

ThermalTransfer Machine

HTM-FLRTR-1700AIR



Apply to: CS-HTM-FLRTR-1700AIR

User's Manual

2015.08.24

English

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1. Introduction

Thank you for choosing our products, TTM-17700Pro-B is our independent development of heat transfer equipment which launch in 2014. The advantage of this equipment is that improves heat transfer rate and transfer performance. It is applied by using oil heating to control temperature, so heating fast with perfect insulating effect, greatly improving production efficiency. In addition, it is also with function that automatically blanket backward, auto-expose the liner of paper and auto-rewinding transfer paper. Make your work safe and relaxed through these user-friendly design.

To ensure the best quality of finish 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.

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 3 emergency switches, if pressing one of them, we will cut the power down and rotating clockwise, the switch will raise automatically. 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 Separating-blanket Switch

The Switch is on the main panel while the heat transfer finishes work, it will stop heating. And only the temperature of heating roller goes down to less than 80°C, spin the hand wheel to make blanket belt separating from the heating roller to prevent the blanket from burning.

2.1.3 Heating Roller

During heating, the surface temperature of the heating roller could be up to over 240°C. And it will alarm when temperature is up to 270°C. While it is heating, please don't touch the roller 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 roller 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

The sign is at the junction of upper and lower roller on two sides of machine.

The roller is dangerous when working. Please keep your hand, 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 left body.

Please keep your hand, cloth, hair and parts of body away from the sprocket when working in order to avoid accidents.



Anti burns symbol

This is placed at the heating roll of cabinet.

Roller is heat generating elements. Don't touch. After power off, upper roller needs much time for cooling. Don't touch immediately in case burned.

2.3 Safety Cautions

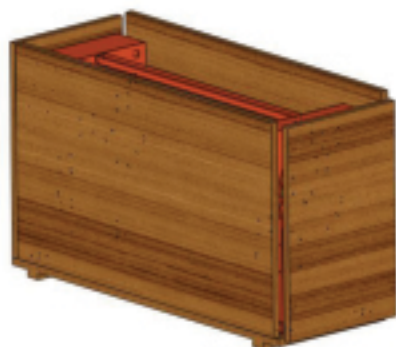
- 1) The mains supply must match the type indicated on the machine identification label. And reliable ground connection shall be ensured. (Don't change the function of grounding for three-pole plug)
- 2) The max temperature is 280°C. The default temperature is 230°C. It will alert when reach the max.
- 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 roller which caused 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

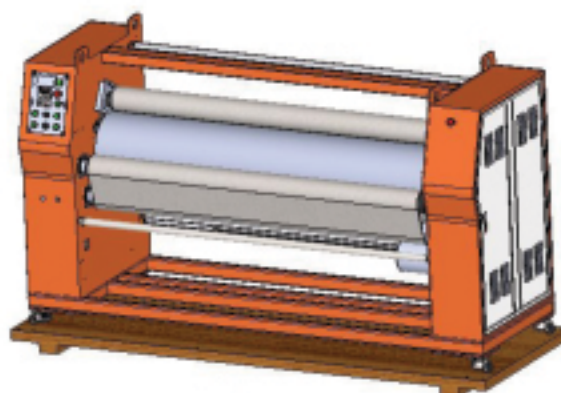


Step 1: Remove the top cover (need 12/13/14 wrench)



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

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



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

Caution: Must put the bottom frame of the machine on the forklift when moving and need protection on both end. Be careful during transportation to prevent damage from falling off.

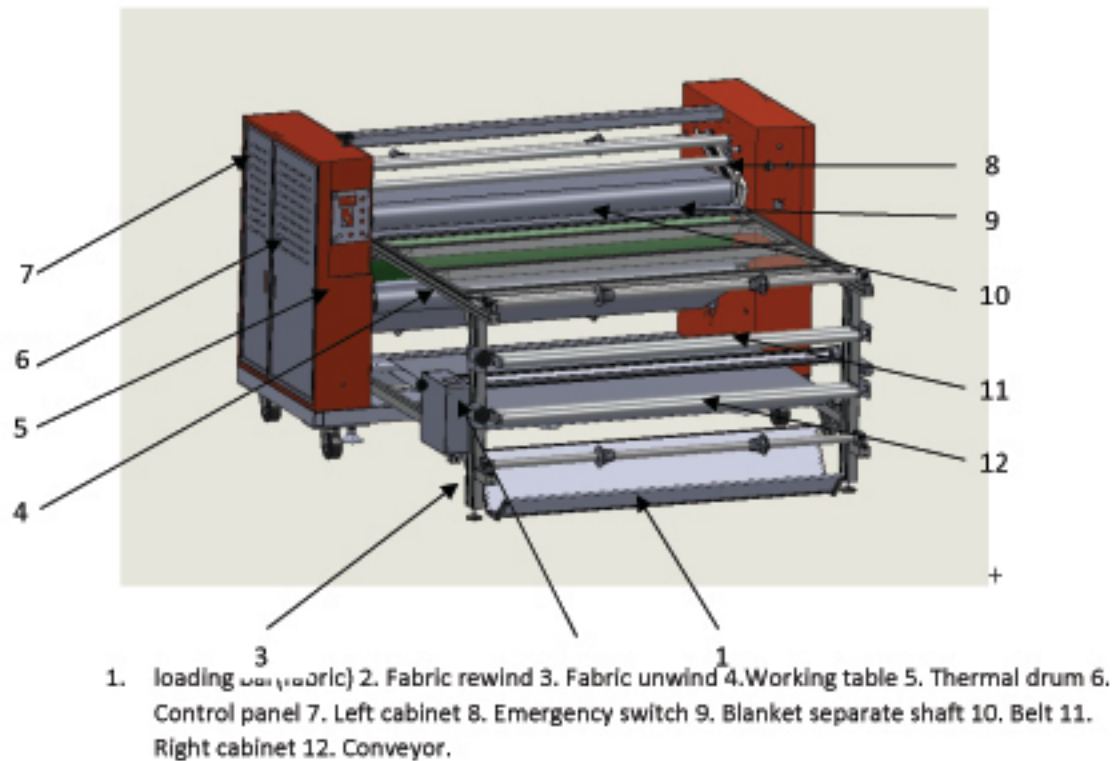
4. Specification

Width	1700mm	66.9in
Speed	0-4.2m/min	0-165in/min
Belt size	Φ3126×1820×δ 6	123×72×0.2in
Thermal Media	Oil	
Temperature	0-240℃	
Power	21.6Kw	
Power Supply	230/400V,3W+N+PE	
Current	30A	
Motor Power	750W	
Machine Size	2480(L) × 2418(W) × 1443(H)	98×95×57
STOP	3	
Weight	1800Kg	

NOTE: The power supply is 380V, 50A. Power code is 6mm²×3+4mm²×2.

5. Name of all parts

5.1 Front View



5.1.1 Notes

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. Slip ring with protector and temperature tester is on the left. Don't open the protector in case the electric shock. The thermal drum is filled in oil before delivery. On trail, rotated pre-heating for the drum, turn off when the surface reach 80℃. Then set the right end of hole of drum on the max height. Loosen the screw with a wrench slowly till no air out. Then screw it. Keep heating on 120℃, repeat the above operation three times. The machine can be used safely. Set the temperature at 80℃、120℃、160℃、190℃、230℃ respectively and get the air out when machine keep the setting temperature for 1 hour.

FRUCTION SHAFT

We have 6 rollers of this machine. Unwind/rewind roller for tissue paper, unwind/rewind roller for transfer paper, unwind/rewind roller for fabric. The three black hand wheel in the left cabinet and one black hand wheel on the working table cabinet are used for the friction adjusting. Adjust the friction by rotating clockwise to increase friction and anticlockwise to decrease the friction to insure good transfer quality. Adjust the hand wheel for two front shafts in order to increase the friction.

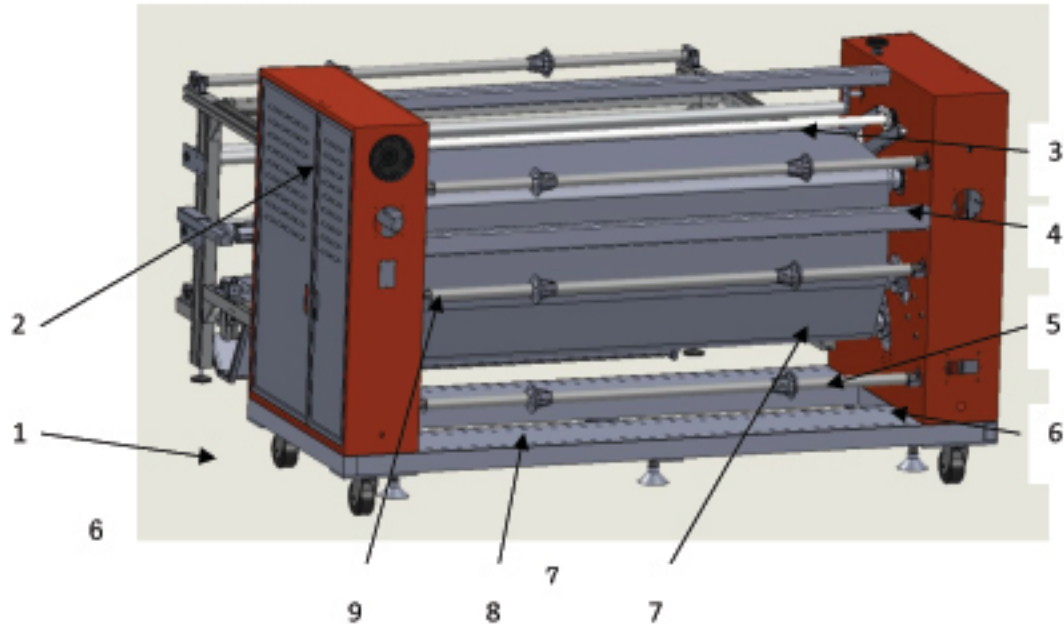
Wheels

The wheel is $\Phi 125$, no breaks, this is only used for short distance moving or adjustment.

Emergency switch

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

5.2 Rear view



1. Hand wheel 2. Power line plug 3. Rewinding shaft 4. Bottom stand 5. Blanket adjustment shaft 6. Blanket-separating shaft 7. Tissue paper shaft 8. Fan 9. Fan

5.2.1 Notes

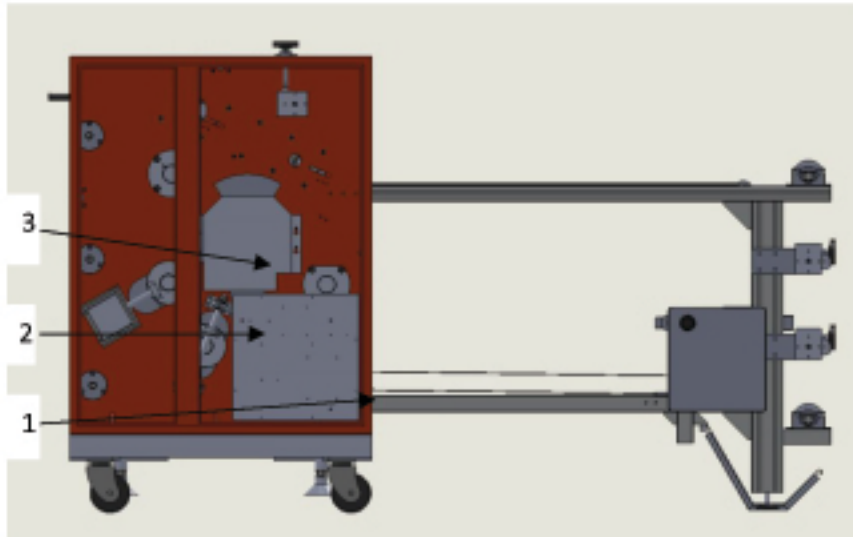
Handwheel

When there is sudden blackout and the machine is working at high temperature, rotate the hand wheel by hand immediately to separate the tank from blanket so that the hot roller does not burn the blanket.

Power Cable connector

Connect power cable and close the rear of left case, reset the stop button. On the control panel, the red light of the stop is on. Then, press green button to turn on the machine, so green light is on, red light is off. Automatically turn on the temperature controller and speed conditioner.

5.3 structure of left case

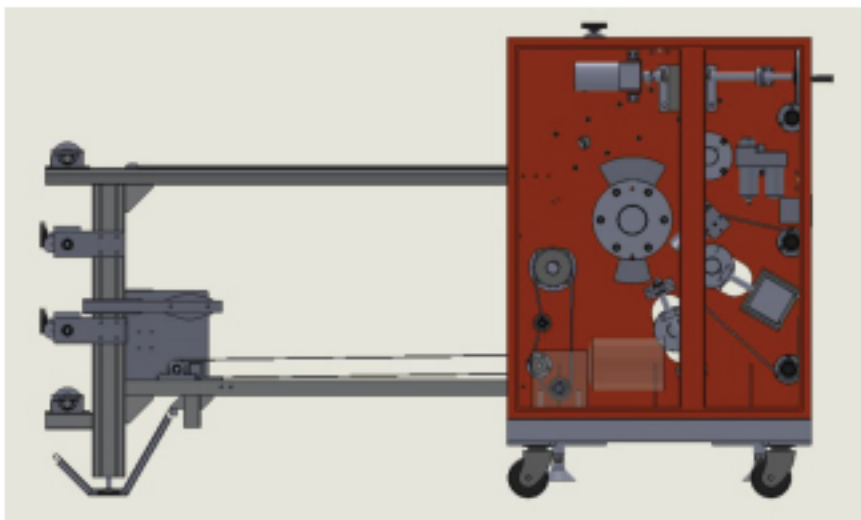


1. Distributor 2. Blanket adjustment 3. Protector case

5.3.1 blanket adjustment

The blanket may deflect to either side in 3mm during working. This is a normal. When the blanket is deflected to left side, rotate the left hand rank to move down the left defected roll, then more tension put on left. When the blanket is deflected to right side, rotate the right hand rank to move down the right defected roll, then more tension put on right.

5.4 structure of right case



1. Speed reducer 2. Main motor and chain 3. Chain

5.5 Control panel



1 Power switch

Press switch to turn on the machine, start to work when the light is on. Press again the switch to turn off. The machine is stop when the temperature is 80℃ and blanket is separated from the drum.

2 Heat

Press heat, the heating display is on, the drum is on heating. Press again, the heating display is closed as well as stop heating.

Control the running speed, the set up range is 0-3.5m/min, suggested running speed is 1.5m/min in order to achieve better transfer performance.

4 Temp Setting

The function is controlling the heating drum. The oil is heated in the heater which is controlled by switch. **Temp Setting show the set up temp. and actual temp. The machine will alert when the temperature exceed 270℃.** Alert is on, heater stop working. The temp setting works by collecting the signal of platinum resistance. Temp setting can display the real-timing temperature of heat transfer oil



1) Temperature setting

Press adjust button, get the temperature, confirm by pressing function button. The digital is flashing(the temperature reach the set temperature, stop flash)

2) Reset the temperature without pressing function button, auto-work in 5s.

3) The temperature shown on display is the surface temperature of drum, the tolerance is less than 5 degree compared with circumstance temperature

No need to change other parameters which is set before delivery. Please read manual carefully and follow the step on manual to change the parameters. In order to expend the machine lifetime, don't adjust the temperature frequently. Press on switch gently to avoid damage.

5) Power supply indication

Green light on, the machine is under power.

6) Emergency Stop

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

Move The Blanket Backward

Turn right to feed in the blanket. Reset the button when get appropriate tension on the blanket. Turn left to take backward of the blanket. Reset the button when get the appropriate position of the blanket.



1. Manual pneumatic rotary valve
2. Pressure Indication
- 3 Emergency switch
4. Pressure control

1. Manual pneumatic rotary valve

Manual pneumatic rotary valve: Turn the valve right to pressurize the blanket. It will improve the transfer quality and meet special requirements during working. Turn middle the valve when finish pressurizing.

2. Pressure indication

Show the pressure

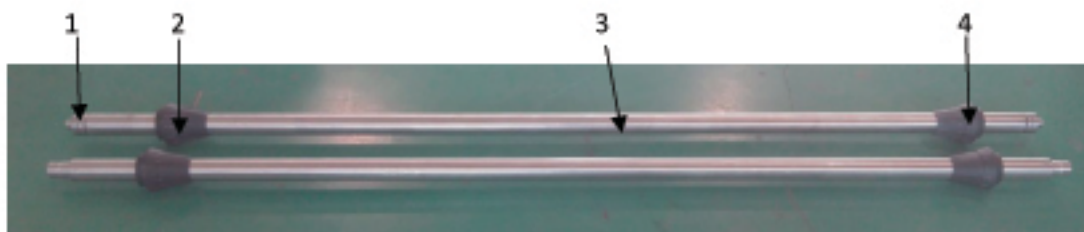
3. Emergency switch

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

control panel.

4. Pressure control

Control the pressure by clockwise pressurize and counterclockwise decompression

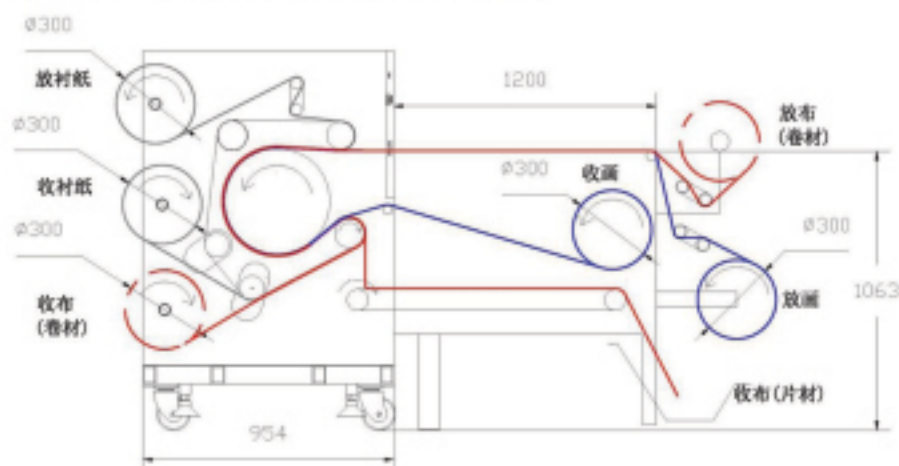


1 Deep groove ball bearings; 2. Roller 3. Roller for nylon pad 4. Chuck

Unwind/rewind roller for tissue paper, unwind/rewind roller for transfer paper, unwind/rewind roller for fabric. Motorized rewind roller of tissue paper and fabric, non motorized assisted roller for tissue paper, transfer paper and fabric. Both rollers can control the transfer quality by adjusting damping. Remove the assist roller for transfer paper and fabric by unscrew the tablet, turn the tablet. Remove the bearing roller by turn vertical then take off the end. Assembly assist roller for transfer paper and fabric by put in the nylon suite and screw it. Assembly the bearing roller by put on the end with non-tongue shaft, then turn to fix on the stand.

6 Sketch up of Processing

Before start transfer, you should know how it works.



7 processing

- 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.