KC-ST-3050PV 吸气式平面丝印机

Plane Screen Printer with vacuum working table

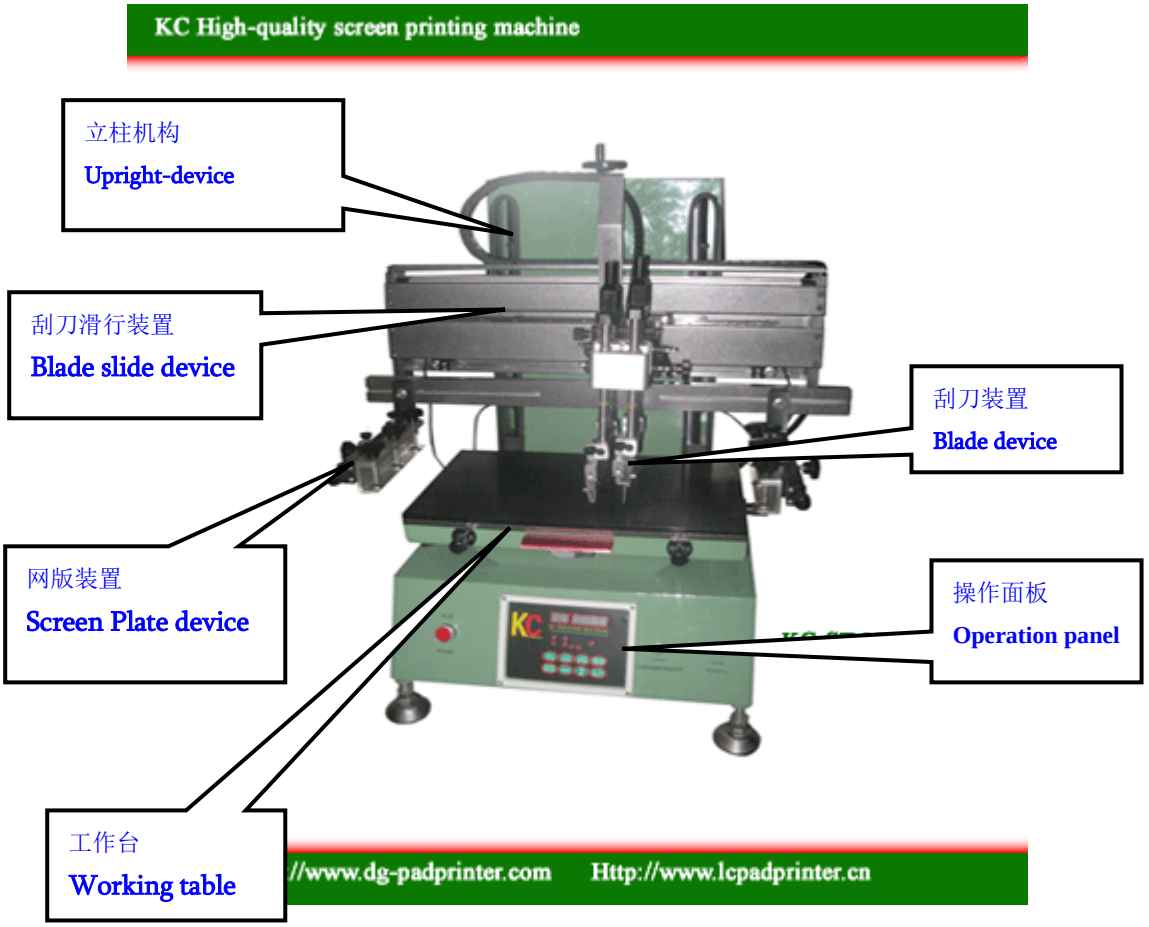
使 用 说 明 书



Operation Instruction

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一、机器简介



这是一款小型的台面式平面丝印机，外形小巧,操作方便，初学者也可以快速入门；它运行速度快，性能稳定，可在较小的厂房空间组成丝印生产线；特别适合小批量打样印刷，印刷的图案清晰逼真，美观适用，尤其适用手机按键，镜片印刷，以及其它小型产品的图案 LOGO 印刷，如：CD 盒，礼品盒等。

● Brief Introduction

This type of vacuum sorption plane screen printing machine is designed for the screen printing of plane substrates, such as paper,Film , CD case, Gift case, Mobile key, Lens etc. This printer has a vacuum sorption platform and an automatic screen-throwing function, which is particularly suitable for the printing of paper cards, nameplates and circuit boards. To guarantee the quality of the machine, the pneumatic, electronic and mechanical components of the printing scraper frame, sliding frame and printing arm, etc. are all imported from well-known brand. With the combination of high quality organs, which ensures the stable running of the machine and reduces the maintenance? In the aspect of electrical and pneumatic control, this printer adopts the IC Programmed controller to translate and edit the action programmed, which is compatible with the imported cylinder , to make every action faster and more accurate, enhancing the productivity and printing quality to the maximum.

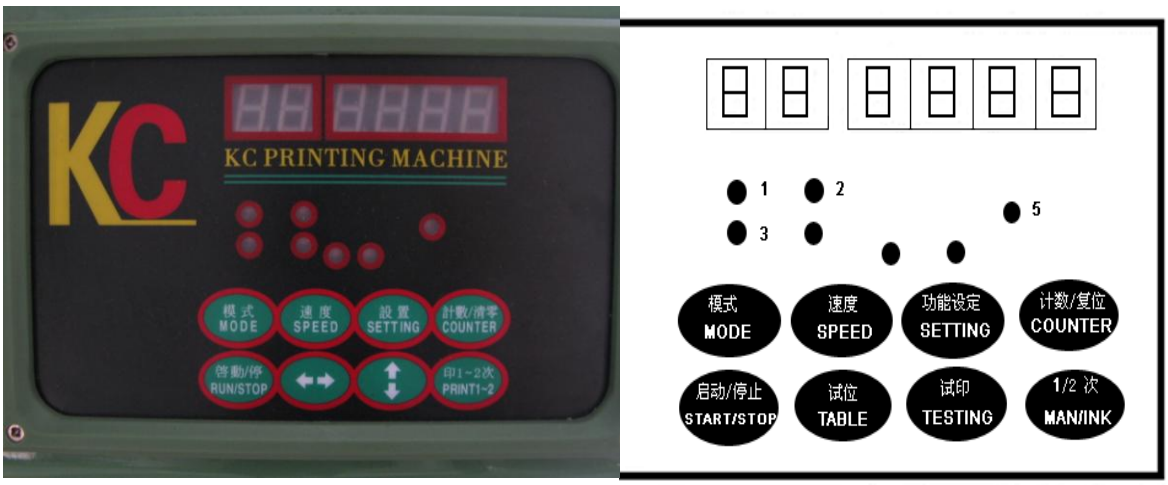
二、技术参数

- Technical Parameter

机器名称	KC-ST-3050PV 台面式平面丝印机
电源 Power supply	220V 50 - 60MHZ
印刷面积 Table size	300X500MM
左右行程 Right-left stroke	500MM
上下行程 up-down stroke	125MM
工作气压 Pressure	5 - 7BAR
机器重量 Net weight	80KG

三. 面板操作说明

- Operation Panel



各按键说明：Instructions of the keys

- {模式（MODE）}键：

0 和 1 两种模式选择.

There are two mode to operator this machine, "Mode", Display "0"-Semi-auto mode

0 半自动，在此模式下，按一次（启动/停）键，丝印机完成一个印刷循环后停止.

This machine run only one Circulate when press one time the Key : RUN/STOP

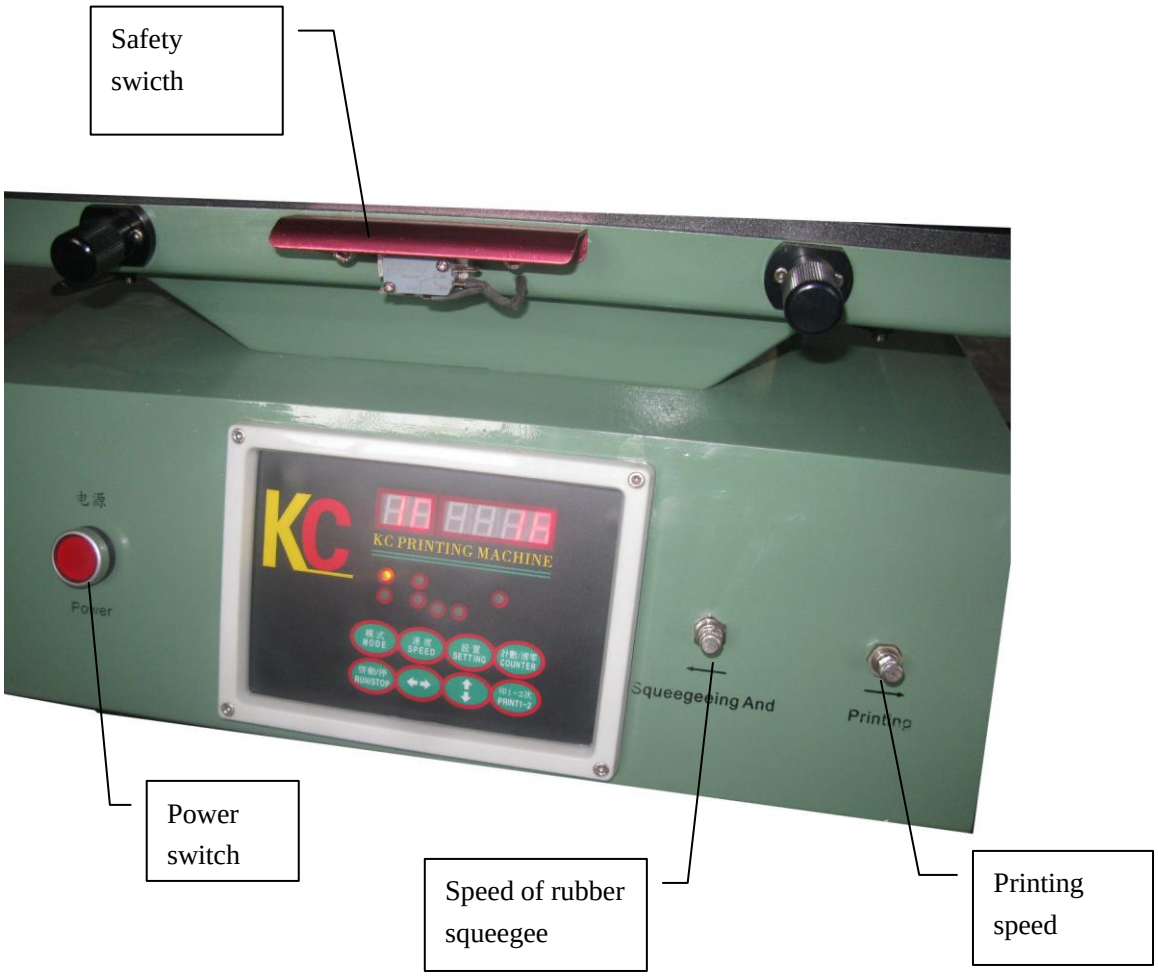
1 全自动，在此模式下，按一次（启动/停）键，丝印机会一直不停的印刷，直到再按一次（启动/停）键，机器才会停止印刷.

Mode" Display "1"- auto-mode.

Under this mode, Press the key of " RUN/STOP":, The machine will start automatically till you press the key" RUN/STOP".

- {速度（SPEED）键}

0-9 级速度选择



如果您要在全自动的模式下工作，您需要设置工作的速度，0—9 级的速度选择，代表的是每个印刷循环完成后，到一个印刷循环开始的停留时间，0 是最慢，9 是最快，具体数值需要根据实际的印刷产品及工人的熟练程度设定.

Press the key " Speed", the counter will display 0-9. The bigger number, the more fast printing speed.. The speed is two printing circulation interval. 0 instead of max long time, 9 instead of max short time. Please set the speed according to your requirement.

- {设置（SETTING）键}

机器可选功能，除非客户指定安装，标准机型不具备此功能. 但凡客户选择安装此功能时，机器的电气部分会加装一个电磁阀，在停机状态下，按（设置）键，丝印机的左右滑行气缸会处于无压力状态，用手可轻松左右移动，再按一次（设置）键，左右滑行气缸又会恢复有压力状态，使机器使用者在调试左右印刮滑行的位置时非常方便. 常规标准

机器此功能采用一个手推阀实现，在电磁阀的安装处，有一个圆柱状的手推阀，在需要调试左右位置时，只需轻推手推阀，使左右气缸处于失气状态，就实现了同样的功能，调试完成后，再将手推阀的气源接通，左右气缸又恢复有压力状态，机器就可以正常工作了.

Standard machine have no this function, Updated KC-ST-2030PV Will install one Solenoid valve to the cylinder of left-right , Press the key : SETTING , the cylinder can be moved with hand, Press the key again, the cylinder revert pressure regimes.

- {计数/清零(COUNTER)键}

在停机状态下，长按此键 3 秒以下不放，面板计数器就会归零，方便重新计算产能.

Under the stopped state, press the key for 3 seconds, The counter will display “0”.

- 启动/停（RUN/STOP）键 }

启动或者停止机器运转.

Press the key you will start or stop the machine.

-  {左右移动键/停左停右键}

此键有两个功能，均需在停机状态下完成

1. 按一下此键，如果印头是在右边，印头就会向左滑行到左位，如果印头是在左边，印头就会滑行到右位，属于是印头左右滑行的点动按键
2. 点击此键，印头停在左边，在半自动状态下，再按启动键时，一个印刷循环完成后，印头会停在左边，不回油，只有再启动的时候，印头才会回油印刷，如果印头停在右边，在半自动状态下，再按启动键，一个印刷循环完成后，印头会停在右边，等待下一个循环开始.

There are two functions under the stopped state.

1. Press the key, The printing head will move to left side or right side, Press the key again, The printing head will mode to another side.
2. click the key, If the printing head stop at the left side, Under the semi-auto state, Press the key of : Start”, The printing head will stop at left side after one printing circulation, non-ink flood, till you re-start the machine, The printing head begin to covering ink and printing. If the printing stop at the right side, Under the semi-auto state, Press the key of “ Start”, after one printing circulation, the printing head will stop at the right side.

-  {上下点动键}

在停机状态下点击此键，丝印机或上或下滑动一次.

Click the key , the screen plate will move up and down one time under stopped state.

- {印 1~2 次(PRINT 1~2)键}

此键有两个功能：

1. 印刮及回墨刮转换：在停机状态下按此键，印刮及回墨刮转换一次，方便检查胶刮及回墨刮的位置状态
2. 印 1~2 次功能：在机器正常运转印刷的状态下（不论是全自动还是半自动），点击此键，机器会自动进入印 2 次的状态，就是说，机器在一个循环内连续印两次产品，增加墨层厚度，再点击一次，则恢复到正常状态.

There are two functions of the key:

1. Rubber squeegee and ink blooding acts:

Press the key under the stopped state, The rubber squeegee and ink blooding will move up and down. It is helpful for you to check the situation of Rubber squeegee and ink blooding

2. Print 1/2 times.

Under the normal running state(Both auto and semi-auto), Click the key, The machine will enter into print 2 times mode. You will get mode thicker ink film. Press the key one time, the machine enter into normal mode- only print one time.

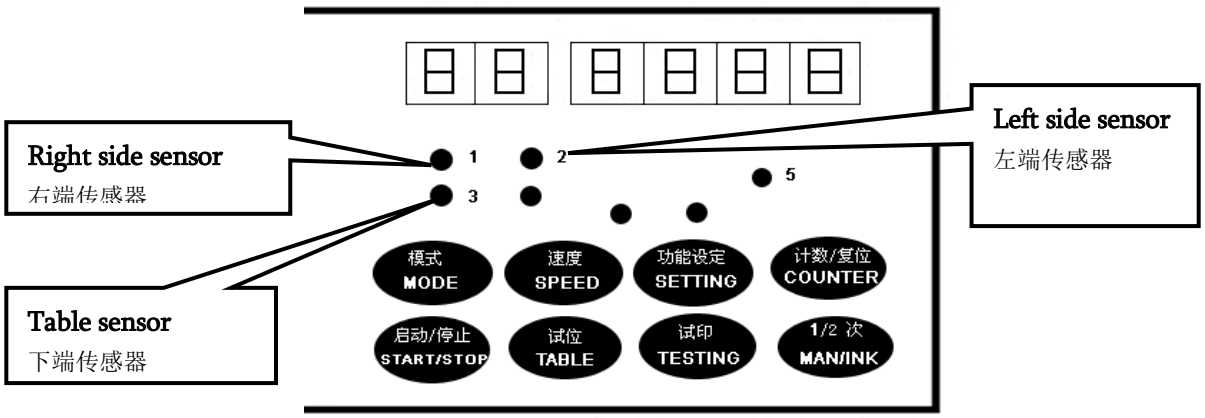
四、简易故障排除法

- Trouble shooting

1.面板无显示 No display one panel

a. 检查保险丝是否烧坏，在线路板及电源插座处各有一个保险丝，请检查清楚,如有烧断，请更换相同型号保险丝.

Please check if the fuse broken, there are two fuse on electron circuit board and power insert seat, if fuse broken,



please replace it.

b. 电源异常，根本没有外电进入机器控制电路，检查电源线的通电状态.

Please check the power line and check if the power line connecting with machine well.

c. 如上面两项都排除，没有故障，则机器线路板损杯，请联系供货厂商售后服务.

Please find electric engineer to check the circuit board, If you confirm the board broken, Please contact with our company.

2 机器无动作 No action

a. 检察机器面板显示有无异常，如完全无显示，请参照第一项的处理方法.

Please confirm the indicator display ok.

b. 检察进气气压表有无压力，机器是否处于通气状态.

Please check the pressure meter , confirm the air connecting well

c. 感应开关是否损坏及是否感应到位：最简单的方法，面板上有 7 个小灯，每个小灯代表不同的位置状态，具体的显示如下：

其它的 4 个灯没有具体的含义，将机器的进气气源关闭，将印头推到右边，看面板上右位感应灯是否亮起，依次类推，如果三个位置到位，有灯没亮，则说明该位置的感应开关损坏或者没感应，请现场具体判断，如果感应开关都显示没故障，有可能电路板损坏，请联系厂家处理。

There are three sensor switches , Please confirm the three switches well.

Shut off the air switching, Mode the printing head to Right side, Check the indicator of Right side sensor LED. Then moving the printing head to left side, check the indicator of left side sensor LED.

If three indicator keep good, Perhaps circuit board broken, Please contact with our sales person.

d. 检察电磁阀蕊和线圈是否有问题，处理方法：断开电源，不断气压按电磁阀上的小蓝色按钮，如不动作则阀蕊坏，更换同型号的电磁阀测量线圈阻值是否在 50 欧姆左右，若有问题则更换同型号的线圈。

Check the Solenoid valve:

Shut of the power supply, Keep pressing the blue button on solenoid valve, If the solenoid valve no action, Please replace it. Please measure the Resistivity of coil about 50 OHM.

3.机器动作不正常 Abnormal run action

机器运行中，没完成印刷循环，在一半突然回位，时不时出现此类情况，并不是每次都是这样，有两种情况：

a，线路板程序错乱，

b，外部电磁干扰，移动机器位置到车间的另一位置测试效果。

When the machine running, if the printing head return back without finishing full printing circuit, Please notice:

a) Maybe the process of circuit board disordered;

b) External Electromagnetic Interference, Please move the machine to another place to test.

4 机器运转震动大 Too high noise

a，检察气压是否调得过高，处理方法，气压调到 5-6 公斤.

Please check the air pressure, Keep the pressure ad 5-6 kg.

b，左右油压缓冲器是否漏油.

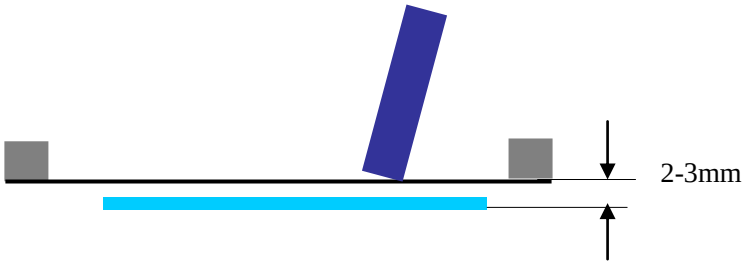
Please check the Oil buffer

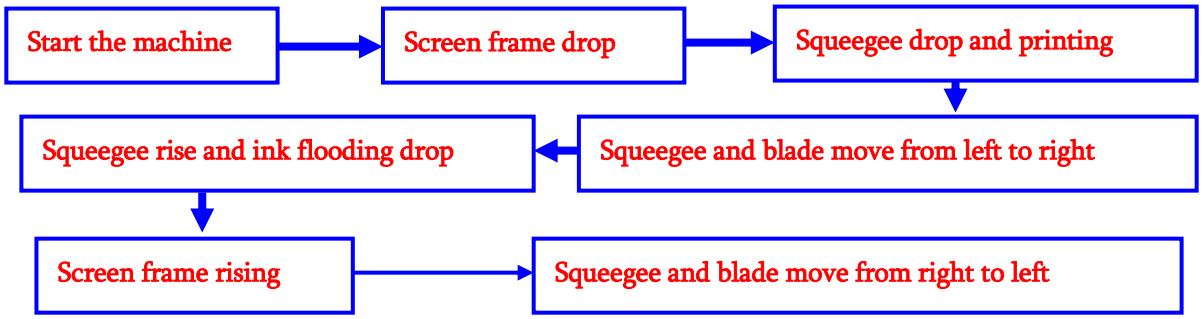
C，气缸是否有漏气.

Please check the cylinder.

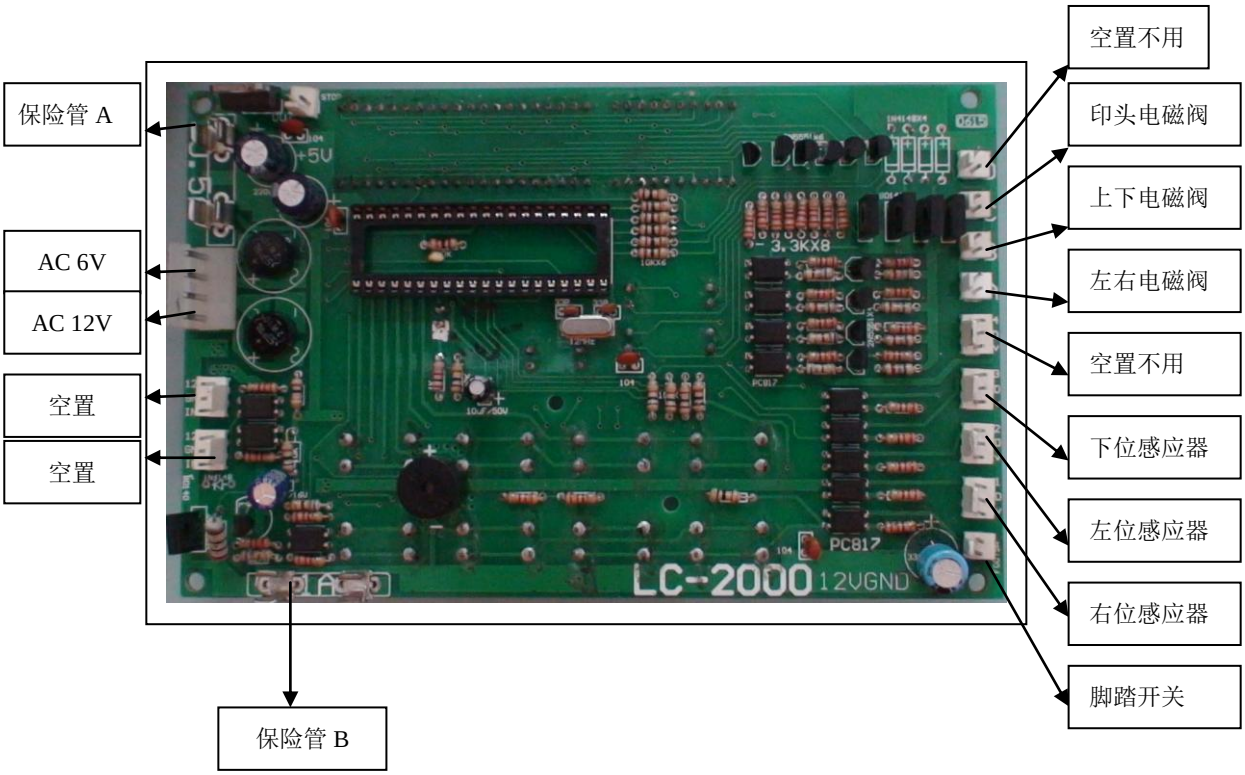
五、机器电路图

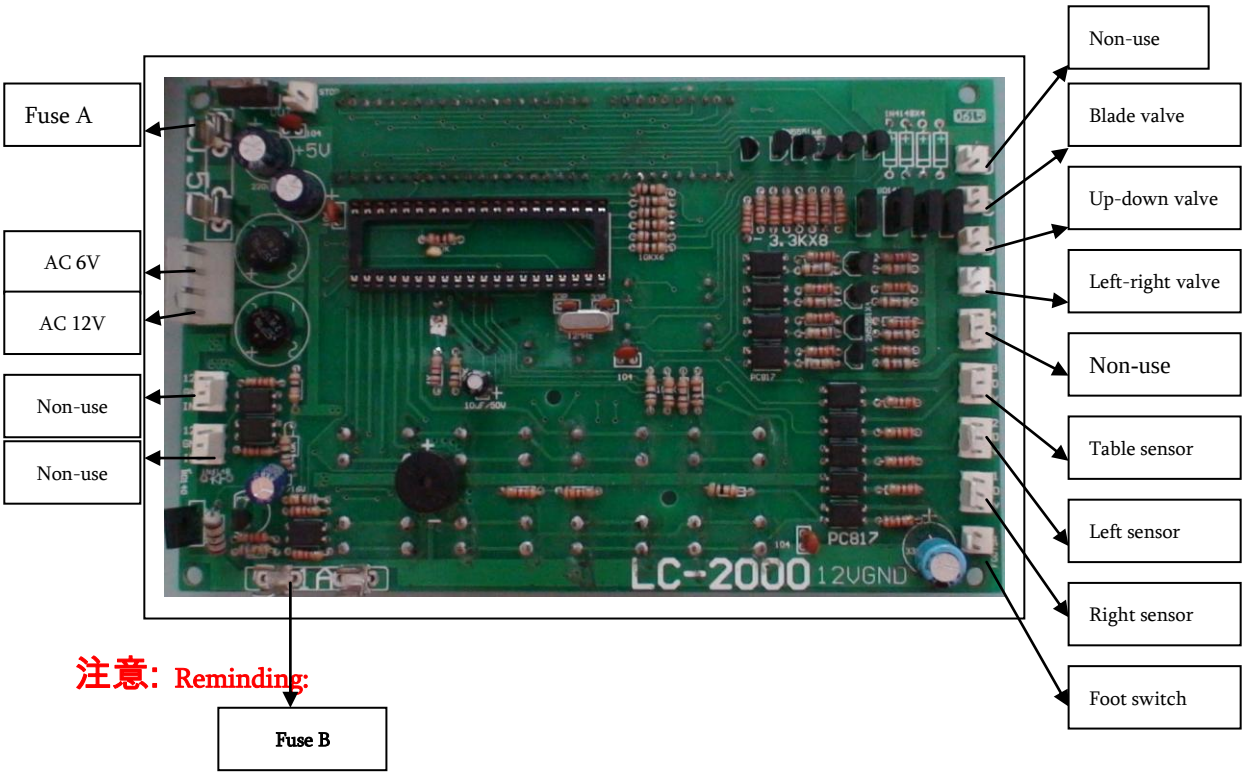
The machine action





Circuit diagram





注意: Reminding:

1. 维修接线时请注意输出电磁阀线圈及输入开关的电极特性，正负极不能接反.

When repair the circuit board , please notice the Electrode characteristic of Solenoid valve coil and input switch.

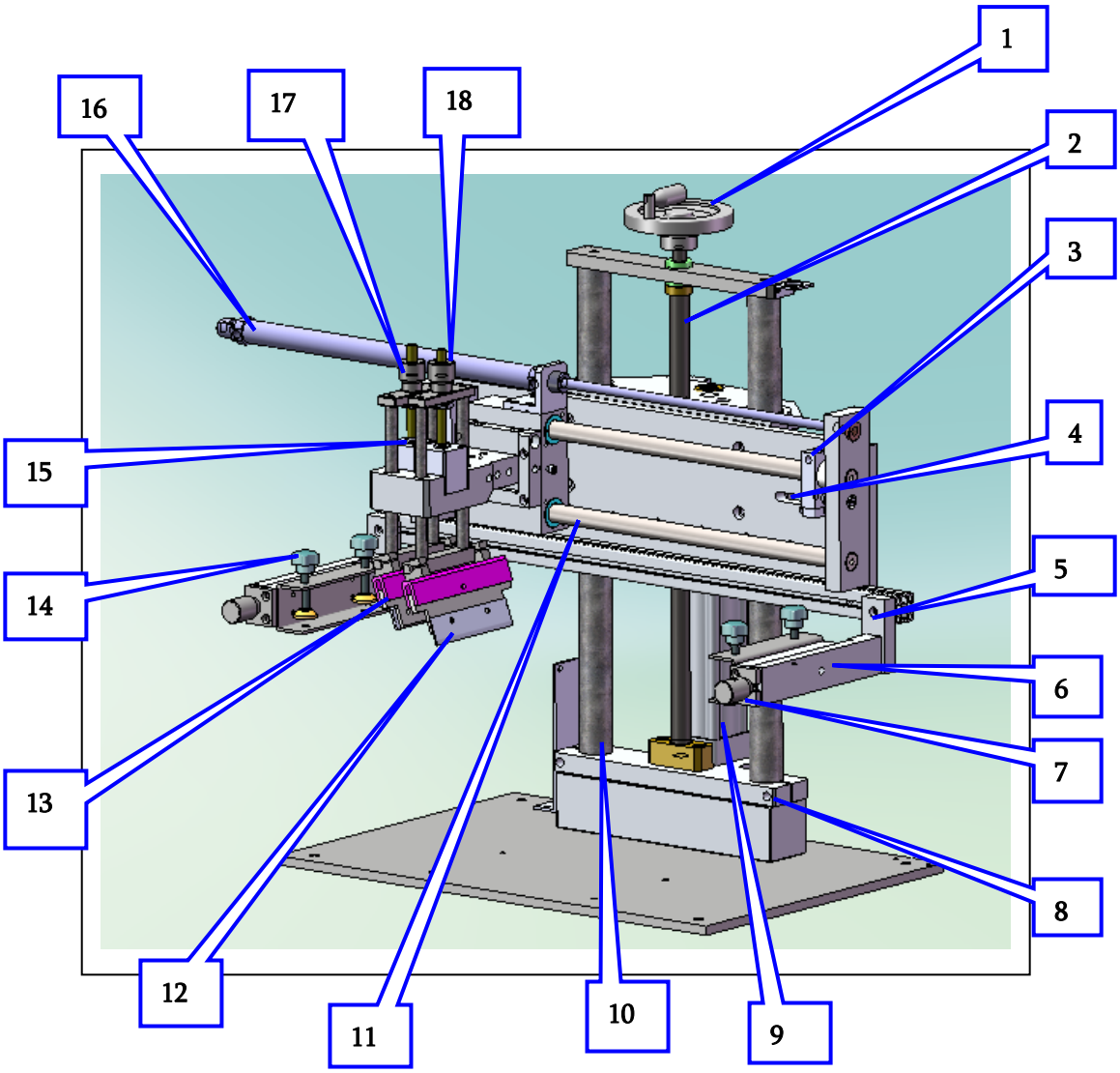
Please do not connect inversely cathode and anode

2. 保险管 A 断开后，线路板的数码管不显示，下面的 LED 灯有显示，保险管 B 断开后，线路板的数码管有显示，LED 灯没显示，请区别情况.

If the fuse A is broken, the counter can not display but indicator can light;

If the fuse B is broken, The counter can display but indicator can not light.

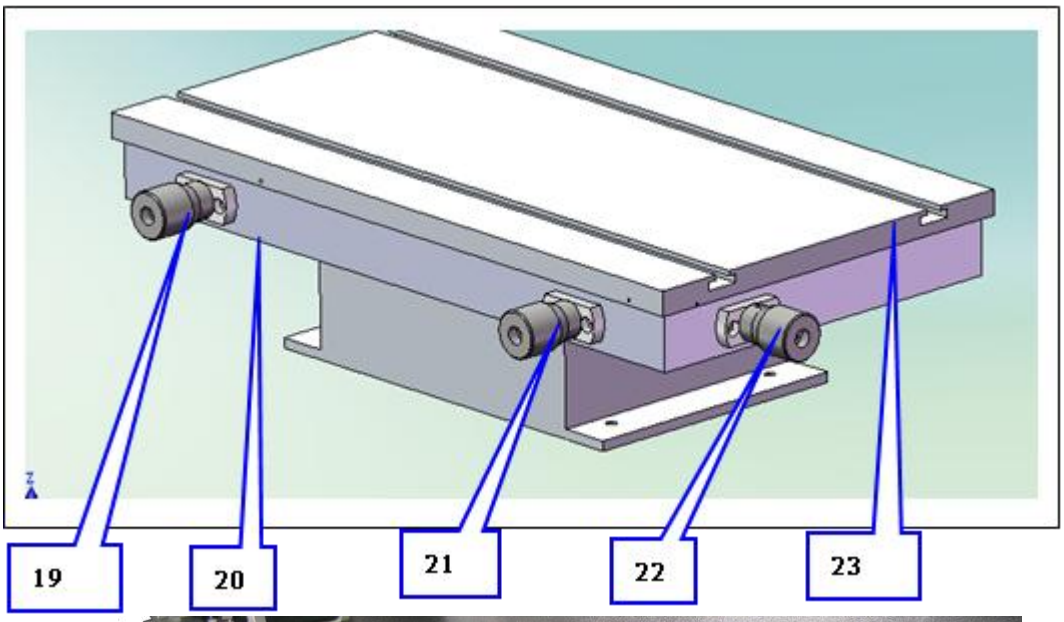
六、机器各部分结构详细说明



丝印机的动作的重复精度对于印刷品质有决定性的影响，KC-ST-3050PV 采用高精度的导轨控制，网版上下，刮板的左右动作的重复精度可以达到 0.03mm.适合高精密的平面印刷。

The action of repeatability of screen printing machine have a decisive influence to printing quality, KC - ST – 3050PV controlled by high precision liner rail screen plate up-down, rubber squeegee left-right can

reach 0.03 mm. Suitable for high precision of the print.





KC-ST-3050PV 有两种类型的工作台，一种是吸气式的工作台，主要用来印刷纸张和薄膜，另一种是 T 型槽式的丝印机，主要用来印刷注塑产品。

There are two kinds of working table; one is vacuum working table for printing paper and film. The other is T-Type working table for injection products.

序号	组件名称	功能
1	升降扳手 Height adjustment handle	调节整个机架与工作平台的高度距离,适应不同高度工件的要求. Adjust the height of screen plate with working table
2	升降丝杆 Rising Screw rod	控制升降的速度及精度 Control the speed and accuracy of rising
3	左右限位块 Limited Block	限制左右滑行的距离，实现不同的印刷行程. Strict the slide distance of Rubber blade
4	左右感应器 **Position Sensor**	检测印头的左右位置 Detect the position of Printing head
5	网版调节块 Screen Block	调节网版的大小长度 Adjust the size to install different plate frame
6	网版调节组件 Plate-adjustment assembly	控制网版前后移动 Controlling the moves of screen plate
7	前后调节旋扭 Adjustment Knob	微调网版前后移动不同的距离 Adjust the front-back position of screen plate
8	升降底板 Fixing Block	固定气缸及锁紧整个升降的机架 Machine base for cylinder and Rising device
9	升降气缸 Up-down cylinder	Φ 50X125 气缸，控制升降的速度及高度 Controlling the screen plate up and down
10	升降主轴 Guide axis	机架升降的精密导向 Oriented axis for screen plate
11	左右滑行轴 Guide axis	印头左右滑行的精密导向 Oriented axis for Rubber squeegee move
12	胶刮组件 Blade Assembly	固定丝印胶刮用 Install rubber squeegee
13	胶刮水平调节件 Adjustment screw	调节胶刮及回墨刮与网版的前后水平位置 Adjust the level of rubber blade and ink blooding
14	网框压紧旋扭 Compact Knob	压紧网版，保持印刷精度 Make the screen plate tighten

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15	印头气缸 Printing cylinder	SDA25x25 控制胶刮及回墨刮的上下升降 Controlling the action of rubber squeegee and ink blooding
16	左右气缸 Ink cover cylinder	MAL25X350 控制左右滑行的速度 Make the rubber squeegee move from left to right
17	回墨刮调节旋扭 Adjustment screw	调节回墨刮与网版的距离 Adjust the space between screen plate and ink blooding
18	胶刮调节旋扭 Adjustment screw	调节胶刮与网版的距离 Adjust the space between screen plate and rubber squeegee
19	调节旋扭 Adjustment screw	调节工作台前后位置 Adjust the front-back position of working table
20	锁紧旋扭 Locking screw	锁紧工作台，保持精度 Lock the working table after adjust
21	调节旋扭 Adjustment screw	调节工作台前后位置 Adjust the front-back position of working table
22	调节旋扭 Adjustment screw	调节工作台左右位置 Adjust the right-left position of working table
23	工作面板 Working table	固定产品印刷，有 T 字槽和吸气面板两种选择 Install Object to be printed.

七． 操作程序

- ***Operation process***

1) **Connect the electric source**;

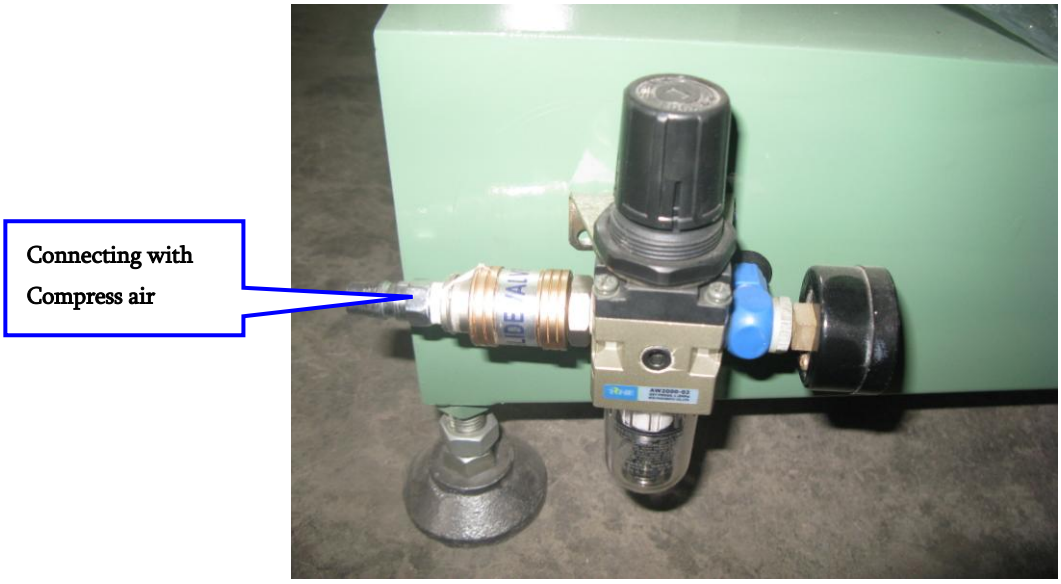
2) Our machine use one phase 220 V power supply. Some countries such as, USA, Canada, Mexico use one phase 110V, We will change the voltage when you make a demand on it. First confirm your locating and electron condition. Turn the power switch one the IC panel from position 0 to position 1, Check whether the power supply light is in the status of connecting.

3) **Connect the compressed air**.

Your printing plant must be have one set compressor to provide compress air to machine, Please enquire to our sales Members, we will give you some advice on how to choose it. Please Check the display of the pressure gauge, adjust the pressure to 4~5 Bar (the standard pressure).

4) **Install screen frame**.

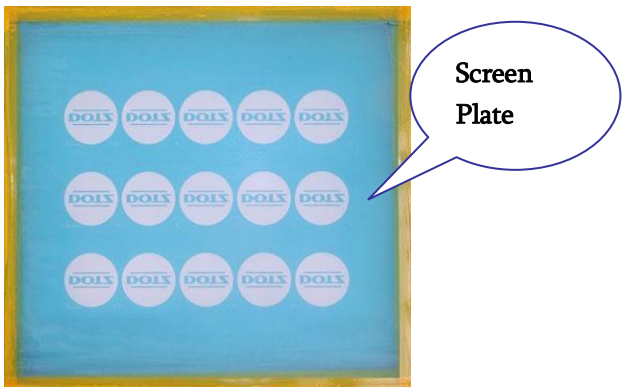
You must make one set screen frame by yourself, at the first order, we can suggest you sending printing document by email and make one pc screen plate for you, It is expert technology to make



screen plate, some equipment and materials , one operating worker with excellent experiences. Please keep the screen frame surface parallel with working table, or please adjust the screw 29 of picture 2.

5) **Install fixture**.





T model working table

need to make one fixture to fix it one the working table . When printing paper, only adhere two pcs locator thickness about 75um card on the working table.

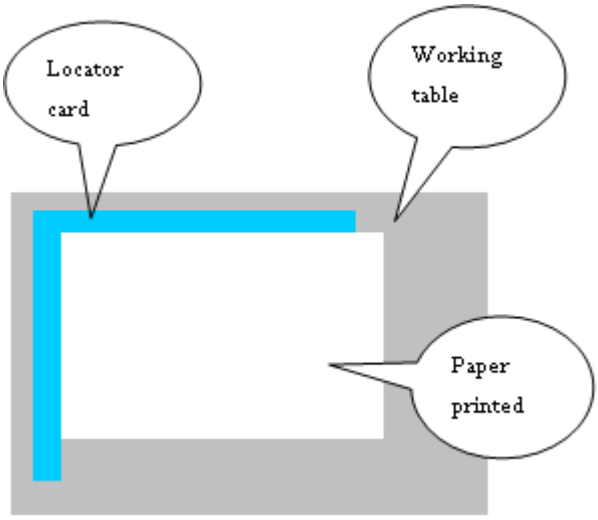
6) **Install rubber squeegee,**

There are different size rubber squeegee, we suggest you use the size 45*7mm or 50*9mm . Please cut it to the lengthe only longer than printing design with knife Adjust the stroke of squeegee.

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Loose the screw and put down of squeegee combine nip, first push the rubber squeegee at the beginning of printing design, fasten the setscrew at

the right side, then push the rubber squeegee to the other end till it can cover all printing design, then fasten the screw of left stroke screw.

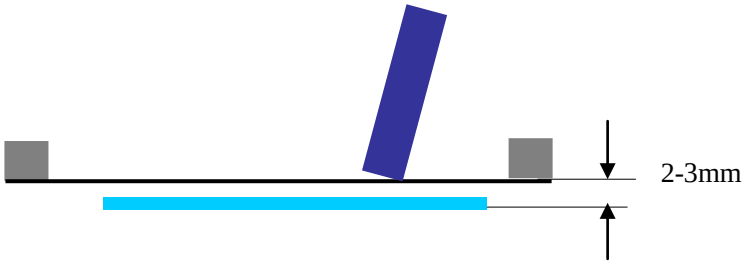


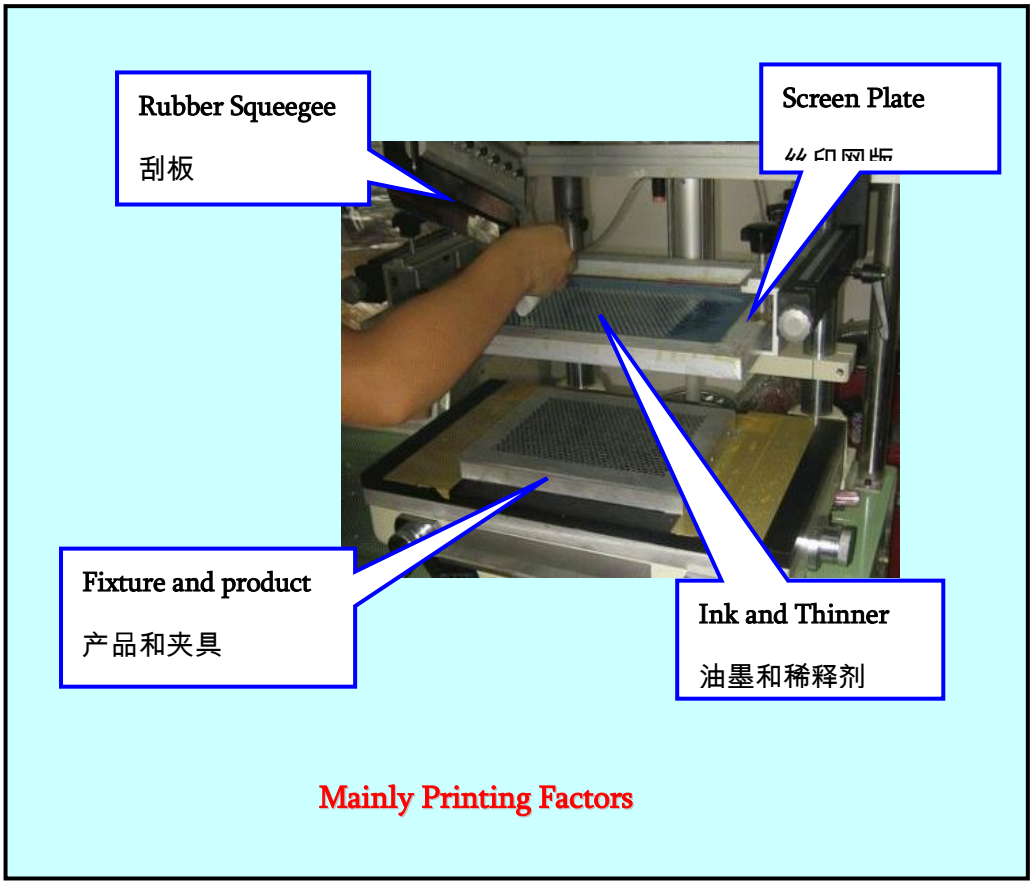
7) Adjust the distance between screen frame and products.

Turning the handle wheel of machine at the back of machine to drop the screen frame. It is best distance is 2-3mm when the screen frame press down. Adjust the height of rubber squeegee make it contact with the surface of screen silk exactly.

8) Adding ink and thinner.

Choose ink according to your products. Pour them into screen frame a long the direction of rubber squeegee , start the machine and make a one circle run, check the printing quality, Please adjust the pressure till clearly words .





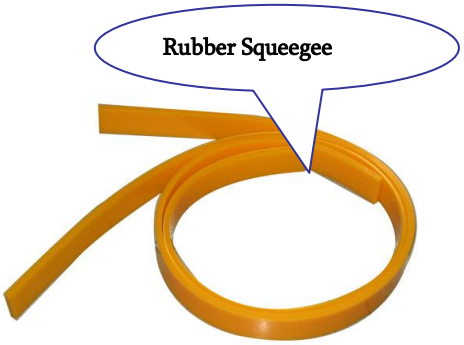
1. Cautions



1. The workshop should be ash-free, because, the ash could affect the quality of printing.

2. Make the fixture for the material printed, in order to insert and take out the material printed, at will, and position it accurately.

3. When the screen is jammed with ink , you could only wash it using diluted solvent or the screen cleaning solvent. Strictly wash it using other kinds of chemical solvent.

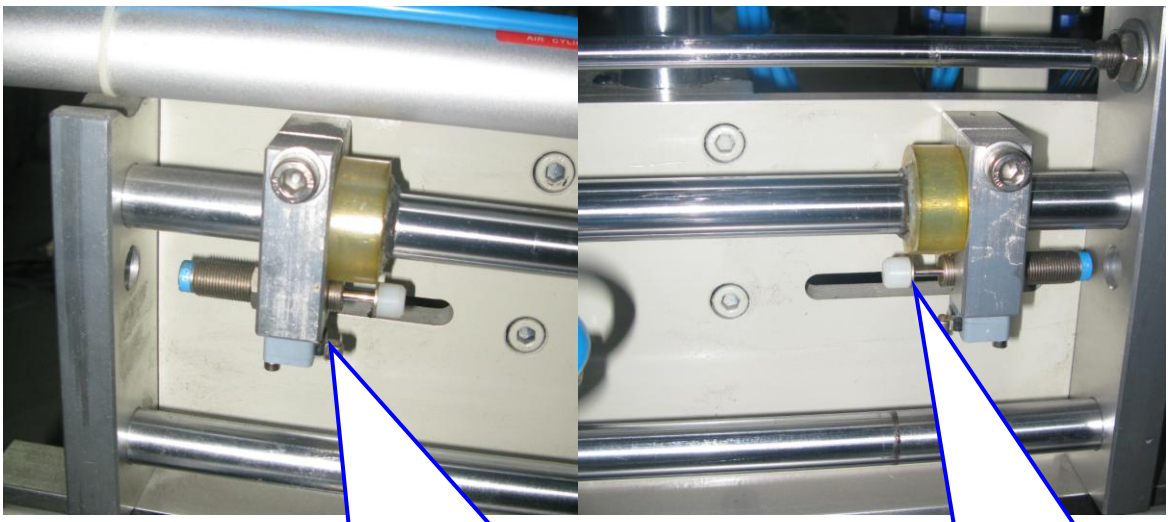


4. Check whether the shape of the squeegee is compatible with the characteristic of the material printed (Square squeegee is suitable for the even surface, and the sharp-edged squeegee is suitable for the accidental surface).

5. Based on the features of the printing design, choose the mesh of appropriate density

6. Mix the ink to the appropriate chrome, if the ink is too ropy, not only has it lacked the active. But also it could jam the mesh. If the ink is too watery, the chrome of the pattern printed will be fuzzed.

7. While printing, the ink stored on the surface of the mesh could not be too much or too less, otherwise, the mesh will be jammed and the ink will leak, or the chrome of the pattern will be uneven.



- 左限位块和限位开关

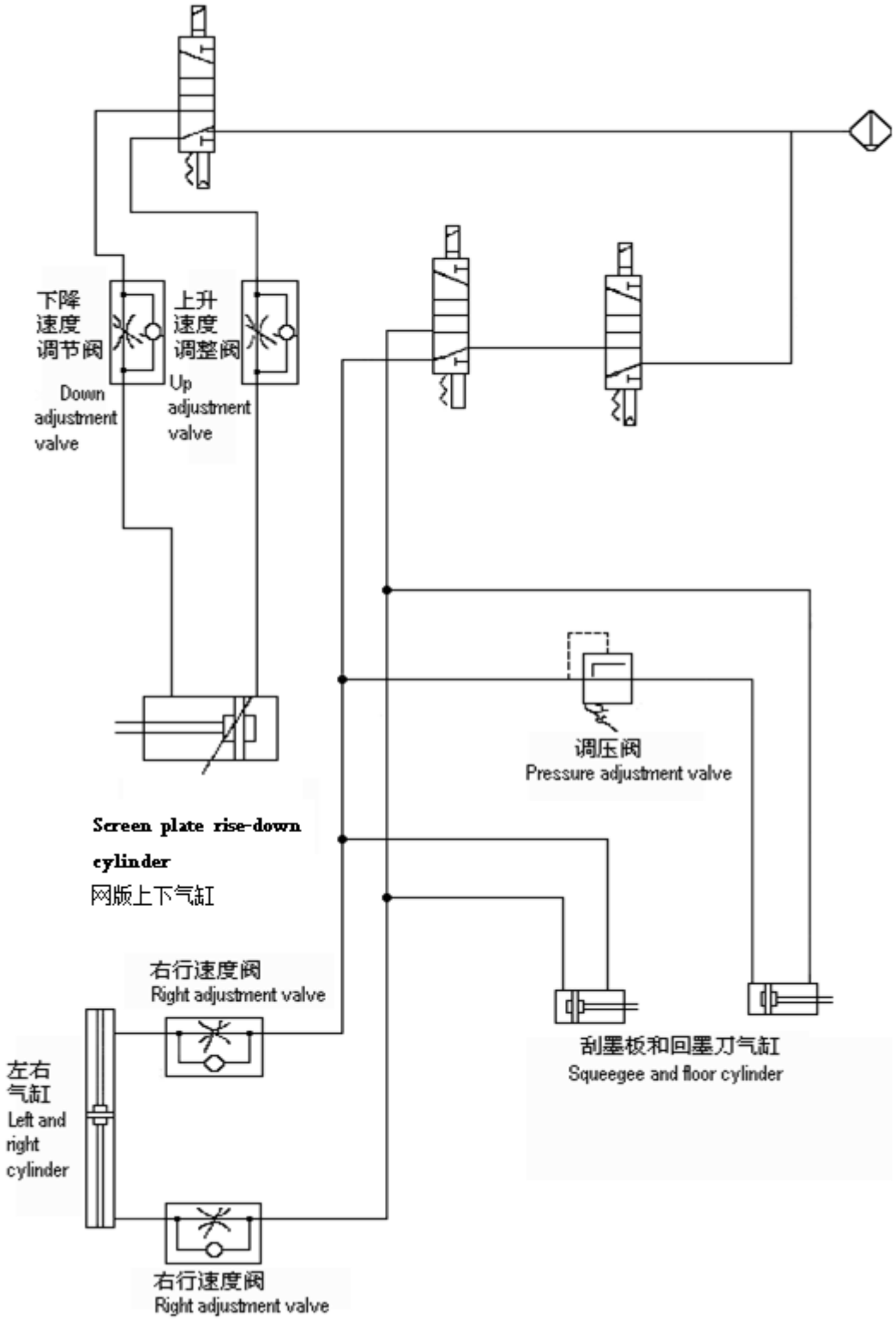
Left Limited block and limited switch. Controlling the left position of Rubber blade .

- 右限位块和限位开关

Right Limited block and limited switch. Controlling the right position of rubber blade.

How to adjust the stroke of rubber squeegee

1) Install screen plate;
2) Loose the screw of Left side locating block and push the rubber squeegee to the left position so that the blade can cover the beginning of design;
3) Fixture the screw;
4) Loose the screw of right side locating block and push the rubber squeegee to the right position so that the rubber squeegee can cover full design.
5) Fixture the screw.



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