

WL Series Liquid laminator



Apply to:

BU-1200WL

BU-1600WL

BU-2200WL

User's Manual

Introduction

Liquid laminator is one kind of machine, which uses special emulsified liquid to coat on the picture surface and drying the liquid film quickly; thereby forming a protective film on the picture surface. It is widely used in the post-production of outdoor/indoor advertisement and vehicle body advertisement.

A bed of solid film is formed directly on the picture surface, the spaces between molecules reduced greatly, and affixed firmly. It is impossible to depart the film from the picture.

This kind of machine can be used to laminate the picture with broad width, either standard wide picture or non-standard wide picture, not be limited to width of general film.

The picture will show more bright-color and beautiful, with the function of waterproof, sun-proof, and anti-ultraviolet radiation and scraping-resist. This will prolong the picture service life. Of course, it is very important to select liquid with good quality.

Choosing Beauty Brand series liquid laminators and liquid film with high quality, you will get a first-level advertisement pictures and benefit from it greatly.

Liquid laminating will reduce greatly the costs of advertisement pictures, and also reduce waste substances. This is very good for protecting environment.

The machine is easy to operate with high output rate. You will take back your investment in short time.

Before operating the liquid laminator, please read the

instruction carefully in order to operate correctly the machine.
Our company will also provide a free-charge training for operator.

I ·Mounting (Installation) :

1. The place for opening the package shall be near from its mounting place; it shall be flat and with enough space. Don't put the machine on tilted floor.
2. Be careful to disassembly the package to avoid damage the machine. Don't tamp or prize the package to avoid damages to the machine.
3. When opening the package, please first remove the top plate firstly, then remove the side plate; taking out the attached fittings for this machine, and then dismount the fixed chassis's bolt and clamping-plate, making the four truckles put on the floor. After that, you can use crane or manpower to move the machine to the ground, and push it to its work area.

Notice: Due to its huge body and heavy weight, careless removing may injure human body or make damage to the machine. The machine shall be moved and charged by person who has practice experience.

4. Place the machine in an area with sufficient operating space. The operation area should keep clean, ventilation, lighting sufficient, also shall conform to the safety requirement of fireproof. Never using air-conditioner or blower to cool the dryer down, meanwhile the machine should be put in the place where its humidity not exceeds 65%.
5. After the machine placed in the work place, please mount four foundation bolts to level the machine on ground.

6. Switch on power supply: This machine use a 3-phase AC380V (or to be made according to the customer requirements), 50Hz-60Hz, and maximum current 27A-30A. Before switching on the machine, please check if the local power-supply system conforms to the voltage indicated on the machine nameplate in order to ensure safety.
7. **Power supply connection:** a over-current protection switch and PE earth wire shall be set at the machine, and this shall be in accordance with the national or local electronics specification and standard. In any case, no switch can be set in the PE wire.

Notice: for the reason of safety, the machine is equipped with a residual-current action breaker, however the earth wire is still needed.

II·Technique Specification

Dimension: 2630mm×930mm×1050mm

Weight: 435 kg

Power Supply : 380VAC 50 Hz

Power : 8.4 kW, rated current 14A

Motor for speed-adjusting: 90W

Main switch : residual-current action breaker 3P+N
25A

Earth-leakage protective current $\leq 30\text{mA}$.

Laminating width: 2200 mm

Laminating speed: $\leq 1-1.5 \text{ m/min}$

Laminating thickness: 0.0075mm-0.01mm

Working mode: successive

Application: Laminating for advertisement outdoor/indoor,
vehicle advertisement, light-box as well as coiled

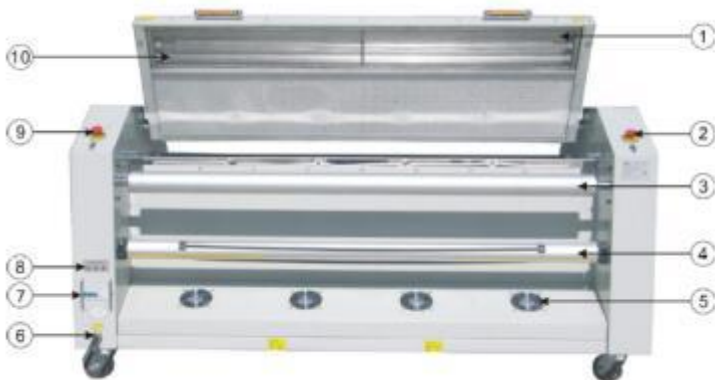
paper/cloth

III·Structure



1、Handle 2、Valve 3、Small guiding roller 4、Fan 5、Protective net 6、Spring support 7、Control panel 8、Glue wheel 9、Roller for supporting picture 10、Liquid receiver 11、Guiding roller 12、Wiping roller assembly 13、Cup for liquid receiver 14、Panel of instruction 15、Liquid Entrance 16、Drying oven

Fig. 1



1 Pressing net 2、Emergency switch 3、Guiding roller 4、Roller for collecting picture 5、Cooler 6、Power supply 7、Air switch 8、Phase-Lack indicator light 9、Emergency switch 10、IR heating pipe

Fig. 2

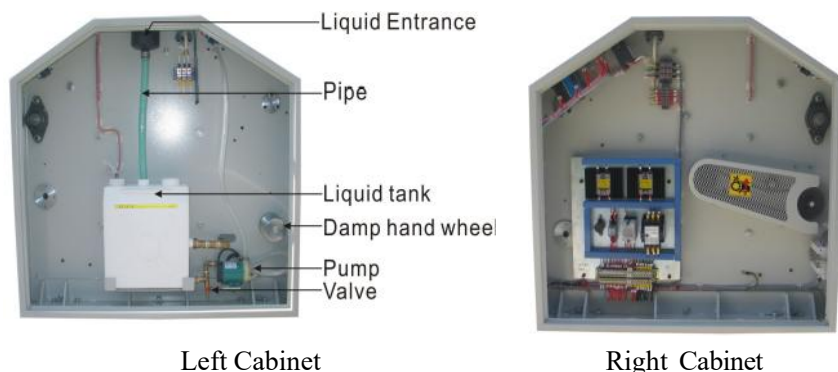
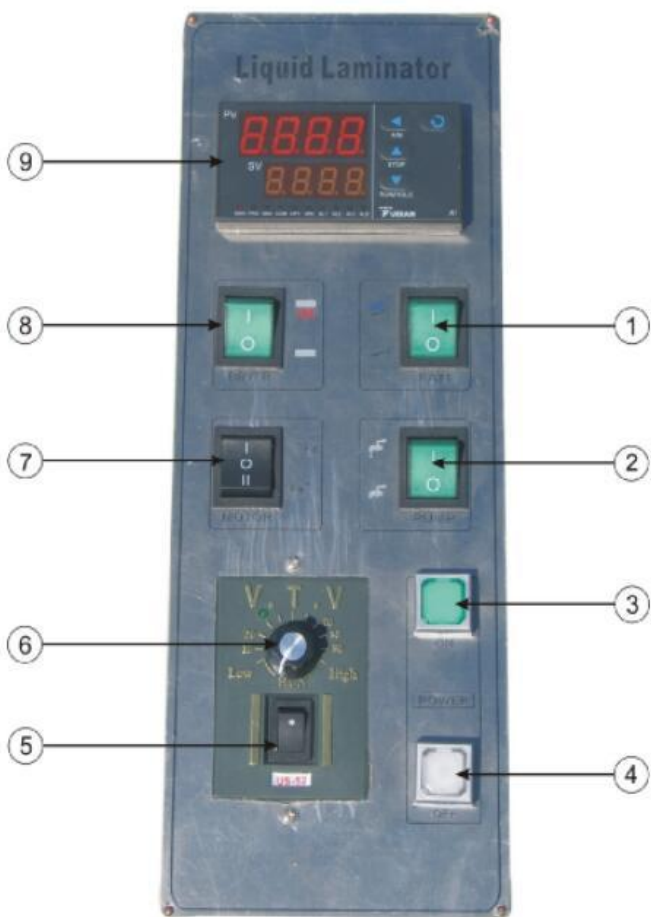


Fig. 3

IV-Control Panel Instruction

1. **Heater Control Switch:** press the “I ” at the upper position of the switch, it will start to heat, and the cooler over the drying oven begin to work. Press the “O” at the lower position of the switch, it will stop to heat; the cooler over the drying oven stop working after 2 minutes delayed.
2. **Cooler Switch:** Press the cooler switch “I ” or “O”, the cooler will work or stop.
3. **Direction Switch of the collecting roller for pictures:** Press the upper position “I ” of the switch to let the collecting roller for pictures rotating in clockwise. Press the lower position “II” of the switch to let the collecting roller for pictures rotating in counter-clockwise. The middle position of the switch is “stop”.



① Cooler switch ② Liquid film-providing switch ③&④ Power switch ⑤ Work state switch ⑥ Speed-adjust switch ⑦ Direction switch ⑧ Heater control switch ⑨ Temperature controller

Fig. 4



Fig. 5

- 1 、 Set temperature as per requirement. The temperature setting mustn't exceed 140℃.
- 2 、 Press keys to set temperature (The set temperature is displayed in "sv"). Press "PAR" key to confirm.
- 3 、 The temperature variable is displayed in ; the lamp "op1" is on.
When the set temperature is met, the "op1" lamp is out. Put down the drying oven to start work.
- 4 、 The temperature displayed in is the temperature inside drying oven. Other than the temperature of the picture surface.
- 5 、 Please refer to its Manual if you want to readjust the controller.



Fig. 6

4. **Work-State-Selection Switch of the collecting roller for pictures:** Press the upper position "I" of the switch, and the motor will work. Rotate the speed-adjusting button in clockwise, the collecting roller for pictures will run; Press the lower position "O" of the switch, the collecting roller for

pictures will stop.

5. **Speed-adjusting Button:** When the Motor is working, rotate the speed-adjusting button in clockwise or counter-clockwise to increase or decrease the speed.
6. **Liquid Pump Switch:** Press upper position “I ” of the switch, the indicator lamp will be on, and the pump will begin to work. Press the lower position “O” of the switch, the pump will stop work, the indicator lamp will be off.
7. **Power Supply Switch:** Press “ON” or “OFF” of the switch to turn on or off the machine. (Press again the “ON” position of the switch to continue work after pressing the emergency switch.)

Digital Temperature Controller: Using the digital 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 user 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, 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

8. **Notice :** The temperature displayed on the meter is the temperature inside the drying oven, other than the temperature of hot air at the outlet of the drying oven. Please refer to the Manual for Meter attached to the machine.
9. **Liquid capacity switch:** when the bucket of liquid storage is filled with liquid film, green light will bright, and if the light shows red with the company of warning, it means the liquid film in the storage is used up. (see Fig 6)

V-Liquid laminating operating procedures

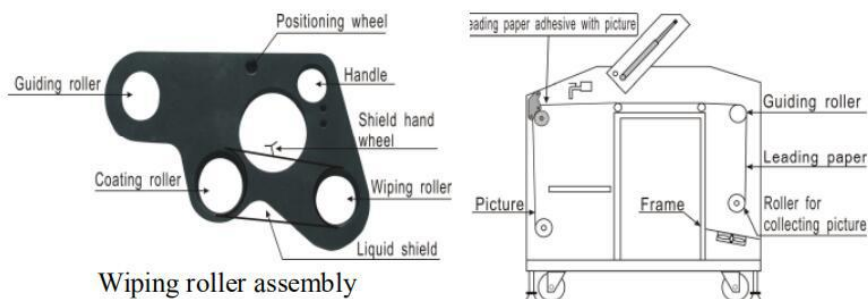


Fig. 7 (Liquid laminating operating procedures)

A、Preparation :

1. **Adding Liquid:** Turn off the liquid pump switch. Open the machine left cabinet door. Add some liquid filtered into tank depending upon the amount to be used. (It is permitted to add 5-10% clean water and stirring the mixed liquid. See liquid film instruction for details.)
2. **Temperature Setting:** Turn on the main switch (see Fig.2). Press the button or the button to set temperature (see Fig.5) . Because drying the liquid film is influenced by

many factors such as ambient temperature, dampness, property of liquid film, coated film thickness, picture feed speed and the base-material of picture etc., the temperature setting range is between 100°C-140°C. The operator may adjust them by his experience in different cases. It is recommended that the temperature can be set at 110°C, the speed at 30% when operating the machine at first time. Notice: Too lower a temperature may cause the picture distortion. Too higher a speed may cause the picture not dry completely.

3. Placing Picture on the machine:



Aluminum rollers for picture-collecting, picture-supporting roller

1、End cap 2、Aluminum 3、Adhesive tape 4、Fixed block

Fig. 8 (Roller for supporting and roller for collecting picture)

- (1) Paste a piece of leading paper (or cloth) about 1-1.5 meters long and having the same width with the picture (it is better to use same material with the picture.) at each end of the picture to be laminated. Then roll the picture on a paper tube with the picture drawing outward. After this, put the paper tube into the roller for supporting the

picture.

- (2) Lift up heating box, loose the positioning-wheel and pull up the roller system used for wiping liquid film. Paste the picture and paper-tube on the roller for collecting picture together according to a path, through which the picture passes (see Fig.7). Then put down the roller system for wiping liquid film, and clamp the positioning-wheel at two sides.
- (3) Move the liquid-film stoppers (see Fig.7) to the two ends of the picture, and screw firmly a small handwheel at the liquid-film stoppers.
- (4) Adjust the damp-handwheel (see Fig.3 Fig.8) of the roller for supporting the picture, in order to let the picture stained. The laminated film will be over-thickness and without drying enough if a damp is too small. However, the motor may be damaged if damp is too large.
- (5) Turn **the Direction Switch of the collecting roller for picture at its** upper position “F” to let the roller for collecting picture rotating in clockwise. Press the **Work-State-Selection Switch of the collecting roller for picture**, and turn the speed-adjusting button in clockwise to let the picture stained

Notice: When the picture mounted on the machine, the two sides of the picture shall be parallel to its moving direction; otherwise, the picture may deviate from the setting line during laminating.

4. **Pre-heating** : Pull the handles on the heating-boxes, and make the heating oven turn over upward. Press the “ON” at the upper position of **Heater Control Switch**, the indicator will be on, the axial fan of the drying oven will start to work. There is hot wind from the bottom of the drying oven, and the drying oven will pre-heat for about 3-8 minutes. The machine starts to work when the setting temperature is met.

B、Laminating Process

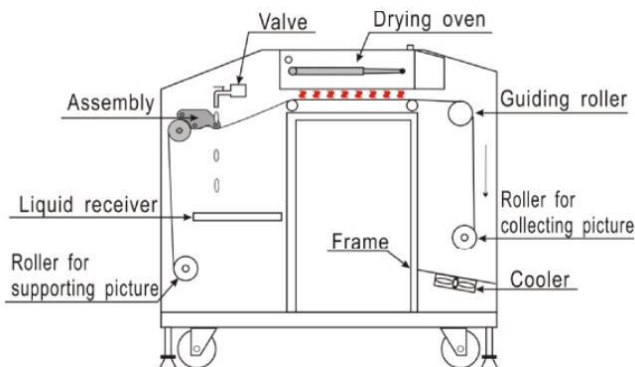


Fig. 9 (Liquid laminating operating procedures)

1. Turn on the liquid pump switch (Fig.4); open the valve (Fig.9) for liquid supply. Spread some liquid on the surface of the picture. (It is better to let the liquid contact the two liquid stoppers.)
2. Press the **Direction Switch of the collecting roller for picture** (Fig.4) at its the upper position “F” to let the roller for collecting picture rotating in clockwise. Press the **Work-State-Selection Switch of the roller for collecting picture**, and turn the speed-adjusting button in clockwise to

25%. Put down the drying oven, the picture start to move ahead to begin to laminate. During laminating, care should be taken to adjust temperature and speed to ensure the laminated quality (the picture surface shall be dry and without distortion.). Add some liquid into the tank to avoid liquid run out.

Suggestions: In order to obtain suitable temperature and speed setting values and be familiar with machine's functions, it is recommended that we can use a test piece of picture instead of the useful picture to avoid any loss due to failure operation.

3. Stop Heating: Stop the liquid supply when the end of picture entering the heating-boxes, and clean out the glue in the guiding paper (or cloth) with wet cloth. Turn off the drying –box switch (Fig.4) when the end of picture coming out of the heating-boxes, and the indicator lamp will be out. The heating-boxes will stop work. At this time, the axial fan is still working to reduce the temperature inside the heating-boxes and drying the liquid in the guiding paper (or cloth). Notice: After the heating-boxes stop work, the axial fan will stop work automatically after 2 minutes delayed. Please turn off the main switch after the axial fan stops work.
4. Take the picture from the machine: Lift up the heating-boxes, depart the picture from the guiding paper (or cloth). Press **the Direction Switch of the roller for**

collecting picture (Fig.4) at position “R”. Turn the speed-adjusting button in clockwise to set the 100%. Press the **Work-State-Selection Switch of the roller for collecting picture** (Fig.4) in order to take the laminated picture from the machine.

You can also take **the roller for collecting picture** from the machine to roll the picture on the worktable.

5. Emergency Button: In the course of laminating, If the temperature is found too high (this may burn the picture), and without any time to change the temperature setting value, you can lift up the drying boxes or press the Emergency Button to turn off the machine.
6. If it is found that the machine is with troubles, press the emergency button (Fig.2) to cut off power supply.

C、Services after working

1. Turn off the power supply.
2. Retrieve liquid collected in the tray (Fig.9).
3. Clean machine components: Clean the wiping-rod, liquid stoppers and the roller for coating the picture in time with wet cloth after laminating. In order to facilitate the cleaning work, loose the positioning handwheels (Fig.7), and lift up the wiping roller system. Put them back in their place for using the machine at next time.

Notice: If the machine is not used for a long time, empty out liquid from the tank into the original container, and wash the pipe between tank and valve to avoid blockage due to

solidification..

VI-Maintenance and Cautions

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. Before using the equipment, confirm the connection style and ensure the correct grounding so that to use it for security.

3. The power supply shall comply with the equipment to ensure the normal work state. The machine shall be earthed well. Don't lay the cable on the walkway or put things on it.

4. The electricity would be provided only when the connection between electric equipment and the requirement method of this machine are consistent and right.

5. 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.

6. The maintenance work shall be carried out by the qualified personnel. Please contact with us if you can't shoot the troubles.

7. Don't use the machine near the water source or wash it with water. Don't place flammable and blast able substance around it.

8. The operator should be trained and familiar with the

machine structure, performance and safety operation.

9. If there are more than two persons operating at the machine, they should cooperate well. When lifting the drying oven and the wiping rod, be careful not to make the hands pressed or let foreign substance into machine to avoid hurt to personnel and damages to equipment.

10. Don't turn off the main switch at once and let the cooler work for 2 minutes to reduce temperature after the work is over.

11. Keep the machine clean. Check regularly whether each rotating components running well and add some lubrication grease. If there is abnormal sound or failure, repair it at once. Do not turn on the machine before shooting troubles.

12. Turn off the power supply after work is over.

13. Check regularly the cables for break, leakage-circuit switch for reliability to avoid electrical shock.

14. When abnormal or failure is found and you can't shoot the trouble, please contact with the manufacturer as soon as possible.

Guarantee

model		ex-work serial No.	
user		purchase date	
sales agent		phone No.	

Notes

1. The guarantee should be filled in by the sales agent and kept by the user; alterations are prohibited.
2. The guarantee period is 1 years; the repair within 6 months is free of charge and will be charged with material and labour cost hereafter.
3. No free repair is available for damages caused by improper use.