

## User's manual

### JT-SLT-1300F Fully Automatic High Speed Slitting Rewinding Machine



#### Company information

Our factory specializes in the production of JT-SLT-1300F automatic high-speed slitting machine. The machine has the most advanced technical structure, the magnetic powder brake tension, the set length or the number of meters can automatically stop, and the electrical appliances are controlled by energy-saving inverters. This machine has the advantages of compact structure, reliable performance, easy operation and high productivity. It is the ideal advanced equipment for the current professional production of roll paper manufacturers.

#### Precautions

- Before installing the equipment, read the instructions carefully.
- This machine adopts AC 380V power supply, do not connect it wrongly.
- The power supply must be cut off when adjusting the blade or specifications.
- In normal operation, once the paper cut edge is not in the blowing pipe, be sure to stop and

put it in.
➤ When loading the jumbo roll, the operator should stand on the side of the jumbo roll
➤ Unpacking acceptance: When the product is found during the unpacking acceptance, and the accessories do not match the packing list, please contact our company.
➤ Installation and use: The installation, environment, operation and adjustment in the instructions should be clearly understood in advance to avoid accidents. Under normal transportation, installation, use and maintenance conditions, if you find product manufacturing quality problems, you can contact our company within one year of the date of receipt.
➤ Safety matters: The product voltage is AC380V, the total power is 15KW, and the AC voltage must be sent by a voltage stabilizer. The leakage protection switch set at the power switch of the whole machine should be sensitive and reliable. The protective cover and electric control set for each rotating part The connection of the box should be firm.
➤ Air source part: When the machine is in use, an air source is required. The air source needs to have a pure air pressure above 0.4MPa. The air cleaner at the air source input port of the machine should be drained every 2-3 days to ensure that the moisture in the air is not Enter the cylinder and solenoid valve to protect the electrical components.

<b>Technical information</b>	
The max unwinding width (mm)	1300
The max unwinding width(mm)	800
The min slit width(mm)	20
Diameter of core paper core(mm)	76
The max rewinding diameter	Single layer is 600mm
The max slitting speed	0~300m/min
Motor Power	380V,50HZ,15KW
Air source	Compressed air is greater than 0.4MPa

## Instructions

1. After the machine is in place, it must be adjusted to maintain the level without looseness or unevenness. After the equipment is adjusted, pull out the safety pin, close the internal air switch of the machine, then turn on the power and check whether there is any air leakage at the air pipe joints. If there is any air leakage, it should be eliminated immediately.
2. Check the paper arm. Press up or down to check whether the up and down movements of the paper lifting arm are the same. Then the connecting rod is adjusted up and down. A small amount of oil should be added to each part of the connecting rod pin, and the up and down operations should be performed several times to ensure that the shaft pin is lubricated.
3. No-load debugging operation: Press the start button once to start the machine and the start light will flash. At this time, the reel is still running and traction. Press the start button again and all parts will start to work. Press acceleration or deceleration again and the machine will accelerate or decelerate. Decelerate, if there is any abnormal sound during operation, stop immediately for inspection.
4. Check whether the magnetic powder tension control and the tension meter are normal: when the tension control knob is clockwise, it means that the brake is larger. In normal operation, the brake tension is larger or smaller according to the size of the base paper.
5. Check the air expansion and unwinding shaft: When inflating the air expansion shaft, check whether the tension block in the shaft can be stretched or not. A small amount of engine oil should be added to the copper sleeve at both ends of the shaft whenever paper is changed to avoid damage to the copper sleeve. Before loading the paper, the coupling must be loosened to separate the coupling from the air shaft, and the magnetic powder brake control switch should be turned off to avoid damage to the mechanical equipment.
6. Open the air circuit and refuse to loosen the two-question knife shaft fixing seat screws and turn them 180 degrees to pull out the knife shaft fixing seat (note that the fixing seat will have a little weight to hold and be careful to fall).
7. The adjustment and coordination of the upper blade (small thin knife) and the lower knife (bottom knife) are shown in the figure. The occlusal depth of the upper blade and the lower knife shall not exceed 1.5mm, and the occlusion shall not be too tight or too loose. Too deep

and too tight will directly affect the upper blade. The service life of the lower knife, too loose, will cause the paper roll to appear burrs, not smooth or inseparable. After the upper and lower knife are adjusted, the machine should be operated for 3-4 minutes to check whether the upper knife elastic torsion spring has fallen off.

**8.** Coordination between the paper core and the reel: the inner hole of the core should be standard 3 inches or 6 inches (other inner diameters can be customized), and the core should be aligned with the bottom knife edge, otherwise the plane and the paper tube will not be in line after the paper is rolled It will affect the quality of products produced.

**9.** Air Friction shaft: Start the discharge button on the screen. The air friction shaft will reversely rotate the slip ring to shrink. Then, after installing the paper tube, turn off the discharge button. The air friction shaft rotates forward to tighten and reverse to shrink.

**10.** Edge position control After pulling the material neatly, move the sensor to align the edge of the sensor to the middle of the sensor, and then turn on the automatic function. If the correction direction is found to be reversed, press the polarity button on the correction controller screen.

**11.** Adjustment of the upper round knife: first press the upper round knife into the lower round knife groove to a depth of about 1.5mm, push the handle of the push knife to the middle position, and then gently lean the upper round knife peak against the lower round knife peak. Lock, then push the handle of the push knife to push the upper round knife to the middle of the round knife slot, and then turn the upper round knife up hand wheel to lift the knife away from the lower round knife and then feed in the material. After the material is aligned, put the knife down and place Push the knife until the lower round knife is close to the peak of the knife and lock the upper round knife limit.

<b>Others:</b>
1. During operation, if the winding is not satisfactory, please stop it immediately. The machine will stop according to the set time and then start again after finishing. If there is a serious problem, you can directly press the emergency stop switch, then the machine will stop quickly to ensure that the loss of material becomes larger.
2. In the process of using the air friction shaft, try to use a filtered air source without moisture to ensure the life of the electric proportional valve. The smaller the speed difference of the slip shaft during operation, the better, so that it is not easy to occur due to the excessive speed difference. The heat reduces the friction strips in the slip ring.

<b>Circuit characteristics</b>
➤ The electrical design of this machine adopts advanced MCGS touch screen for operation, Inovance Programmable Logic Controller (PLC) to realize logic program control, and frequency converter to adjust speed.
➤ All signals, sensors, photoelectric switches, and proximity switches adopt single-wire control of common and signal terminals, low voltage DC24V, safe and convenient, good interchangeability, easy access and easy maintenance.
➤ All signal inputs, such as switches, buttons, sensors, and output signals are displayed on the PLC with a luminous tube. It is very convenient to observe the working status and judge the fault.
➤ Each operation button has perfect interlocking, anti-shake, and effective control functions to ensure accurate actions.

<b>Main configuration</b>
➤ MCGS
➤ GA700 high-performance vector inverter (Inovance)
➤ Inovance H3U PLC

**Motor:**

- Main motor:3.7KW 4 electrode, equipped with inverter; two winding motors (3.7KW 4 level, equipped with inverter)
- Blower: AC380V,3-phase,2.2KW
- Hydraulic motor:1.5KW

**Circuit Introduction**

**Working environment:**

- The ambient temperature is not allowed to exceed 40°C.
- The altitude is below 2000m.
- No dust, acid salts and other corrosive gases are allowed in the air.

**Power supply**

- This machine uses AC380V, 50HZ single-phase AC power supply, and the control loop voltage is AC220V and DC24V.
- The power supply voltage is allowed to fluctuate by  $\pm 10\%$ , and the frequency deviation does not exceed  $\pm 2\%$ . For areas with large grid voltage fluctuations, the control system may fail, and effective measures should be taken.

**Installation wiring**

1. The control box is installed on the operating side of the paper conveyor.
2. Before connecting the control box to the power supply, carefully check whether the components in the control cabinet are loose or damaged due to vibration during transportation, whether the motor is damp, and the insulation resistance should be  $\geq 2M\Omega$
3. Re-tighten the screws of each terminal (control cabinet, junction box, junction box, control button) to prevent poor contact caused by vibration.
4. The power supply is allowed to be connected to the control box only after the above three-point inspection is completed.
5. The control box must be opened by electrical professionals, and the main switch should be disconnected during maintenance before work is allowed.
6. When the main switch is not closed, the incoming terminal is already live, please pay special attention.

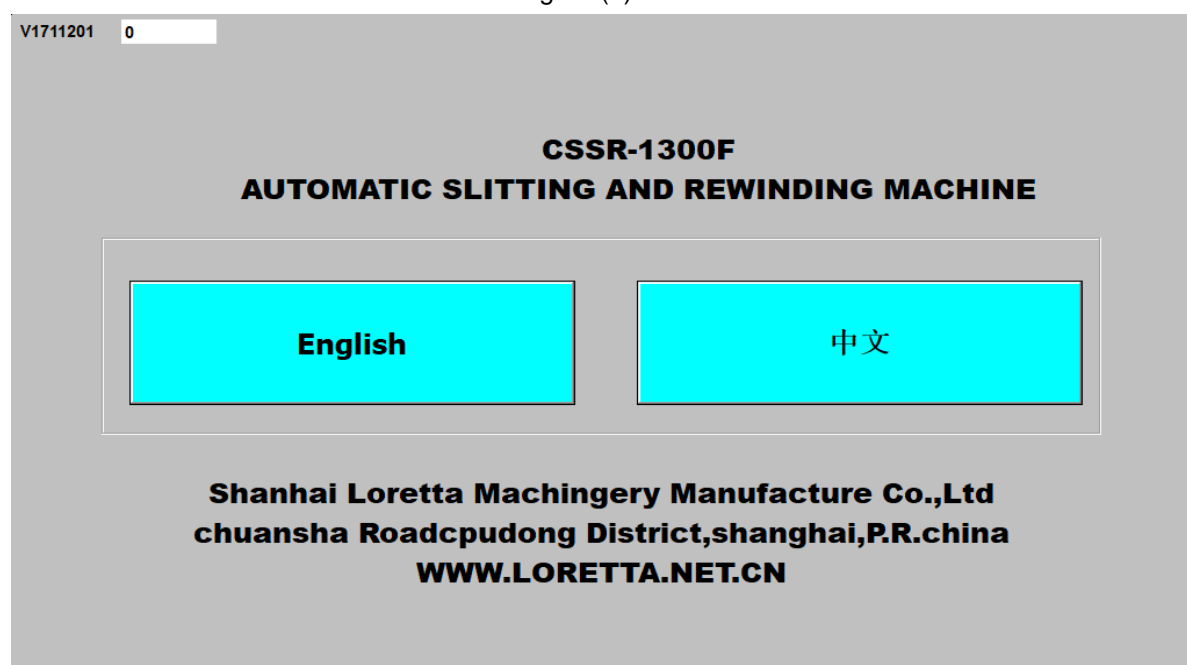
#### Short circuit and overload protection

1. The control box adopts a 32A air circuit breaker, and its instantaneous trip mechanism is used for short-circuit protection of the main motor and other motors.
2. The coil of the control circuit power contactor is protected by a 0.5A fuse.
3. The control loop uses a 3A fuse for short-circuit protection (FU1).

#### Instructions for touch screen

1: After power-on, the touch screen displays the language selection interface, as shown in Figure (1)

Figure (1)

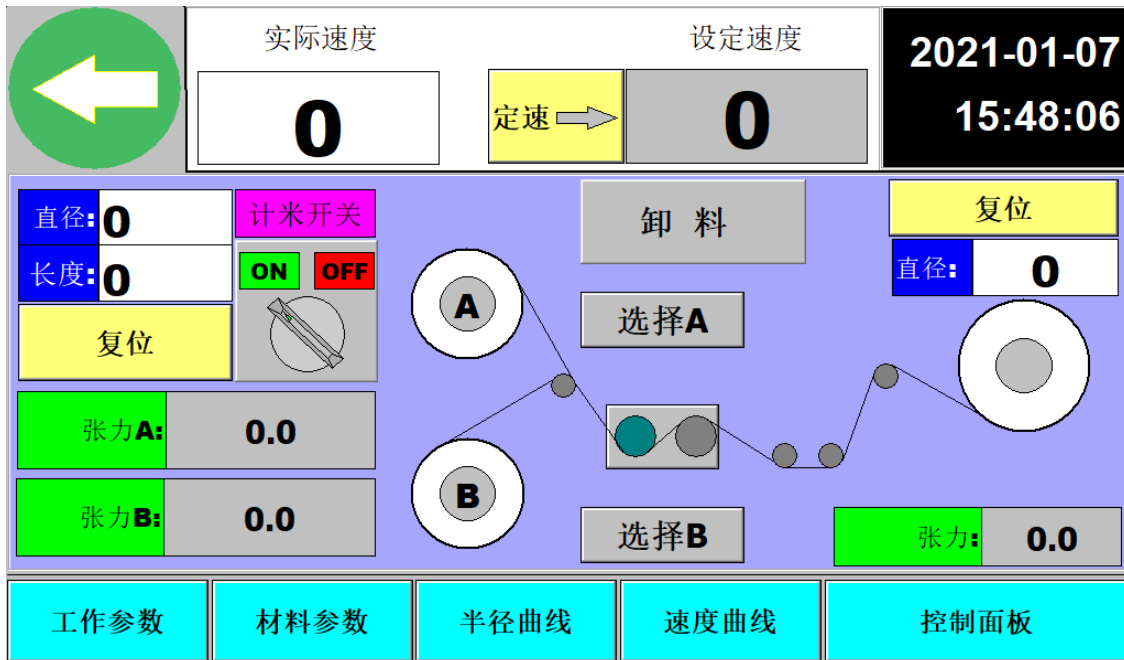


2: Select the corresponding language key to enter the main control screen, as shown in Figure (2)

2.1: Press the "reset" button to reset and set the required tension value

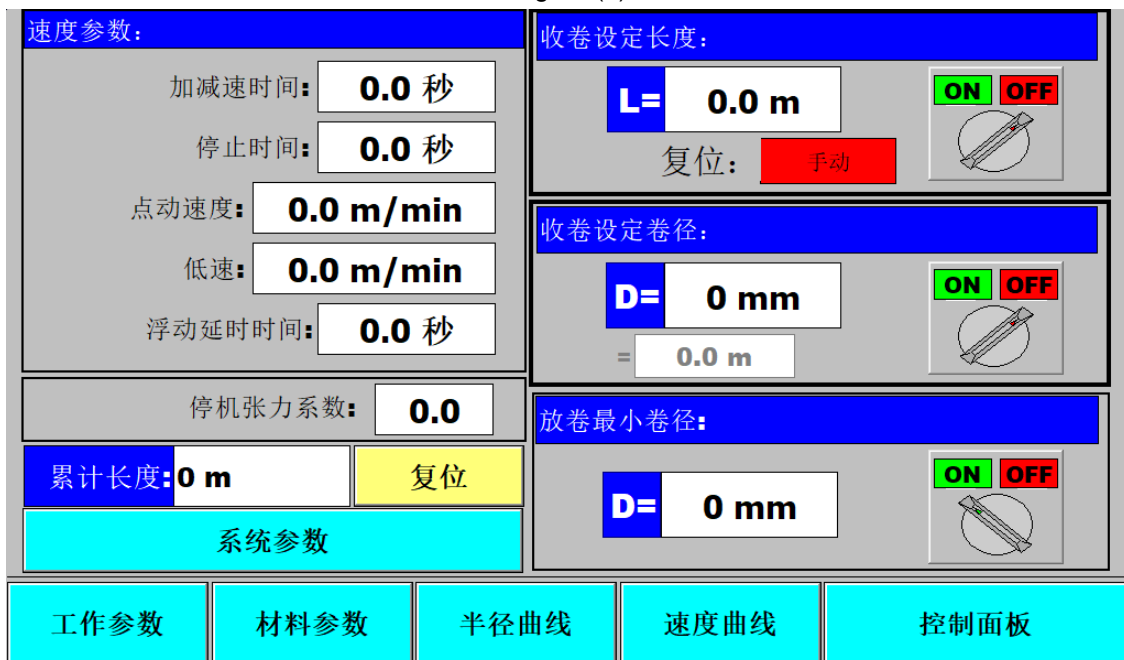
2.2: Press the 'unloading 'button to unloading

Figure (2)



3: Press the "work parameter" key to enter the parameter interface, see figure (3)

Figure (3)



3.1: Press the "L" key to set the length of rewind

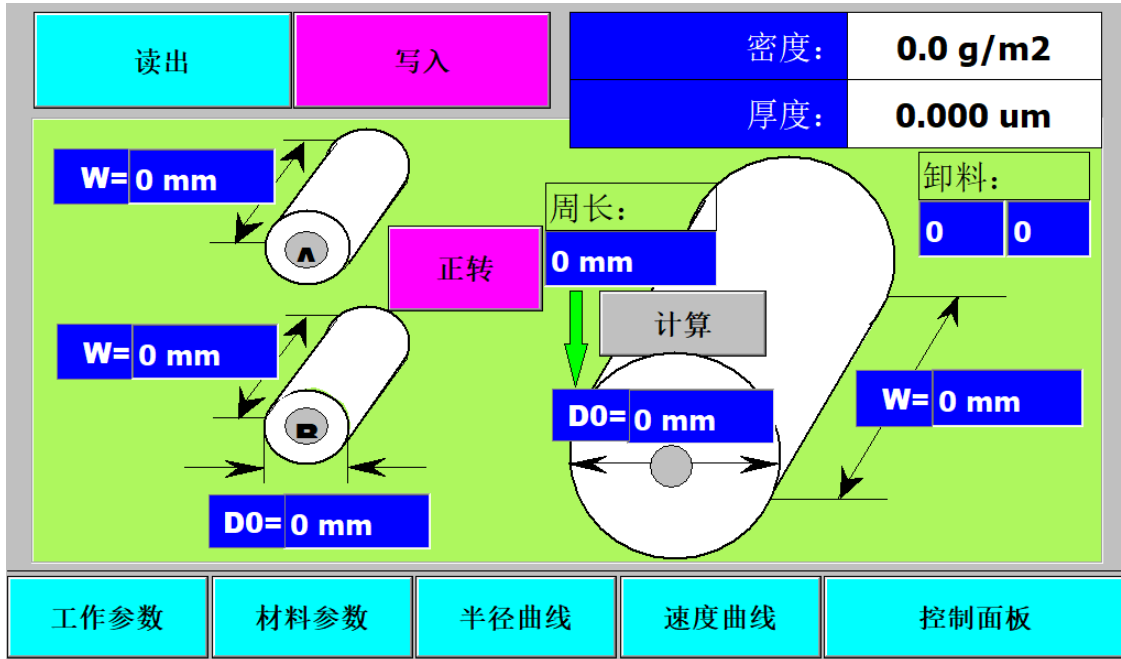
3.2: Press the "D" key to set the diameter of rewind and least diameter of unwind

3.3: The speed parameter does not need to be changed and has been set at the factory

4: Press the "material parameter" key to enter the material parameter interface, see figure (4)



figure (4)



4.1: Press "W" to set the width of rewinding

4.2: Press "D0" to set the diameter of the paper tube

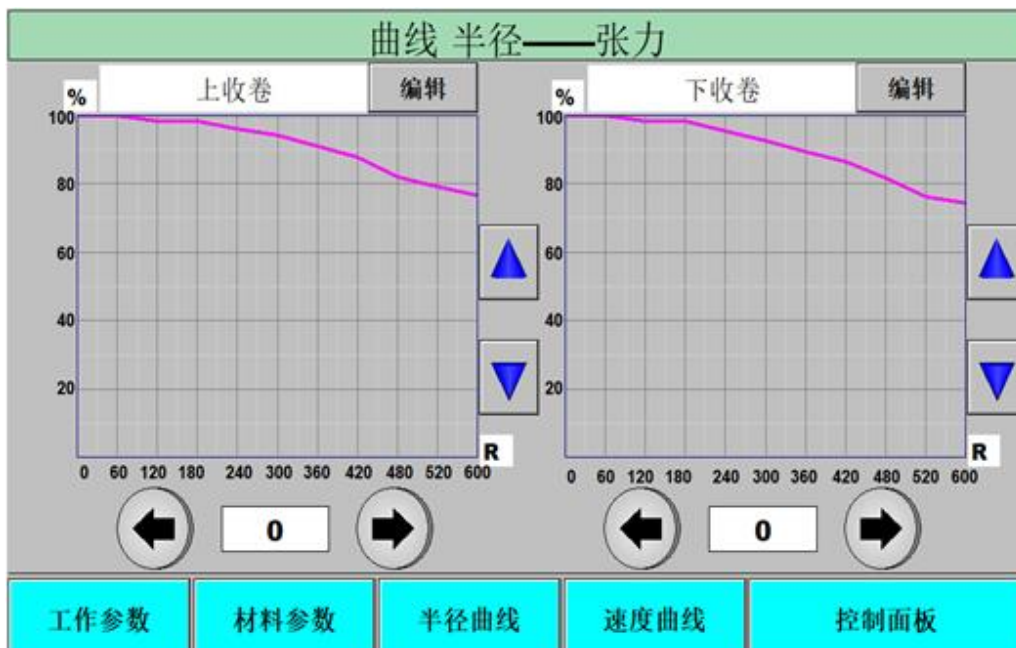
4.3: Press "W" to set the width of unwinding



4.4: Press "D0" to set the diameter and width of unwinding

4.5: Set the corresponding value according to the density and thickness of the material

5: Press the "radius curve" key to enter the radius curve interface, see figure (5)

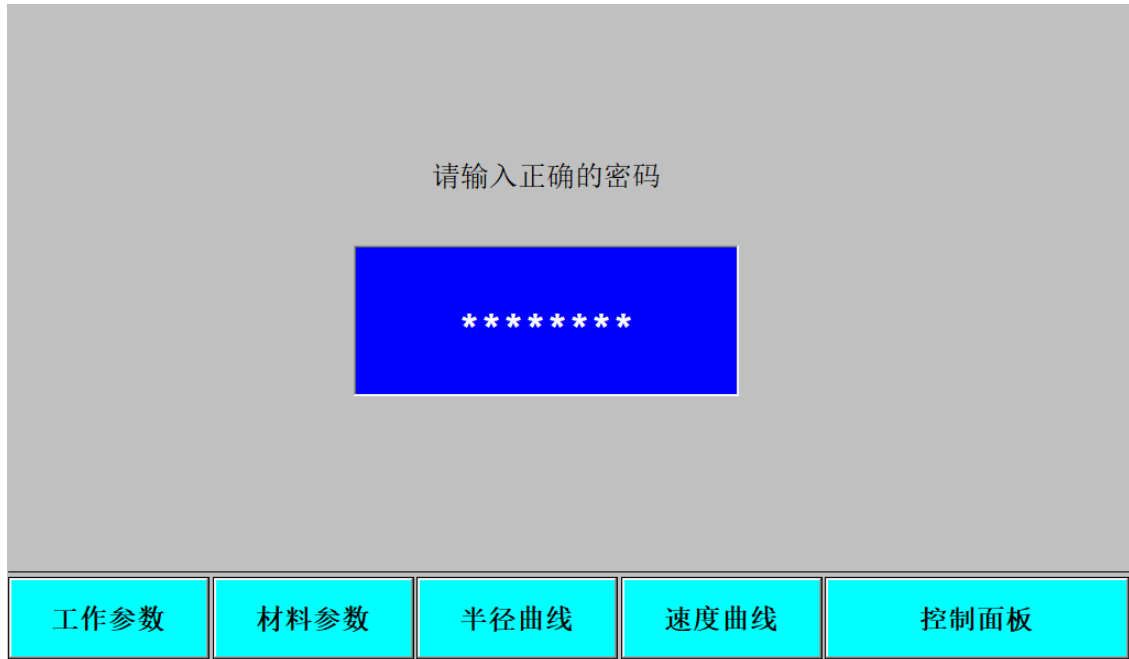
Figure (5)



5.1: Press  or  to set the tension of rewinding, The larger the curve, the faster the tension increases

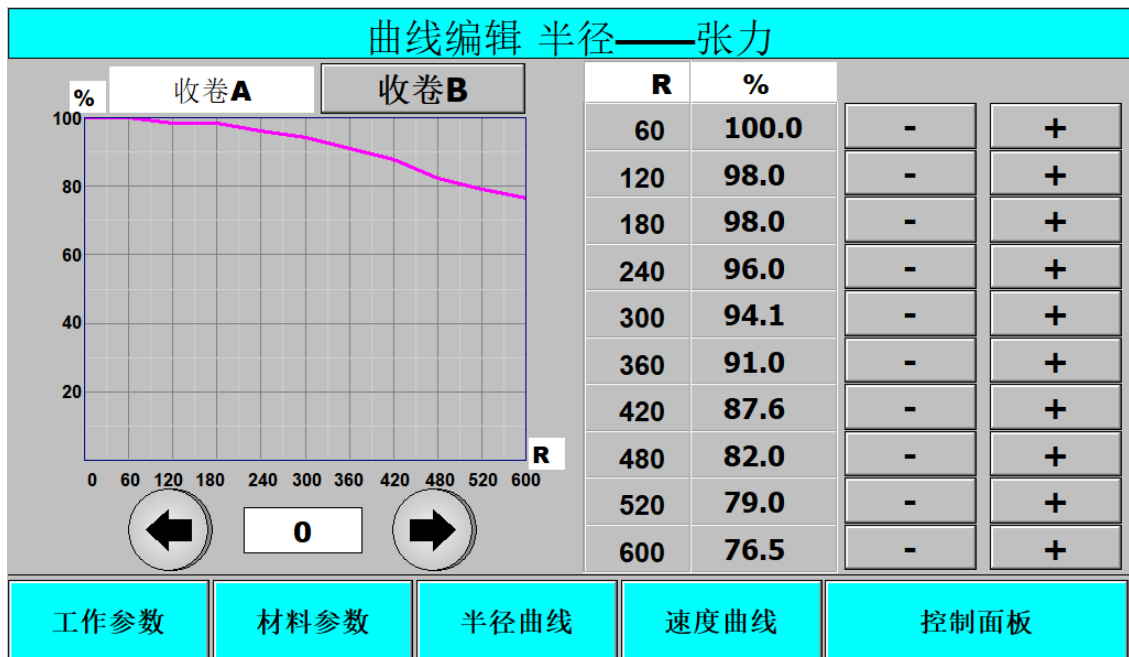
5.2: Press “edit” button to enter the password interface, see figure (5-1)

Figure (5-1)



5.3: Enter the correct password and enter the manual input radius tension value interface, as shown in the figure (5-2) .

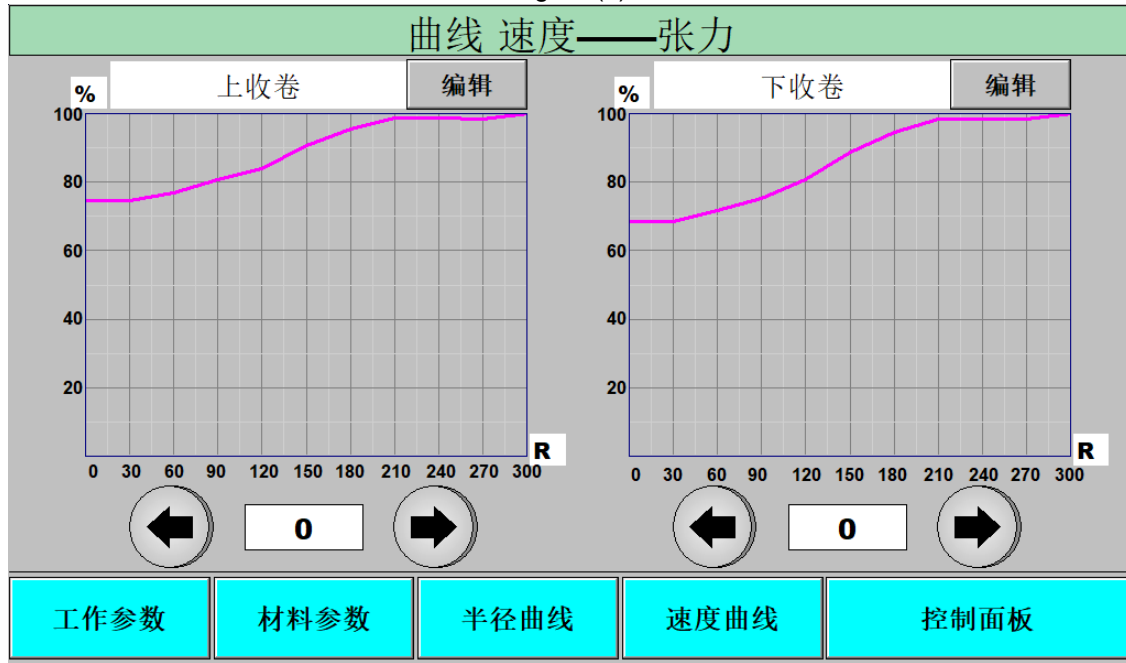
Figure (5-2)





5.4 Enter the corresponding value manually, the larger the value, the faster the tension increase, and the smaller the value, the gentler the tension increase.

6: Press the "speed curve" key to enter the speed curve interface, see Figures (6), (6-1), (6-2)

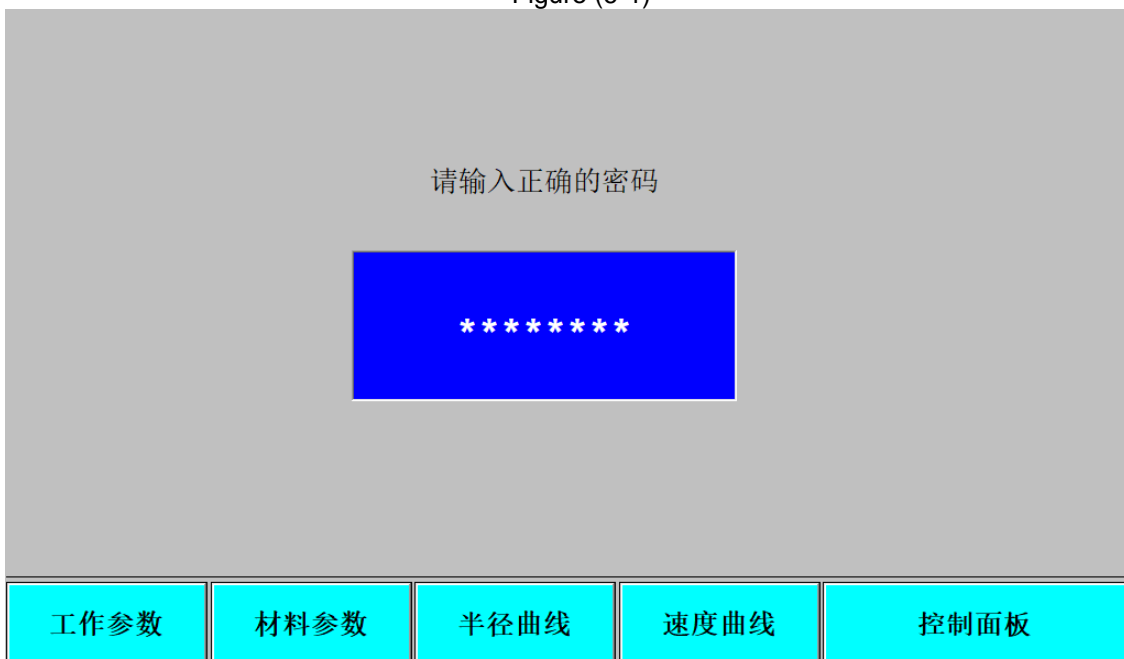
Figure (6)



6.1: Press  or  to set the winding speed and tension, the larger the curve, the faster the tension will increase

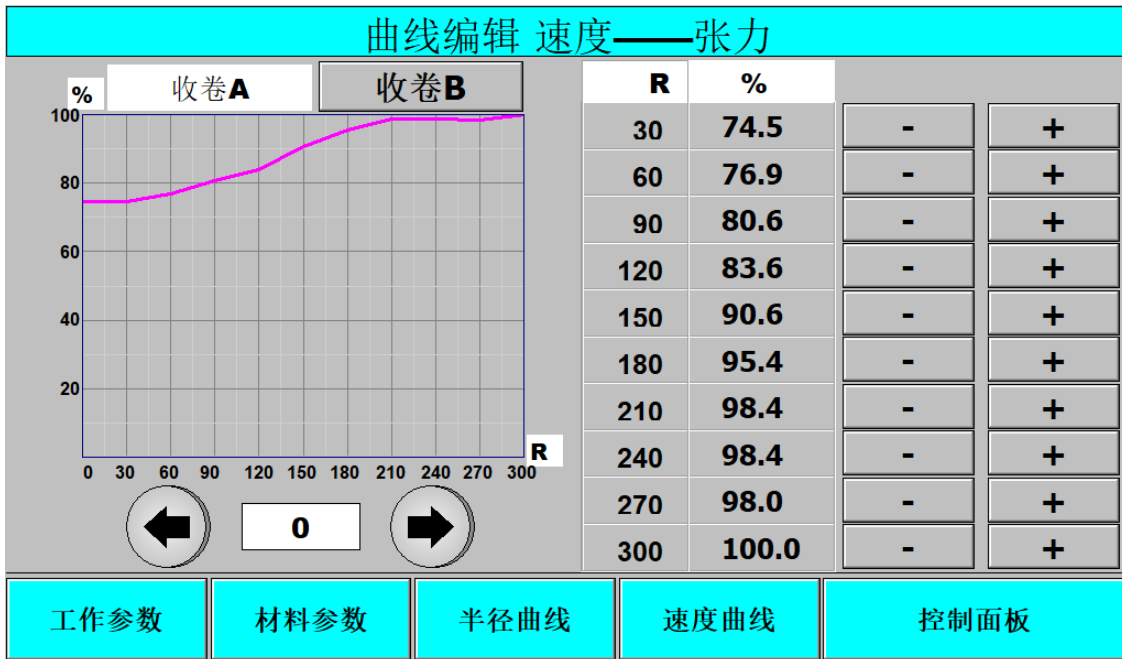
6.2: Press the "Edit" button to enter the password interface; see figure (6-1)

Figure (6-1)



6.3: Enter the correct password and enter the manual input speed and tension value interface, as shown in Figure (6-2)

Figure (6-2)



6.4: Enter the corresponding value manually, the larger the value, the faster the tension increases, and the faster the speed, otherwise the smaller the speed, the smoother the speed

### Operation panel function introduction:

#### 1: Electric area operation panel see figure 7

- Total Power: The power switch has two buttons: press the green button to start the button to turn on the main power, press the red button to close the button to turn off the main power.
- Waste trim: The blower starts to blow when the rotation is turned on, and stops when it is turned off
- Nip roller: Press the traction button to rotate the traction roller to clamp the material.
- Start: Click the start button and the machine starts to run.

Figure 7



- Stop: When the machine is running, press this button to stop the machine
- Speed up/Down: Adjust the operating speed of the host, the user can adjust the operating speed of the host according to the speed display on the touch screen
- Emergency stop: This button is a red mushroom head self-locking button. Press this button to stop the machine immediately and stop all operations of the machine. Only when the button is rotated clockwise and released, the machine can be operated again. In non-emergency situations during normal operation, emergency stop should not be made, and it can be stopped by rotating the safety switch under normal conditions
- Static elimination: Turn on to remove static electricity from materials
- Inch: When the emergency stop switch is raised, press this button, the machine will run at the jog speed, and it can't rotate continuously. It is used for manual paper threading debugging.
- Rated speed: Set speed according to touch screen display operation
- Tension indicator: Indicate the current tension

## 2: Pneumatic area operation panel, see figure 8

- A down/ A up: This button adjusts the up and down distance of the upper pressure roller.
- B down / B up: This button adjusts the up and down distance of the lower pressing roller.
- Traction pressure: This knob adjusts the traction pressure corresponding to the upper pressure gauge.
- Rewinding shaft pressure: This knob corresponds to the upper pressure gauge to adjust the reel pressure.
- A floating pressure: This knob adjusts its pressure according to the rewinding shaft of interface A of the “material

Figure 8



parameters” on the display.

- B floating pressure: This knob adjusts its pressure according to the rewinding shaft in interface B of the “material parameter” on the display.

### 3: Operation panel, see figure (9)

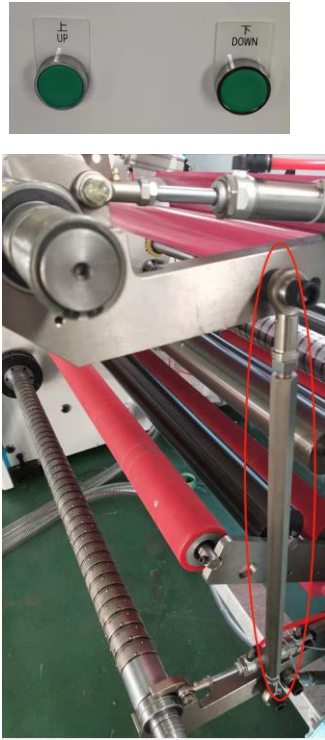
Figure 9

- Inch: When the emergency stop switch is raised, press this button, the machine will run at the jog speed, and it can't rotate continuously. It is used for manual paper threading debugging.
- Traction: Press the traction button to rotate the traction roller to clamp the material.
- Shaft lock: Rotate the lock shaft knob to fix the unwinding cylinder shaft.
- EPS: Turn the correction knob to correct the neatness of the material.
- Emergency stop: This button is a red mushroom head self-locking button. Press this button to stop the machine immediately and stop all operations of the machine. Only when the button is rotated clockwise and released, the machine can be operated again. In non-emergency situations during normal operation, emergency stops should not be made. Under normal circumstances, the safety switch can be turned to stop.



1) **UP/DOWN:** Control the lifting of the fixed arm, Figure 10  
up and down position of the cutter, Figure 11

Figure (10)



2) **Handwheel:** Adjust the

Figure (11)



3) The connection between the back frame and the main shaft is shown in the figure, figure 12-13



Figure (12)



Figure (13)

**Precautions:**

The machine has been carefully debugged and inspected before leaving the factory. Under normal circumstances, no major adjustments should be made.

- Regularly check whether the solenoid valve is loose or damaged.
- Regularly check whether the wiring of each button switch is loose.
- Note that maintenance is an important guarantee for a reliable workbench of the electrical control system. Users are requested to strictly follow the requirements.
- During the use of the machine, once there is an electrical failure, it should be repaired by a well-trained electrical professional with reference to the technical information provided by the factory. If there is any difficulty, the user should contact our factory in time and send someone to solve it.
- Choosing high-quality electrical components to exchange is a problem that cannot be ignored after maintenance to continue to ensure reliable electrical work. If necessary, you can directly purchase electrical components of various specifications from our factory or machine manufacturers.