

# ADL-1600C1 Auto Cold Laminator Manual

## I. Technical specification and relevant parameter

Laminating Width: 1520 mm(60" )

Laminating Speed: 0—6 m/min

The Diameter of Roller: 130mm

The Lifting Height of Roller: 25mm

The Heating-temperature of Roller: When cold laminating, the temperature of the upper roller can set 50-60°C; the highest temperature no more than 60°C.

Voltage: AC220-240V 50 Hz (optional 110 V)

Power: 1400 W/single roller heating

Rated Current: 10A/single roller heating

The Motor Power: 90 W

Packing Size: 2150 x 740 x 740 mm

Packing Weight: 180 kg

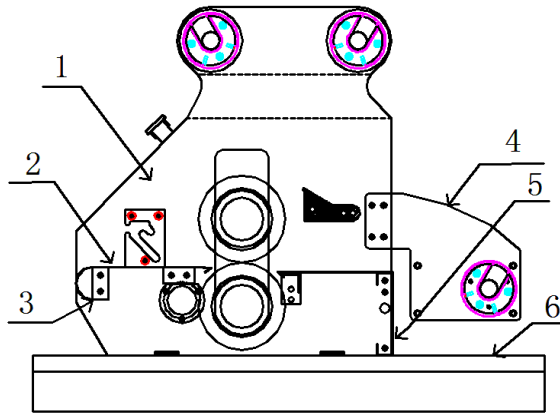
## II. Installation

The notes during installing:

1. Before unpack the box, check the packing cases whether it is damaged during the transportation in order not to cause the machine damaged.
2. After unpack the box, check whether parts are complete according to the packing list (see appendix one).
3. The installation place should be in an enough operating space, which is clean, no dust, no steam and corrosion gas pollution, no inflammable and explosive substances. Don't put the machine in the air vents, otherwise it will affect the roller surface temperature to cause laminating quality not stable.
4. The machine's truckle can only be in flat surface to do shortly move.
5. The voltage of this machine is 220-240 V (or 110 V need to order). Before connect the electric power, should check the power source and capacity is enough. Need to fix the breaker in 220-240 V/20 A, and have sound grounding device, in case cause personal injury.
6. Front working-table can be turned over, which is a not-stress mechanical structure, when you move the machine, pls turn the working-table over, don't put heavy things on it to avoid to not damage it and the screws.
7. When use forklift to move the machine, need to put the forklift arm under the under-beam, but both sides must have person to help protect it, to prevent the machine from dumping front and back.



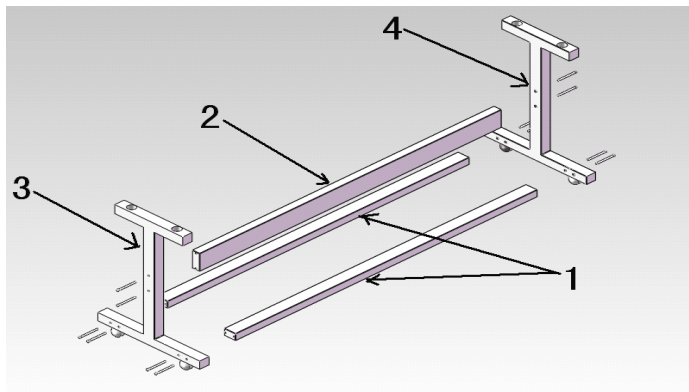
***The machine is heavy! When moving, must pay attention to safety!***



1. Host machine
2. Front working-table
3. The front support beam
4. Racks for gathering-paper roller
4. The back support beam
5. The cork base of package

### Racks Installation

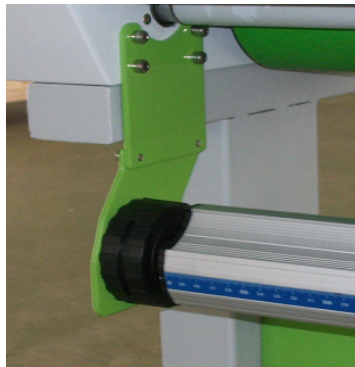
1. Take out parts from the package
2. Reference to the assembly drawing



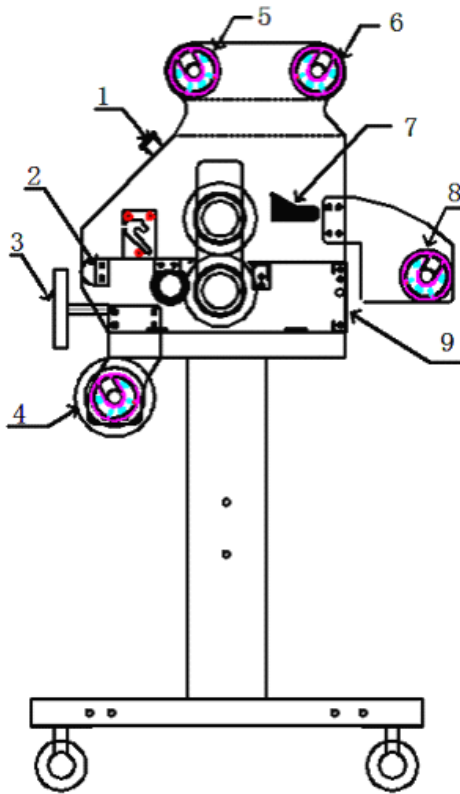
### The Installation of Host Machine

1. Install host machine on the special racks (please see the chart)

***! Warning: When carry or move, should focus on front and back support beam position, but don't to move and raise the handwheel etc.***

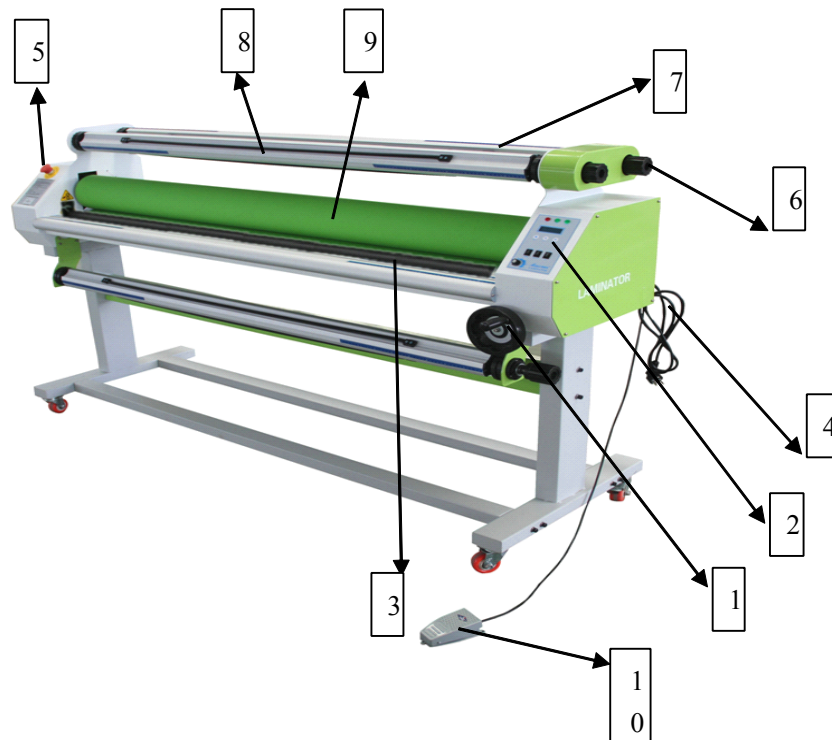


2. Fix the handwheel and the racks



1. Emergency button
2. The front support beam
3. Handwheel
4. Putting-paper roller
5. Back-paper roller
6. Film roller
7. Infrared probe
8. Gathering-paper roller
9. The back support beam

### III. Name of Machine Parts



1. Hand-wheel to adjust the up and down of roller
2. Control panel
3. Front working-table
4. Power line
5. Emergency "stop" button
6. Resistance handle
7. Gathering-back-paper roller
8. Film roller
9. Rubber roller

## IV. Control Panel



1. Hot laminating indicator light
2. Cold laminating indicator light
3. Ready indicator light
4. Roller temperature
5. Temperature adjustment button
6. Hot / Cold switch
7. Forward/Backward switch
8. Continuous/Inching switch
9. Speed controller knob
10. Preset temperature

### ***Instruction:***

Preset temperature: Find hot/cold switch, choose the "hot", temperature display screen will light up, the left number is preset temperature, the right number is roller temperature, press “■ SET” and then by “▲ UP” 和 “▼ DOWN” adjust preset temperature, after adjust it and press“■ SET” confirm it. For cold laminating, the preset temperature is 50°C, the max is 60°C. According to the viscosity of the glue to adjust preset temperature.

Turn: This machine don't have continuous reverse function;

In the "continuous", it only can "turning";

In the "Inching", through the pedal switch can "turning" or "reverse".

Speed knob: clockwise to up speed, counter-clockwise to down speed; Please select the appropriate speed to ensure the laminating effect, when stop laminating please select "Inching".

***Note: Please do not use this knob for switch to use.***

## V. Use Instructions:

### 1. Power

Power Lines: Use standard power plug, please pay attention to your power supply voltage whether it is compliance with the rated voltage of the machine before connect power, and also the access socket, and have good grounding device, and capacity is enough or not.

Main Switch: the main power switch is at the back of the machine, main power switch has two gears position, up for open, indicator is light; down for shut, indicator is light out.

Fuse Tube: the machine is equipped with two fuse tube: 2A and 15A, 2A tube is for the whole machine circuit, 15A tube is for heating tube.

2. Footswitch: the switch to control motor running. Before use, first find out the right position and put in the socket and fix it. When use, should choose the "Inching", speed knob set in "2" position, touch the footswitch and the motor runs,; untouch the footswitch and motor stop s working.

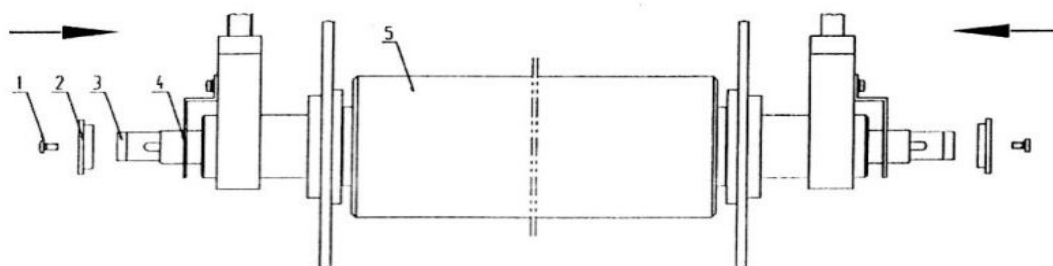
3. Emergency-stop Switch: In an emergency, press the red button and it can immediately cut off power, the indicator light out and rubber roller stop turning. Clockwise, red button will automatically rises, the power will open again and indicator light, rubber roller back in operation again.

4. Roller up-and down: Open the handwheel handle, counter-clockwise, the roller is up, clockwise, the roller is down, when the rubber rollers touch, when feel not tight, it is called empty space. If continues to run the handwheel, the force between the two rubber rollers increase gradually, operator should choose different force according to different material and different laminating specifications.

***Note: when you open or fold the handwheel, please pull out a little before you turn over or fold, don't direct fold to cause the damage.***

### 5. Heating-tube Installation

***Note: Pull out power plug before install heating tube!***

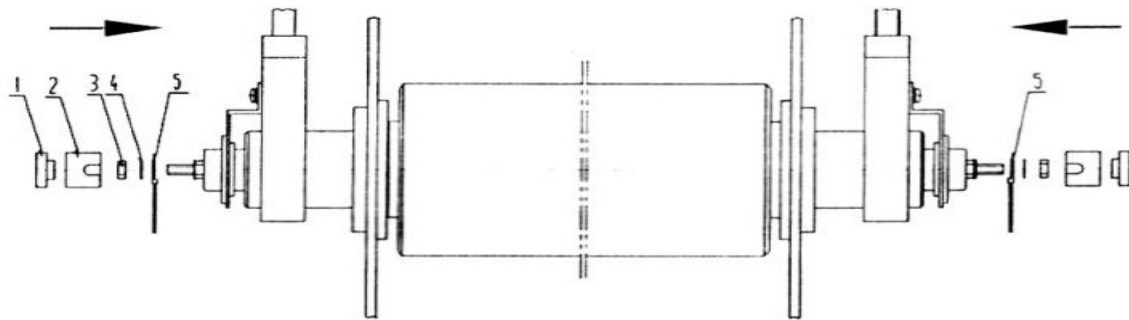


1. screw 2. rubber mat 3. heating tube 4. tube racks 5. roller

### **Step one: Tube Installation(such as above)**

1. Take off left and right box cover;
2. Take off rubber mat from tube racks

3. Put the tube into roller and set rubber mat on the tube, tighten it and the racks with screws



1. Porcelain cap 2. Porcelain pipe 3. Hex nuts 4. Flat mat 5. Wire

### Step two: Wire Installation(such as above)

1. After the tube installed well and take off the porcelain cap, porcelain pipe, hex nut, flat mat from the both sides of the tube.
2. Put wires on the tube.
3. Put the unloaded flat mat, hex nuts, porcelain pipe, porcelain cap pack to the tube.

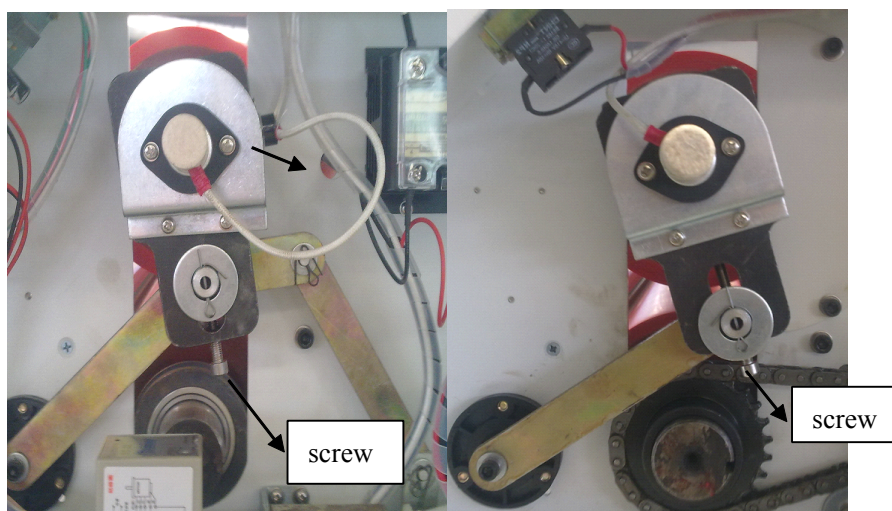
**Note: The hex nuts must be tighten! If loose, will appear electric spark , the power will increase to broken wire and other components.**

### 6. Force Adjustment

The degree of parallelism of the rollers can directly affect the laminating quality and the picture running direction, the roller parallelism has been adjust well before the machine sending out, but after a period of time, it still needs to adjust.

Note: the distance between the two rollers should be adjusted when the machine working,

Pls check and adjust according to the following steps:



Left-side

Right-side

### **Parallelism Adjustment**

1. Turn off the power and open the right and left cases.
2. Put the upper roller down and left a tiny gap, then check the distance of the left and right sides.
3. Clockwise turn the screw in the left case to increase the right gap and vice versa.

### **Pressure Adjustment**

1. Turn off the power and open the right and left cases.
2. Parallelism adjustment.
3. Put two paper notes between the rollers after parallelism adjustment. Anticlockwise move the handwheel, then pull the two notes to check the tension.
4. Adjust the screw in the left case until you feel the tension is the same.
5. When adjusting, need to up and down the roller, checking the laminating quality when adjusting.

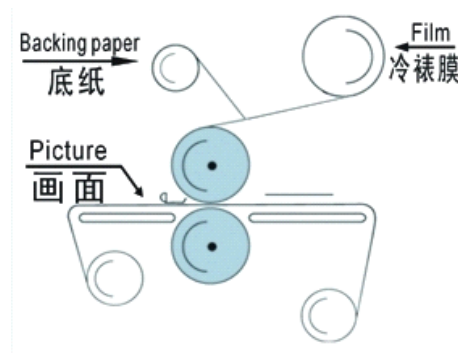
## **VI. Film laminating**



Laminating is an extremely fine and technical work, for beginners, need to laminate under guidance of the experienced technician, the general operation is as below:

### **Preheating:**

1. Down the upper roller;
2. Press the "Continuous" and "Forward" switch, Speed to "1";
3. Turn on the main switch;
4. Turn "hot" and set the required heating temperature, then roller began heating. The preset temperature usually is 50°C, (it takes about 10-15 minutes for the heating)
5. Take one roll film and put into film roller, then put the film roller in the racks, and pull the film with the hand to ensure the appropriate resistance
6. Put the laminating materials on the paper roller and fix it rewinding racks.



### **When the upper roller temperature to the set temperature:**

1. Press the "Inching" switch and then roller will stop turning.
2. Remove the press-paper roller and lift the upper roller.
3. (cold film installation) Cold film used for cold laminating, generally not need to heat, but if the upper roller heating to 40-50°C, the laminating quality will be better. pull the film and across the two rubber roller to stick it on the roller for gathering-laminated-paper(for the beginner), or someone pull it, after laminated to quickly stick on the roller for gathering-laminated-paper. In proper position to separate the film and back paper, make the back paper on the back-paper roller. Note: when the back-paper and film separate, make the film stick on the rubber roller very smoothly.
4. Put the needed laminating paper on the front working-table, insert the blank of paper in between rollers , then put press-paper roller.

***Note: Make both edges of the paper vertical with rubber roller in order to make the laminating straight.***

5. Down the upper roller by handwheel.
6. Press the "continuous" switch and began to laminating.

***Note: if the hot film not tighten, clockwise move handwheel to increase friction.***

7. Clockwise move the speed knob to adjust appropriate speed.
8. If the film fold clearly, cut the film and again do the above steps.

### **When film laminating, should note the five points:**

1. The film should be wrapped around the roller.

2. Make the laminating-paper straight with the film.
3. When the laminating-paper put between the rubber roller, need to tighten the paper on the front working-table and make it very straight(show 90 °angle).
4. When laminating and the operation is right, but it still not straight, can press with hand to increase the force to make it straight slowly.
5. When laminating, keep all the rollers the suitable friction to make sure the best laminating.

## **VII. Safety operation procedures and notes**

1. The operator first must learn carefully the machine structure, function and instruction, and obey the notes and warning marks on the machine, improve safety consciousness, prevent the happening of the accident, in order to ensure safety.
  2. The power must be the same as the required power, grounding line must be accurate and reliable.
  3. When examine and repair machine, must first cut off power. After finish laminating, also need power off.
  4. Not put the power line on the pedestrian path or put something on it, prevent the vehicle to press.
  5. The working place should be dry and ventilated, should not be close to the place wet or damp, and place with inflammable and explosive items.
  6. If More than two staff to operate machine, should be mutually coordinate, if in an emergency, need to press the “Emergency” button in time to stop the machine.
  7. The upper roller is the roller for heating, the surface temperature is more than 50°C, When heat, do not touch the roller, at any time, not put hand and other parts of the body touch the between parts of the rollers, in case crushed or burned.
- Note: when machine in heating, need staff nearby, in order to avoid fire or damage the roller due to overheat.***
8. Not put the tools or others on the front and back working-table and other machine parts.
  9. Not clean the machine with water, in case cause a short circuit, electric shock accidents and rust.
  10. In order to prolong the life of the rubber roller, must make rollers clean, after finish laminating, please use swab and 80% alcohol to clean.

**Note:**

- (1)When clean the roller, must stop heating and clean when temperature below 40 °C .
  - (2)Clean by moving the roller slowly, avoid to clean them on fixed point, in case to damage one part of the rollers.
  - (3)Need to clean the glue and attachments on the roller in order not to affect the laminating quality.
11. Regularly inspect whether the machine rotating parts are flexible and put some lubricating oils in the gears.
  12. Regularly check whether the power supply line and pedal switch line damaged, in case the leakage accident happen.
  13. The upper and lower rubber roller are main parts, if rubber roller damaged, it will affect the laminating quality, so not scratch rollers, after laminating, need to raise rollers, in case the roller press long time to not in shape ; Always keep the rollers clean, no dust, when the rubber rollers with glue, need to clean them with swab and alcohol.

## **VIII. The general questions and methods**

<b>Problem</b>	<b>Reasons</b>	<b>Methods</b>
Control panel have no electricity	Power is off or “emergency”button down	Check the power and emergency button
	Fuse tube broken	Check and replace insurance pipe
Don't turn	Force between rollers too large	Lift a little the upper roller
	Friction is too large	Adjust friction
	Motor key loosen or fall off	Tighten sprocket key
	Motor or speed knob get problem	Contact with motor or governor
Laminated paper isn't clear and have white point	Roller temperature is not enough	Increase roller temperature
	Dust on the paper	Clean the dust
	Film quality not good	Contact suppliers to replace film
laminated paper have pleated bubbles	Roller's force is not uniform or too much	Adjust roller force
	Paper not flat	Put paper in 90 angle into rubber roller
	Speed slow and temperature too high	Increase speed and reduce temperature
	Press-paper roller not in the right position	Press-paper roller fully touch paper
Laminated paper continuous running aslant	Roller force is not evenly on both sides	Adjust the roller force
	Paper at first not straight	Make the paper straight
Film fold	Film tension is too small	Adjust material-roller's resistance
	The upper roller's temperature too low	Adjust to the required temperature
laminated paper curly seriously	Film's tension is excessive	Adjust to suitable tension
	The winding tension is too large	Adjust to suitable tension