



**FLAT SCREEN PRINTING MACHINE
WITH VACUUM WORKTABLE
OPERATION INSTRUCTION**

操作说明书

S-2838/3848/4565PV





Brief Introduction

This type of vacuum sorption plane screen printing machine is designed for the screen printing of plane substrates, such as paper, Film 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.

● *Technology Parameters*

Model	S-2838PV 2838PT	Table area	300×400MM
Power supply(V)	220	Inspiration area	280×380MM
Max printing area	280×380MM	Printing speed	1000PCS/HOUR
Max printing height	160MM	Total weight	182KG

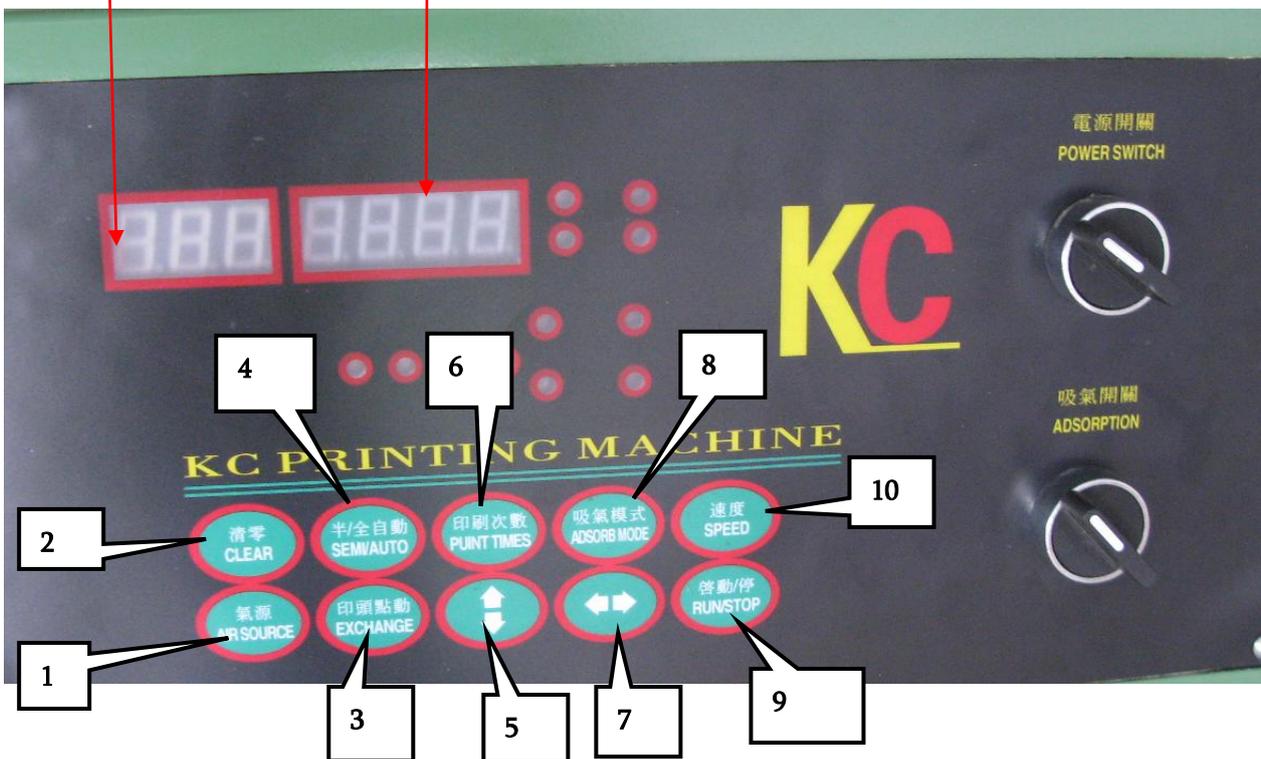
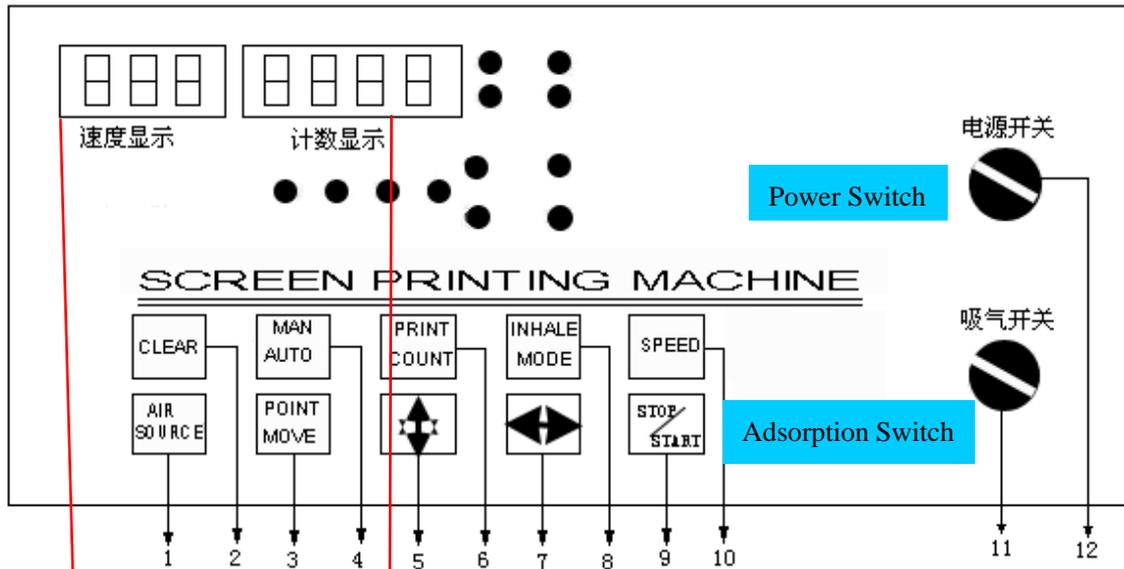
Model	S-3848PV 3848PT	Table area	400×600MM
Power supply(V)	220	Inspiration area	380×550MM
Max printing area	380×480MM	Printing speed	1000PCS/HOUR
Max printing height	160MM	Total weight	200KG

Model	S-4565PV 4565PT	Table area	500×700MM
Power supply(V)	220	Inspiration area	450×650MM
Max printing area	450×650MM	Printing speed	1000PCS/HOUR
Max printing height	200MM	Total weight	250KG

[S-screen printer](#) [P-Flat printing](#) [V-with vacuum table](#) [T- with T model working table](#)



● Instruction of A panel



Elucidation of the keys on the IC panel:

1: "AIR SOURCE":

Switch between the air source connected status and disconnected status.

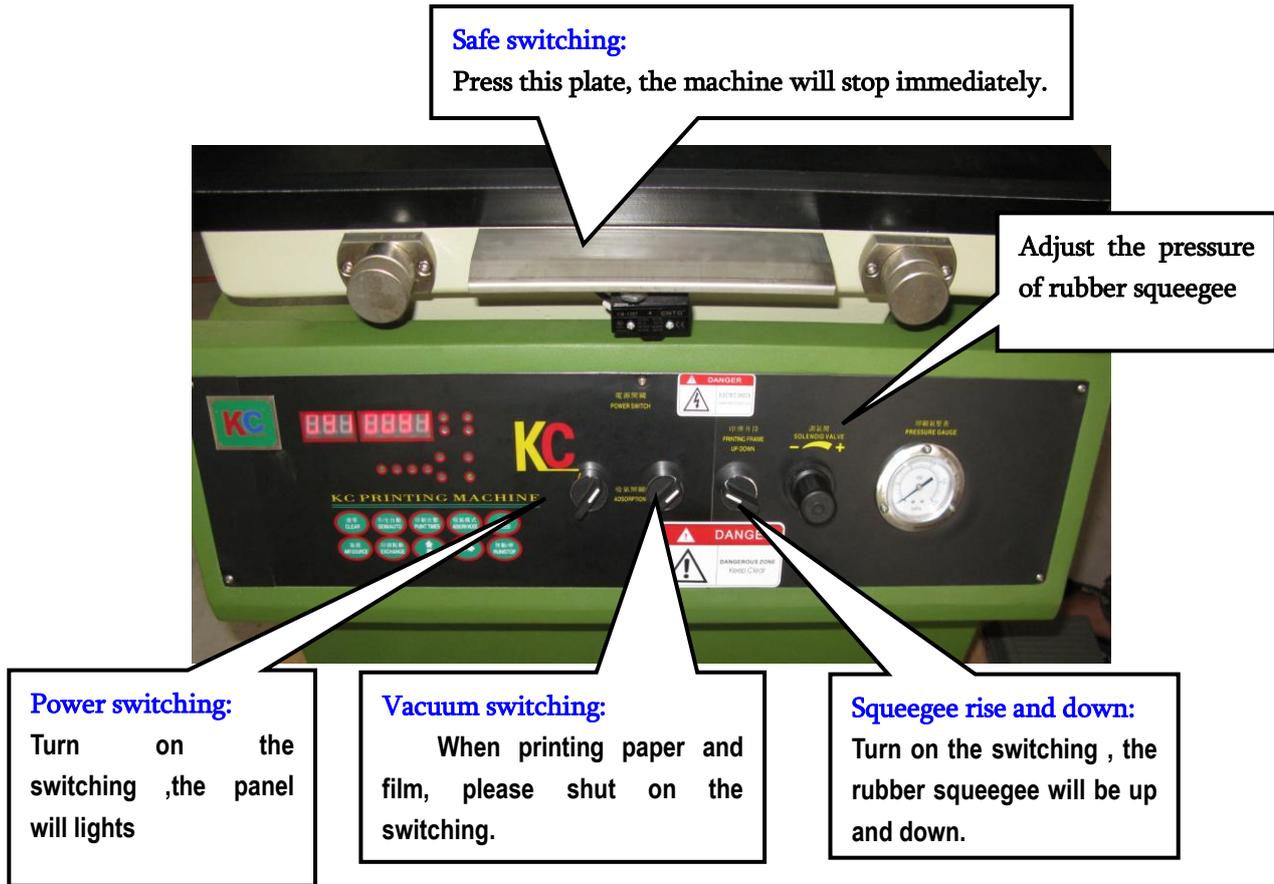
2: "CLEAR":

Reset the counter. Press the key, The machine will begin count from zero.

3: "POINT MOVE"

Press this key, machine have a step action so that you are easy to adjust machine

4: "MANUAL/AUTO":



Switch between fully automatic mode and semi-automatic mode.

5: "UP-DOWN":

Run up-down travel of the lifting pedestal by manual operation for one time.

6: "PRINT COUNT":

Set the reacting printing times for the same work piece.

7: "LEFT-RIGHT":

Run left-right travel of the slide organs by manual operation for one time.

8: "INHALE MODE":

Press this key once, the air suction mode changes one time. While it displays "1", the machine will remain inhaling air nonstop, it displays "2", the machine will inhale and exhaust air in accordance with the movement of the machine.

9: "RUN/STOP":

Start or stop the machine



Adjust the speed of blade of rubber squeegee

10: "SPEED":

Set the printing speed, from 1-9.

11: "SORPTION SWITCHING":

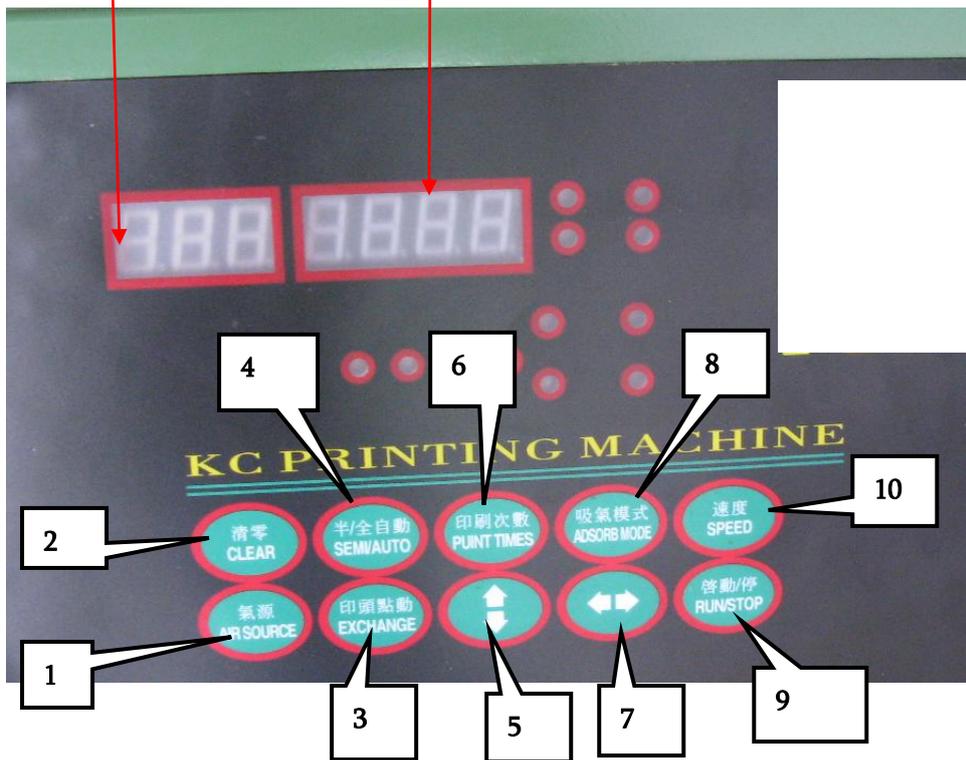
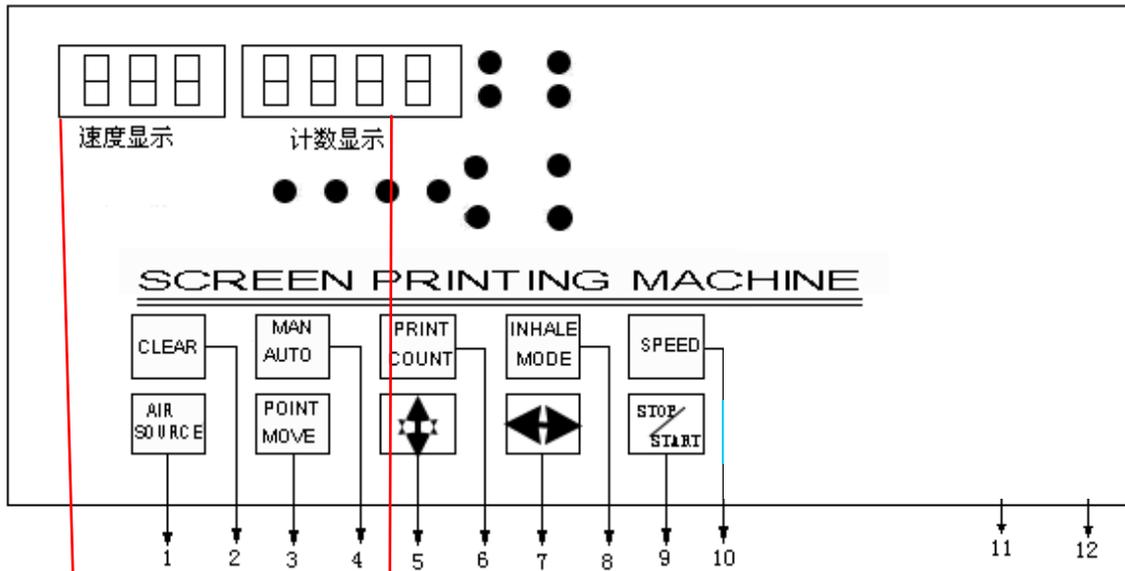
Open air switching of air suction

12: "POWER SWITCHING":

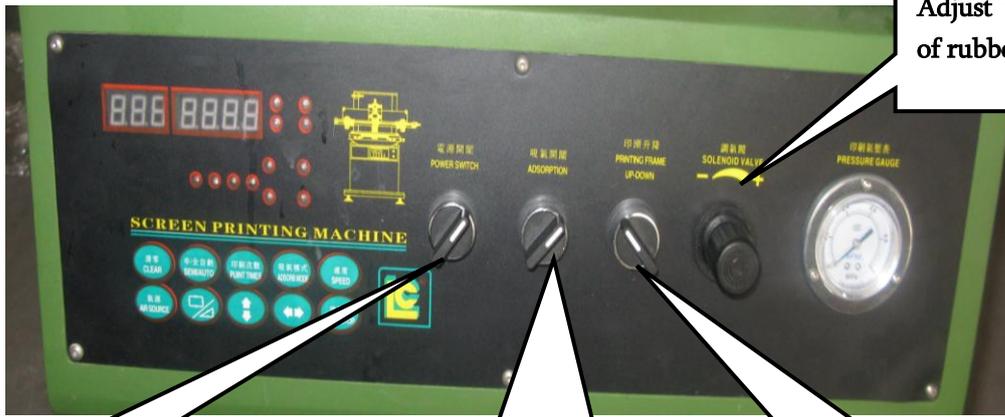
Open or shut off power supply.



● *Instruction of B panel*



Elucidation of the keys on the IC panel:



Adjust the pressure of rubber squeegee

Power switching:
Turn on the switching ,the panel will lights

Vacuum switching:
When printing paper and film, please shut on the switching.

Squeegee rise and down:
Turn on the switching , the rubber squeegee will be up and down.

1: "AIR SOURCE":

Switch between the air source connected status and disconnected status.

2: "CLEAR":

Reset the counter。 Press the key, The machine will begin count from zero.

3: "POINT MOVE"

Press this key, machine have a step action so that you are easy to adjust machine

4: "MANUAL/AUTO":

Switch between fully automatic mode and semi-automatic mode.

5: "UP-DOWN":

Run up-down travel of the lifting pedestal by manual operation for one time.

6: "PRINT COUNT":

Set the reacting printing times for the same work piece.

7: "LEFT-RIGHT":

Run left-right travel of the slide organs by manual operation for one time.

8: "INHALE MODE":

Press this key once, the air suction mode changes one time. While it displays "1", the machine will remain inhaling air nonstop, it displays "2", the machine will inhale and exhaust air in accordance with the movement of the machine.

9: "RUN/STOP":

Start or stop the machine

10: "SPEED":

Set the printing speed, from 1-9.]

11: "SORPTION SWITCHING:

Open air switching of air suction

12: "POWER SWITCHING":

Open or shut off power supply.



Adjust the speed of blading of rubber squeegee



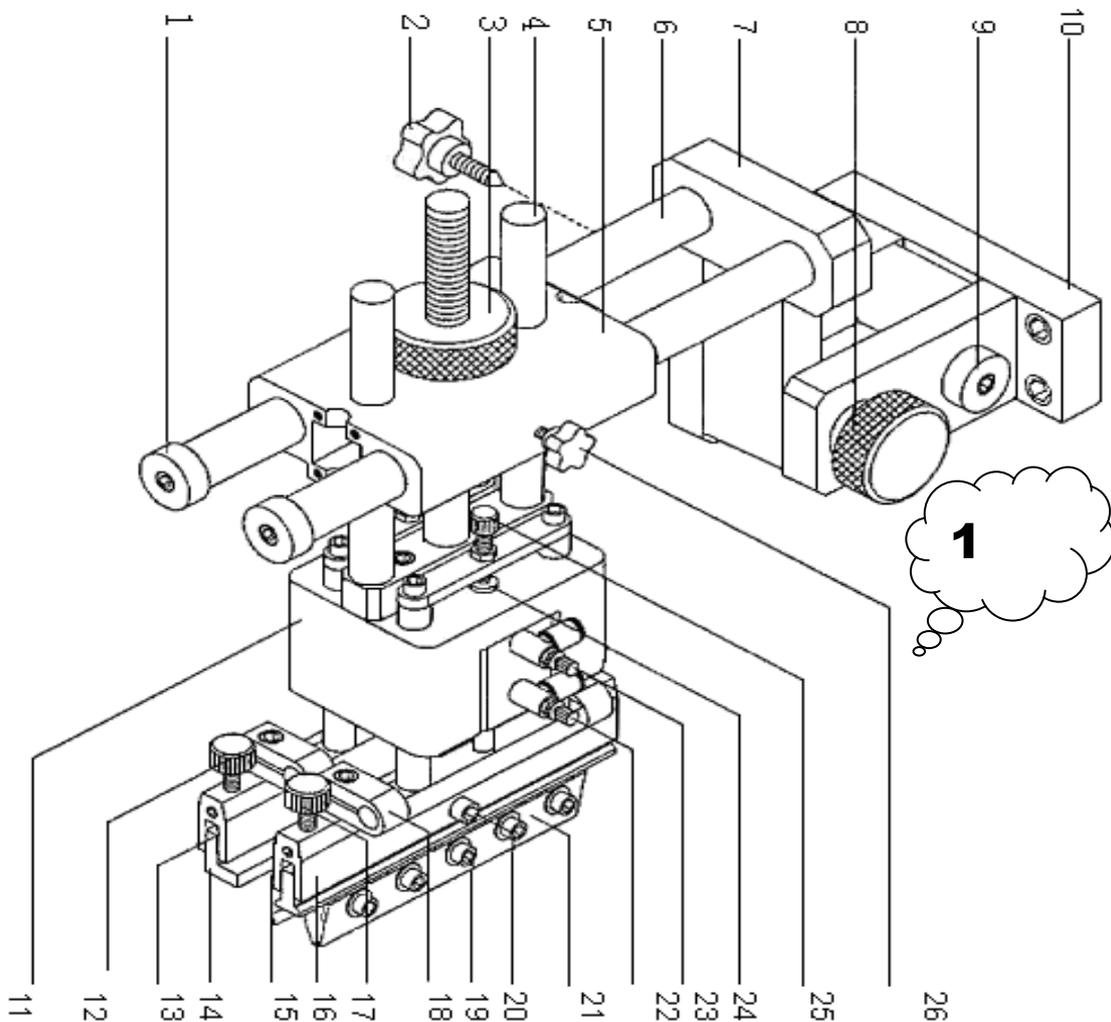
● **Machine structure**

Flat screen printer consist of screen frame nip system, working table, Machine body, Operation Panel, Printing Squeegee system. Screen frame used to install screen frame and ink, Machine body support all parts of machine, Working table used to install fixture and objects to be printed, Printing squeegee system used to install rubber squeegee and ink floor plate. All machine run drive through operation panel.

When put product onto the working table of screen printer and start it, The screen frame will be down to contact with products, the rubber squeegee move from right to left and press ink onto the products till finish the stroke. The rubber squeegee rise up and ink floor plate descend to coat the ink on the silk surface.

1) **Printing Squeegee system (picture 1)**

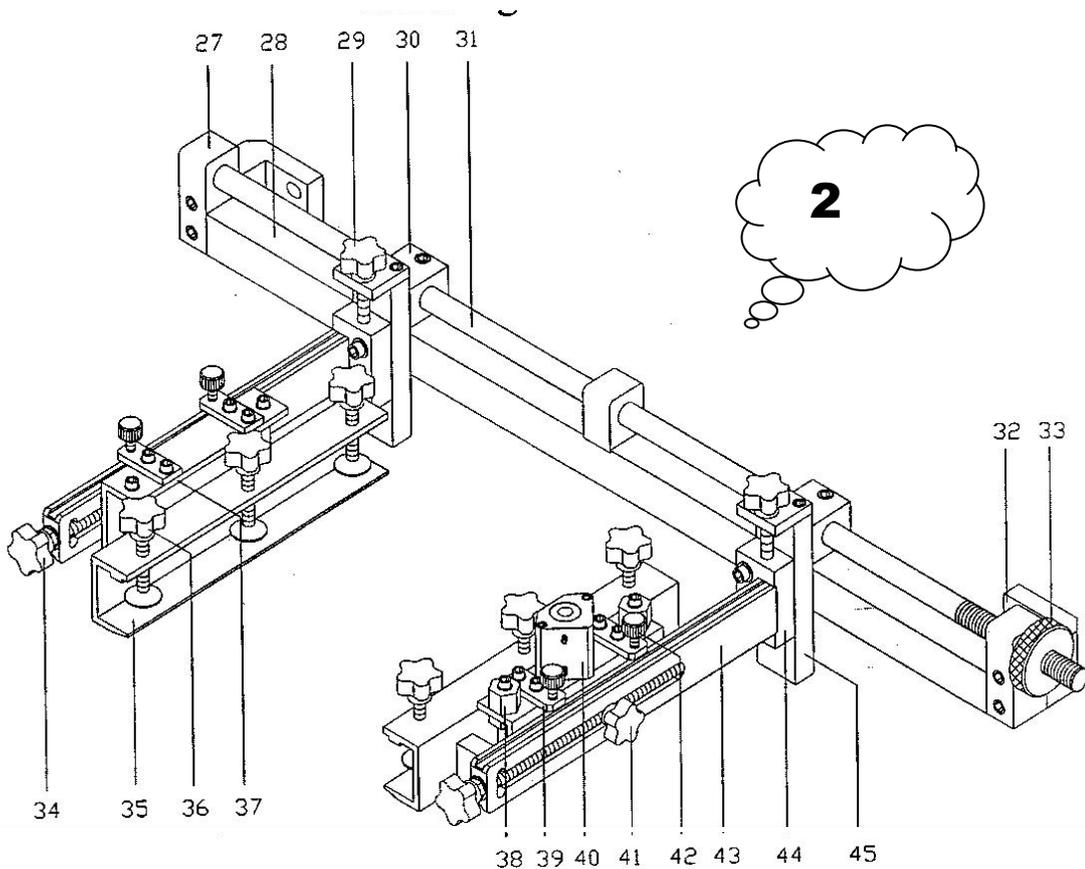
1. End position screw: prevents the printing scraper from going out of the position-adjusting shaft.
2. Turning panel setscrew: fastens the turning panel of the printing scraper frame.



3.



- Lifting adjusting knob: adjusts the cylinder components of the printing scraper frame in vertical direction.
4. Vertical direction slide shaft: balance-keeping shaft for the cylinder components on printing scraper frame.
 5. Sliding carriage: upholds the printing scraper frame.
 6. Slide shaft: adjusts the position of the printing scraper frame in front-back direction.
 7. Turning panel: turns the printing scraper frame upwards through it in order to adjust the screen frame conveniently.
 8. Setscrew knob: controls the turning of the panel.
 9. Panel turning spindle: central revolving spindle of the panel.
 10. Fastening bar: fastens and connects the printing scraper frame with the sliding carriage on the machine frame.
 11. Cylinder fixture: fixes the cylinders on the printing scraper frame.
 12. Adjusting knob: adjusts the parallelism among the ink-reclaiming scraper fixture, mesh and substrate.
 13. Ink-reclaiming scraper fixture: fastens the ink-reclaiming scraper.
 14. Ink-reclaiming scraper fixture: fastens the ink-reclaiming scraper
 15. Ink-reclaiming scraper: reclaims ink to the printing pattern on the mesh after one stroke.
 16. Scraper fixture: fixture of the squeegee clamp.
 17. Adjusting knob: adjusts the parallelism among the squeegee clamp. Mesh and substrate.
 18. Angle adjusting fixture: adjusts and fastens the ink-reclaiming scraper and the squeegee clamp to the appropriate angle.
 19. Squeegee clamp setscrew: fixes the squeegee after adjusting the position of it.
 20. Angle adjusting spindle: a screw that drills through the squeegee clamp.
 21. Squeegee clamp: fixes the squeegee.



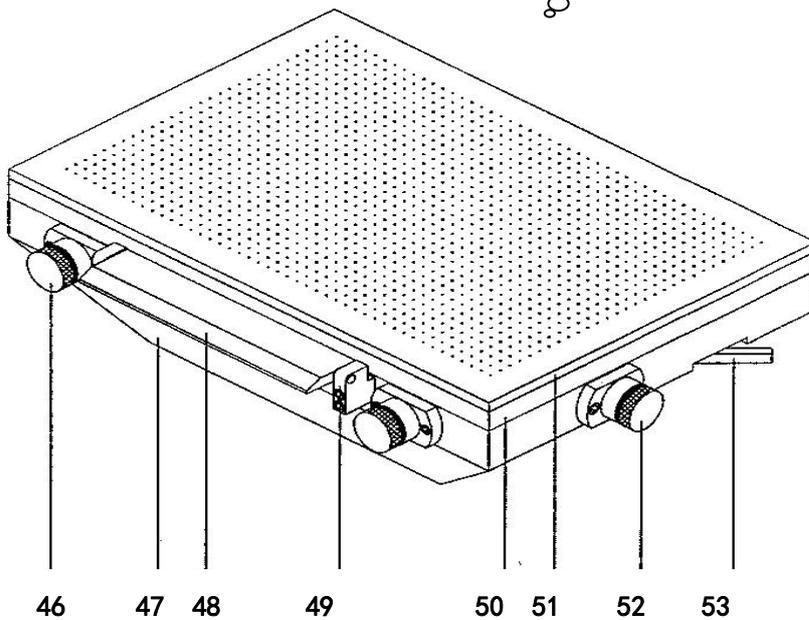


- 22. Throttle valve: adjusts the upstroke compressed air current
- 23. Throttle valve: adjusts the down stroke caused air current,
- 24. Downgrade cushioning : reduces the shock caused by down stroke
- 25 Inching knob: adjusts down stroke length of the squeegee and ink-reclaiming scraper
- 26 Setscrew knob: fixes the sliding carriage of the printing scraper frame after positioning it.

2) Screen frame nip system

- 27. Side bar of the printing arm: fixes the slide shaft to the machine frame.
- 28. Upholding bar of the printing arm: keeps the relative positions of the printing arm components.
- 29. Inching knob: adjusts the screen frame in vertical direction
- 30. Sliding setscrew: fastens the printing arm after positioning it .
- 31. Slide shaft: moving the printing arm components horizontally through it.
- 32. Printing arm upholding frame: connects the printing arm components with the machine frame.
- 33. Inching knob: moving the printing arm frame in horizontal direction.
- 34. Inching knob: moving the printing arm components forwards or back wards.
- 35. Screen frame clamp: fixes the screen frame.
- 36. Pressing setscrew: presses the screen frame tightly in order to fasten it.
- 37. Fixture of the screen frame clamp: moves it forwards or backwards to adjust the position of the screen frame.
- 38. Setscrew: fixes the screen frame clamp after adjusting its position.

Working table



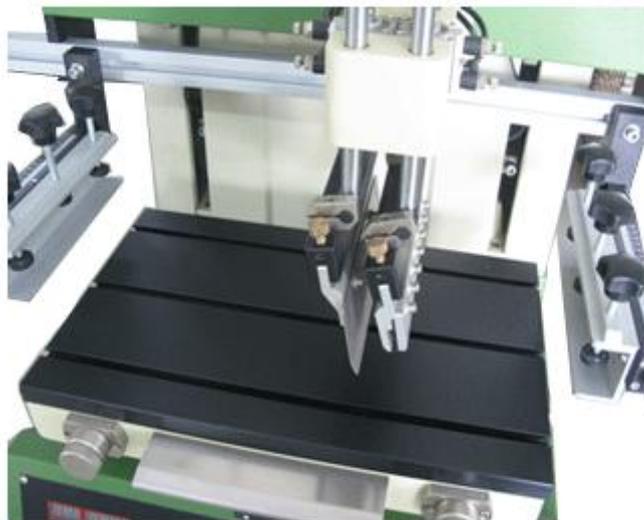


- 39.Parallelism adjusting work piece: adjusts the parallelism between screen frame and substrata through the screw on this work piece
- 40.Cylinder: pulls the screen frame away from the surface of substrate after printing
- 41.Setscrew knob: adjusts the parallelism between the screen frame and the substrate
- 42.Inching knob: adjusts the parallelism between the screen frame and the substrate
- 43.Printing arm : fixes the position of the screen frame.
- 44.Slide bar: mows' the printing arm components in vertical direction
- 45.Slide track: controls the up and down moving of the printing arm

3) Working table system

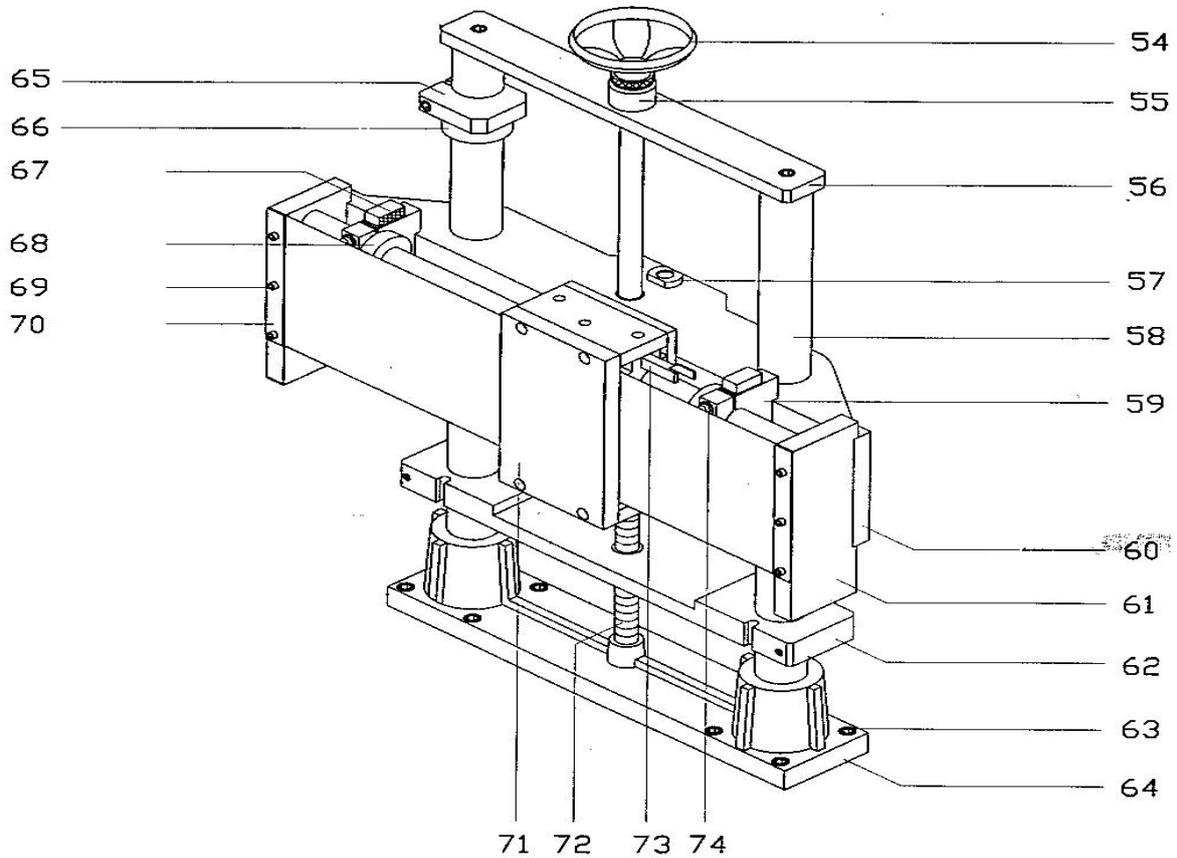
There are two types working table machine to provide by LC Printing Machine, one is vacuum table screen printer, this machine is suitable for printing thin and soft substrates such as paper, film etc, the other is T Model working table, this machine is suitable for printing more thicker and weight products such as plastics metal glass materials, Vacuum working table keep substrates stillness by absorbing objects to be printed. Fix screws fix the fixture and products when using T model working table screen printer.

- 46. Adjustment screw: adjust the front-back position of working table
- 47. Machine frame: install working table;
- 48. safety protection plate: press it the machine will be stopped immediately when dangerous happen;
- 49. safety switch: connecting with safety protection plate ;
- 50. guide plate: vacuum table plate support;
- 51. vacuum table plate: put objects to be printed on it;
- 52. adjustment screw: adjust the right-left position of working table;
- 53. setscrew: after the working table adjustment, fix it the working table will be keep stillness.





升降部分



4. screen frame lifting system

- 54. Hand wheel: adjusts the height of lifting frame
- 55. Graduation knob: indicates the distance moved
- 56. Upholding frame: fixes the lifting frame components to the machine precisely
- 57. Setscrew: fixes the raise and fall function cylinder
- 58. Slide shaft: keeps the printing arm frame moving in vertical direction precisely
- 59. Stroke length fixture: adjusts and confines the horizontal stroke length
- 60. Lifting frame: fixes the printing arm components
- 61. Left and right side plate: fixes the rod less cylinder and the slide shaft
- 62. Cylinder fixture: fixes the raise and fall function cylinder
- 63. Setscrew: fixes the lifting frame components to the machine frame
- 64. Pedestal of the lifting frame components: fixes the lifting frame
- 65. Upstroke top fixture: confines the highest point of upstroke
- 66. End position cushioning: reduces the shock caused by upstroke

LC industrial Company Limited 16-11

Website: [Http://www.lc-pm.com](http://www.lc-pm.com)

Online contact Skype: yingsuahuakelven

QQ: 726986799

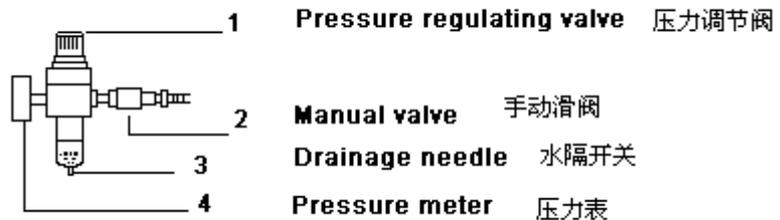
Email: sales@lcpadprinter.cn



- 67. Proximity switch: controls the raise and fall of the squeegee and the ink-reclaiming scraper
- 68. End position cushioning: reduces the shock caused by horizontal strokes of the printing scraper frame
- 69. Setscrew: fastens the pressing plate tightly
- 70. Fixing plate: presses the safety protection cloth tightly
- 71. Sliding carriage: fixes the printing scraper frame and the slide Dearing
- 72. Lifting shaft: adjusts the height of the printing scraper frame and the printing arm frame
- 73. Proximity sensor: near the sensor switch, which controls the raise and fall of the squeegee and the ink-reclaiming scraper?
- 74. Setscrew of the stroke length fixture: fixes the position of the fixture

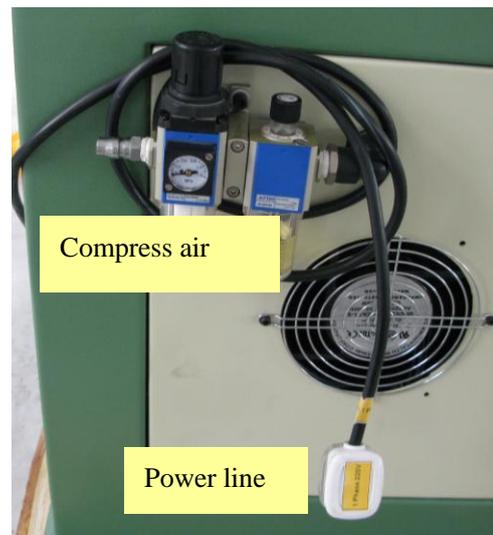
● Operation process

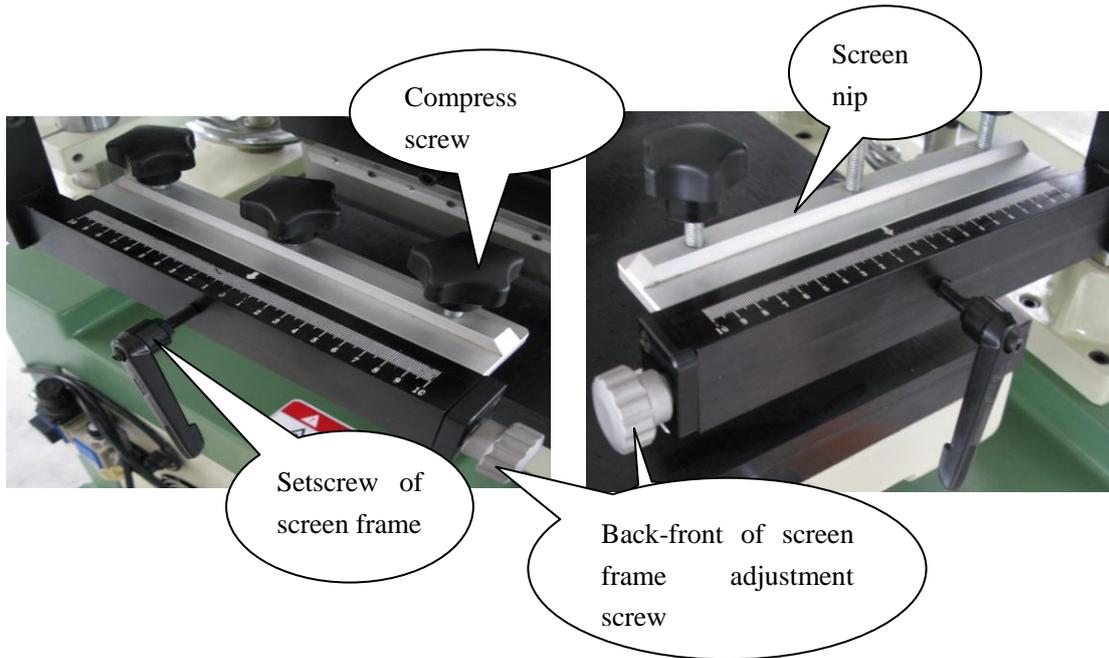
1) **Connect the electric source;** our machine use one phase 220 V power supply. Some countries such as, USA, Canada, Mexico use one phase 110V, We will change the voltage when you make a demand on it. First confirm your locating and electron condition. Turn the power switch one the IC panel from position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



2) **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).





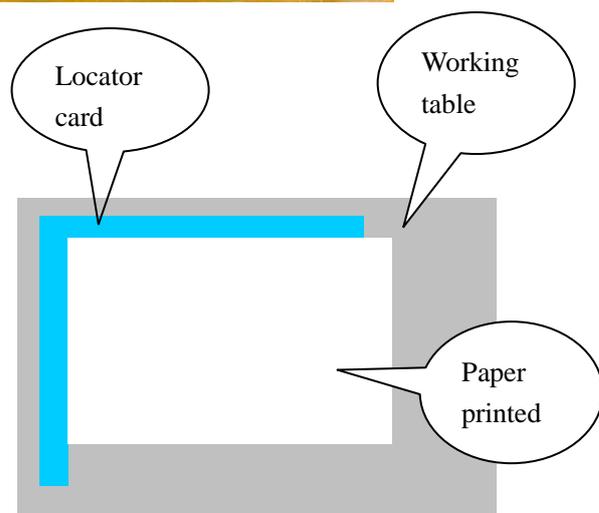
- 3) **Install screen frame.** You must make one set screen frame by yourself, at the first order, we can suggest you sending printing document by email and make one pc screen plate for you, It is expert technology to make screen plate, some equipment and materials , one operating worker with excellent experiences. Please k



screen frame surface parallel with working table, or please adjust the screw 29 of picture 2.

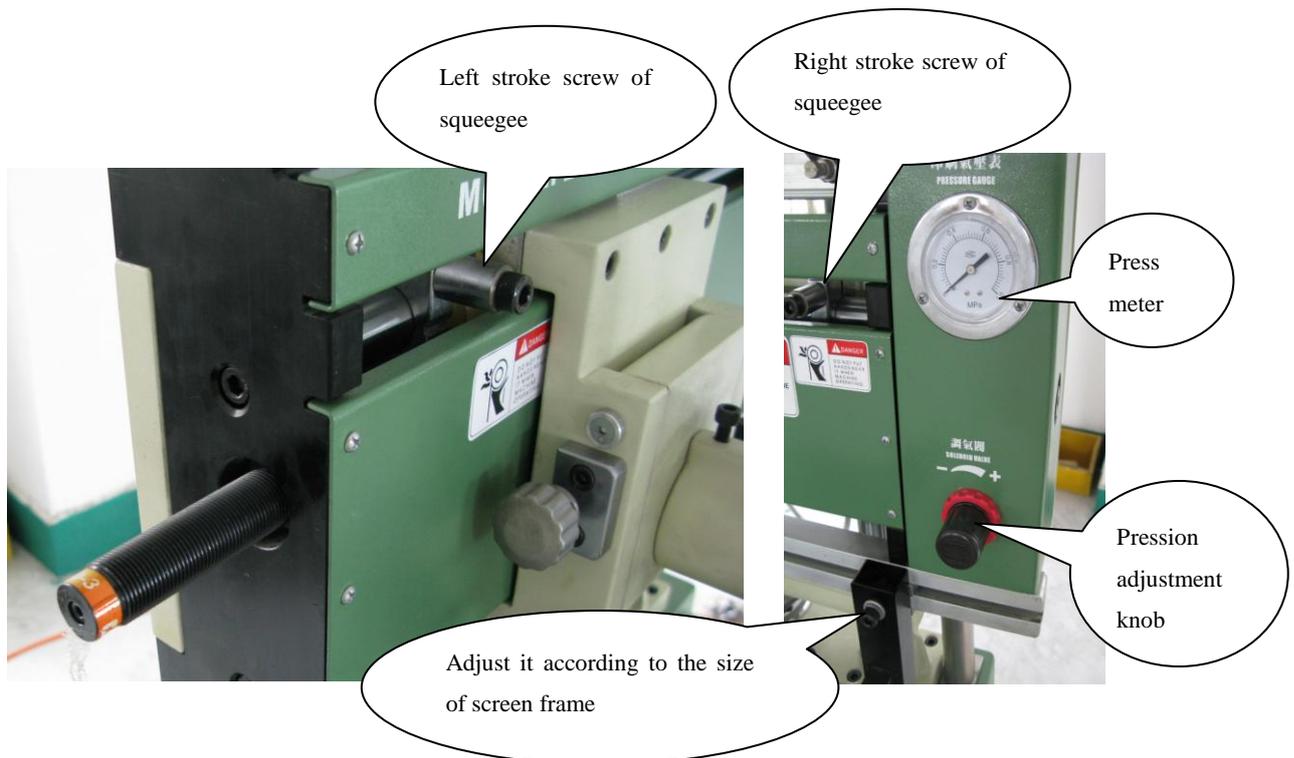
- 4) **Install fixture.** T model working table need to make one fixture to fix it one the working table . when printing paper, only adhere two pcs locator thickness about 75um card on the working table.

- 5) **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. 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.





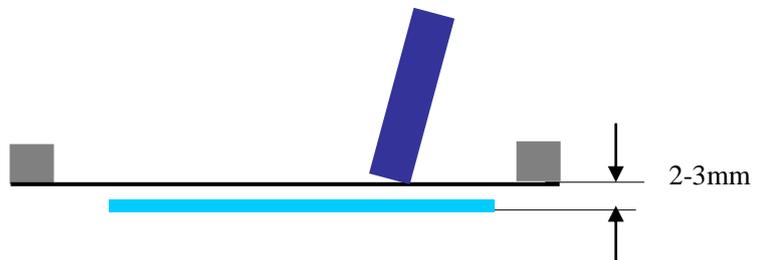
- 6) **Adjust the distance between screen frame and products.** Turning the handle wheel of machine at the back of machine to drop the screen frame. It is best distance is 2-3mm when the screen frame press down.



Adjust the height of rubber squeegee make it contact with the surface of screen silk exactly.

- 7) **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 .



● **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, you could only wash it using diluted solvent or the screen cleaning solven. Strictly wash it using other kinds of chemical solvent.



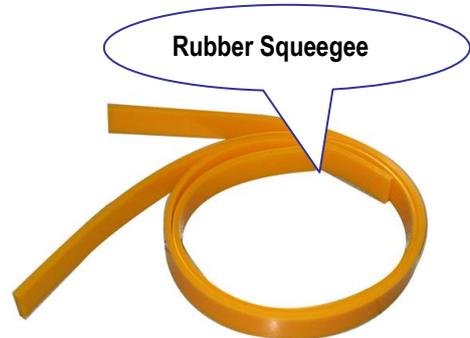
4. Check whether the shape of the squeegee is compatible with the characteristic of the material printed (Square



squeegee is suitable for the even surface, and the knife-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.

● **Maintenance**

1. Infusing lubricant to the sliding ram and the raise and fall shaft once per month, in order to keep the lubricities' of the lubricities' of the moving components of the machine.
2. The moisture of the compressed air should be littered, in order to prevent the moisture entering into the cylinder, which could reduce the longevity of the cylinder.
3. The surface of the suction platform should be kept clean to prevent eye winker jamming the suction being screen-printed.
4. Remember to drain the contaminative water accumulated in the plastic cup of the filter frequently.

● **Circuit drawing**

