USER MANUAL V1.0

Heat Transfer Machine

English

Written In Feb 2017

Contents

1. Introduction

Thank you for choosing our products, HT-1220P /1720P T2B is our independent development of heat transfer equipment which is launched in 2017. The design is concise using small space, as well as it uses short heating time. It is applied by using electricity heating to control temperature, heating is fast greatly improving production efficiency.（In additional, it can take up tissue paper and finishing sublimation paper） Make your work safe and relaxed through these user-friendly design.

To ensure the best quality of finishing product and extend the life of the machine when you use thermal transfer, please carefully read this manual on the part of installation, operation, maintenance instructions. Meanwhile, in order to let you enjoy our after-sales service, please fill out the warranty card inside the operating manual and fax or courier to our company, our contact information is on the last page.

Notes: THIS MACHINE IS USED FOR HEAVY INDUSTRY.

2. Safety Notice

Before the operation, please read the safety instruction carefully to fully understand the machine's primary structure, function, and operation method. If conditions permit, the training to the operators is required, and the operators passing the examination, are allowed to operate and maintain. During the operation and maintenance, please pay attention to the warning signs pasted to the equipment, and improve the safety awareness to prevent the accidents and to guarantee operator's personnel safety.

2.1 Safety Parts

2.1.1 Emergency Switch

There are 2emergency switches, if pressing one of them, power is cut down. The switch will release automatically by rotating clockwise. But only we repress the power switch on the main panel, the device could restart. Once emergency, press the switch please.

Note：Emergency switch is very important safety part, please check whether it is ok or not regularly.

2.1.2 Heating Cylinder

During heating, the surface temperature of the heating cylinder could be up to above 230°C. And it will alarm when temperature exceeds 250°C. While it is heating, please don't touch the cylinder surface with any part of the body to avoid crushing or burning. When the machine is heating and operating, the operators shall be present to avoid the cylinder damages or the fire due to the overheating.

2.2 Warning Sign

Below warning signs indicate any potential damage or injury requiring special attention.

Anti-roll in *symbol*

(This sign is placed in the side frame of drum and blanket connection, hands going the space between drum and blanket is very dangerous while machine running). The rollers are rotating when working, please keep your hands, cloth, hair and other body away from contacting in order to avoid accidents.

High-voltage symbol

The symbol is inside the cabinet.

Don’t touch in case risk of electric shock.

Sprocket symbol

This symbol is inside the right body.

Please keep your hands, cloth, hair and parts of body away from the sprocket when working in order to avoid accident**s.**

Anti burns symbol

This is placed at the heating cylinder of cabinet.

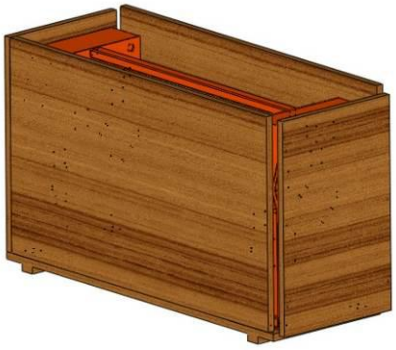
Cylinder is heat generating elements. Don’t touch. After power off, Please don’t touch it immediately after work since the drum need enough time to release heat

2.3 Safety Cautions

1) The mains supply must match the type indicated on the machine identification label. And reliable ground connection shall be ensured. (Don’t change the function of grounding for three-pole plug)
2) The max temperature is 250℃.. The default temperature is 210℃.. It will alert when reach the maximum.
3) The temperature of roller surface is too high during working. Don’t touch.
4) Before open the box to exam and fix of the equipment, the machine must be power off in order to avoid electric shock or mechanical wounding incidents. Cut off the power when the transfer is finished.
5) Don’t place the power on the walkway or stack goods on it. Prevent the power from rolling by the vehicles.
6) Inverter and board should be kept clean in the body in order to avoid metallic conduction material dust falling into. Never open the protective covering, caution risk of electric shock.
7) The working place should be dry and ventilated. Please keep the equipment far away the water or the damp place. Don’t put the inflammables or explosives around the equipment.
8) Don’t put tools or others, such as screwdriver, screw nail and nut etc. on the table or the surface of both stands in case the cargo falling into the cylinder to cause the damage.
9) Don’t use water to wash the machine in order to avoid the short circuit, electric shock or the corrosion.
10) The ambient temperature is -10℃ to +50℃.

3. Unpacking

Step 1: Remove the top cover (need 12/13/14 wrench)

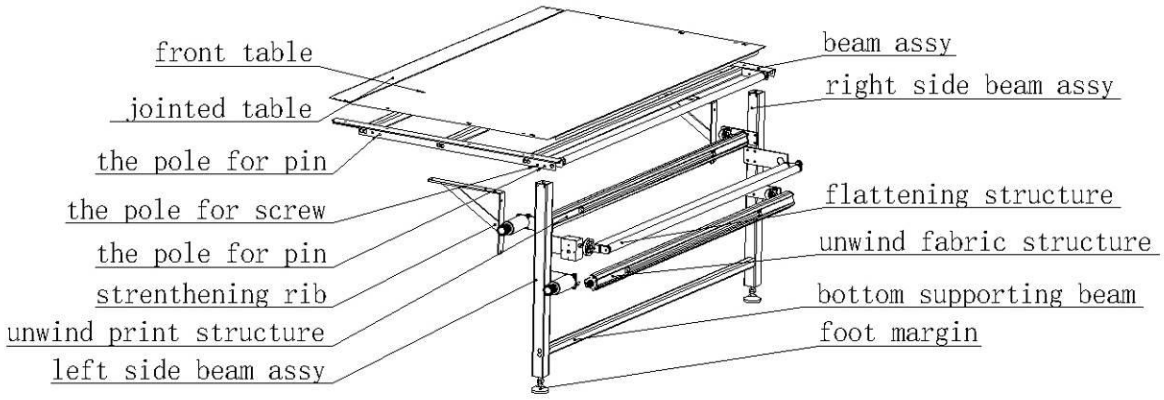


Step 2: Pull down the wooden side covers (use 12/13/14 wrench)

Step 3: Loosen the screw between pallet and machine (use 17mm wrench). Move the machine by forklift.

Note: This is a schematic diagram. The quantity of bolts is based on the packing dimension

Caution: When moving the machine by forklift, must put the bottom frame of the machine on the forklift and people should protect the machine on both side. Be careful during transportation to prevent damage from falling off.



1. Rotate the beam assy to horizontal, then install the left side beam assy and right side beam assy with screws and pins.
2. Joning the right side beam assy and left side beam assy with bottom supporting beam, adjust the foot margin to the beam horizontal, install the strengthening rib.
3. Install unwind print structure、unwind fabric structure、flattening structure in turn.
4. Install the jointed table and front table.

4. Technical Specification

HT-1220 T2B:

Width	1200mm	47 inch
Speed	0-2.3m/min	0-90.6in/min
Belt size	Φ1794×1300×δ8mm	72×51×0.2in
Thermal Media	Electricity	
Temperature	0-230℃	
Power	5Kw	
Power Supply	Single phase, 220V	
Current	24A	
Motor Power	200W	
Machine Size	1821mm(L) ×1856mm(D) ×1234mm(H)	71.7×73.1×48.6(H)in
E-Stop	2	
Weight	500Kg	

HT-1720P T2B :

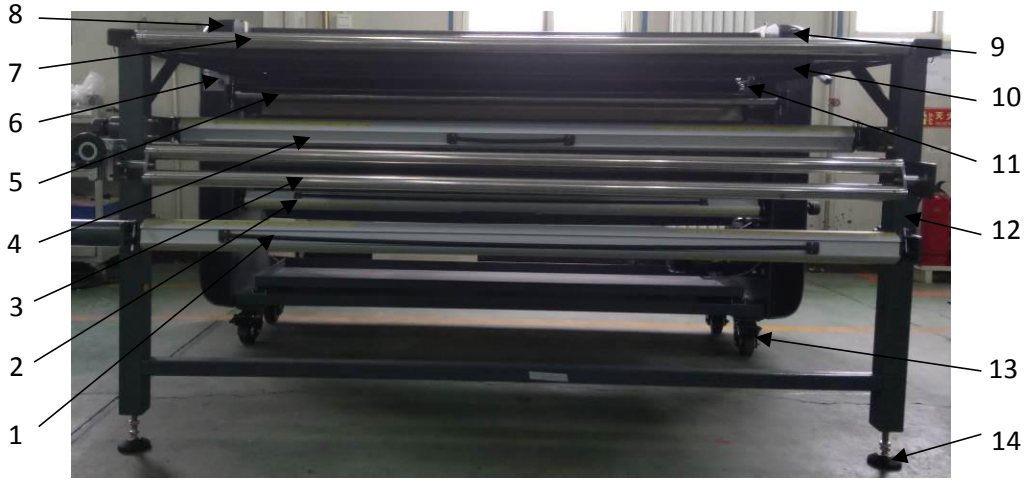
Width	1700mm	67 inch
Speed	0-2.3m/min	0-90.6in/min
Belt size	Φ1794×1800×δ8mm	70.6×70.8×0.3in
Thermal Media	Electricity	
Temperature	0-230℃	
Power	8Kw	
Power Supply	Single phase, 220V	
Current	37A	
Motor Power	400W	
Machine Size	1821mm(L) × 2356mm(D) ×1234mm(H)	71.7×92.8×47(in)
E-Stop	2	
Weight	700Kg	

NOTE: The power supply for HT-1220P T2B is Single phase, 220V, 24A. Power code is 6mm^2×3.

The power supply for HT-1720P T2B is Single phase, 220V, 37A. Power code is 6mm^2×3.

5 Definition of whole machine

5.1 Front View



1. Fabric Unwind 2.Waste paper Rewind 3.Tension for Fabric 4.Prints Unwind

5. Paper Idler bar 6.Control Panel 7.Table Idler Bar 8.Left Side Cover 9.Right Side Cover
10.Feeding Table 11.Converyor Roller 12.Stand 13.Castor 14.Anchor bolt

5.1.1Notes

Functional Shaft

The machine equipped with 6 shafts, 3 shafts for unwind- Tissue paper unwind, Prints unwind and Fabric unwind; another 3 shafts for rewind – Tissue paper rewind, Waste paper rewind and Fabric rewind. There are 4 tension knobs on the right frame and another 2 on the feeding table, to increase the tension by rotating in clockwise and decrease tension in anticlockwise, please adjust the tension based on the finishing quality.

Castor

The wheel is Φ100 with brake; this is only used for short distance moving or adjustment.

Anchor Bolt

Two M16×100 anchors to support the working table, to use in different ground through adjusting anchor bolt height. Remove it when need short distance movement.

5.2 Rear view

1.Drawer Collection 2.Main Motor 3.Fabric Rewind 4.Pieces Falling Plate 5.Tissue Paper Rewind
6.Heating Drum 7.Blanket Support Roll 8.Tissue Paper Unwind 9.Emergency Stop 10.Felt
11.Felt Adjustment Roll 12.Circuit breaker 13.Power connection 14.Pallet

5.2.1 Notes

Power Cable connection

Connect the main power cable, switch on the circuit breaker, reset the E-stop, then power on the machine from control panel, select direction of F or R, press the motor switch on, rotate the speed potentiometer to run machine, and heat machine up till setting temperature.

Emergency Switch

In emergency, press stop button to power off the machine, the roller stop roling. Clockwise the stop button, it takes up automatically. To restart the roller, press switch button on the control panel.

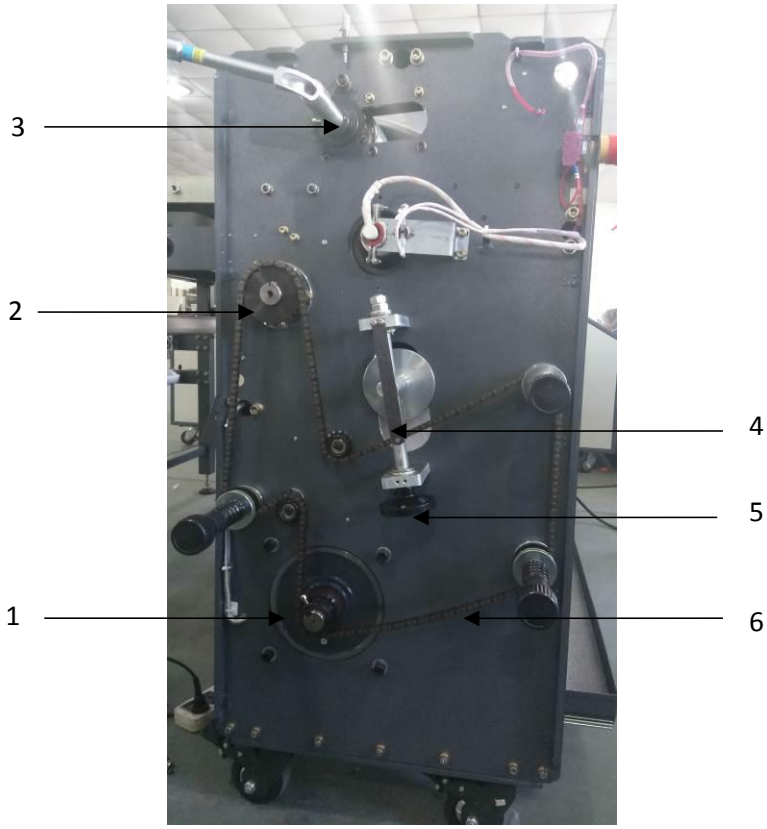
Felt

Felt is the core component on the machine, please use it followed by the instruction to ensure it can be used long time. Please don't make any changes for felt alignment structure during its fixation period, and it is allowed to adjust within the specified range after fixation to keep its life. Please keep the machine running while it is warming up, we could not give any guaranty if it is burnt without rotating process. The machine can be shut down only the temp drop down less than 80℃(keeping machine running during cooling down), otherwise, it is a risk to burn the felt.

Thermal Drum

Thermal drum is the main part which needs to be maintained. Before use, keep it clean. The surface of roll is special process, don't scrub with corrosive liquids and prevent scratch by falling into objects.

5.3 Structure of right case



1.Motor 2. Sprocket 3. Manual Felt in/off structure 4.Felt alignment structure 5.Small Hand wheel 6.Chain

5.3.1 Notes

Manual Felt-alignment Adjustment

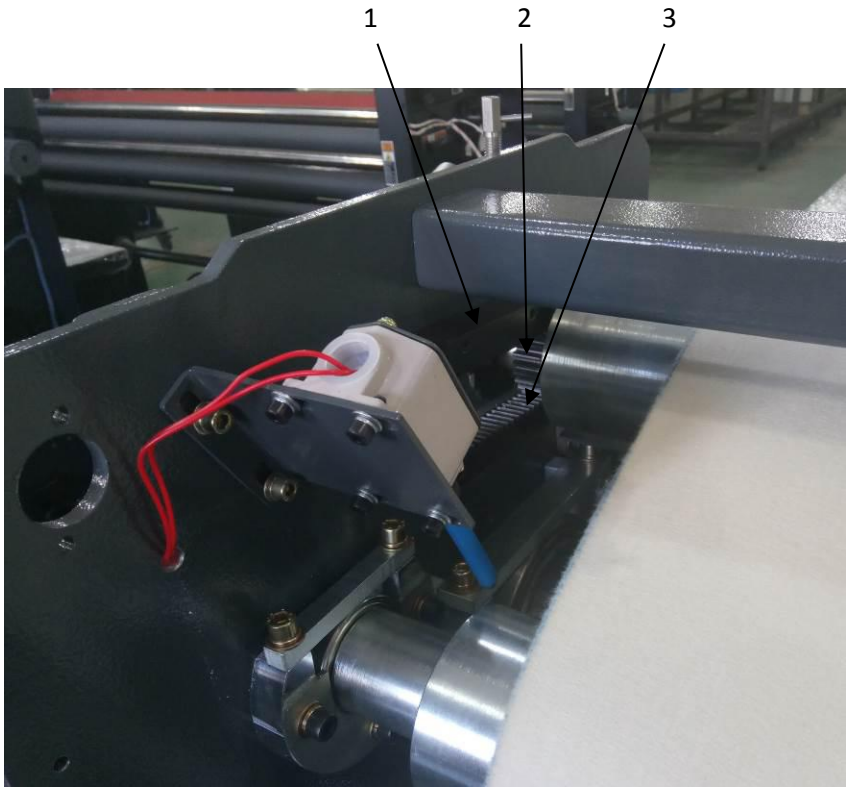
During working, make the felt in a suitable position. The sensor will monitor the felt position. The alert is on when the felt isn't alignment. Adjust the felt according to the signs on the machine. The alignment block moves back, the blanket moves left; the alignment block moves front, the blanket moves right. The structure ensures to adjust felt without power off during transfer.

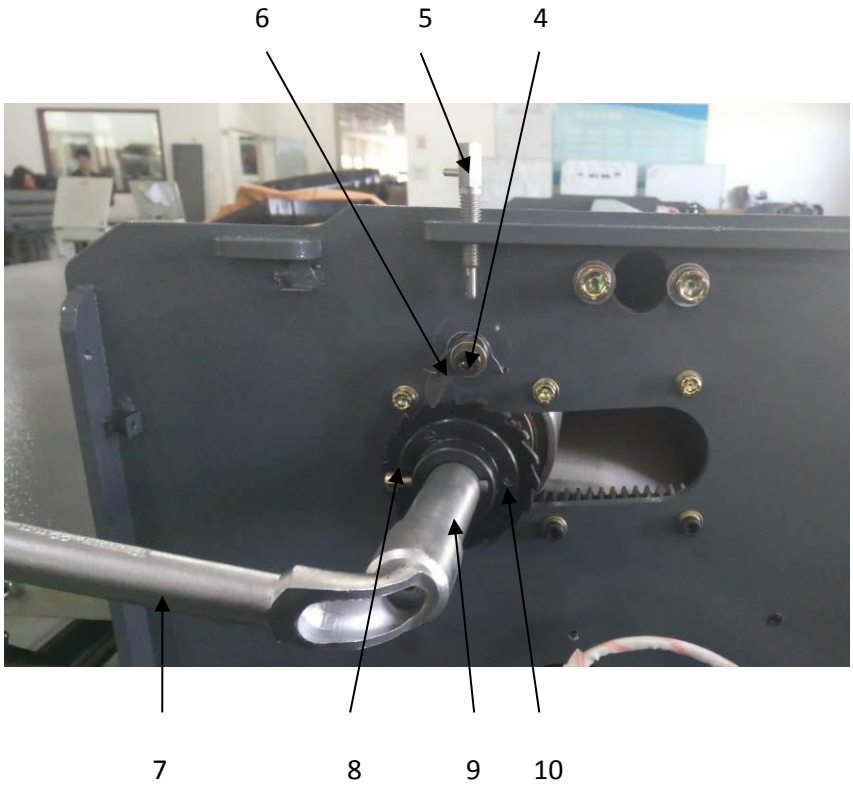
Manual Felt- in/off Structure

It is the structure for felt easily enter and release. Before work, you can set felt tension to suitable location, during felt fixation, much more tension is not allowed, just set the available pressure for artwork use. If the felt travels to either left or right while working, just release it and put felt into center and lock to continue.

Small Hand Wheel

It is the part of felt alignment, by rotating which can change the felt traveling way. Please use it when the felt is in loose.

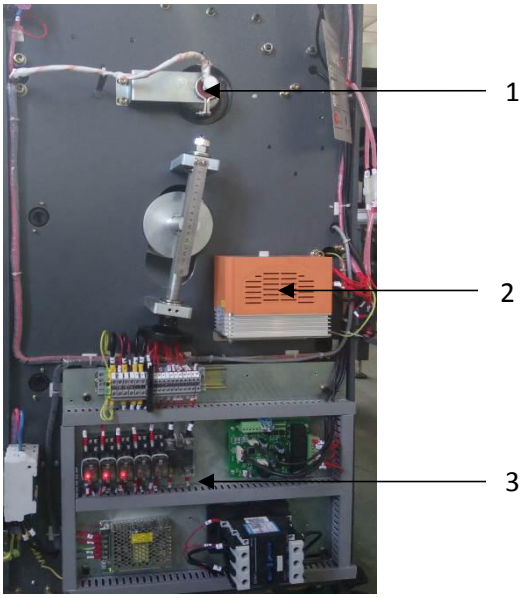




1. Gear Way 2.Gear 3.Fixed gear Way 4.Bolt and washer 5.Quick Disconnect 6.Pawl 7.Spanner

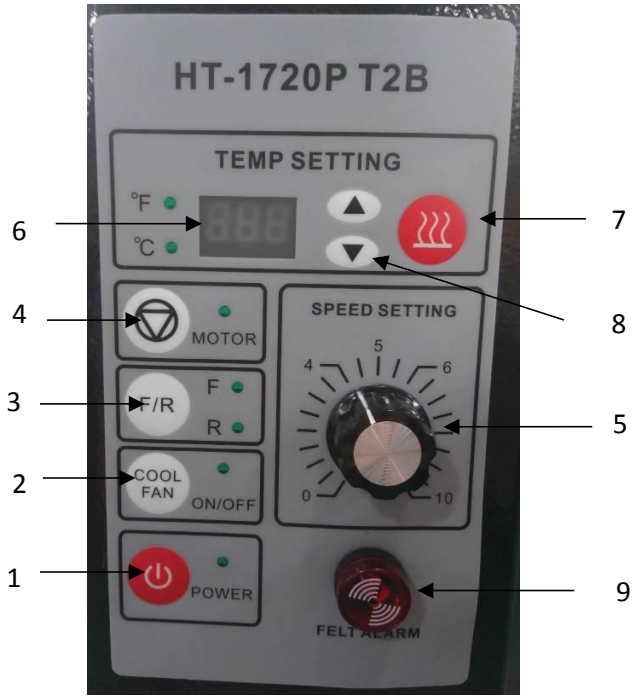
8. Ratchet Wheel 9.Expended shaft 10. Fixed Plate for Ratchet Wheel

5.4 Structure of left case



1.IR Heater 2.Inverter 3.Electric Panel

5.5 Control panel



1 **Power On/off Switch:** Main power control button, green indicator on means the machine power is connected for working; switching it off to disconnect main power, then the machine will stop. Be sure that the machine temp is less than 80℃ and blanket is off before you switch machine off.

2 **Cooling Fan Switch：** The cooling fan bank will work when it is on, the fan will cool down the finishing transfer artwork to avoid twice transfer if fabric surface is too hot. It must be on during work for quality finishing.

3 **F/R Button:** F means forward, R means reverse.

4 **Motor On/Off:** Control the main motor on and off

5 **Speed Potentiometer:** The range is 0-2.5m/min, but we suggest set 1-1.5m/min for better finishing quality.

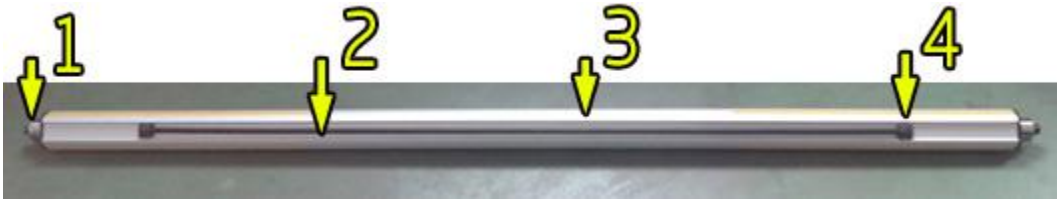
6 **TEMP Indicator:** display the real heating temp, you can select Celsius or Fahrenheit

7 **TEMP Up/Down:** Increase or decrease setting temp

8 **Heater On/Off:** switch on or off heater

9 **Felt alarm:** Key part for felt alignment, you should adjust the felt when it is alarming to avoid any damage to felt.

5.6 Functional Shaft



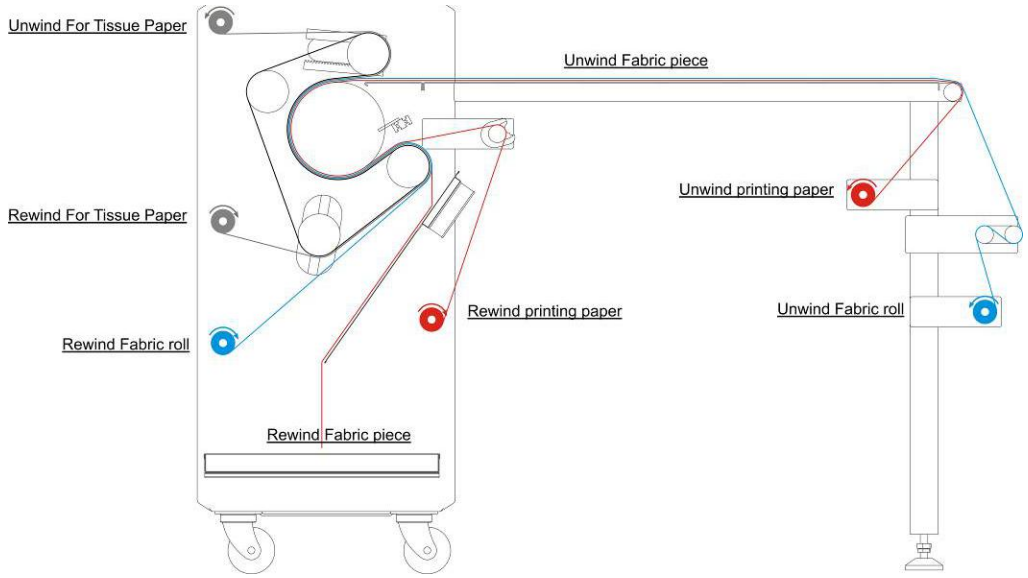
1 Bearing 2 Rubber strip 3 Aluminum shaft 4 Scale mark

It includes tissue paper unwind,prints unwind, fabric unwind, tissue paper rewind, waste paper rewind, finishing fabric rewind, which are same structure per photo shown. For all unwind shafts are without chain driven, and all rewind ones are driven with motor, they are all with tension knob for adjustment.

When putting them on, one side insert into the tang first and another side drop down the saddle after, at the end put the pin into the front hole to lock.

6 Working Principle

Before start transferring, you should know how it works.



7 Working Procedure

1) Before switching on the machine, make sure that all electrical wires are connected correctly. The body of the machine must be connected to ground.
2) Keep the blanket and roller clean. The belt can't be too tight. Feel the tension by touch the belt by palm.
3) Press the main power switch and transducer switch. Set up the speed
4) Result with small piece of printed transfer paper and substrate. Adjust the temperature with reference to the testing result of the transfer to make sure the quality of mass production.
5) Place the printed transfer paper and fabric (to prevent the contamination of blanket) in proper roller. Feed in the belt evenly. The printed image is up and attach on the fabric.
6) Use the rewind roller when the transfer paper is long. Make sure the appropriate tension of roller. Adjust the tightness by damping hand crank.
7) Keep the hard piece away from drum. Keep clean and tidy. During operation, the operator is not allowed to leave to avoid blanket deviate and other accidents.
8) When the transfer is finished, press heating button, stop the machine when it cools down to 80℃.
9) The equipment should be maintained and checked parts regularly.

8 Notice for operation

1) Check the packing before unpacking.
2) Check the accessories according to the packing list.
3) There should be enough room for installation the equipment. The environment is clean, no dust, no steam and corrosive gas pollution, non-flammable materials piled up and ground is level.
4) Before using, keep clean on the surface of heat roller surface, the other drive roller and blankets. The heating roller surface is through a special process, avoid to cleaning by corrosive liquid and scratch by hard objects falling into the roller surface.
5) When it is working, if the blanket is assembled not well, it will have deviation phenomenon. Turn the knob to let the belt backward, reset the position of blanket.
6) The rollers and bearing may expand and create noise when they are hot. Do not worry as it is a normal phenomenon.
7) Keep clean and tidy so that there is no dirt falling into electric circuit box and transducer. Do not open the protective shield of transformer to avoid electric shock.
8) Do not replace the parts yourself without consulting the engineers of our company. The parts must be provided or approved by our company.
9) The feeding table is not allowed to put heavy duty goods on to avoid it may be bend for inconvenient use.
10) When use a forklift move the machine, put the arm under machine, people should help protect against the machine upside-down on both sides

9 Device Maintenance

9.1 Daily Maintenance

No.	Item		Solution
1	Switch and Lights		Repair if it is abnormal
2	Heated problem	1）Less of voltage	More voltage
		2）Incoming or outgoing line is loosing	Check the circuit
3	Temperature uncontrolled	1）Solid relay broken	Replace relay
		2）Temperature controller damage	Replace temp. controller
4	Drum not rotated	1）Blanket too loosing	tension the blanket
		2）Sprocket slipping	fasten the screw
		3）Bearing stuck	Replace bearing
		4）Inverter damage	Replacement
		5）Motor or gear box damage	Replacement

9.2 Regular maintenance

No.	ITEM		Solution
1	Heated problem	1）One or more heating rod burned	Replacement
		2）Thermal oil aging	Replacement
2	Drive roller maintenance		Keep clean Clean the surface by water or alcohol. Don’ t use gasoline to clean.
3	Due to the high frequency of use, blankets damage. Blanket is too loose to tension		Replacement
4	Confirm the connection of head of electrical wiring		Adjustment
5	Investigate whether vibration causes of mechanical fasteners loose		Adjustment

9.3 Trouble Shooting

Phenomenon	Cause	Solution
1. Power off	1) The supply switch of universal socket damage 2) Circuit breaker open 3) Transformer damage 4) Switch damage	● Replace spare parts ● Replace spare parts ● Replace spare parts ● Replace spare parts
2. Turn on the machine, light isn’t on	1) Supply voltage can’t match the machine voltage 2) E-Stop switch is locked 3) The fuse next to the power is not installed or has been damaged	● Check the voltage of supply and machine ● Unlock E-Stop switch ● Check if fuse damage
3.Power on, turn on the air switch but not trip	Heating rod damaged cause the short circuit	● Check and replace heating rod
4. Motor rotated but can’t adjust speed	Potentiometer damage	● Replacement
5. Drive roller run abnormal	Chain is loosing	● Adjust chain