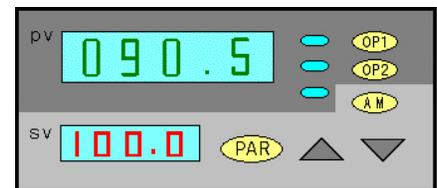
IV. Control Panel Instruction

1. Power Switch
2. Liquid wiping rod and Lift switch for guiding roller
3. Heater Control Switch
4. The Motor Switch of the collecting roller for pictures
5. The speed-adjusting button for the collecting roller for pictures
6. Work-state-selection switch of the collecting roller for pictures
7. Liquid pump switch
8. Fan cooler switch
9. Drying box lifting switch
10. Digital temperature controller



1. Power Switch: Press the white button "ON", main power lamp is on; press the green button "OFF" to cut off power supply.
2. Coating Roll (Liquid wiping rod and Lift switch for guiding roller): Press the upper position "ON" of the switch to lower down the liquid wiping rod and lift up the guiding roller; press the lower position "OFF" of the switch to lift up the liquid wiping rod and lower down the guiding roller. The liquid wiping rod and the guiding roller will at their lower position without compressed air.

3. Heater Control Switch: Press lower position of the switch to heat with the 2 drying boxes, at same time the fan in the drying boxes begin to work; press upper position of the button to heat with the right drying box; Press "OFF" in middle of the button will stop heating. The fan on the drying box will automatically stop work after 2 minutes later.
4. The Motor Switch of the collecting roller for pictures: when this switch is in "ON" position and to be pushed upward, the motor will turn on. Rotate the speed-adjusting button. The collecting roller for pictures will work.
5. The speed-adjusting button for the collecting roller for pictures: turn on the Motor Switch of the collecting roller for pictures, rotate the speed-adjusting button in clockwise or counter-clockwise to increase or decrease the speed.
6. Work-state-selection switch of the collecting roller for pictures: when the switch is in upper position "ON", the roller will run in positive direction. When the switch is in lower position "OFF", it is in Free State. At this time, you can take the picture off.
7. Liquid pump switch: Press upper position "ON" of the switch, the switch lamp will be on, and the pump will begin to work. Rotate the liquid pump valve. Liquid will be supplied onto the picture. Pressing the lower position "OFF" of the switch, the pump will stop work. At same time, switch off the valve.
8. Fan cooler switch: Press upper position "ON" in the switch, the cooler will begin to work; Press lower position "OFF" in the switch, the cooler will stop work. The speed-adjusting button, equipped in right frame, can regulate the cooler speed.
9. Drying box lifting switch: Press the upper position "ON" of the drying box lifting switch", the drying box will lower down; Press the lower position "OFF" of the drying box lifting switch, the drying box will lift up. The drying box will lower down automatically without compressed air.
10. Digital temperature controller: Using TH8 digital temperature controller, its measuring accuracy is 0.5% with resolution of 1 °C. This machine has been set and tested well in functions before ex-factory. The users only need to set temperature according to laminating requirement. "SV" displays the setting temperature value. "PV" displays the measured temperature. The method is to keep pressing the SET (DISP) for 3 seconds to enter into the PID Adjustment Menu in display measurement mode. If you want to modify the setting value, press SET + \wedge keys at the same time. The nixie tube will flash, and then jog the \wedge key to change the modifying bits. Press \wedge / \vee keys to modify the data. Press SET to confirm the entry. Please refer to the Manual for the controller to set other parameters.



Notice:

- ① The temperature displayed on the meter is the temperature inside the drying boxes, not the temperature of hot air at the outlet of the drying boxes.
- ② The operating instruction attached the machine for your reference.

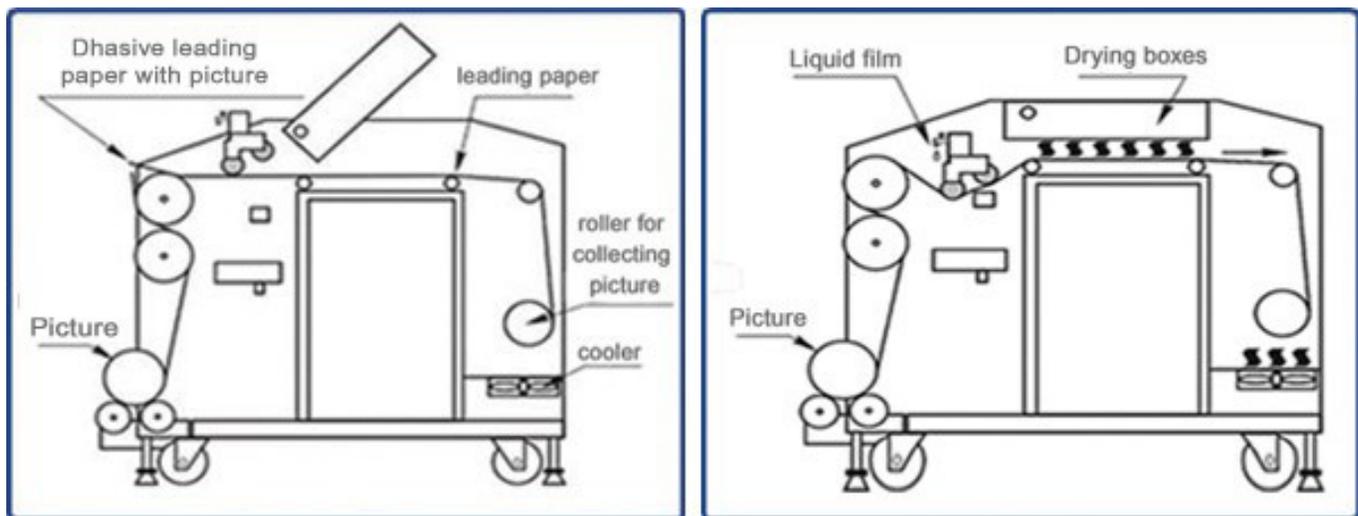
V. Liquid laminating operating procedures

1. Compressed air: connect the compressed air pipeline with the joint at the left side in the rear of the machine. Then turn on the air supply valve for compressed air when it is confirmed that every thing is OK. The display pressure is about 0.6 Mpa.
2. Adding liquid: check plastic pipes for the connection between liquid tank and pump, the connection between pump and nozzle, the connection between liquid collector and the tank. Then add liquid into the tank.
3. Test run and preheating: Turn on the main switch (see Back View Fig.2) and test running the machine when air pressure reaching 0.6 Mpa (6 kgf/cm²). To do as following procedure: Press the power switch "ON" to connect power supply; the switch lamp will be on. Press the drying box switch to let it lift and fall. Press the switch for the wiping rod and the guiding roller to let it lift and fall. Press the heating switch, hot air should come out from the bottom of the drying boxes. Then press upper position "ON" of the motor switch for collecting roller. Then rotate speed-adjusting button in clockwise to let collecting roller for picture work. Press the liquid pump switch and open the valve for liquid supply. After a while, the liquid will flow out. The liquid flowed out will come into the liquid collector and return back to the liquid tank.

- Placing Picture on the machine: paste a piece of leading paper (cloth) about 1.5 meter long on the collecting roller for picture, then paste the picture with the leading paper on the front guiding roller (see Fig. 1). The leading paper must be pasted straight, neat and flat on the collecting roller for picture; otherwise it will be deviation from the roller. After pasting picture, let the picture under the wiping rod. Press the switch and lower the wiping rod.

Notice:

- ① Trial operation is very important before real operating. Through it we can find whether there is anything wrong with this machine to avoid it not working after fixing picture on the machine.
- ② On the other hand, it is more important that operator shall be familiar with machine's functions and operating procedure in order to avoid any loss due to failure operation.
- ③ There is a damp device for the guiding roller on the right side of machine. According to your need, increase the friction force of the guiding roller to let the picture stained. This will make the thickness of laminating film under 0.01mm and obtain optimum laminating speed.



FMJ-3300-WL Liquid Laminator Process

- Liquid film supply: Press the switch for the liquid pump. Turn on the four valves supplying liquid. Liquid will flow out. Liquid supply flow can be adjusted through regulating the handle for the four valves. Some liquid will retain evenly in the channel formed between wiping rod and picture. The excessive liquid will overflow into liquid collector from picture's two sides.
- Temperature and speed setting: Because liquid laminating and drying will be effected by such as temperature, dampness, liquid film's nature, film thickness, laminating speed and picture's quality, etc., the temperature setting is a variable. Generally temperature setting is between 120°C-130°C, speed will be set at 30% or so. The operator may adjust them by his experience in different cases.

Notice:

- ① Too low temperature and too high speed may cause the picture adhesion together due to the liquid film not dry completely when collecting picture. Over high temperature and over low speed may burn the picture. During laminating, operator must pay attention to the temperature and speed to ensure the laminating quality.
 - ② In order to get optimum temperature and speed setting, operator should use the same material with the picture to make a trial laminating. Only after mastering the necessary experience, operator could work on target picture to avoid losses.
 - ③ There is a speed-adjusting button equipped in the right frame of the machine to adjust the cooler speed.
- Laminating: carry out laminating after completing the all above preparing works. Before the work is over, the operator shall firstly stop liquid supply. Slow the speed when the last part of the picture passes through drying boxes (thus this part of laminating is thicker.). After the end of picture passing through the drying boxes, press the "OFF" position in the lift switch for the wiping rod to lift up the wiping rod and lower the guiding roller. Press the "OFF" position in the lift switch for the drying boxes to lift up the drying boxes. At this time, press the "OFF" position of selection-switch for the collecting roller to collect the picture.

8. Emergency button

① If the temperature is found too high (this may cause burning the picture), and without time to change the temperature setting value, you can lift up the drying boxes to avoid from burning the picture.

② If it is found that the machine is with troubles, press the emergency button to cut off power supply.



If meet abnormal situation and need to urgently stop machine in operation, press the emergency stopping switch or switch off the main switch according to the operator's position.



This machine is equipped with heating and drying system, and upon operation doesn't place the hand in the heating area, to avoid scalding of the skin.



Upon the machine working, don't allow any substance to block two fan openings at the upper surface of the heating box, to avoid damage of the heating box.



Upon the machine working, don't insert the rigid substance in two fan openings at the upper surface of the heating box, to avoid damage of the heating box.



During the operation, be careful not roll the necktie, hair, necklace, wristband etc. into the machine, lest unexpected injuries. And not insert any material into the machine; otherwise this would lead to the unnecessary damage of the machine body.



When lifting the heating box, pay attention to placing lightly. And don't place the hand onto the latter guide roll or the racks, to avoid the hand injure.



In process of moving or operating this machine, pay attention to the position of foot wheel, to avoid the feet injure.



It is suggested that the filming material used by this machine is the water-solvent type, and when using other solvent type, ought to consider its corrosively and inflammability.



The filming material used by this machine is harmless to the body, and can be used at ease.



This machine's power cord shall be connected to the air switch with protection for electricity leakage, and the air switch's nominal working current shall be no less than 32A.



If meeting the failure, the nonprofessional personnel shall not open the electric apparatus box to repair, and the professional personnel or manufacturer shall be asked to be responsible for the maintenance.



When maintaining the mechanic failure, firstly switch off the switch for main power supply. When necessary for opening the electric apparatus box in process of maintaining the electric failure, ought to switch off power supply for the external line, and the lively debugging and maintaining of this machine shall not be allowed. Don't touch the circuit controlling part in the electric control box.



The nonprofessional personnel do not open this machine's electric control box at will. This electric control box is equipped with key, and the special person shall keep the key.



When not using this machine for a long term, be sure to switch off the power supply from the external line.

VI. Maintenance work after laminating

Using wet cloth to clean the attached liquid on the wiping rod and on the liquid collector and components. After cleaning, put down the wiping rod.

Turn off the main switch and compressed air.

Notice: If you will not use it for a long time, you should drop the surplus liquid in the tank to its original container, and inject clean water into the liquid tank. Then turn on the liquid pump to circulate cleaning the liquid supply system to avoid from blocking of the pipeline, valve, liquid pump and supply valve due to liquid solidified.

VII. Maintenance and Attention Points

1. Keep the machine clean, especially the wiping rod must not have solidified film on it. To clean solidified film, do not use metal tool to avoid damage to wiping rod.

2. Check regularly whether each rotating components running well. In some conditions, it is needed to dismounting for cleaning and coating lubricating grease. The water retained in air compressor system of this machine (in right side) shall be cleaned out regularly. The oil level in oil cup should keep in normal range, when insufficient please add lubrication oil for special pneumatic tools.
3. Check abnormal sound or failure at once. Do not turn on the machine before shooting troubles.
4. Before checking machine, turn off the main switch to avoid electric shock and machine injury to human body.
5. The drying boxes of this machine are heating system with large power. Prohibiting heat-up without keeper. Do place flammable and blast able substance under the drying boxes and around it. Once the fire accident occurs, cut off the power supply and use the powder fire extinguisher to put out fire immediately.
6. The small air compressor is selected as general equipment for user. It's use and maintenance not including in this instruction. Please repair and maintain according to its operating instruction. This is not in the range guaranteed.



Switch off the pneumatic power after used! Before maintenance, if heating box is still in upholding state when switch off the pneumatic power, please use switch for pressure relieving within the equipment.

- ① When abnormal or failure is found and you can't shoot the trouble, please contact with the manufacturer as soon as possible.
- ② Pressing emergency switch will stop the power supply. When ready to rework it is needed to press the main switch again.
- ③ For other attention, please carefully read the "Special Attention" in the left side.

VIII. Attention Points for Safety Operation



1. The operator must read carefully the Manual for Operation, observing all the signs and warnings on the machine and instructions in the Manual, aware of safety requirements to avoid accidents.
2. The power supply shall comply with that of the requirements on the machine nameplate to ensure safety. The machine shall be earthed well. Don't lay the cable on the walkway or put things on it.
3. The drying boxes are heating devices with large power. It is prohibited that no man is in charge of them during heating. Switch off the power supply after the work is over. The power supply must be turned off when opening the cabinet doors for maintenance.
4. The maintenance work shall be carried out by the qualified personnel. Please contact with us when you can't shoot the troubles.
5. Don't use the machine near the water source or wash it with water. Don't place flammable and blast able substance around it.
6. The operator should be trained and familiar with the machine structure, performance and safety operation
7. If there are more than two persons operating at the machine, they should cooperate well. When one person operating the live parts, it should be ensured that there is no person in danger and no foreign substance at that place. In case of emergency, use emergency switch to stop the machine.

WARRANTY CARD

MODEL		LOT #	
BUYER		DATE	
SELLER		TEL	

Notes

- i. The warranty card should be filled by seller and kept by buyer. Alterations are prohibited.
- ii. The guarantee period is one year, and will be charged with material and labor cost after 24 months.
- iii. No free repair is available for any damages caused by the improper use.