



HM-TC

Large-Pressure manual-operating stamping machine



操作说明书

OPERATION INSTRUCTION

东莞市高宝印刷机械科技有限公司

KC Printing Machine (Group) limited 20-1

Website: [Http://www.dg-padprinter.com](http://www.dg-padprinter.com)

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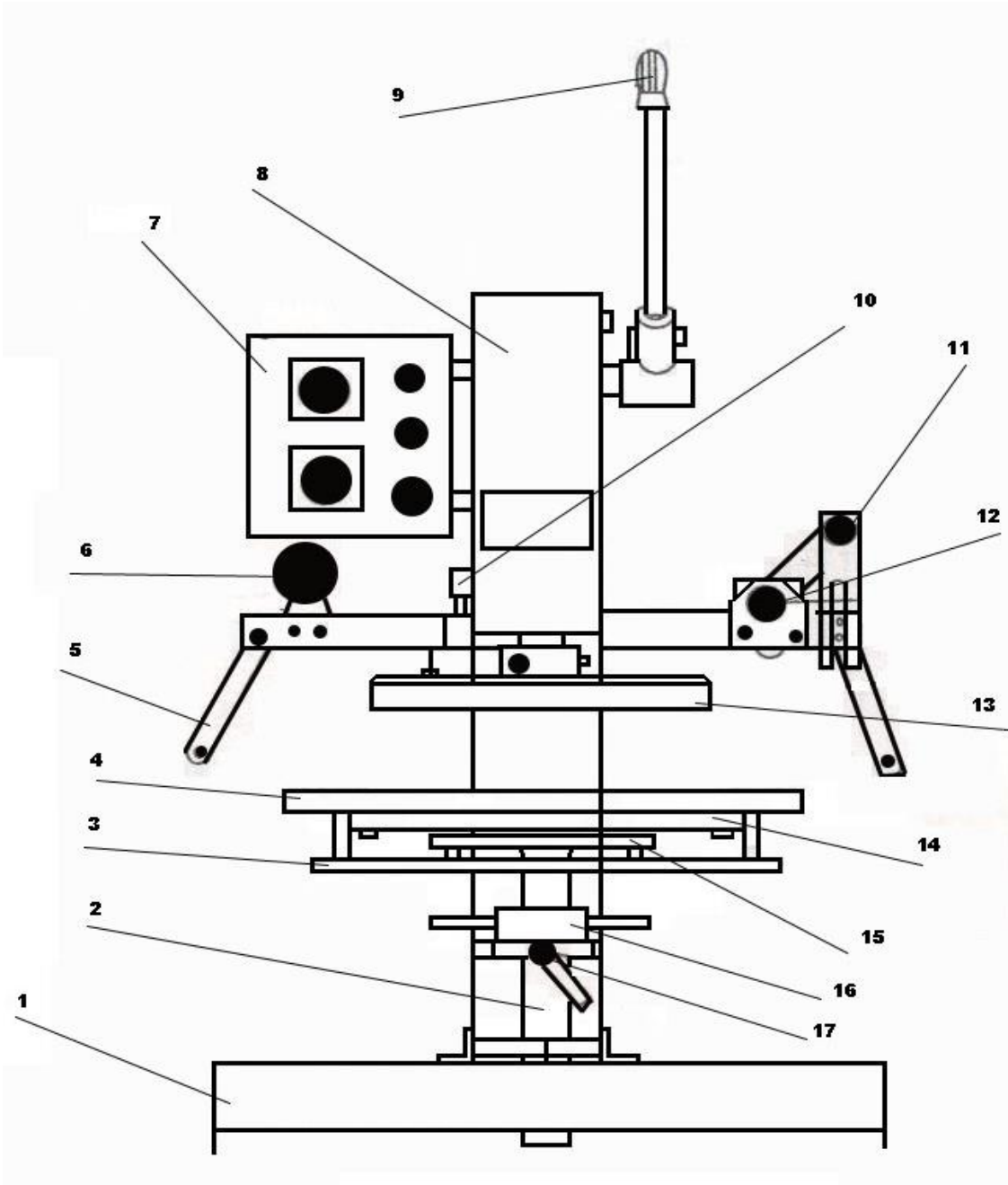
Some simple stamping problems.....



HM-TC 手动大压力烫金机

Manual stamping machine

- 概述: Summarize



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1、系列烫金机是在平面烫金机的基础上，根据杠杆的原理，将杠杆的力量作用于发热体与工作介面，从而达到工作时所需的大压力，该机不但可用作烫金，而且可作压痕和小型模切。

This type of machine is on the basis of flat stamping machine. According to pry-theory to act on the heat unit and working table, so that generating the pressure in this working period. this type stamping machine can be used not only for bronzing But also for impressing and die-cutting

2、该烫金机应用范围较广，广泛应用于烫印各种名片、橡胶、像册、木材、纸张、皮革、塑料、各种食品及化妆品硬包装运输等印件的电化铝图案。

Widely used for gilding on cards, rubber, film, wooden, paper, leather, plastics, cosmetic industry field etc)

● 主要技术参数: Mainly technology parameter

Model	HM-TC1520	HM-TC2129	HM-TC1927	HM-TC3025
烫板尺寸 area of stamping)	150*200mm	210*290mm	190*270mm	300*250mm
工作台尺寸 area of working table)	320*400mm	320*400mm	320*400mm	320*400mm
烫头行程 Stamping head stroke	40mm	40mm	40mm	40mm
电源要求 Power supply	AC 220V/50HZ	AC 220V/50HZ	AC 220V/50HZ	AC 220V/50HZ
加热功率 Heating Wattage	1200W	1200W	1200W	1200W
温度范围 Temperature range	0-299	0-299	0-299	0-299

● 不同材料的温度参考/Temperature reference

纸张：85 ~ 120°C(paper) 软 PVC：65 ~ 80°C(soft PVC)

软塑料：75 ~ 85°C (soft plastic) 硬塑料：100 ~ 135°C(rigid plastic)

人造革、皮革：75 ~ 85°C 100 ~ 130°C(man-made leather)(leather)

压痕温度：牛皮 120 ~ 150°C(impressing temperature)(cowhide)

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合成革仿皮：160~180°C(synthetic leather)

● 烫金机的功能扩展/Functional extension

烫金机不仅能够用来烫金，还可以用来完成其他工作：

- 1) 压痕：
- 2) 浮雕烫金：
- 3) 烙糊：
- 4) 皮革压纹。

Bronzing machine can not only be used to gold foil, can also be

- 1) Indentation;
- 2) relief bronzing;
- 3) wooden baked ;
- 4) leather embossed.



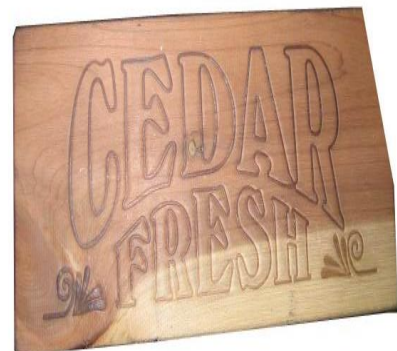
Embossment



Leather impression



Paper indentation



Wooden Baked

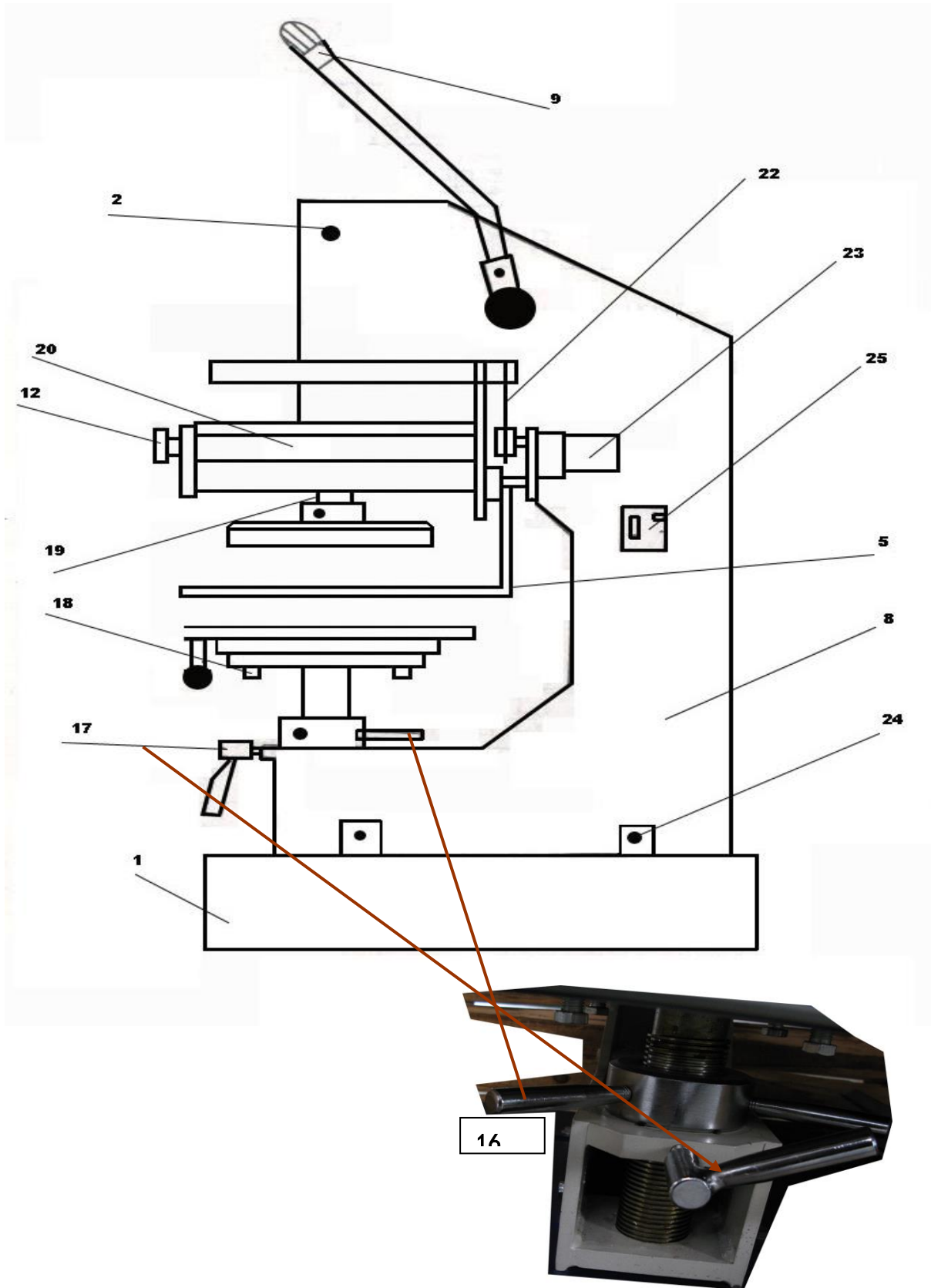
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● 主要结构及性能 (见附图一) (Mainly structure and performance)

序号	名称	序号	名称
1	底座 Pedestal	14	工作台滑道 Worktable sideway
2	升降丝杠 Lifting screw	15	工作台平衡 Worktable balancer
3	工作台拉手 Worktable handle	16	升降螺母 Lifting nuts
4	工作台 Work table	17	锁紧螺母钉 Locking nut
5	支承 Fulcrum bearing	18	工作台平衡螺 Worktable balance nut
6	放箔轮 Foil wheel	19	加热板滑柱 Heat plate slid column
7	电气箱 Electrical box	20	收箔辊组 Roll assembly
8	机体 Frame	21	杠杆销 Lever plunger
9	手把 Handle	22	圆型带 Belt
10	行程开关 Travel switch	23	电机 Electric motor
11	收箔轮 Foil wheel	24	固定块 Fix block
12	收箔手轮 Foil hand wheel	25	断路器 Circuit breaker
13	电热板 Electric heating board		

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● 参数的设置与调整: *Setting and adjusting parameter*

1、平衡的调整 : /Balance adjustment



首先应将设备放于平衡度好且无震动的场所。设备在出厂前都已调好，若需换版或做其它调整，其步骤如下：

1) the adjustment of balance of the machine: the machine should be put in stable and no shaking place. It has already adjusted well when it is out of factory, the steps are as follows if need some adjustment or change another hot stamping edition.

A. 将丝杠螺母手柄16 顺时针旋转使工作4 上升。

A. Rotates the handle of leading screw (16) clockwise to make the working table 4 up

B. 用手压动作手把9, 让加热模块13 紧贴工作台4。

B. Press the handle (9) by hands, let the heating plate (13) cling to the working table (4)

C. 用一张薄纸放于两间隙中, 以四点均拉不出为最佳平稳状态。

C. Put a piece of thin paper in the clearance, the best balance station is that the four point of paper won't pull out

D. 调节方式为: 调整工作台下方四个平衡螺针18。

D, the way to is to balancing screw (18) under the working table.

2、温度的设置 :

2. the adjustment of temperature

不同的烫印材料, 要求有不同的温度与烫印箔, 应根据材质温度所需设置好温度, 将电器箱上温控仪旋钮刻度对准所需的温度值。正常升温时, 温控仪上的红色电源灯和绿色输出灯亮, 恒温后绿色输出灯灭, 设备停止加热, 自动恒温。

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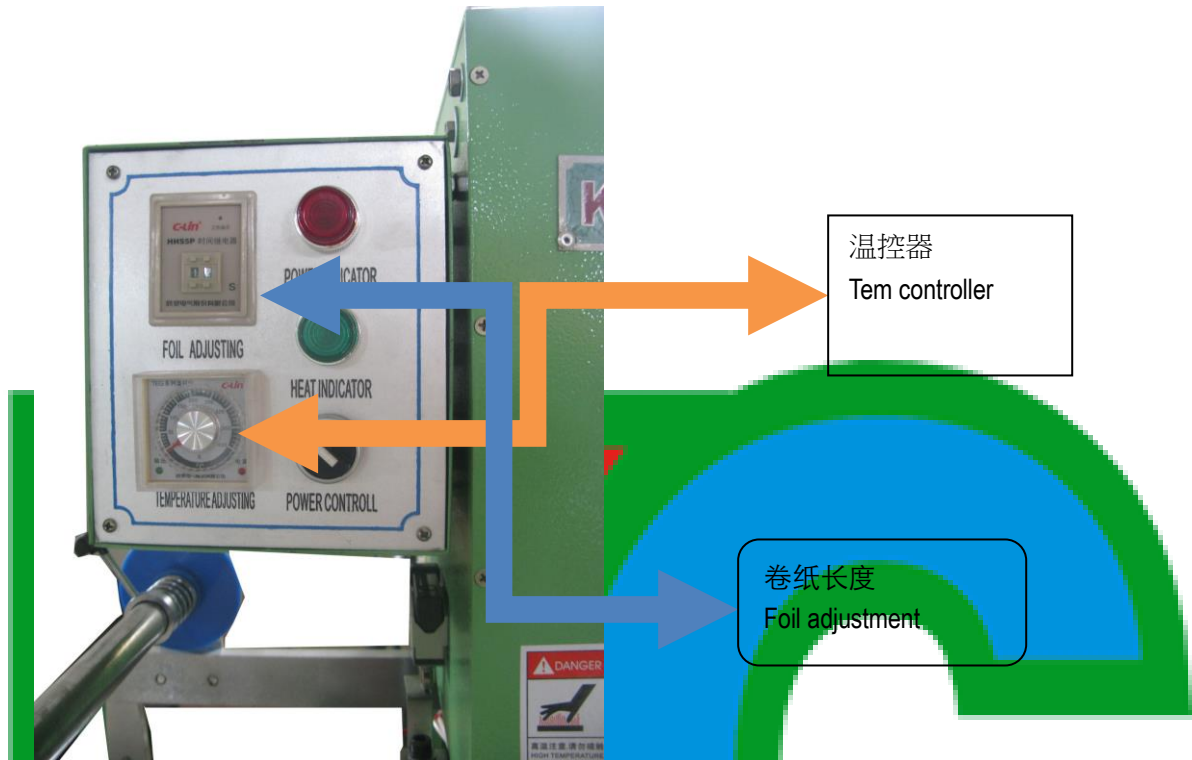
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Different of products require different temperature and hot stamping foil, set the temperature based on the products, make dial indicator of temperature controller in the electrical box pointing to the right temperature, the power lamp will be red and the lamp output will be green when the temperature increase. The lamp out (green) are off means that the temperature is stable, the machine will keep at a stable temperature.

3、卷箔长度的调节：

3. the adjustment of length of foil

本设备继电器控制自动卷纸，电器表箱上有一时间继电器（其设置范围为0~5秒、0~30秒不等）用户可根据实际烫印要求，在通电前，将旋钮刻度旋至所需时间值，时间值越大，卷箔长度越长。

This machine adopt the foil crimper automatically controlled with time relay, There is a time relay in the which is in electrical box (the setting arrangement is from 0 to 5 second, or from 0 to 30 second.) Adjust the dial indicator to the right time before connection to the power supply, the larger the time is, the longer the foil will be.



调整工作台高度
Height adjustment
handle

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其工作方式为：撞铁碰行程开关 SA→时间继电器 KT 获电→电机 M 拉金箔运转。

The working way is: pull to switch SA→ Time relay KT switch on→ Motor M run the foil controller

4、烫印效果决定因素：

4. The adjustment of pressure, time and temperature

注：压力、时间、温度以用合适的电化铝。

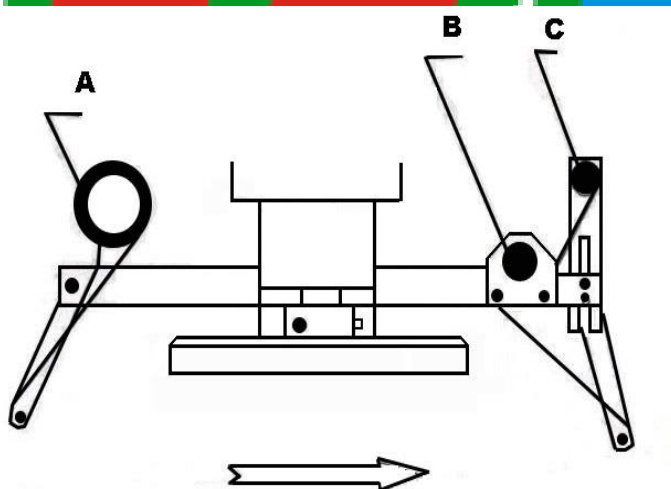
用户首先应根据质材，选配好合适的电化铝，其次烫印压力、时间、温度，根据实际情况略作调整。

It is very important to master how to adjust the stamping pressure, time, temperature and to choose the stamping foil, please do flexible adjustment based on the practical situation.

5、工作压力的调整：

5. The adjustment of pressure

本机为杠杆式传动，其压力最大可达 4T 左右，调节压力时将手把 9 压下，使加热模板与工作台 4 紧密接触，用手



旋转工作台下方手柄 16，使丝杠 2 上升，上升到 3-4mm 左右时产生的压力即为设备的最大压力。用户应根据烫印工件选择合适的参数。烫印时若压力过小，应旋转手柄 16 使丝杠 2 上升（缩短工作行程）。若压力过大，应旋转手柄 16，使丝杠 2 下降（增加工作行程）。

Stamping pressure adjustment: the stamping pressure is generated from lever installed on the stamping head, the max pressure is up to 4000kg, Press handle 9 to make the heating plate cling to working table (4), rotate the handle (16) below the working table and rise it (2) up to for 3-4mm by hands, it will produce the max pressure when doing that. If the pressure is too small, rotate



handle (16) and make the screw mandrel (2) rise up. If the pressure is too big, rotate the handle and make the screw mandrel down.

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6、电化铝的安装与调整（见下图）

6. Installing the foil

A. 根据工件的性质选择合适的烫金纸。

Choose the suitable stamping foil according to objects to be stamped

B. 烫金纸安装于下图，把金箔安装在放纸轮 A 上固定好后，拉出金箔沿箭头方向绕，用手转动卷纸手轮 B，让金箔从胶辊和光螺中穿过，然后固定在收纸轮 C 上。

Install foil on the wheel A and fix it, put it and across along the direction of arrow, then pass through rubber roller and steel roller, roll it on the collecting wheel.

C. 调整烫金纸的位置，使其处于烫印面的正上方，然后用定位环定位。

Adjusting the position of foil and make it locate above the stamped objects, then fix it with locating loop

D. 调节拉杆的长度和摆角，使烫金纸距离烫印模板 10mm 左右。

Adjust the length and angle of the steel rod, there will be 10mm between the stamping foil and stamping plate.

● 操作事项：Operation process

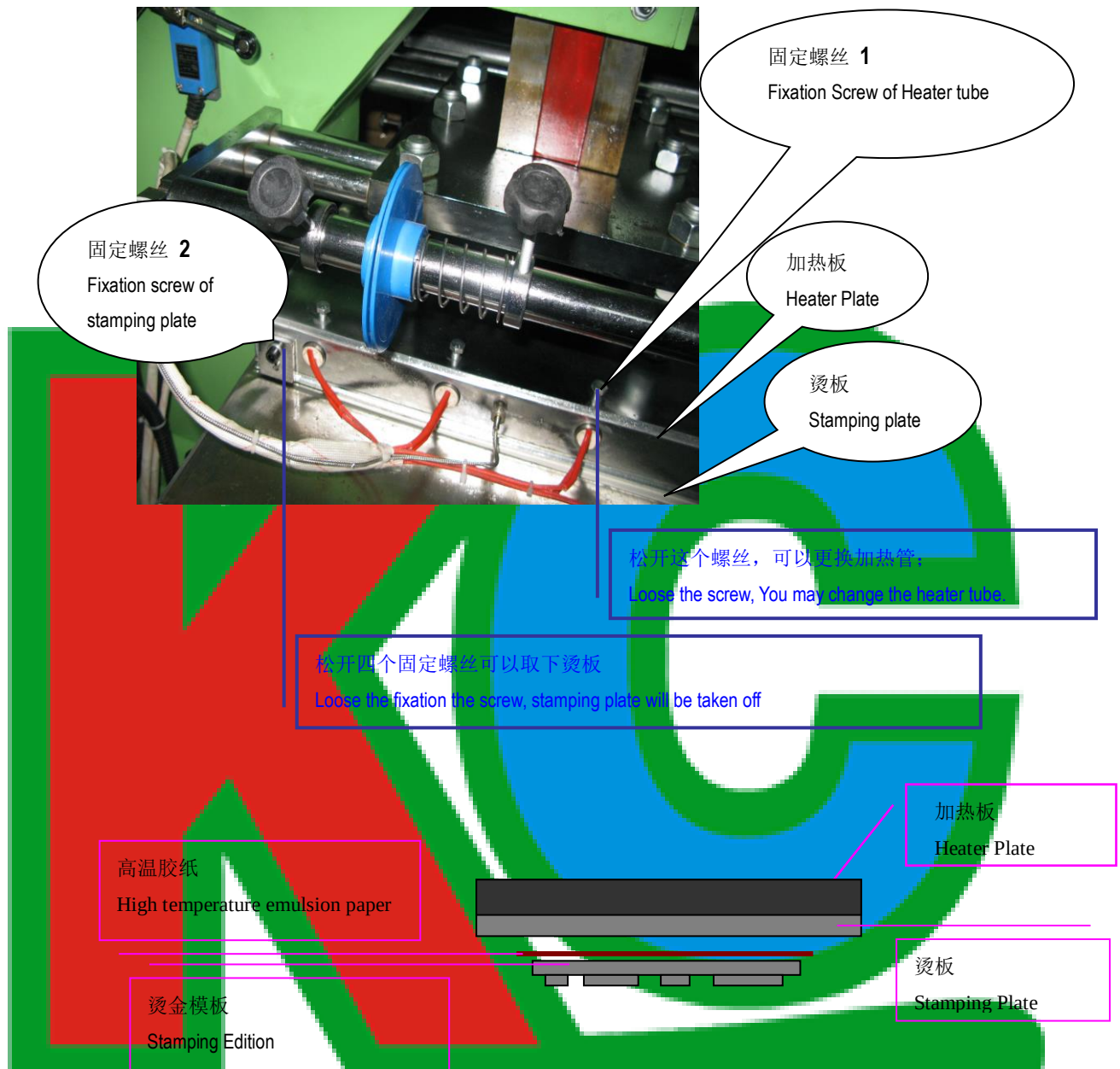
1、将工作台平铺纸板或胶皮，用上板胶将烫印模具定好位置，找好规矩。

Put stamping plate on the working table ,coating high temperature glue or adhering high temperature paper onto the surface of plate, press "Press-testing "make stamping head down and contact with plate for a moment till the plate can be lift up.

2、将设备电源插入有保护接地的电源上（必须接地可靠）。

Connecting Power supply which protective earthing .

该款烫金机的加热功率较大，对于电源线的负荷要求较高，请尽量不要使用民用建筑内的电源，否则有可能造成电源线超负荷运行，引起不必要的损失。



This machine use More strong Power supply line, Please avoid use this machine in civil building room. Or the electron line will not bear the payload and hurt your supply.

3、合上断路器开关，拨开电源开关，设备在某设定参数下开始升温加热。

Shut on circuit breaker, Switch on the Power button on the operation panel, The machine will be heat at the temperature.

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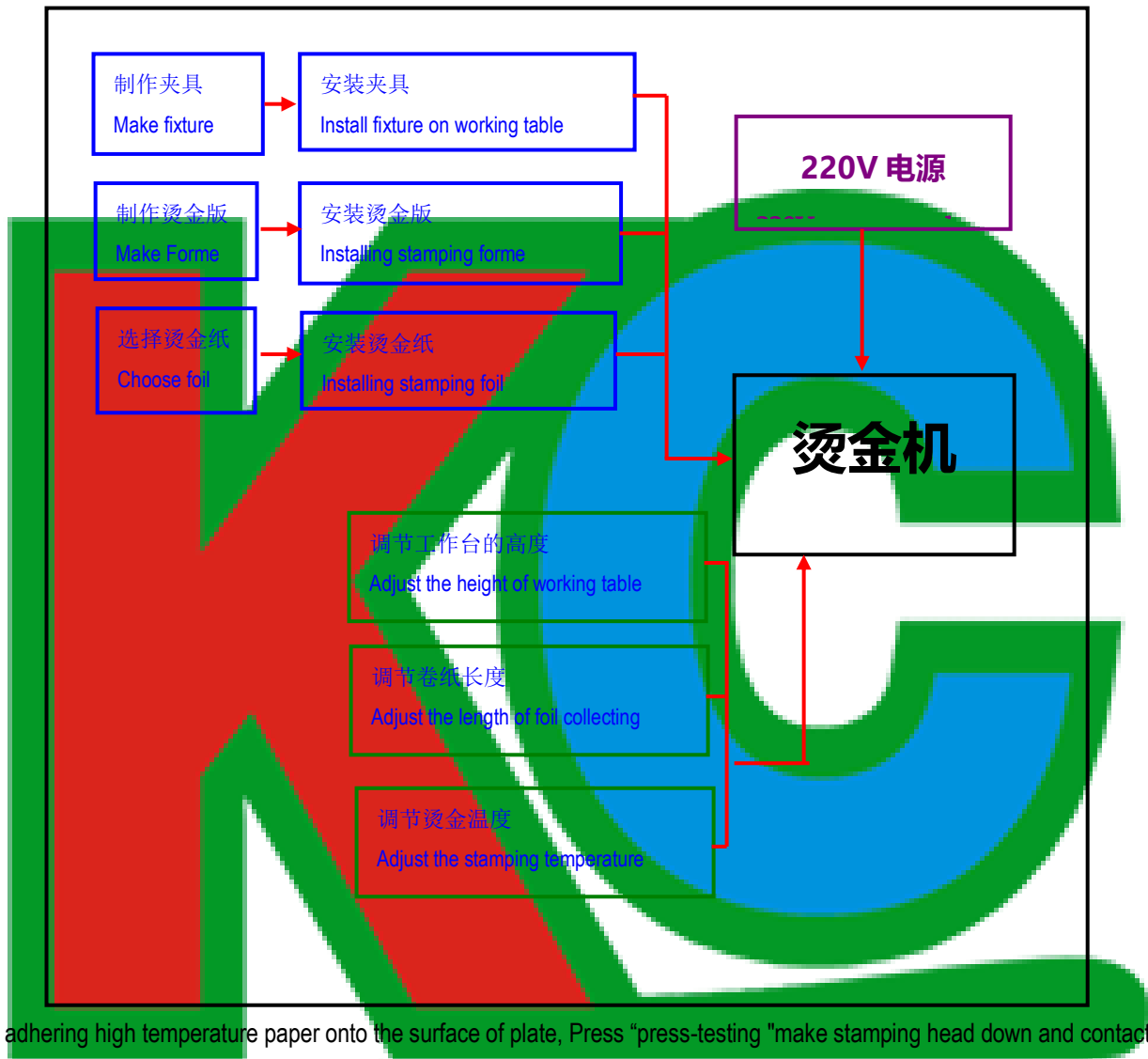
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4、安装烫金版

Put stamping Plate(silicon rubber plate, Copper plate, ZN Plate) on the working table, coating high temperature glue



or adhering high temperature paper onto the surface of plate, Press "press-testing "make stamping head down and contact with plate for a moment till the plate can be lift up.■

安装烫金版有三种方式： 高温胶纸粘贴，高温胶水粘贴，螺钉固定。

较小规格的烫金版可以使用高温胶纸和高温胶水粘贴的方法，较大尺寸的规格特别是金属烫金版可以采用螺钉固定的方法进行固定。

A) 一用高温胶纸粘贴： 首先裁切一块高温胶纸， 尺寸比烫金版稍微大一些， 将高温胶纸的黄色面朝下平铺于烫金版的金属面， 将胶纸的纸基去掉；将烫金版放置于工作台上， 将烫金机加温， 然后操纵烫金机下压到烫金版一分钟左右， 高温胶纸将受热融化并将烫金版粘贴到烫板上面；

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B) 一用高温胶水粘贴：将高温胶水涂布在烫金版的金属基板上，放置在工作台上面，其他程序和 A 相同；

C) 一用螺丝固定：首先松掉烫板固定螺丝，取下烫板，大致确定烫金版的位置，在烫板上制作固定螺丝孔四个，然后将烫金版固紧，再将烫板安装到原来的位置。如下图所示。

There are three methods to install stamping edition: adhere with high temperature emulsion paper, High temperature glue, Fixation with screw:

A) —High temperature Emulsion paper: first cutting one high temperature paper according to the stamping edition, Then cover it onto the stamping edition, Put them on the working table of stamping machine, setting the temperature and start the machine to let stamping plate down to contact with them for a few minutes, the stamping edition will be lift up;

B) —High temperature glue: First coating the glue onto the Metal base of stamping edition, The rest process is same as A:

C) —With screw, First loose the fixation screw of stamping plate, take off the stamping plate, Make four screw holes on it, then install the stamping edition on it.

警告：烫板温度较高，防止烫伤！

Warning: Please avoid scald by stamping plate!

5、将电化铝按顺序安装好，注意夹电化铝，弹簧不亦过紧或过松，更不能将电化铝装反。调节拉杆的长度和摆角，使烫金纸距离烫印模块 10mm 左右。

Install stamping foil and adjust the position, tension. The best distance between stamping foil and stamping plate is about 10mm.

6、上述一切工作就绪后，就可操作烫印了，将工件平铺工作台，按工作按钮，即可完成烫印一次。

Put object on the fixture and press "press-testing" to have a stamping process.

7、先进行试印，若设置参数不理想可重新设置。

First have a testing and setting parameter according to stamping result.

警告：烫印作业时请勿将手臂放置于工作台上，以免压伤！

Warning: Please do not put your hand on the working table when stamping!

8、为了工作安全，实际工作时，建议一人操作。

警告：两个人操作机器，可能造成安全隐患！

Warning: Two operator maybe make safety loophole!

Only one worker to operate this machine suggested for safety cause.

9、若需停机，将电源开关拨至 0 位，如果长时间停机，还应把电源和气源关掉。

Move the power switch to "0" when machine stopping. Shut off power supply and compress air when stopping for long time.

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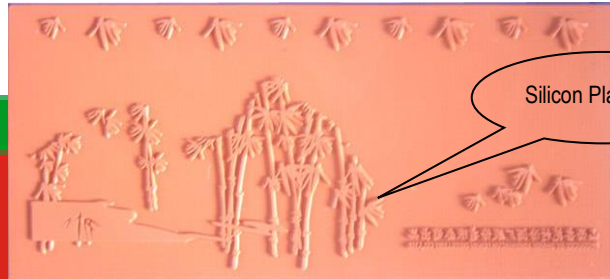
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七、使用烫金机的有关事项：Considerations



Copper Plate



Silicon Plate

- 1、要根据烫印件的烫印面积以及形状选择合适的模具，预制好夹具等。

It is important to make appropriate fixture on the basis of stamped objects. Metal plate is suitable for soft substrates such as Paper, wooden, leather; Rubber plate is suitable for rigid substrates such as Plastics.

对于一些塑料注塑产品，可以用机床车削加工一些夹具，夹具用工作台上面的治具进行固定；对于纸张，要在工作台的边缘粘贴一些定位片，确保纸张在每一次烫印过程中不走位。对于比较轻薄的纸张，我们也可以为您定做带有吸风工作台的平面烫金机，这样纸张烫印过程中会被紧紧吸附在工作台表面。

Fixture



For some Injection objects, Wooden, We suggest you making Metal fixture to fix them, Please use the fixing part on the working table to install it; For paper, Please adhering two pcs Thin paper serape on the working table. If you use this machine to stamp very thin and soft objects such as paper and film, We will make flat stamping machine with vacuum table, Please enquire to our sales

representative.

- 2、烫印时，要保证烫印板与烫印面的紧密接触。

机器出厂以前我们已经将烫板和工作台的平行度作出调整，在您进行正式烫印后可以先行对于烫金的平衡度作

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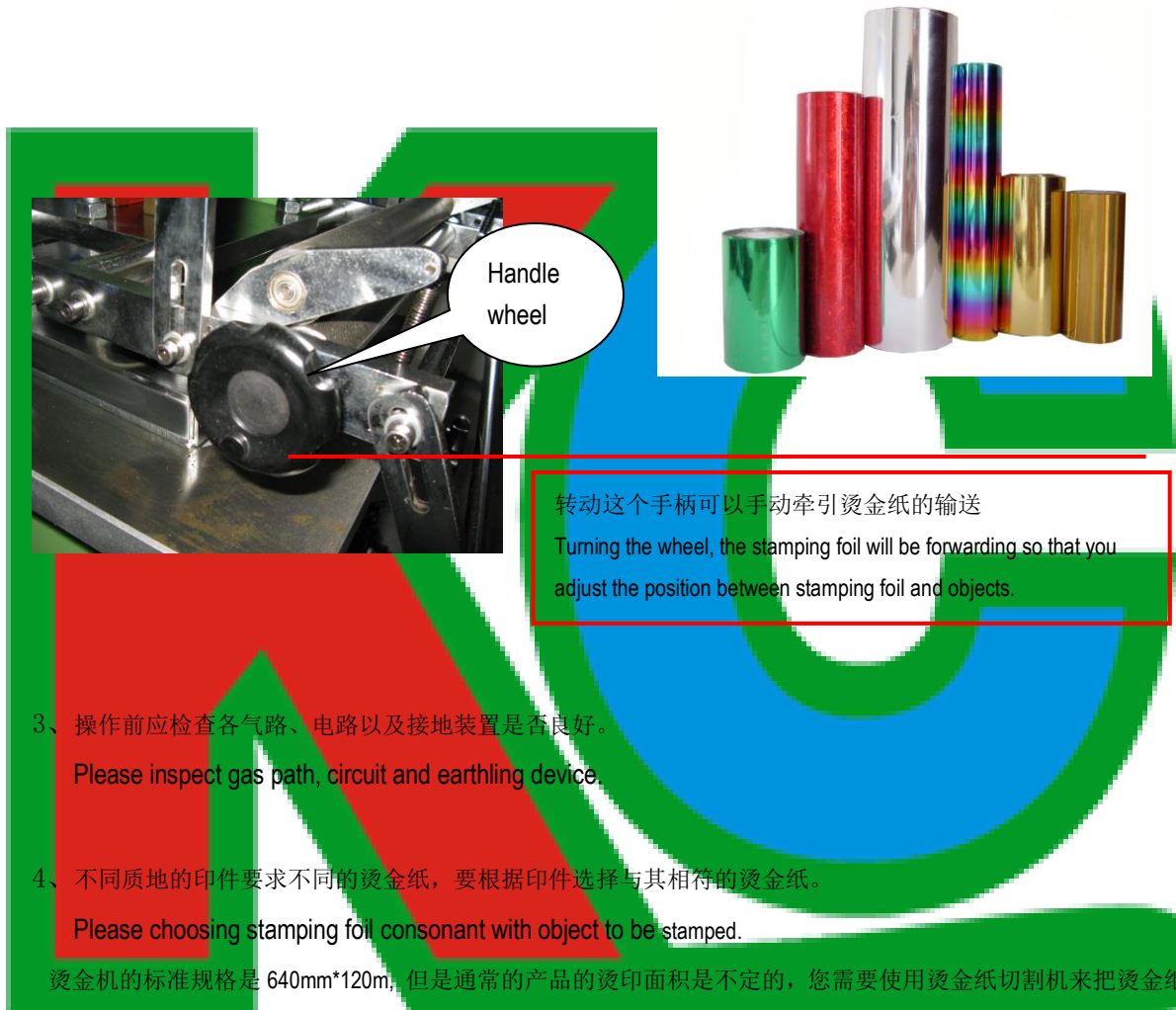
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出测试, 请在工作台上放置一块纸板, 将 烫板压下, 观察纸张表面的烫印情况, 如果出现印痕轻重不同的情况, 可以微量调节烫板上面的固定螺丝;

Ensure stamping plate contact compactness with the surface of object stamped when working.

Before stamping , Please take a test when put one paper on the working table. Please observe the impression on the paper. Please adjust the Balance screw when you find the impression is not even.



割成适合的宽度。

The standard size of stamping foil is 640mm*120mm, stamping size of different objects need different size, So, You need cu the stamping foil to fit width with foil cutter.

5、工作过程中, 不要将身体某部位倾向烫印模块。

Please do not touch stamping head because of high temperature while working.

烫板的温度很高, 所以在操作机器过程当中, 请避免身体部位触及烫板, 以免被烫伤

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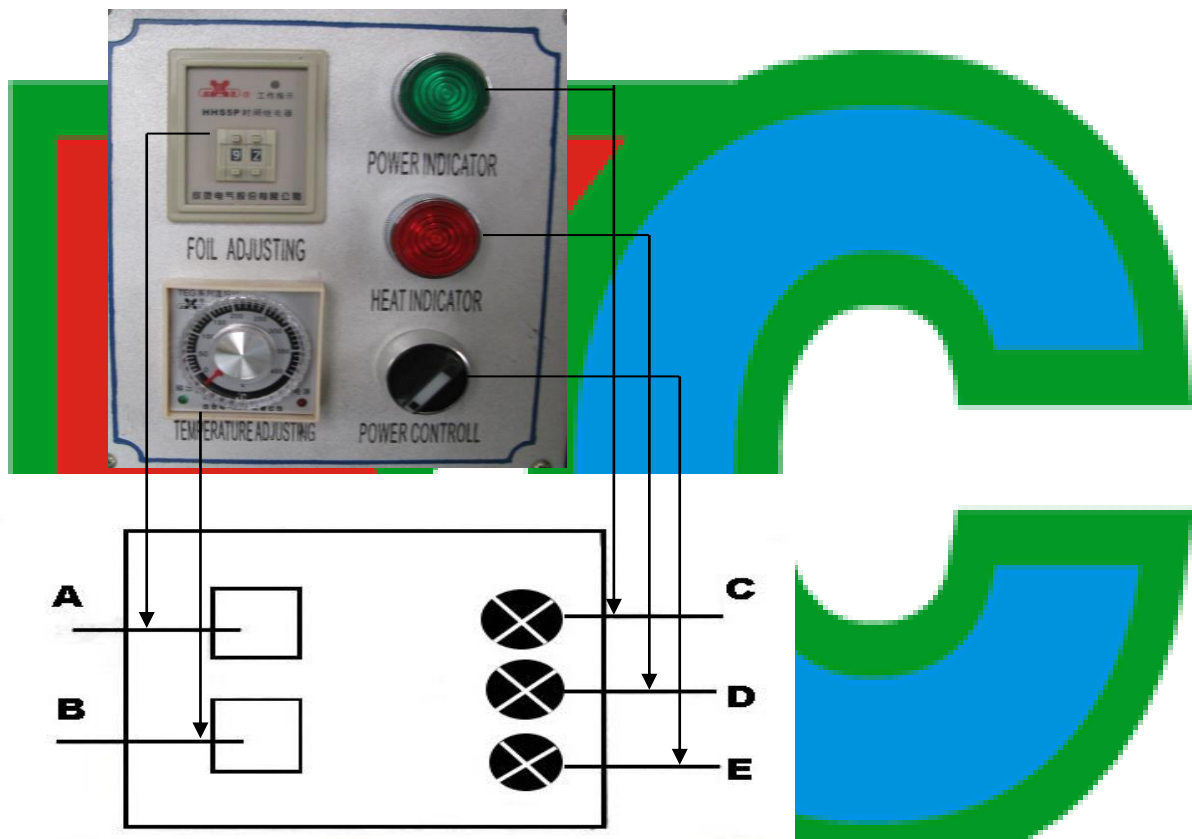
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6、若操作者离开工作现场，必须关掉气源、电源。

Shut off Air source and Power source when the operator leaving.

● 电气面板效果图（附图二） Electrical schematic diagram



A. 时间继电器（0~5 秒等共有 4 个面板最长为 30）可根据用户需要加以调整，本机出厂时已调为 5 秒。

Time relay can be adjusted (It was set to be 5s when it was finished)

B. 温控仪（0~300℃）

Temperature controller（0~300℃）

C. 电源指示灯

Power light

D. 卷箔指示灯

Foil light

E. 电源开关左为闭，右为开。

Power switch

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● 所用电器元件明细 (附图三) Electron component particulars

序号	符号	名称	序号	备注
1	ST3A-A	时间继电器 Time relay	1	KT
2	TEG01	温控仪 Temperature controller	1	TEG
3	Y090	旋钮开关 Knob switch	1	NK
4	AD11-2240	指示灯 Indicator light	2	HL EL
5	B090/220	交流接触器 AC contactor	1	KM
6	RT14-20	保险 Fuse	1	FU
7	AE7311	行程开关 Travel switch	1	SA
8	JQX-13F/220V	小型断路器 Miniature relay	1	KA
9	NL18-20	漏电开关 Earth leakage switch	1	HK
10	M	电机 Motor	1	M
11	E 型/M	热电偶 Thermoelectric	1	

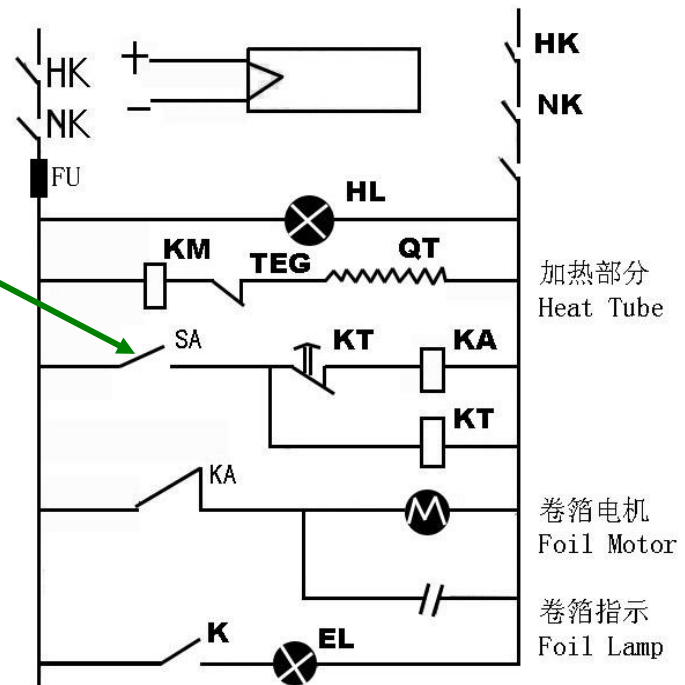
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● 电气原理图 (见附图四) Circuit schematic diagram(Figure 4)

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● 日常维护及故障处理: Maintain and trouble shooting

1、保持设备的干净

Keep the machine clean

2、定期对设备的“活动”部位进行清洁、润滑，把纵向、横向等活动部位添加机械润滑油。

Regularly clean and add lubricating oil.

3、若烫印机不动作，为了安全，避免一切意外损失，查找线路故障时，必须由专业电工，按照以下次序进行检查维修。

When machine not working, please ask specialized electrician to look up circuit malfunction so that avoiding unexpected loss.

① 打开电源，设备无反应。

Turn on the power, the machine not working

检查外连接电源是否良好，电器箱体熔断器是否已坏。

Check the connection of power, if the fuse is break.

② 打开旋钮开关，卷箔电机不动作，卷箔无指示，检查行程开关碰块是否到位，若无复位应复位，时间继电器旋钮是否在零位电机运转处是否有卡住现象等。

Open the foil switch, foil motor no running, foil-no feeding: please check the travel switch if locate in place, time relay if lock at the motor running.

③ 温控仪电源指示灯亮，输出指示灯也亮，长时间达不到温度设定值即不恒温。检查热电偶螺钉处或正负压线是否松动或检查热电偶是否折断。检查加热管有无损坏，检查方法用万用表欧姆档测量加热管的阻值。

If the temperature controller light and output Indicator are working, but the temperature can't reach the set one, please check the Thermoelectric nut and Thermoelectric. Then check the Heater with multi-meter.(check the resistance of the Heater)

注意：为了安全设备要求可靠接地。

Notice: Ensure earthling device of the machine.

① 卷箔电机配件电器为 1.2UF 450V/AC Foil motor Fittings 1.2UF 450V/AC

② 发热管为 AC-220V 1-250W/根 Heater AC-220V 1-250w/piece

③ 行程开关撞块已到位，而卷箔电机运转不停。

Travel switch block is in the place, but the foil motor not stop

A. 检查时间继电器是否损坏，测量其输出端信号是否正常。

Check the time relay, test the signal of the output whether normal

B. 检查电器箱内小型继电器是否良好（JQX-13F/220V）

Check the miniature relay if keep well(JQX-13F/220V)

④ 卷箔电机运转无力。Foil motor run powerless,

检查或更换启动电容。Please check or replace start-up Capacitance.

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