

CALCA ULTRA PRO

DTF Printer

User Manual



CALCA-DTF-TT240

Thank you very much for choosing our CALCA brand series DTF printer, please read the manual carefully, including the operation and maintenance to ensure the best output and the lifetime of the machine.

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What is DTF Printing?

Direct Transfer Printing is a revolutionary new printing technique that's more affordable and accessible compared to DTG, screen printing, sublimation or laser white toner transfers.

What Sets DTF Apart from Other Transfers?



- ✓ A great option for small orders.
- ✓ No cutting and weeding required.
- ✓ Crisp, defined edges and images from start to finish.
- ✓ Low cost on waste.
- ✓ Low investment – high reward (Print Cost: \$0.007/inch²).

Works on Most any Fabrics

DTG technology works best on cotton pre-treated fabrics while DTF opens the door to a wide range of choices and is capable of printing onto non-treated cotton, silk, polyester, denim, nylon, leather, 50/50 blends, and more. It works equally well on white and dark textiles.



1 Create your design



2 Printing



3 Shaking powder



4 Bake



5 Heat Press



6 Finishing

Specifications of This Machine

24.4inch (620mm) Maximum print width

Dual Epson I3200-A1 Printheads (CMYK +WWWW)

Printer Size: 70.3in x 31.1in x 63.5in (1785mm x 790mm x 1613mm)

Printer Weight: 396lbs (180kg)

Speed: 6 pass: 8m² / h; 8 pass: 6m² / h

1 Liter per color ink bottle capacity

Printing Software: CALCA DTF Fairy Rip / Flexi PhotoPrint Rip

Printing Resolution: 1440 / 2160 / 2880dpi

Print Head Cleaning: Automatic

Platform Suction Adjustment: Yes

Rewinding Function: Automatic

Heating Sections: Pre-heater, rear heater: 86°F-149°F (30°C-65°C)

Requirements:

- > Working Power Supply: AC 110V / 220V, 50HZ / 60HZ, 1 phase.
- > Current: 5.5A (220V), 11A (110V)
- > Operating System: XP / Win7 / Win10
- > Temperature control set to 68°F - 82°F (20°C - 28°C) and 65 - 75% humidity.

I. Notice on Safety Using

1.1 General

Read the instructions carefully as they contain important information regarding proper, efficient and safe installation, use and maintenance of the unit.

The installation of this unit must be carried out in accordance with the manufacturer's instructions.

Switch off the unit in case of failure or malfunction and contact your distributor for service information.

1.2 Symbols



This symbol informs about a situation where a safety risk might be at hand. Given instructions are mandatory in order to prevent injury.



This symbol informs about the right way to perform in order to prevent bad results, appliance damages or hazardous situations.



This symbol informs about recommendations and hints that help to get the best performance out of the equipment.

1.3 Safety

1.3.1 Safe use of the appliance



For your safety. Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

1.3.2 Other prohibitions



Using any parts other than genuine CALCA approved manufactured parts can void the warranty.



Improper installation, adjustment, alteration, service or maintenance can cause property damage or major injury. Read the installation and operating instructions thoroughly before installing or servicing this equipment.

1.3.3 Caution



CAUTION

Users must pay attention to content have this mark; it might be caused by misoperation.

1.4 Notice before starting it

This machine is a high voltage equipment, in order to use the machine better please be aware of following specification.

1.4.1 Placement instructions

Installation And Placement

- ① The equipment should be placed in a dry and ventilated environment
- ② The equipment must be placed horizontally
- ③ Keep your computer system away from potential sources of electromagnetic interference, such as a speaker or wireless telephone set.

1.4.2 Power connection instructions

Electricity Parameters

Rated voltage: AC110V / 220 V, 1 phase Rated current: 11A / 5.5A, 1200W

Rated power: 1200W

The access power must be consistent with the rated power of the equipment, and the diameter of the access power supply line must meet the rated requirements.

Please only use the power type identified on the printer's label.

Do not use a damaged or broken power cord. If you use an additional power cord, remember that the total amperes of the device inserted in the additional power cord should not exceed the rated ampere of the power supply. In addition, please remember that the total ampere of all devices inserted into the wall should not exceed the amp rating of the wall socket.

Ground Connection



Before getting the power-on, the ground wire must be connected properly to avoid accidents

Those who are sensitive to static electricity should take protective measures

when operating the equipment.

Those who are allergic to static electricity should wear an anti-static wristband or anti-static gloves.

NOTE: The machine must be connected to the ground wire. In dry air conditions, static can be a dangerous issue, especially when using PET media (and moreso when the paper feeding speed is very fast).

Electrostatic charge can cause damage to the printer and the board.

The grounding wire is the best method to avoid this. During operation, ensure that the user's hands have been discharged (through contact with ground or electrostatic equipment). Otherwise, damage may occur to the plate card or nozzle.

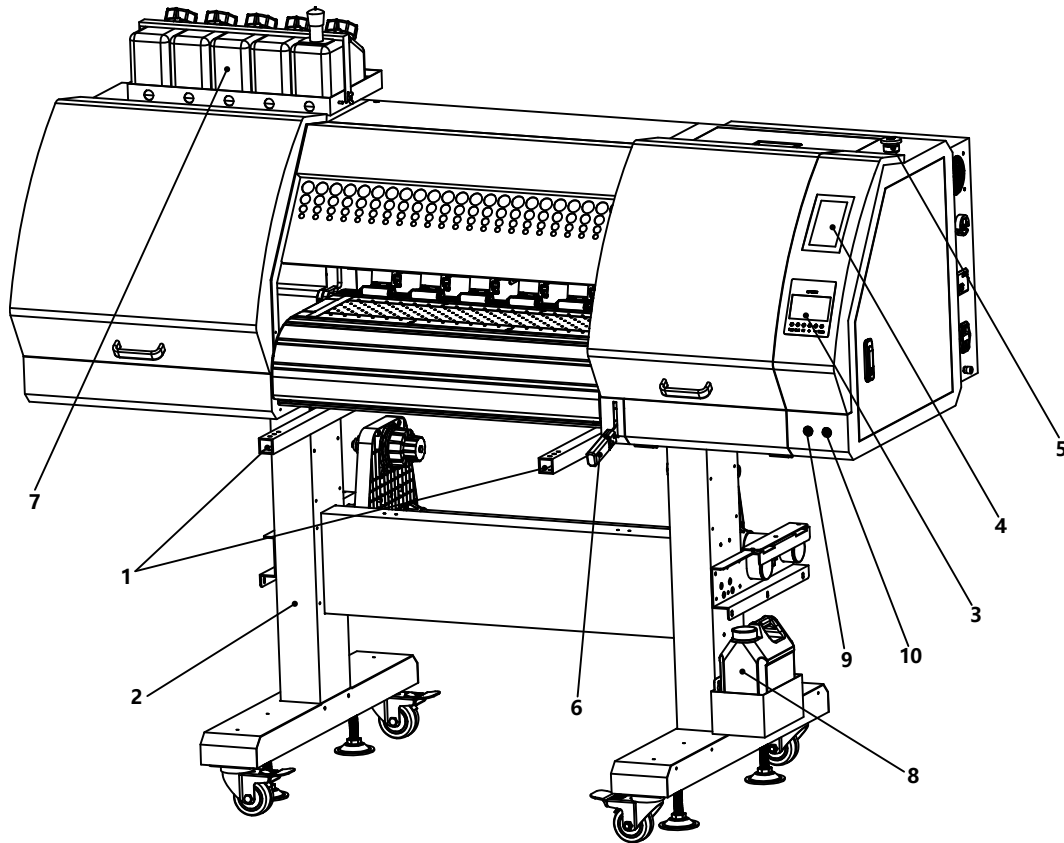
1.4.3 Precautions for operation

- > The printer must be monitored during operation.
- > Do not unplug the printer or other relevant data cables until the machine is switched off.
- > **Do not unplug the print cables or power cable while the machine is on or in operation, as it may cause damage to the main board.**
- > Please do not place tools or other items on the printing platform or cover plate of the machine, so as to avoid unnecessary losses caused by improper cleaning before the machine is running.
- > Before handling your printer, make sure that your printing carriage is fixed in the primary position.
- > Perform regular maintenance on the printer to reduce the impact of dust and ink on the printer.

II. Printer's Parts Identification

2.1 Machine body

2.1.1 Front views



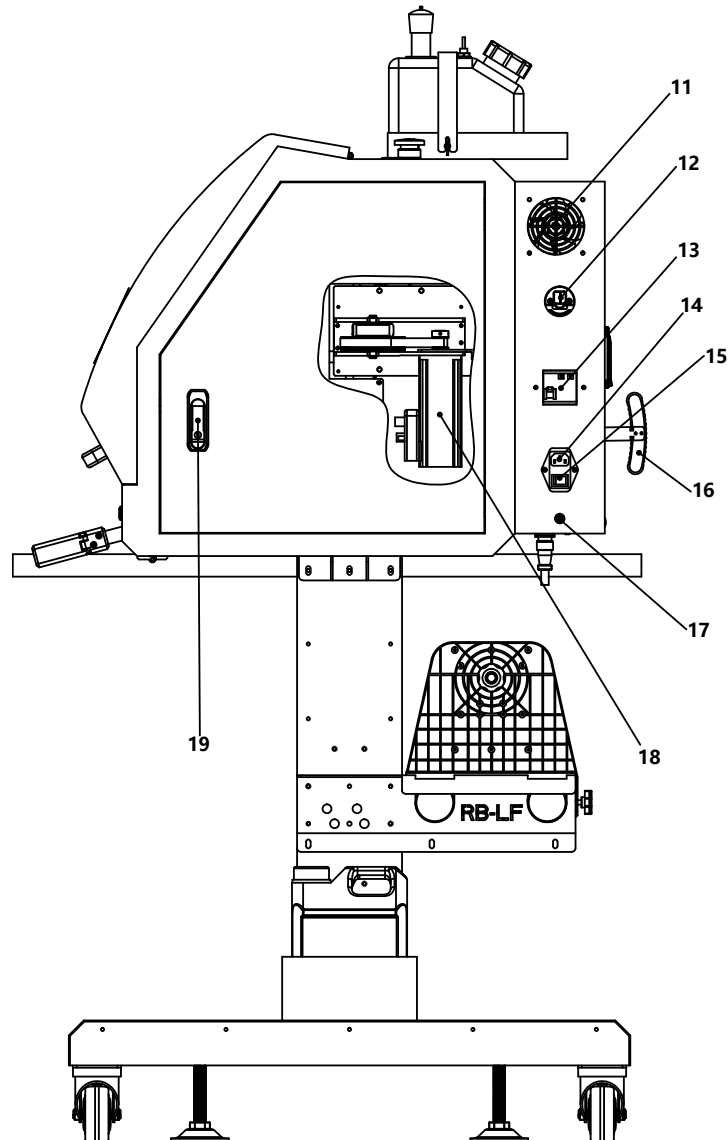
1. **Machine lifting rod:** To fix the wooden box floor during transportation to fix the machine and lift the machine when installing the machine for the first time, The lifting lever can be removed after the machine is installed.
2. **Machine stand floor:** The support frame of the machine. ("The Stand Floor Rack Assembly" in section 3.3)
3. **Platform heating air suction control board:** Set the front, middle and rear heating of the platform.
4. **Operation panel:** To adjust and set the operation and internal configurations of the machine. ("Operation panel diagram" On section 2.2)
5. **Emergency stop switch:** Pressing when stopped in an emergency.
6. **Media pressing handle:** Lift the wheel to install the printing materials.
7. **Bulk ink supply bottle:** A device for storing ink.

8. Waste ink bottle: A bottle for storing waste ink.

9. LED switch: Printing platform light.

10. White ink circulation switch.

2.1.2 Right side views



11. Heat dissipation fan: Do not block the air outlet when the machine is working.

12. Line buckle: To fix data line.

13. Protection switch: Leakage protection device.

14. Switch control of the main power supply.

15. Media pressing handle at rear: Lift the wheel to install the printing materials.

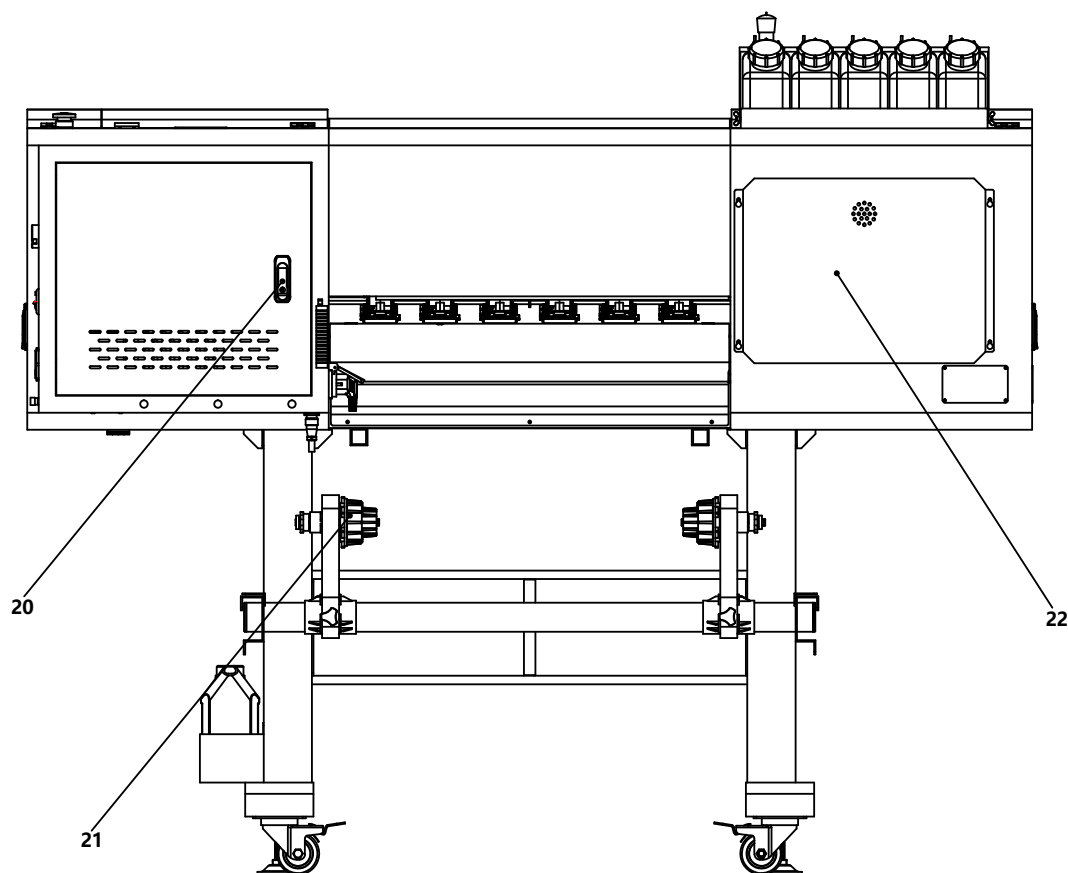
16. The main power supply plug.

17. Ground wire terminal column: External grounding wire to ensure that the machine is free. From static electricity or external electric field interference.

18. X axis motor: X axis driving electric unit.

19. Right box door: Integrating internal X axis electric unit, control panel and temperature control board and other circuit equipment, only accessible for professionals.

2.1.3 Rear views

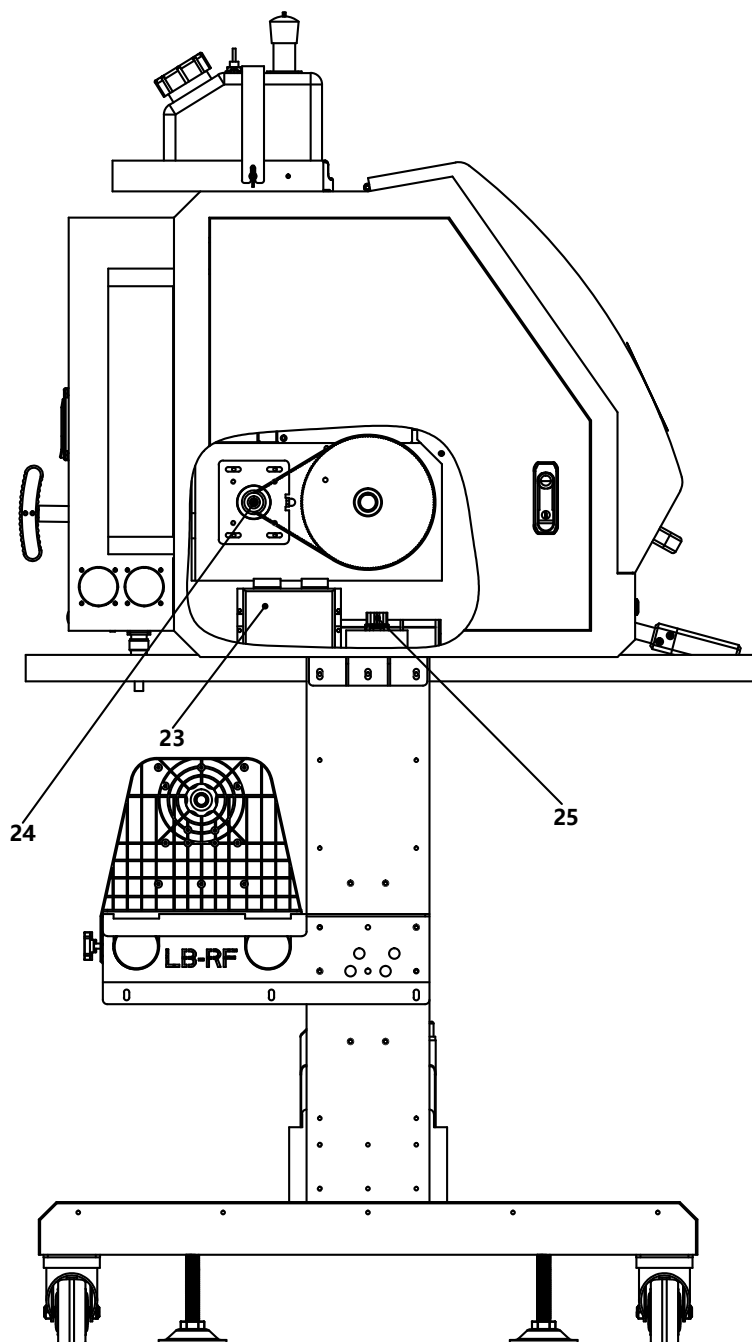


20. Circuit box: Power supply inside

21. Damping dispenser: A device for placing printing materials.

22. Ink supply system inside: Do not open it for a non-professional person.

2.1.4 Left side views

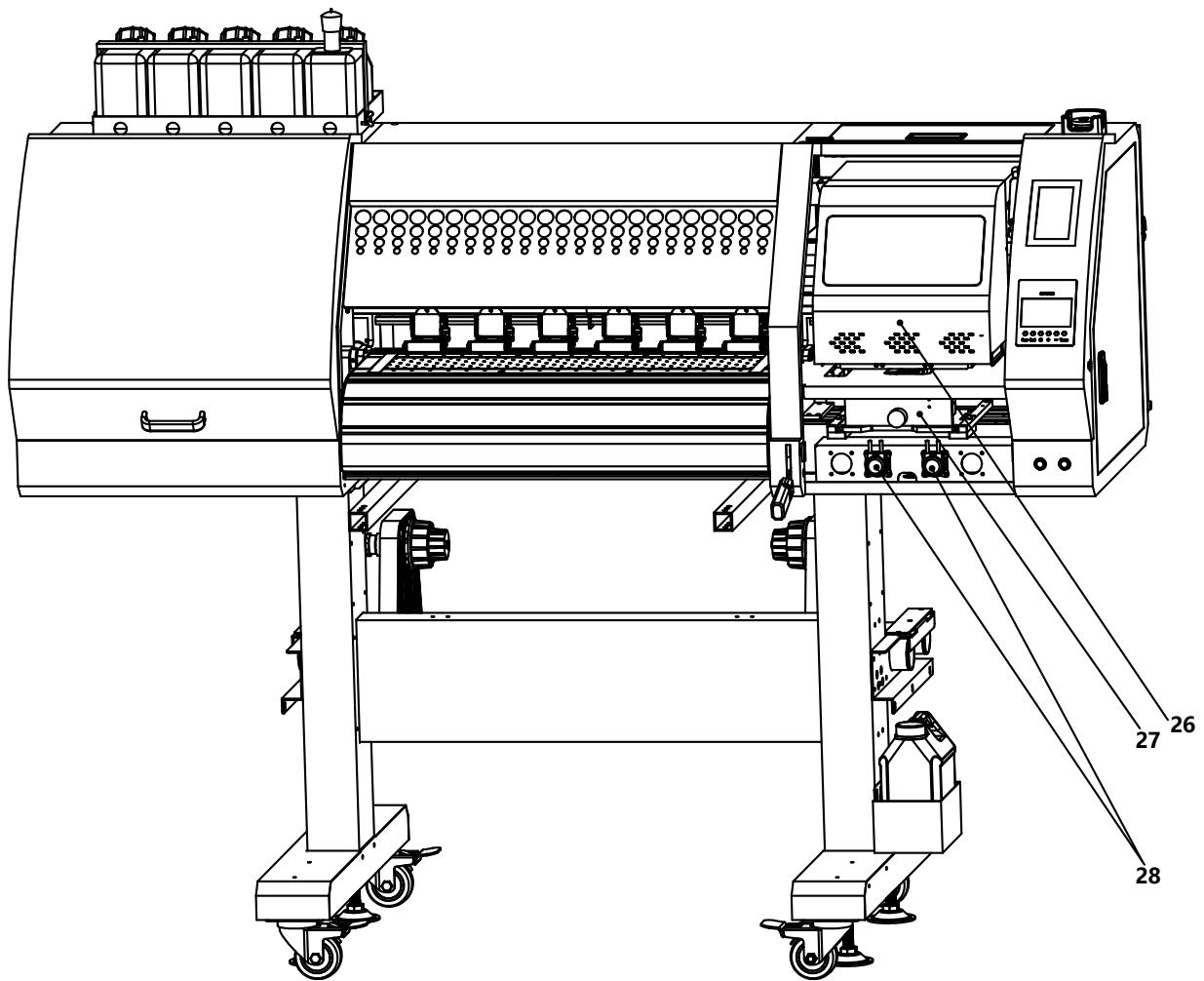


23. Y-axis motor driver

24. Y-axis motor

25. White ink cycle speed control knob

2.1.5 Right cover inside diagram



26. Carriage unit: Please refer to “Carriage Diagram” section 2.3

27. Ink station: The ink pumping and moisturizing device of the nozzle.

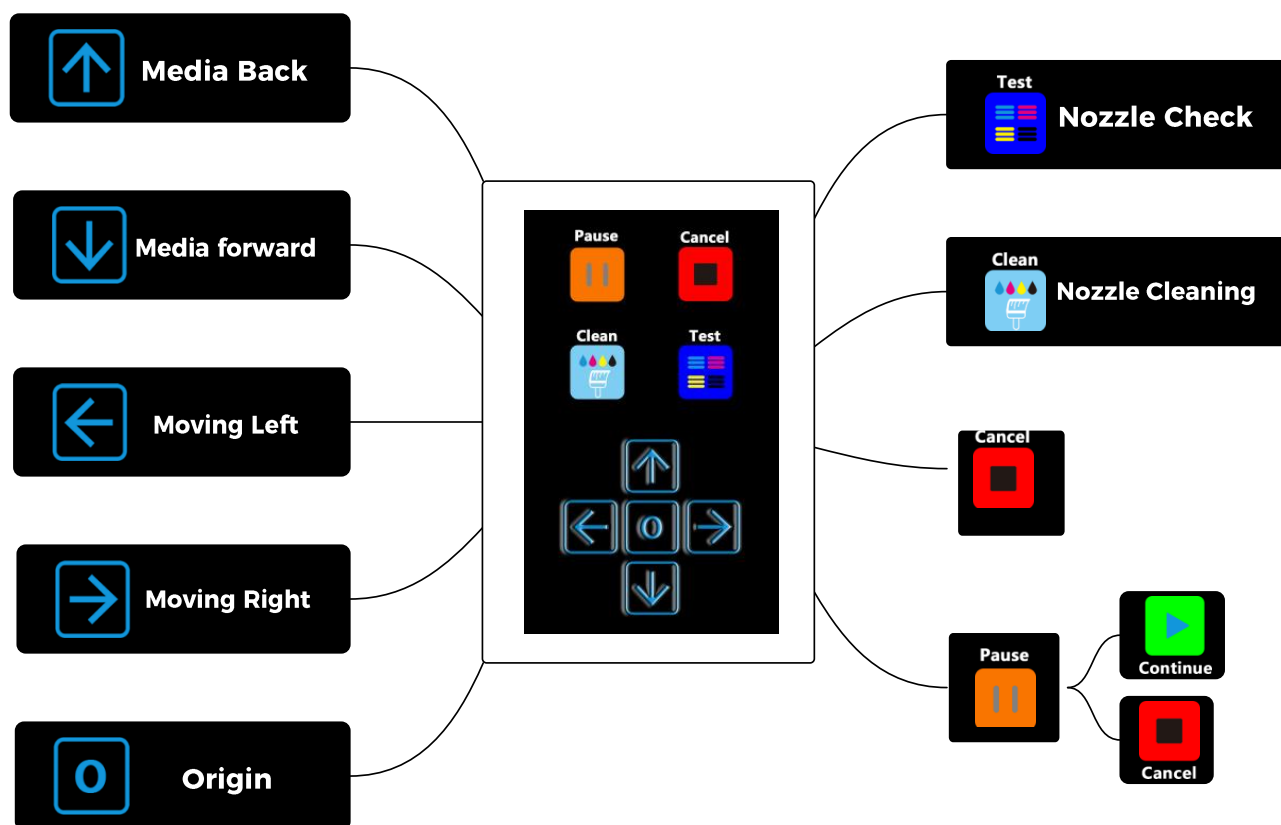
When the machine is not working, the cap top must be used to seal the nozzle.

28. Ink pumping system: Elements for pumping ink at ink station.

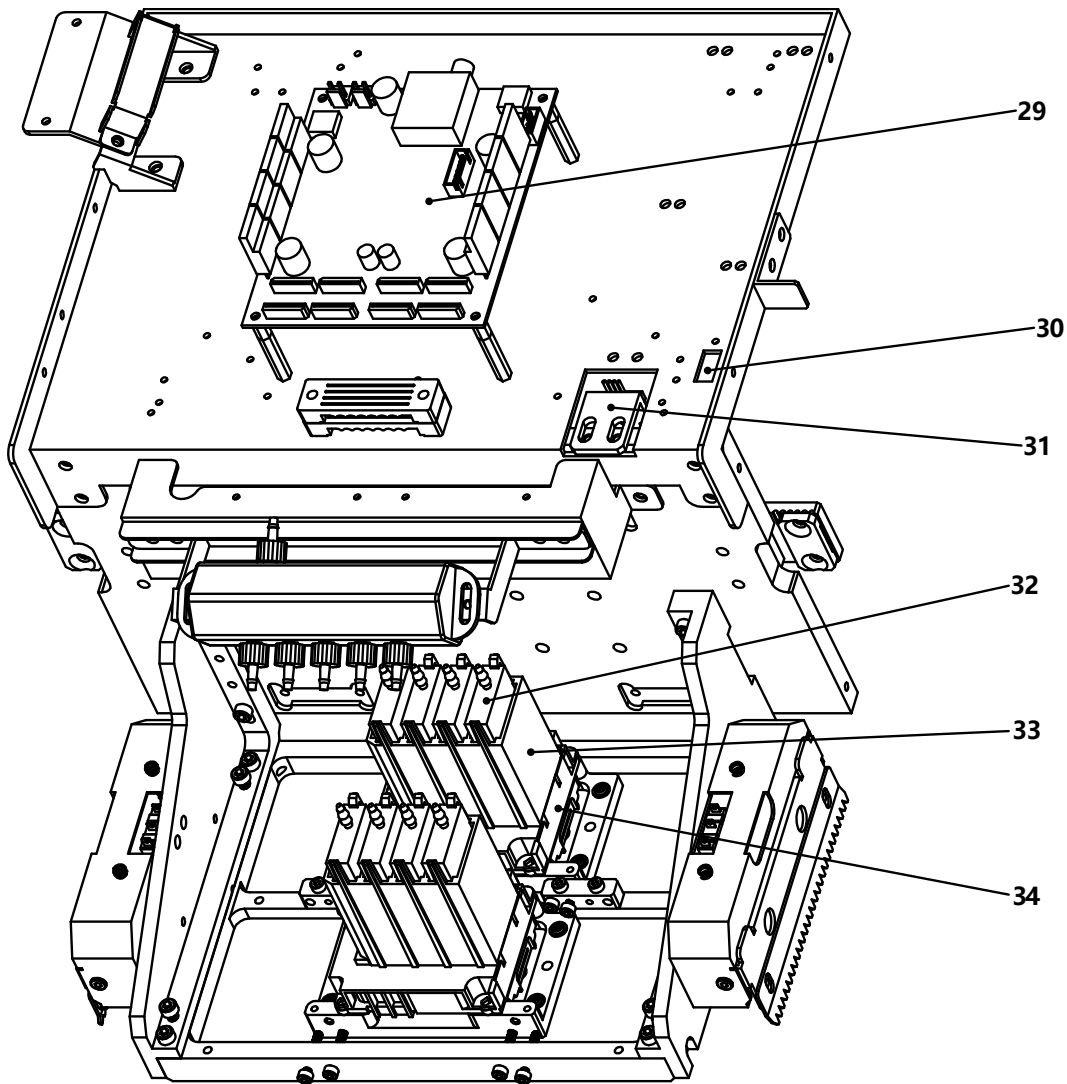
2.2 Operation panel diagram



The screen shows before connecting to the computer.



2.3 Carriage diagram



29. Print head board: Board driving printer jet ink. Machine online, data transmission, inkjet system.

30. X axis Origin sensor: X axis original positioning sensor.

31. Linear encoder: X axis grating scale reading element.

32. Ink damper: Ensure the continuous supply of ink and filter impurities.

33. Ink damper holder: Prevent the ink damper from loosening.

34. Print head: Ink output, the nozzle status directly affects the printing effect.

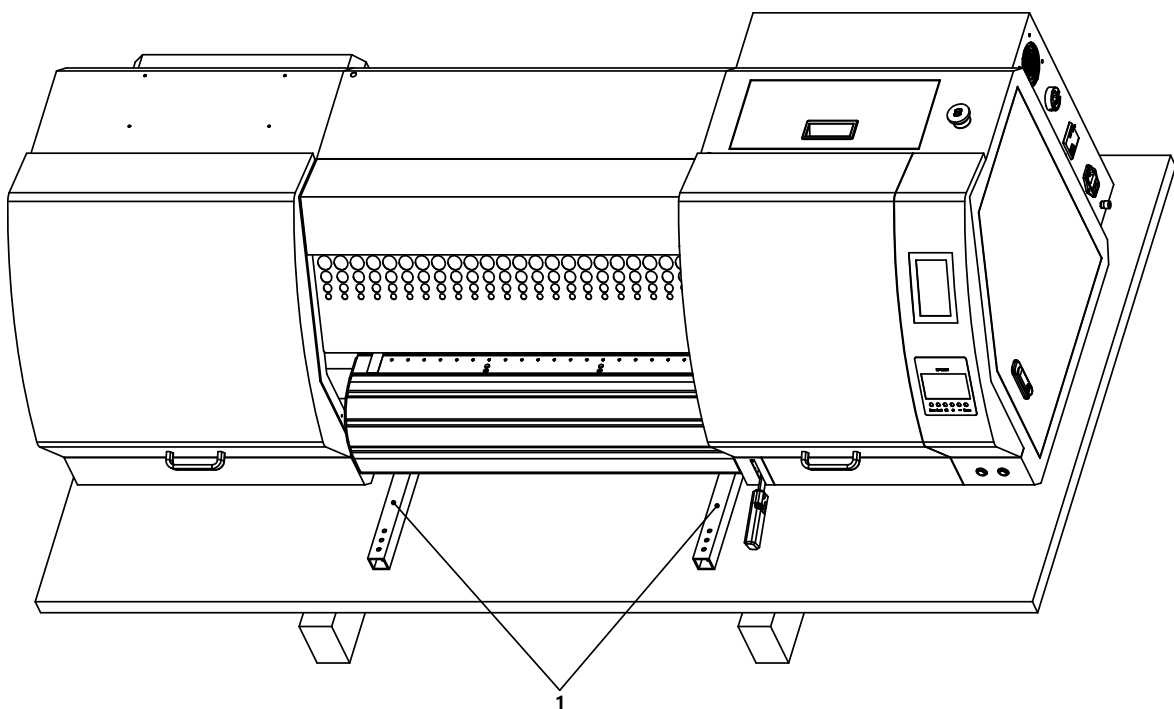
III. Printer Installation

3.1 Installation precautions

1. Before unpacking, check if there is damage on the packing and the machine during transportation.
2. After unpacking, check if the service parts are correct as the packing list.
3. The installing place should be provided enough space for operating and free of dust, no vapor, no corrosive gas, no combustible or explosive substance around. Keep the machine away from wind blowing place, otherwise will affect printing quality.
4. After installation, adjust each caster to reach level ground. The casters only be used on even ground for short distance movement.

Notice: Please move carefully since it is a heavy equipment.

3.2 Printer unpacking



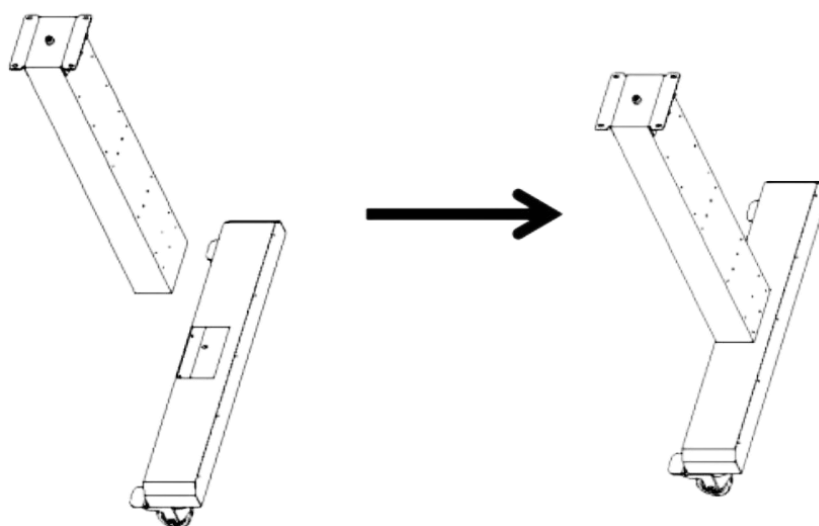
Open the wooden box and remove all the screws that fix the lifting rod of the machine on the bottom plate of the wooden box.

3.3 The stand floor rack assembly

1. Take out the parts from the packing.
2. Assembling two legs and all shafts according to the picture.

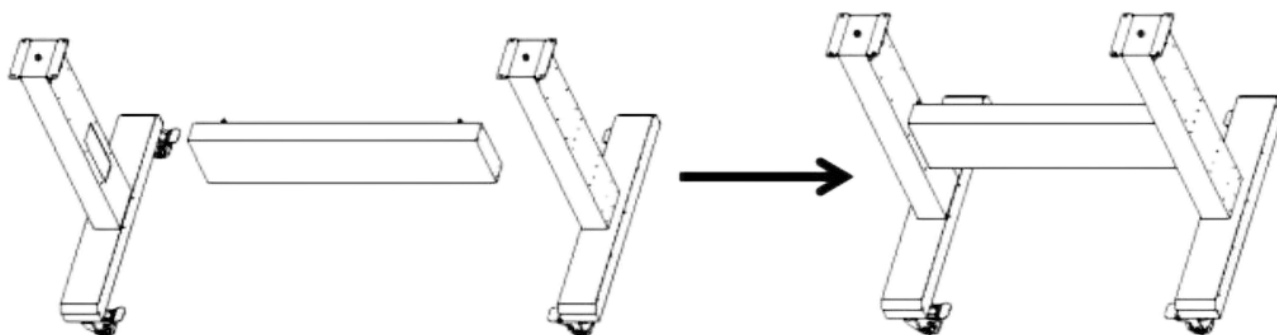


3.3.1 Installation diagram



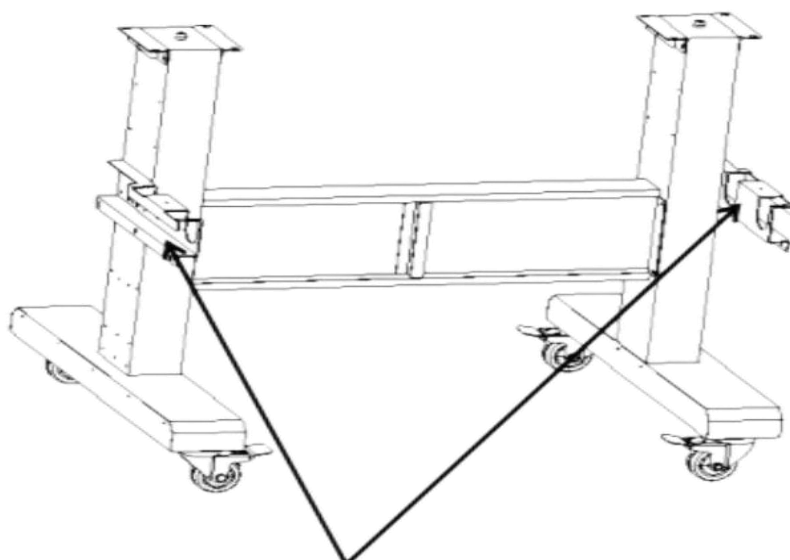
Fix the stand bars with six screws.

3.3.2 Installation of Cross Bar

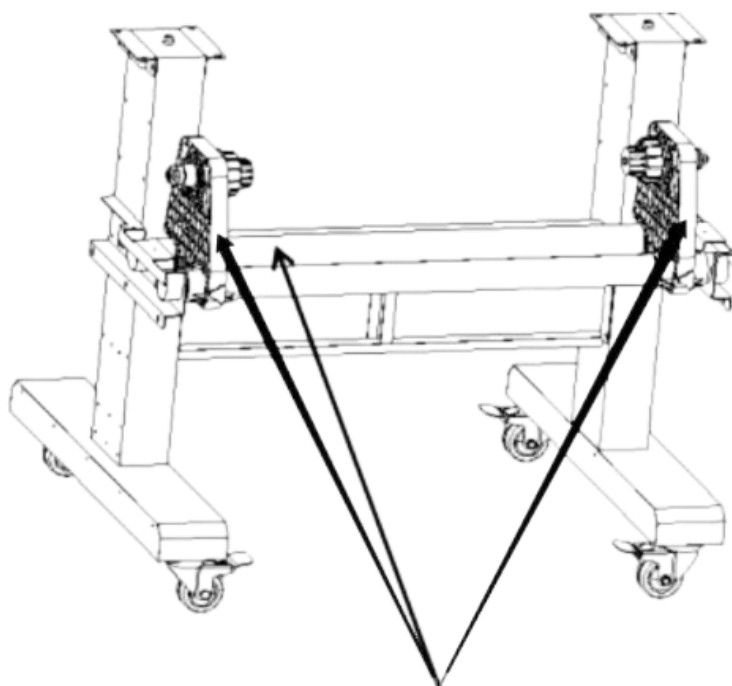


Fix the cross bars and the stand bars together with 12 screws.

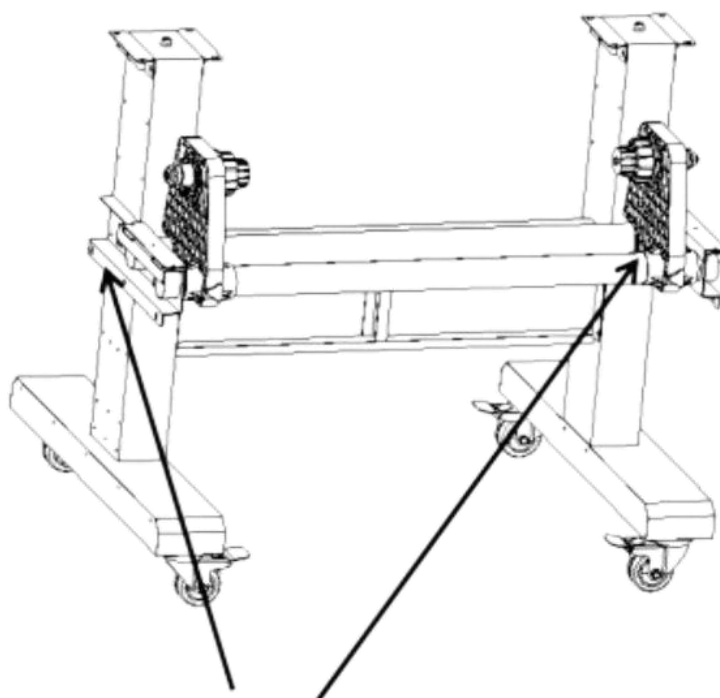
3.3.3 Roller installation



Install the both sides of the brackets

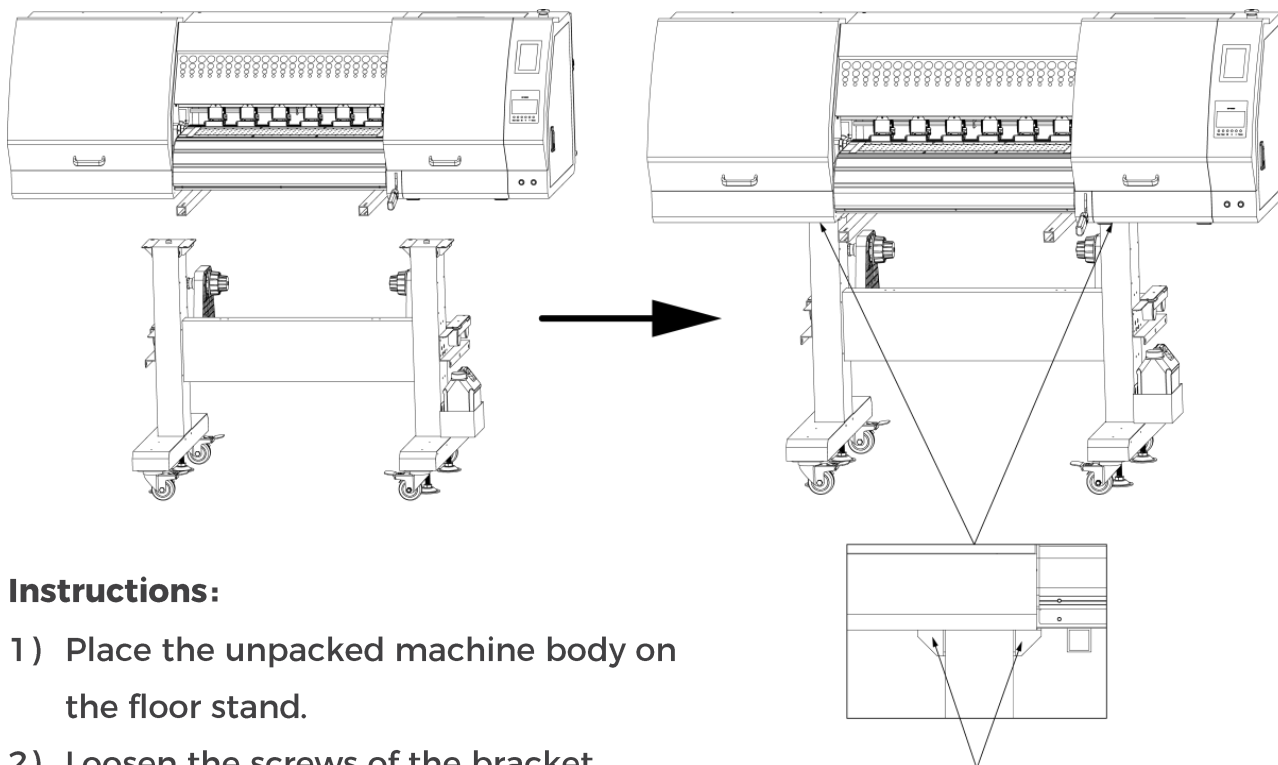


Place two steel pipes and flange plates on the pipe holders.



Fix the steel pipe pressing plate on the pipe frame.

3.4 Machine body assembly

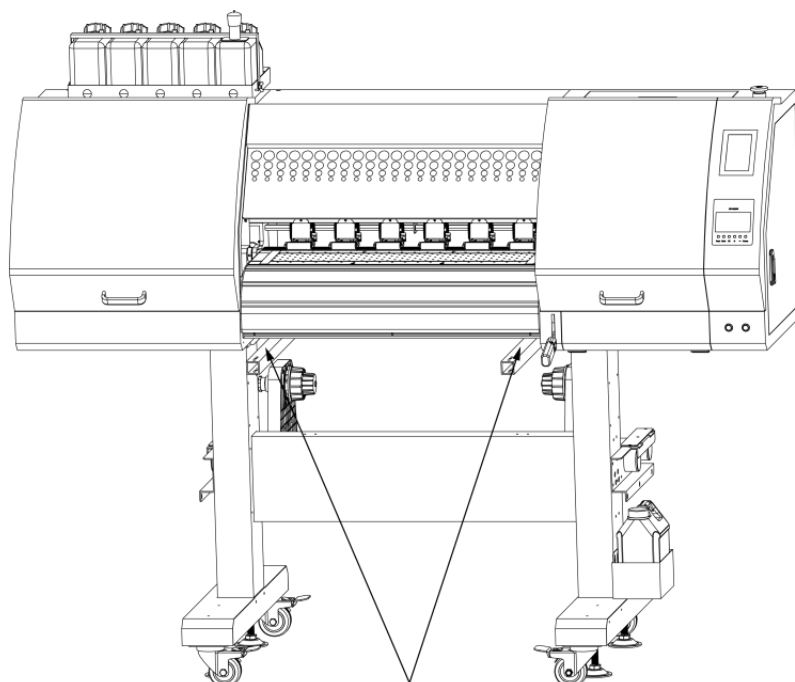


Instructions:

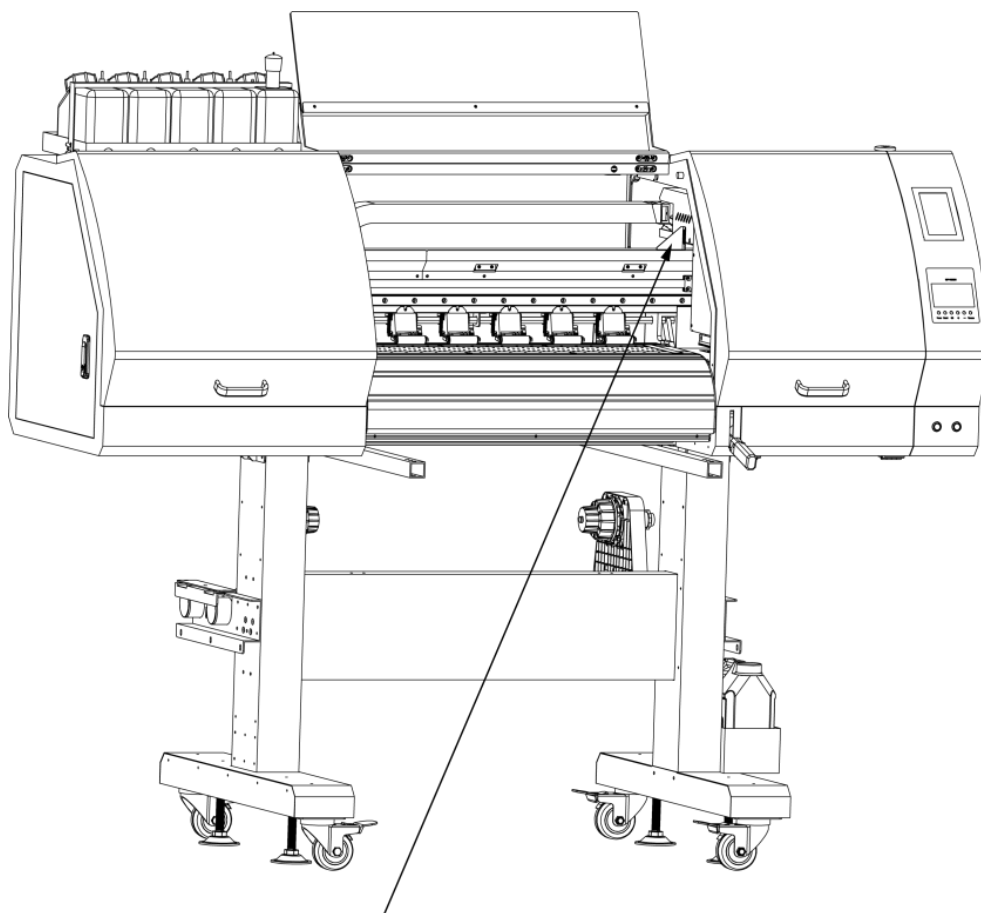
- 1) Place the unpacked machine body on the floor stand.
- 2) Loosen the screws of the bracket connecting plate, and then tightened with machine.

Stick to the bottom beam and stand bar.

3.5 Remove the lifting rod and carriage fastener

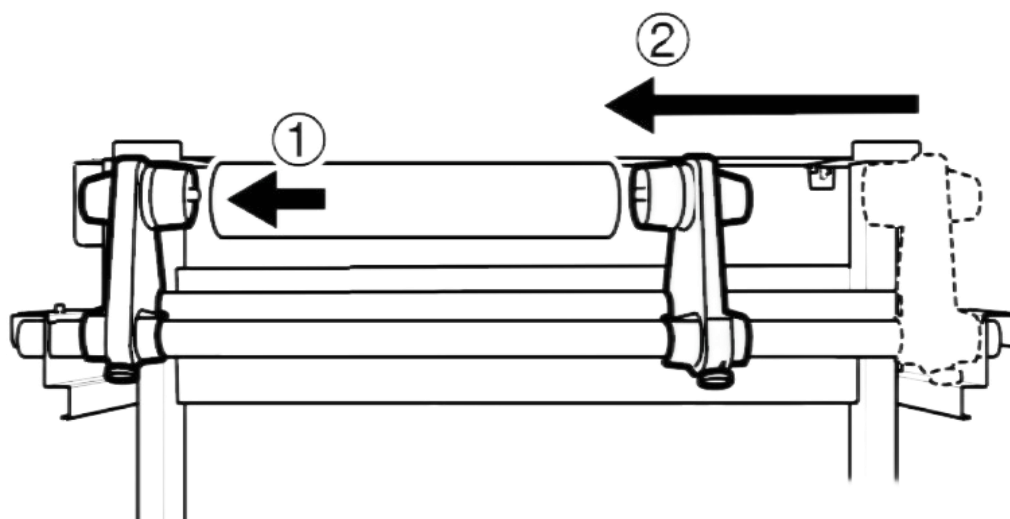


Remove the two lifting rods.

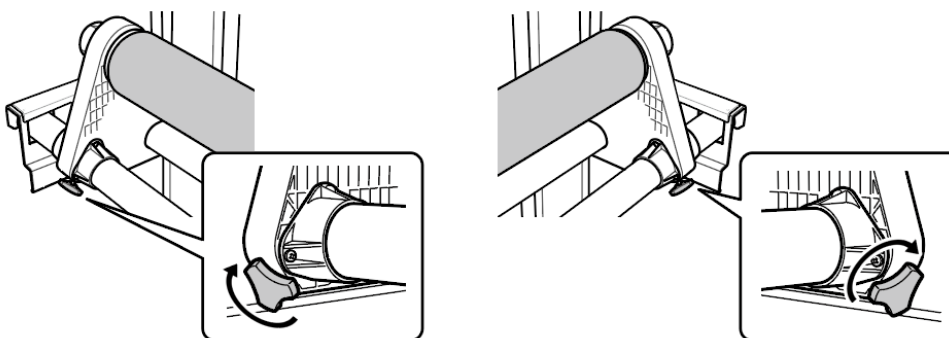


Remove the carriage fastener.

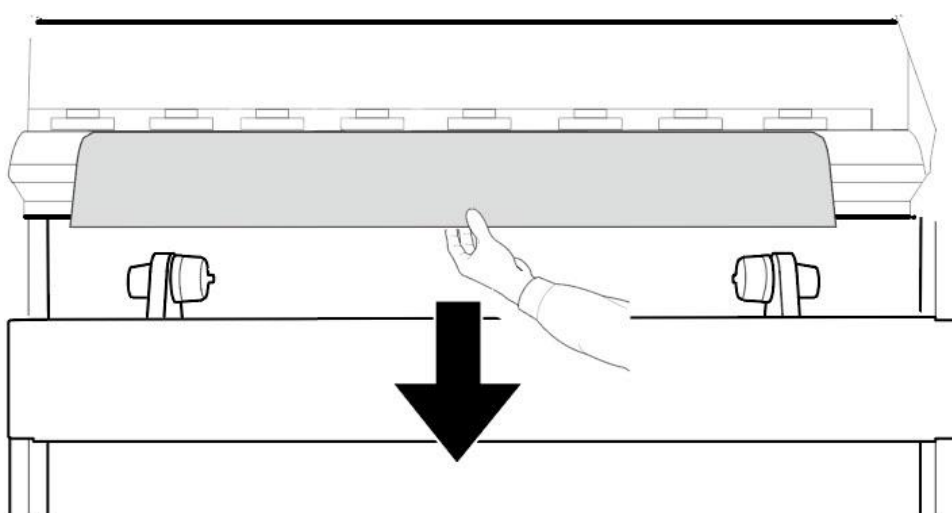
3.6 Media loading



As shown in the figure, fix the coil bracket on the left, load the media roll, closed with the right coil bracket.



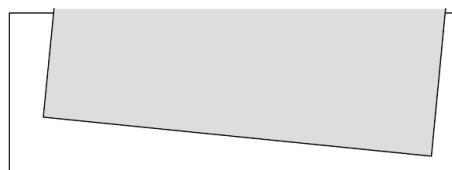
Tighten the screws and secure the roll bracket.



Run the media through the print platform.



Available



Unavailable

Keep the media parallel to the platform

Usable Size

Maximum print width: 24in (620mm)

Maximum thickness: 0.05in (1.3mm)

Roll outer diameter: 5.9in (150mm)

Paper tube diameter: 2 or 3 inches

Weight: 44lbs (20kg) or less

Media heater: Pre/rear heater (Can be controlled separately)

Cautions when handling film:

- > Please use recommended film. Contact CALCA sales for recommended film.
- > Be cautious of expansion and contraction of media from temperature and humidity.

After opening an unopened media, leave the media for approximately 30 minutes to adjust to environments.

- > Do not use media with folds, scratches, tears, curvatures, winding curl and weaving.
- > Do not leave a roll media set in the product for a long time. The media can be curled becoming unsuitable for printing.

When not using for a long time, remove the roll media and store in its original package box.

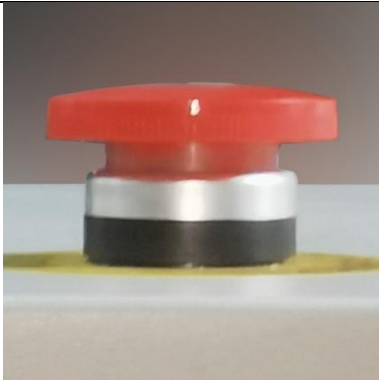
3.7 Inject ink

Put the ink into the ink bottle according to the instructions on the label, note that the color of the ink needs to be the same as the color of the corresponding label on the main ink bottle.

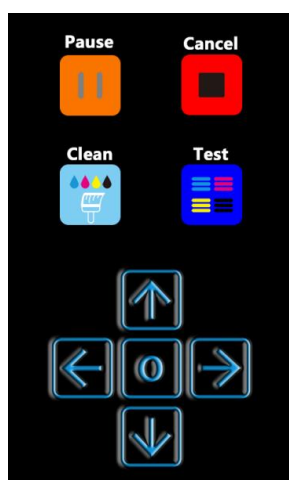
3.8 Turn on the printer



Ensure that the electricity leakage kept in ON.
Rear power switch on the right side of the printer.
Reset - Press Before Switching On.
Test - Push Monthly.

	Keep the emergency switch standby.
	Open the main power Always use the power switch to turn the printer off (rear power switch on the right side of the printer). Do not unplug the printer or other relevant data cables until the machine is switched off.

3.9 Turn off the printer



1. Click the origin .



2. Shut down the main power supply.

IV. IP Setting And Calibration Tool Tutorial

4.1 Computer configuration requirements

Configuration List		
1	System	WIN7/10/11 64 bits
2	Processor	Intel Core 10gen I5 CPU or above
3	Memory	8GB or above
4	Hard disc	500GB above, SSD recommended.
5	Chip set	INTEL
6	Data transmission	1000M Ethernet port

4.2 System data transmission

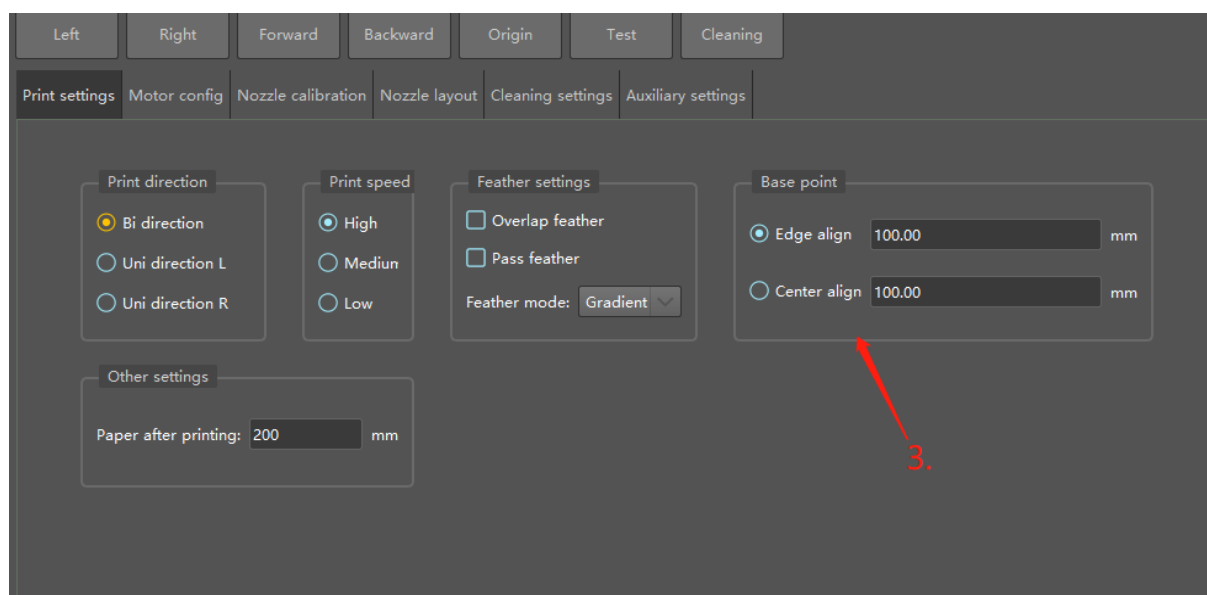
A 1000M Ethernet port is required to connect the data transmission of the printer to the computer.

Computer network IP: 192.168.125.92

Main board IP: 192.168.125.64



4.3 Print setting

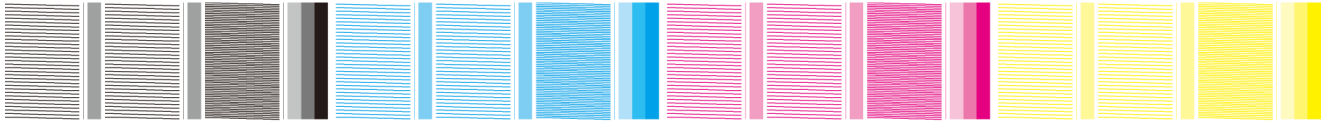


Adjust the positioning parameters so that the picture is correctly printed in viewing.

4.4 Nozzle test and cleaning



Clicking this button on the operation panel, the nozzles will print the following patterns:



They show the perfect state of the nozzles.

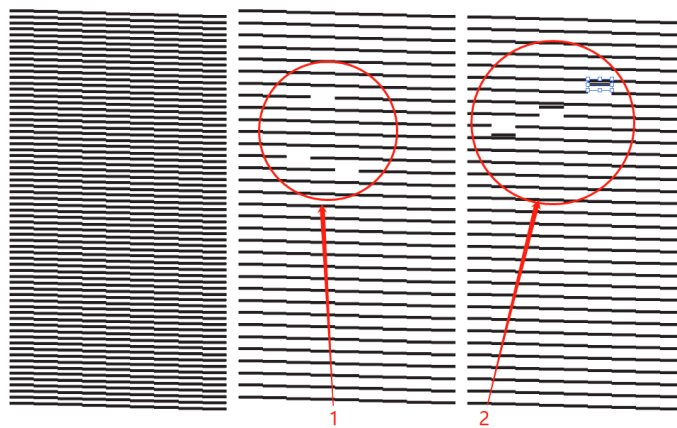


Figure 1 shows the printing blank, and Figure 2 shows the deviation.

You need to clean the nozzles. Please click

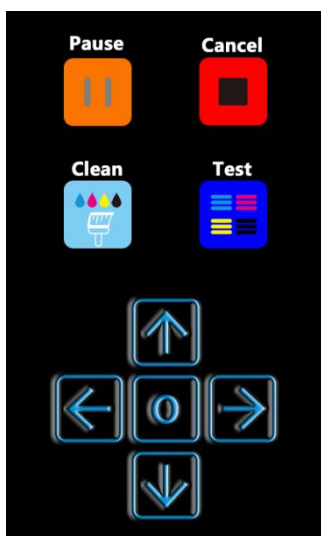


on the operation panel,



click , clean the nozzles, test nozzles again. If something wrong with the nozzle test, please contact your engineer for a check.

4.5 Receive the printing data from the computer



Operation Panel

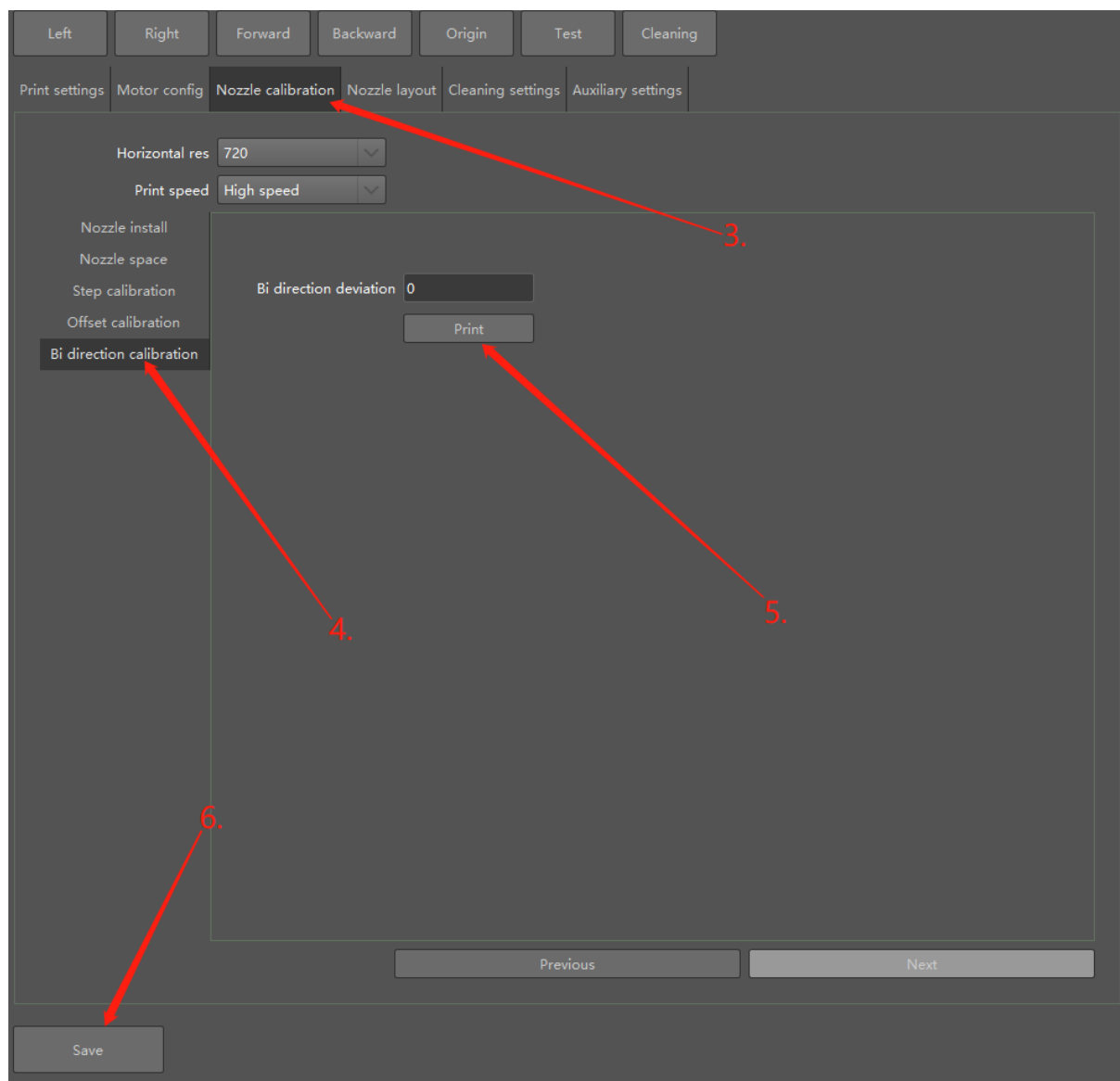


LOGO

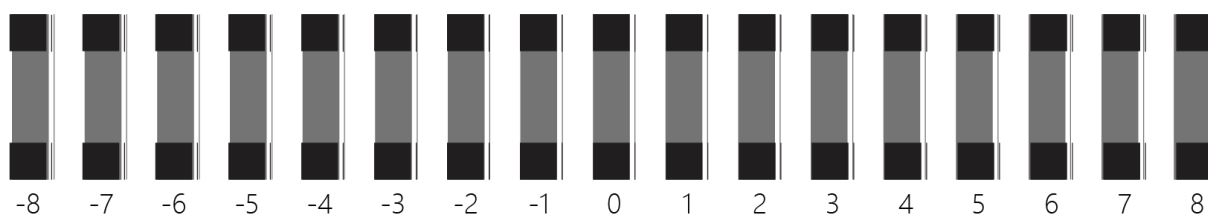
When the operation panel displays the operating interface rather than continuously showing the LOGO, the printer is available for your operation.

4.6 Bi direction calibration



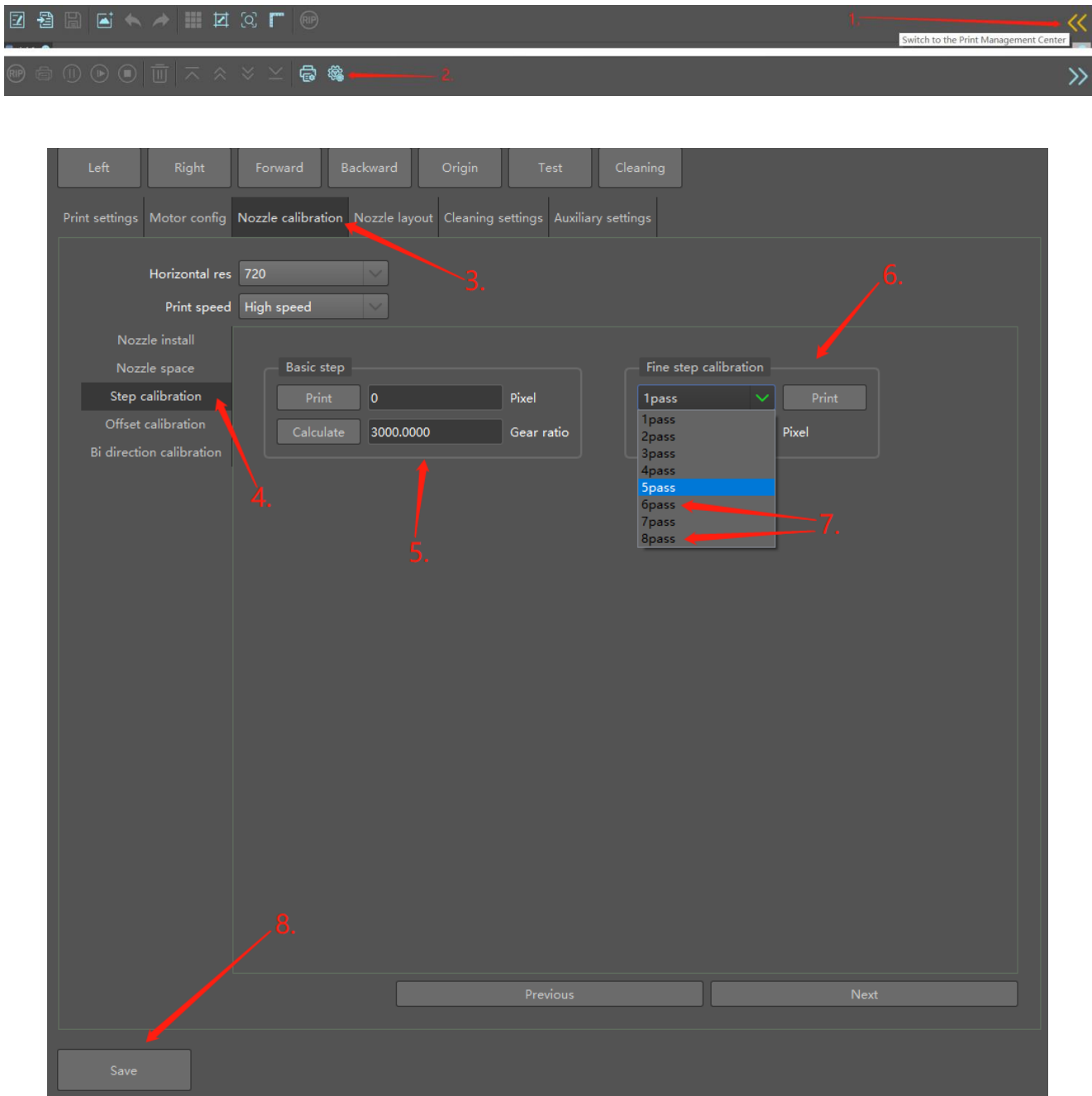


Enter the printer setup interface and print the following calibration test:



Adjust the parameters according to the alignment, and then save the modifications.

4.7 Step calibration



Enter the printer setup interface and print step calibration test, first to make the basic step calibration, adjust the parameters according to the alignment, and then save the modifications.



After the basic calibration, we can keep on with fine step calibration, It is the same processing as basic calibration in 6pass and 8pass mode.

V. CALCA DTF Fairy Rip Software Operation

Please refer to “**CALCA DTF Fairy Rip Software Operation Manual**”, Or look at the setup video.

DTF FAIRY RIP SOFTWARE SETUP VIDEO

Scan this QR Code

for a video walkthrough of the CALCA
Ultra Pro 24in Printer Software setup
and operation video!



Or go directly to this link: <https://www.youtube.com/watch?v=iCI0leRQfHY>

VI. Dual H Calibration Guide

6.1 Calibration steps

6.1.1 Calibration sequence

Print head test->Vertical alignment->Step calibration->Offset calibration->Bi direction calibration

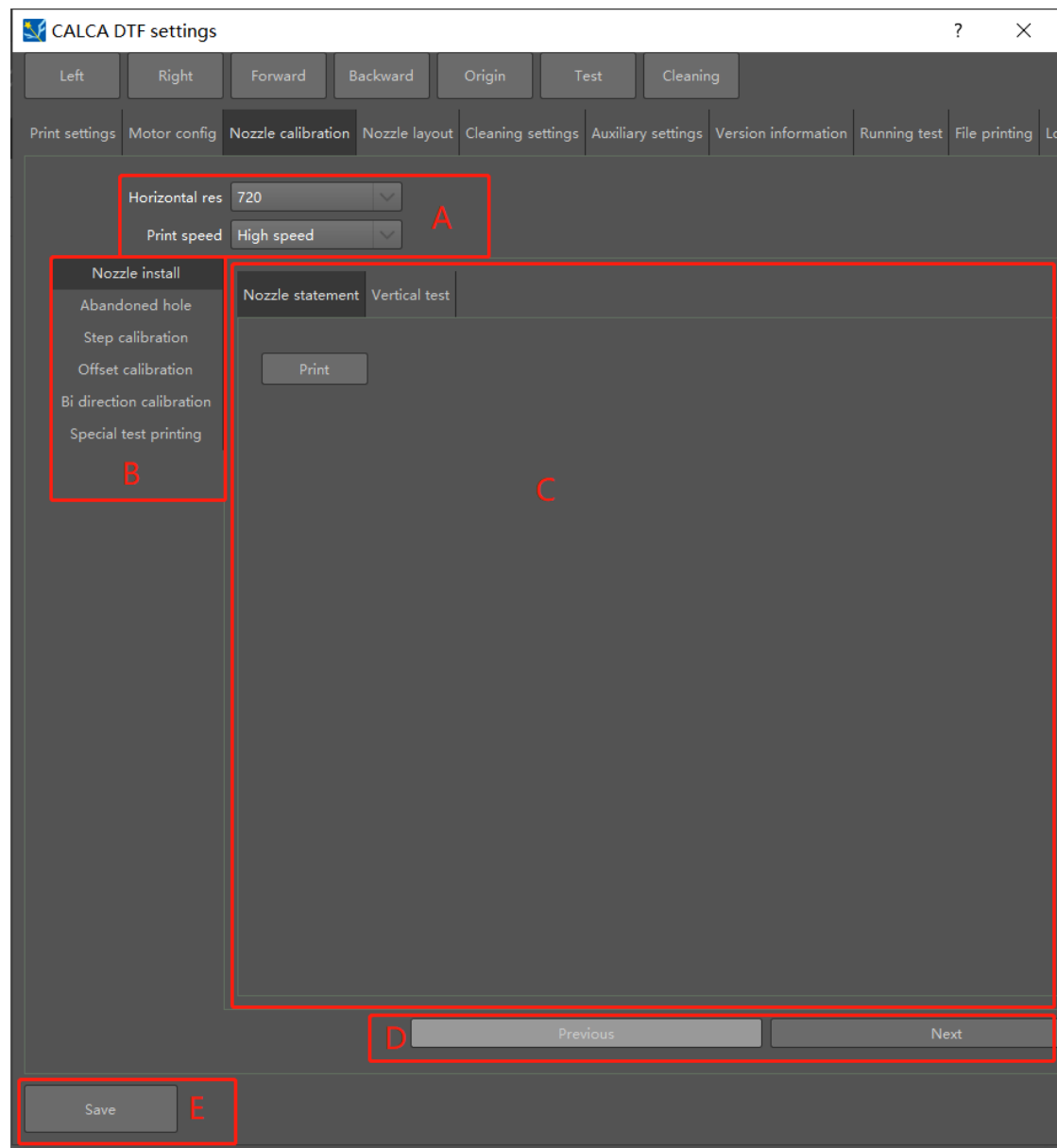
6.1.2 Physical calibration

1. **Print head test:** Check the state of the nozzle, check whether there is broken line, then clean the nozzle to reach the state of continuous output.
2. **Vertical alignment:** Test whether the nozzle row is perpendicular to the printing direction and parallel to the forward direction of the media.

6.1.3 Software calibration

1. **Step calibration:** Confirm the accuracy of forward movement distance of the media.
2. **Offset calibration:**
 - 1) **Offset on the same color:** Calibrate the distance of two rows of printing directions of each color.
 - 2) **Basic offset:** Take K as the base alignment to calibrate all other colors.
 - 3) **W/CMYK calibration:** Calibrate the vertical and horizontal deviation of the W and CMYK.
3. **Bi direction calibration:** Calibrate the offset of the two-way printing point.

6.2 Calibration interface



Calibration Interface Layout:

A: Calibration of the general parameter selection.

- 1) **Horizontal resolution:** Select the print calibration parameters with different printing resolutions.
- 2) **Printing speed:** Select the print calibration parameters with different printing speeds.

B: Calibration test graphs:

- 1) **Physical calibration:** Nozzle test and vertical alignment.
- 2) **Nozzle desert:** Setting of the waste hole of the nozzle group.

- 3) **Step calibration:** Step calibration test printing and settings.
- 4) **Offset calibration:** Including offset of the same color / Basic offset / W&CMYK offset test printing and setting.
- 5) **Bi direction calibration:** Bi direction test printing and setting.
- 6) **Special test printing.**

C: Calibration layout

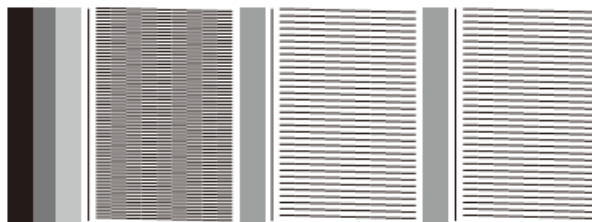
D: Calibration guideline

E: Save

6.3 Operational instruction

6.3.1 Print head installation

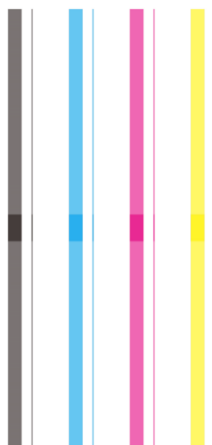
6.3.1.1 Nozzle status



Print the test graph to check the status of the nozzle and see if there is a broken line, then clean the nozzle again until the nozzle print status is restored.

6.3.1.2 Vertical alignment

Vertical alignment test printing

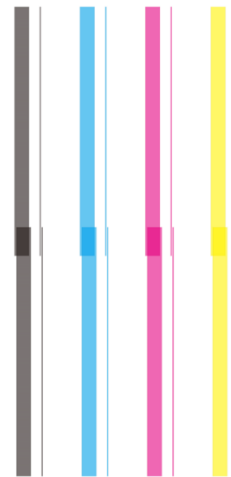


Perfect status

In these print drawings:



Adjust the nozzle clockwise



Adjust it counterclockwise.

6.3.2 Abandoned hole

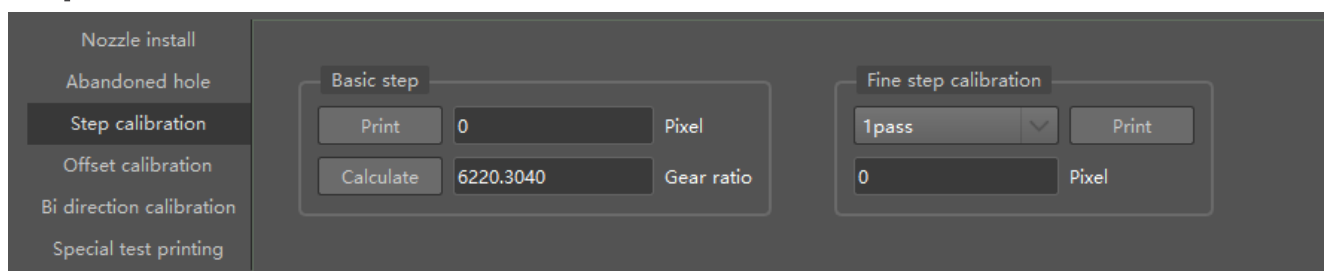
No adjustment is required when the nozzle is in good condition.

In the case of congestion at both ends of the nozzle, the abandoned holes of the nozzle must be adjusted appropriately.

Pay attention to the total abandoned holes of the color and white nozzle should be consistent.

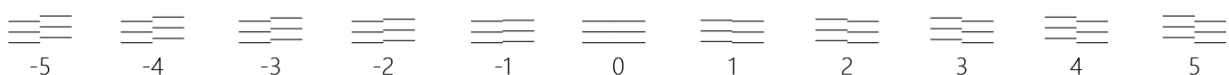
6.3.3 Step calibration

Step calibration interface



6.3.3.1 Basic step calibration

Click the print button and print the calibration diagram as shown below:



Calibration requirements:

Print calibration test, value 0 means no deviation in 3 horizontal line segments.

Calibration steps:

Print the calibration test, if the calibration value is 3, fill in 3 and then calculate and save.

The 'Basic step' calibration interface shows a 'Print' button, a text input field containing the value '3', a 'Calculate' button, and a 'Gear ratio' field displaying '6220.3040'. The 'Print' and 'Calculate' buttons are highlighted with red rectangles.

6.3.3.2 Fine step calibration

Instructions:

Only after the basic step calibration is completed, the multi-pass printing has a fixed step error probably, then the step fine calibration is adjusted. If there is a deviation within a small range, take the average value for adjustment.

The 'Fine step calibration' interface shows a dropdown menu with options from '1pass' to '8pass'. The '1pass' option is selected and highlighted in blue. A 'Print' button is visible to the right of the dropdown. The 'Print' button is highlighted with a red rectangle.

The 'Fine step calibration' interface shows the dropdown menu set to '3pass'. Below the dropdown is a text input field containing the value '1'. A 'Print' button is visible to the right of the input field.

6.3.4 Offset calibration

6.3.4.1 Offset on the same color

Calibration interface:

Nozzle install
Abandoned hole
Step calibration
Offset calibration
Bi direction calibration
Special test printing

Offset in the same color
Offset in seperation
W+CMYK offset

<<<< Left

Print

Nozzle group	Nozzle lines	K	C	M	Y
G1	[L1]	0	0	0	0
	[L2]	-663	721	259	-201

>>>> Right

Print

Nozzle group	Nozzle lines	K	C	M	Y
G1	[L1]	0	0	0	0
	[L2]	-660	718	260	-203

Previous

Next

Calibrate to the left and right respectively with the same processing.

Calibration requirements:

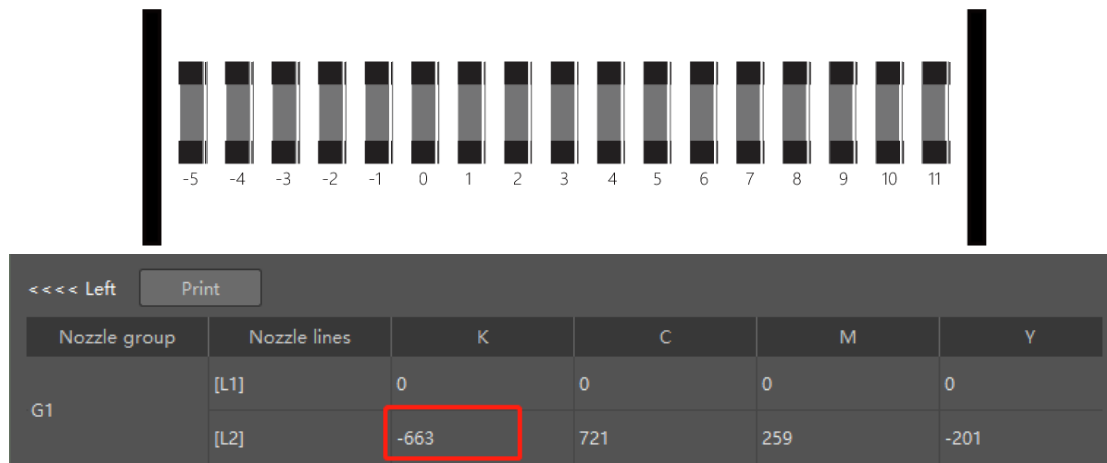
On the calibration printing, the value 0 shows a full overlap between the line and color blocks.

Calibration steps:

Print the calibration test and find the calibration value of the line and color block.

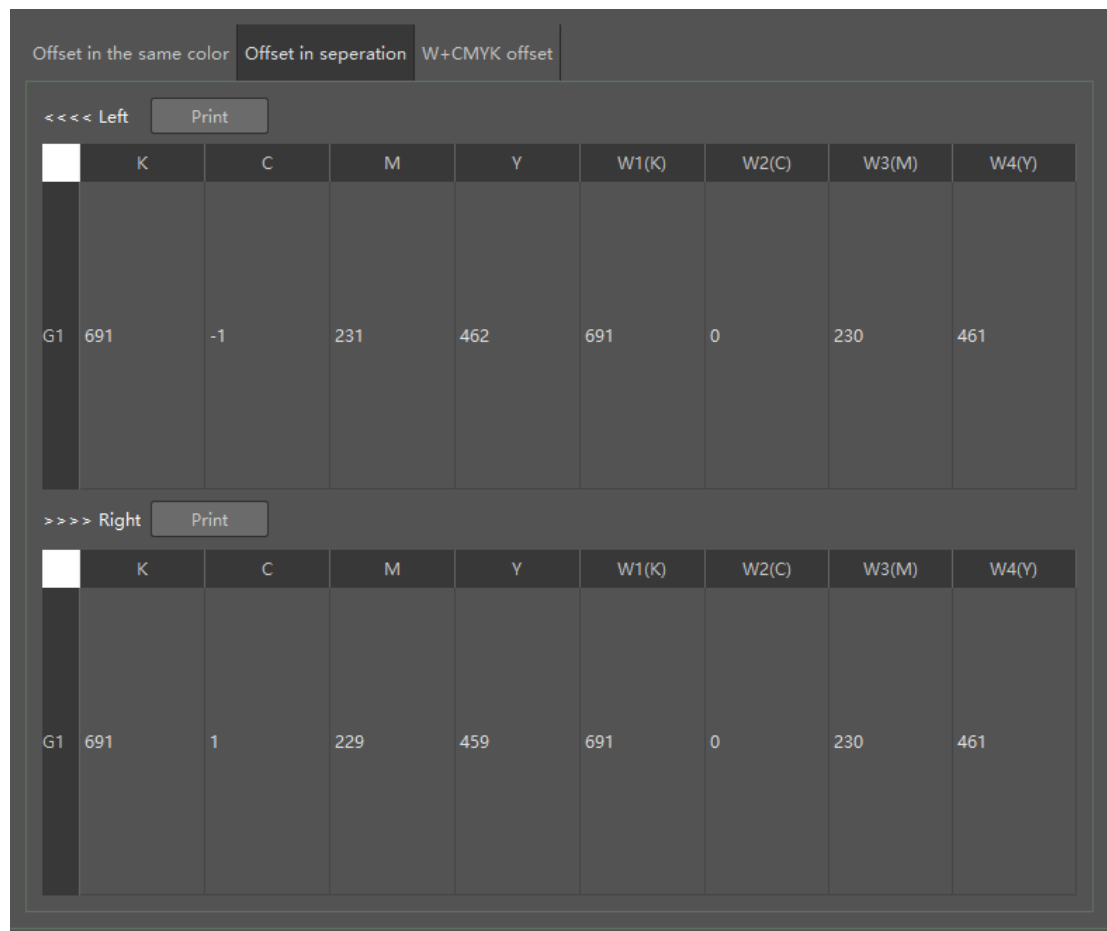


If the calibration value of K is 3, fill in -660 ($-663 + 3$).



6.3.4.2 Basic offset

Basic offset interface:



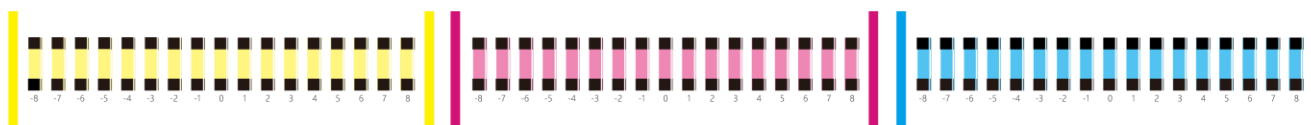
Calibrate to the left and right respectively with the same processing.

Calibration requirements:

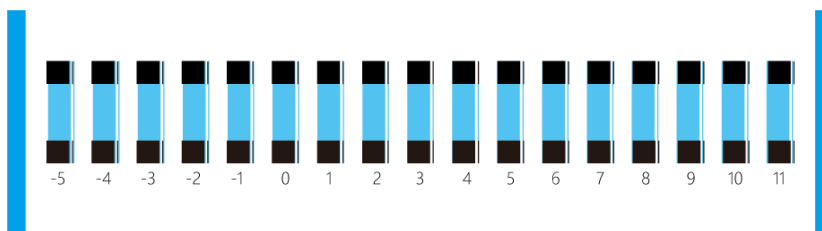
On the calibration printing, the value 0 shows a full overlap between the line and color blocks.

Calibration steps:

Print the calibration test and find the value of the line and the color block.



If the calibration value of C is 3, fill in 3 (0 + 3).



<<< Left		Print						
	K	C	M	Y	W1(K)	W2(C)	W3(M)	W4(Y)
G1	691	0	231	462	691	0	230	461

6.3.4.3 W/CMYK offset

Calibration interface:

Offset in the same color
Offset in separation
W+CMYK offset

Print

Horizontal offset
-10

Vertical offset
1594

Calibration requirements:

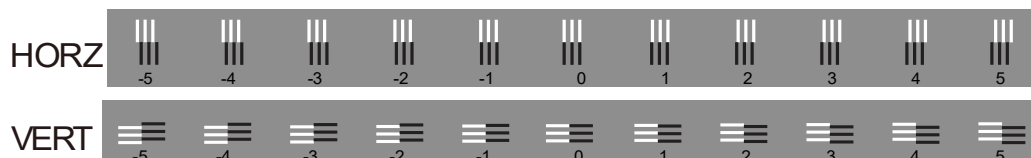
On the calibration printing, the value 0 shows a perfect position.

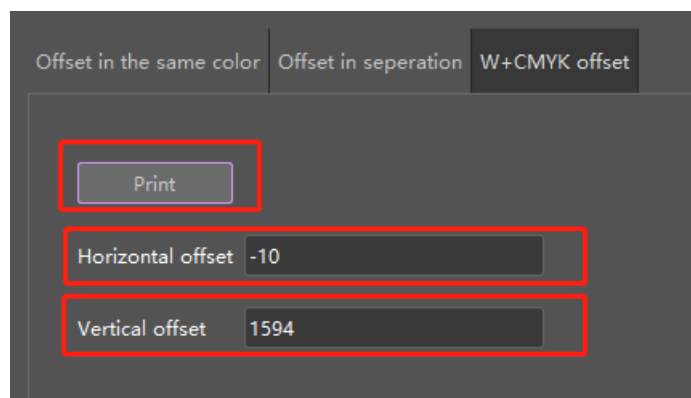
Calibration steps:

Print the calibration test, find the value in the row of HORZ on the figure.

If the value is 3, fill in -7 ($-10 + 3$) in the horizontal color column, and find the value in the row of VERT on the figure.

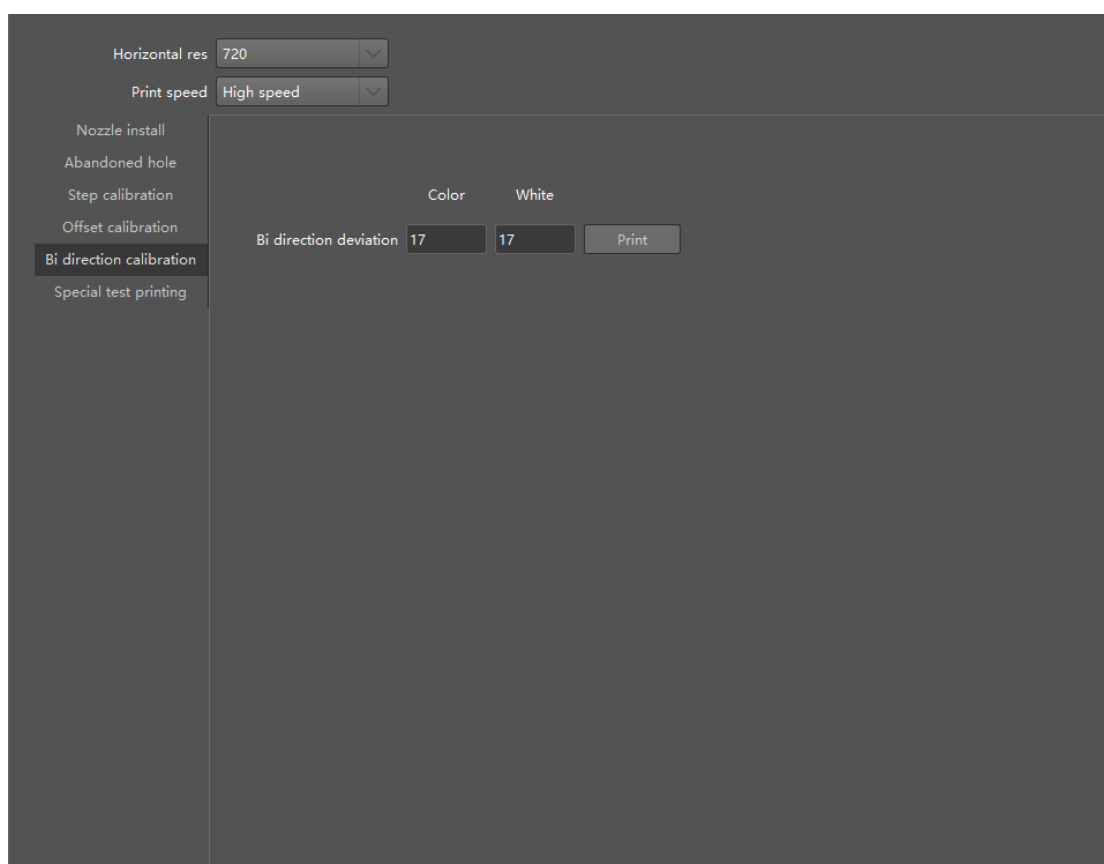
If the value is -5, fill in 1589 ($1594 - 5$) in the vertical color column, and then save and print for confirmation.



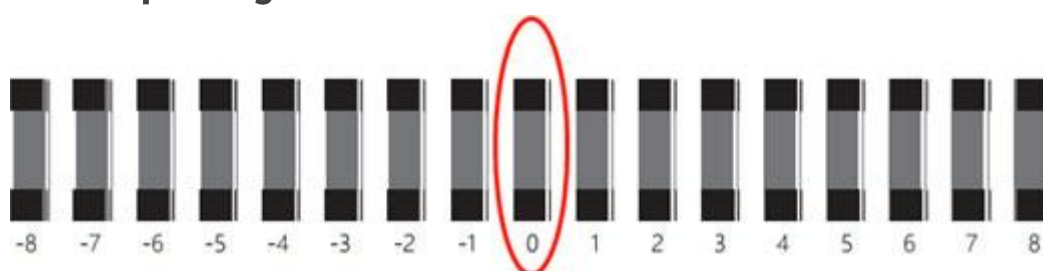


6.3.5 Bi direction calibration

Calibration interface:



Calibration test printing:

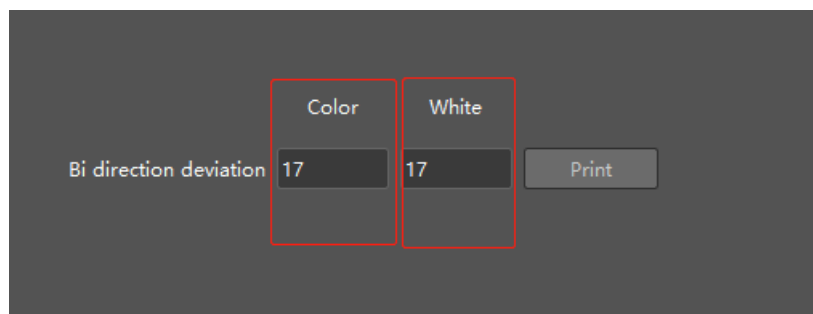


Calibration requirements:

On the calibration printing, the value 0 shows a perfect position.

Calibration steps:

Print the calibration test and calibrate the color and white respectively. If the color bidirectional value is 2, fill in 19 ($17 + 2$), and it is the same way to calibrate the white.



	Color	White	
Bi direction deviation	17	17	Print

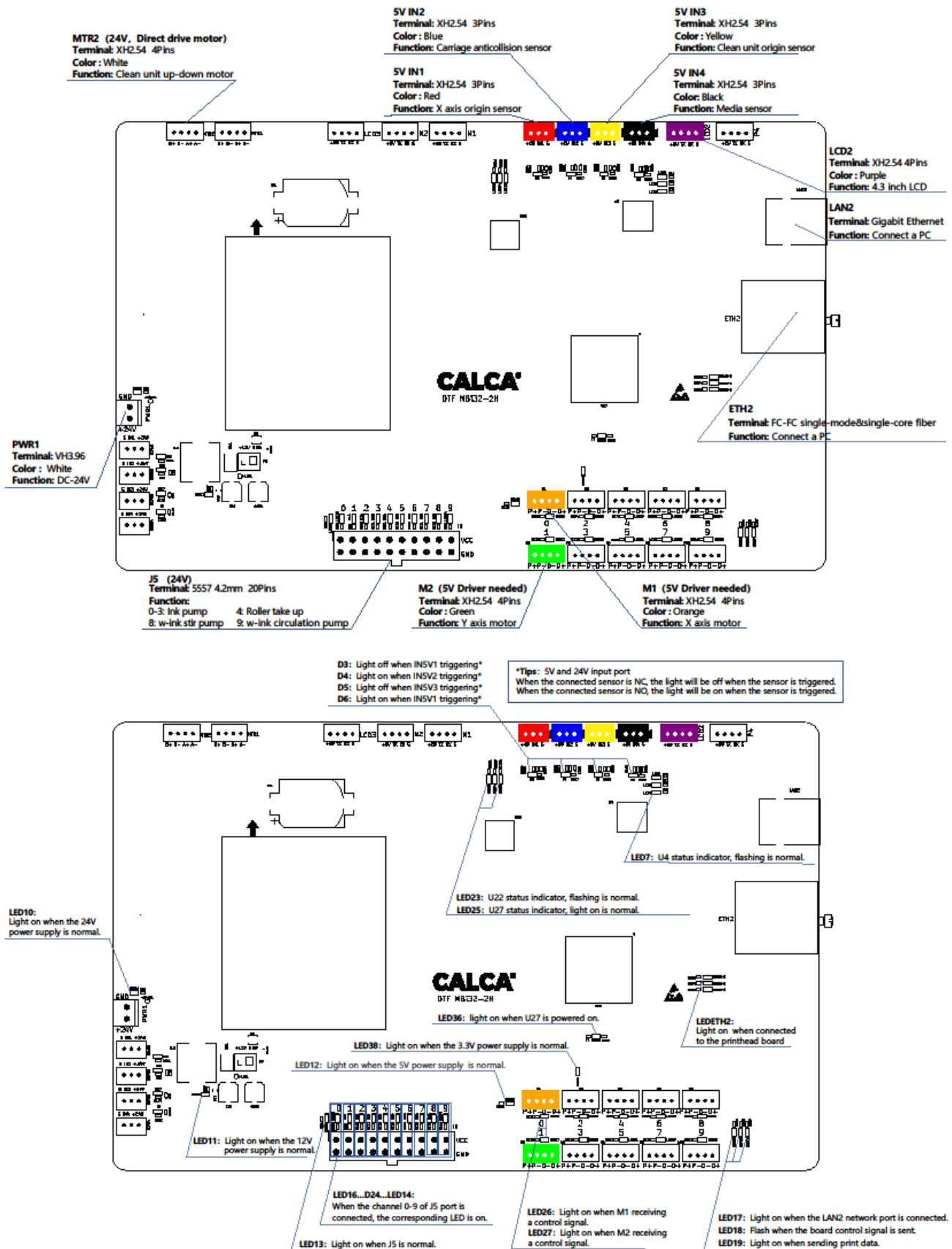
VII. Troubleshooting

This chapter provides information on possible causes of machine errors/damage and recovery actions.

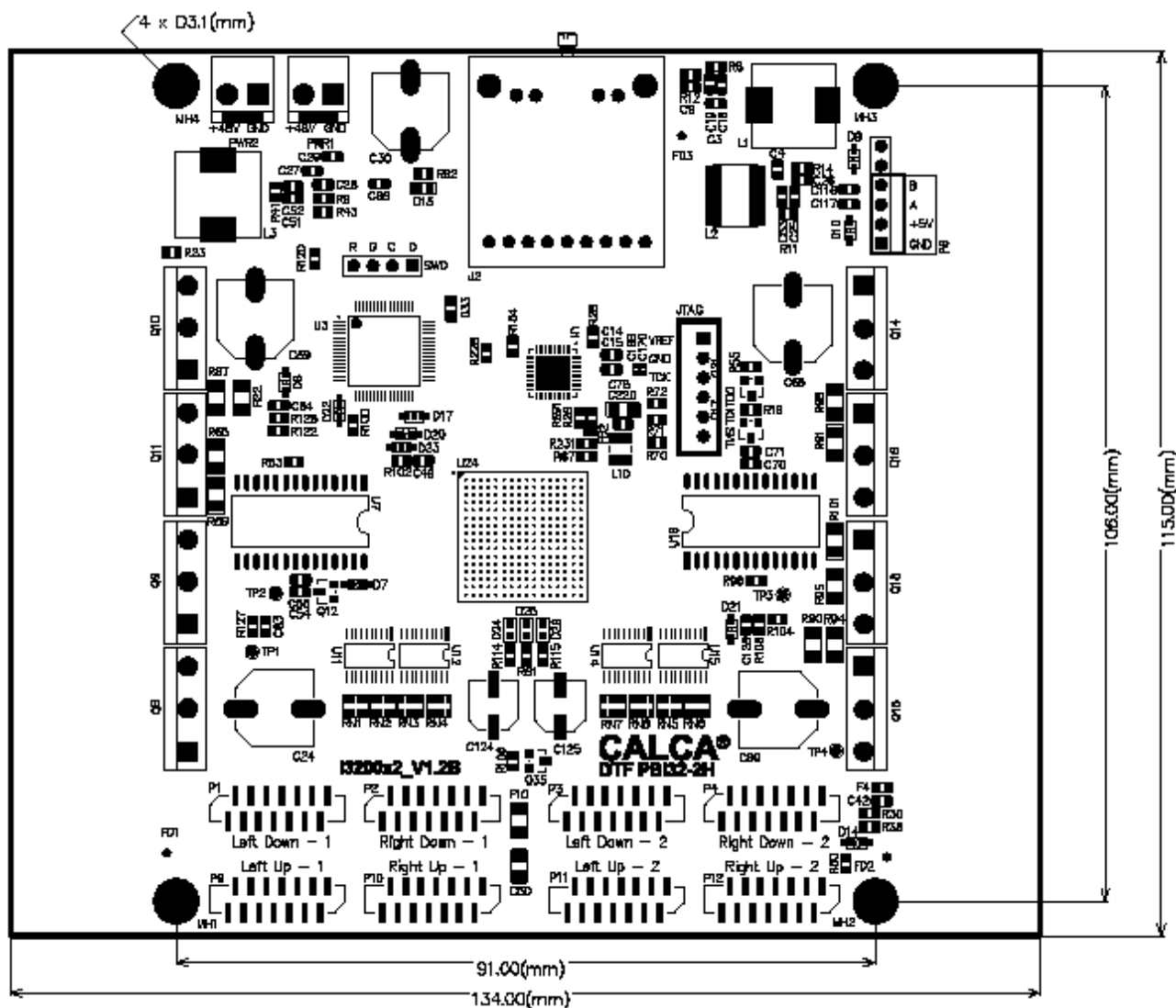
7.1 Error information & solution

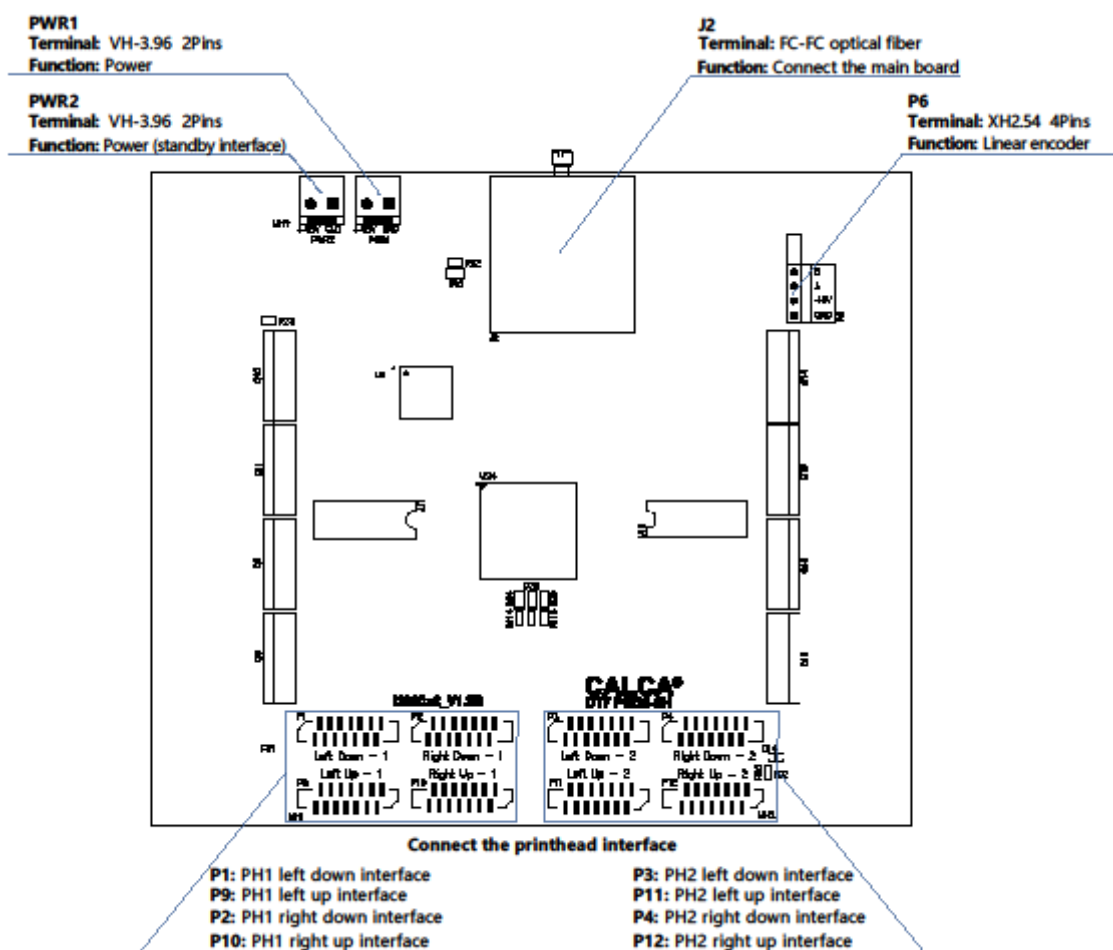
Type	Code	Error Information	Error Analyze	Solution
Serious	1001	Ink channel not support		
Serious	1002	Grayscale level not support		
Serious	1003	X resolution mismatched		
Serious	1004	Y resolution mismatched		
Serious	1005	The print width exceeds the maximum.		
Serious	1011	Mainboard not connected.	1. The device is not powered on. 2. Errors in mainboard's running. 3. The printing software is disconnected from the device. 4. The computer IP is not set correctly. 5. The computer network drives wrong.	1. Check the status of the mainboard. 2. Check the connection between the computer and the device. 3. Confirm the computer IP. 4. Check the network driver.
Serious	1012	The mainboard register failed to read and write.	The mainboard is disconnected from the printing software.	Check the mainboard status.
Serious	1013	Timeout when waiting for the motor to stop.	1. Motor stop signal is not received in the defined time. 2. Printing software is disconnected from the mainboard.	1. Restart the device. 2. Check the mainboard status.
Serious	1014	The mainboard failed to transmit the data.	The mainboard is disconnected.	Check the mainboard status.
Serious	1015	Mainboard reset failed.	1. The device is powered off. 2. The printing software is disconnected from the device.	1. Check the status of the mainboard. 2. Check the connection between the computer and device.
Serious	1016	The execution of mainboard instruction failed.	1. Mainboard is powered off. 2. The printing software is disconnected from the device.	1. Check the status of the mainboard. 2. Check the connection between the computer and the device.
Serious	1017	The carriage acceleration distance is not enough.	1. The distance between the origin position and the start printing position is less than the carriage acceleration. 2. The actual acceleration distance of the carriage is less than the set one.	1. Add the base point in the print settings. 2. Increase the carriage acceleration distance.

Serious	1018	1. Check whether the printing width exceeds the setting. 2. Check whether the maximum distance of the carriage matches the device in the motor setting.	1. The print picture is too wide and the print will exceed the set range of motion. 2. The maximum range of motion of the car is set too small, and the printing distance is not enough.	Match the range of motion setting to the actual maximum motion limit.
Serious	1041	The print head board is not connected.	1. The device is not powered on. 2. The print head board is abnormal. 3. The printing software is disconnected. 4. The computer IP is not set correctly. 5. The computer network is abnormal.	1. Check the status of the print head board. 2. Check the connection between the computer and the device. 3. Confirm the computer IP. 4. Check computer network.
Serious	1042	The print head board communication failed.	1. The print head board is powered off. 2. The print head board is abnormal.	Check the status of the print head board.
Serious	1043	The print head's power on is failed.	1. The print head board is abnormal. 2. Error in network connection.	Check the status of the print head board.
Serious	1044	The print head's power off is failed.	1. The print head board is abnormal. 2. Error in network connection.	Check the status of the print head board.
Serious	1061	Media sensor not triggered	1. Media not reach on the platform. 2. Error in media sensor.	1. Reset the media loading. 2. Check the media sensor.
Serious	1062	Manually cancel the printing		
Serious	1063	Carriage anti-collision sensor triggered	1. Uneven media scraping triggered the anti-collision sensor. 2. Carriage movement exceeds the limit to make a collision 3. Anti-collision false triggering.	1. Return to the origin after power cut off. 2. Check carriage motion imitation. 3. Check the anti-collision sensor.
Serious	4001	The print head type for the configuration parameter is not supported.		
Serious	4002	Customized print head type for the configuration parameter is not supported		
Serious	4003	The physical accuracy of the customized print head is not recognized, not support mixing.		
Serious	4004	The customized virtual print head layout is not recognized, not support mixing.		
Serious	4005	The nozzle overlapping configuration parameter is incorrect.		

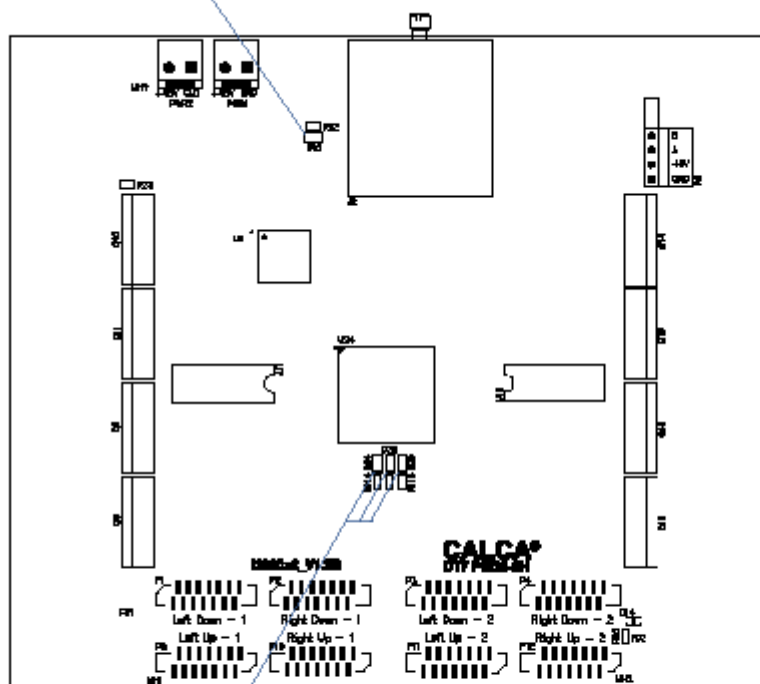


7.2.2 CALCA head board





D15: light on when 48V power on



D24, D25, D29 : Running status indicator light

D24: It will flash during the power-on and power-off process of the PH1;
after the PH1 is powered on, it will light up; otherwise, it will not light up.

D29: It will flash during the power-on and power-off process of the PH2;
after the PH1 is powered on, it will light up; otherwise, it will not light up.

D25: When the optical fiber interface is properly connected and the U24 is running properly, it will flash slowly at 1Hz.
If an error occurs, the light will be on, and it will flash again after the error is cleared;
If the optical fiber interface is disconnected, it will be flash quickly at 3-5Hz;
when printing, it will flash quickly, and the flashing frequency is related to the printing frequency.

VIII. Maintenance

8.1 Remarks

1. Power supply

Confirm the voltage stability of AC110V, 60Hz, it is recommended to use the voltage regulator, the ground wire must be installed.

3.Environment

Please keep the machine working environment meeting the requirements of equipment operation (temperature 18-32°C, humidity. 40-60%), there must be no strong magnetic field or the equipment causing a lot of dust, try to avoid strong light exposure affecting the sensitivity of the sensor.

3. Ink

Add the ink when the buzzer rings, check the remaining inks amount before running every day, and avoid adding the ink during printing.

The ink should be kept in the adequate environment, avoid strong light and ensure good ventilation.

Use the correct water-based cleaning solution.

Pour waste ink daily, empty the waste ink bottle in a long-term transportation. be careful to keep vertical and not shake when removing the waste ink bottle from the printer, please dispose it lawfully.

8.2 Maintenance overview

In terms of running, the surface of the platform must be cleared to avoid nozzle scratching. The dent on the surface of the nozzle is regarded as man-made damage, and the scratch is judged as man-made damage.

1. When cleaning the printer, please close the main power and unplug the power cable.
2. The machine should keep clean at any time during daily use to avoid dust deposition.
3. Do not wipe the surface of the nozzle without training and authorization, which may cause damage to the nozzle.
4. Do not touch the print head or make the print head touch any other

substance. Clean the dust around the print head, and gently wipe with a special cloth and cleaning liquid.

8.3 Routine checking

1. Before daily operation, check the nozzle status to avoid quality problems such as broken lines, oblique spray and ink splashing. If the above problems occur, the nozzle should be cleaned in time to ensure the printing quality and avoid the physical damage caused by the ink outage for a long time.
2. Check the rubber ring on ink stack cap and the status of wiper every week, if irreversible deformation occurs, it must be replaced.
3. Clean the guide rail once a quarter (Do not use water to clean, wipe the dust with non-woven cloth) with special lubricating oil.
4. The machine will rest for 30 minutes for every 8 hours.
5. If the machine needs to stop working for more than 1 week (power off), the ink circulation needs to take measures to deal with blockage, please contact the engineer. Avoid Long-term absence of running, it poses the risk of blockage and cause the no recovery after the ink loading.

8.4 Day/weekly/monthly maintenance

8.4.1 Daily maintenance

DAILY (AM)	> Shake leftover white ink > Turn printer on > Increase White Ink Circulation motor > Execute “Fill Ink” > Execute “Cleaning” > Pull media to the front > Perform “Nozzle Check” Add the ink when the buzzer ring, check the remaining ink amount before running every day, and avoid adding the ink during printing.
	> Retract media

DAILY (PM)

- > Clean the **vacuum bottom platen**
- > Move **printhead carriage to left side**
- > **Clean / wipe capping station rubber gaskets & wiper blades** w/ cleaning swab
- > **Clean around head** with cleaning solution
- > **Pour cleaning solution** into **capping station rubber gaskets**
- > **Engage printhead** back to capping station
- > **Turn printer off**
- > **Cover printer**

Pour waste ink daily: Empty the waste ink bottle in a long-term transportation, be careful to keep vertical and not shake when removing the waste ink bottle from the printer, please dispose it lawfully.

8.4.2 Weekly maintenance**> Check Ink Bottle**

Check to see if there is any ink that needs refilling.

Check to see if stirring device on the white ink bottle is functioning.

> Check Waste Bottle – Empty the bottle**> Clean Encoder Strip**

Use a microfiber cloth / lint-free wipe & 90% or higher isopropyl alcohol, and wipe the strip gently to remove any dust, debris, ink build-up.

> Clean Media Rollers

Use a microfiber cloth / lint-free wipe to wipe any dust/debris from the media / film. **DO NOT USE ALCOHOL.** You may use cleaning solution, but make sure that the rollers are fully dried before use.

> Clean Tension Sensor

Use a microfiber cloth / lint-free wipe & 90% or higher isopropyl alcohol, and wipe the strip gently to remove any dust/debris.

8.4.3 Monthly maintenance

- > Shake the Color Ink bottles for 30 seconds.

8.4.4 As needed

- > **Media replacement:** Whenever you replace your film with a new film, take time to clean the media rollers. Disengage the roller and thoroughly clean the rubber. roller with a microfiber cloth or lint-free wipe to wipe any dust/debris from the media/film.
- > **Keep all exterior surfaces clean:** Use a microfiber cloth to clean the outside surface. DO NOT spray any liquid, as it may damage the board inside.

8.4.5 Long-term storage (1-2 weeks)

- > **Clip the ink tubes** from the ink bottle and before the damper
- > **Wet Cap**

8.4.6 Long-term storage (2+ weeks)

- > **Empty the Ink Bottle**
- > **Pour all inks** back into the original ink bottles
- > **Pour cleaning solution** into the ink bottles and fill until you see the cleaning solution in the dampers and through the ink waste bottle.

8.4.7 Routine maintenance form

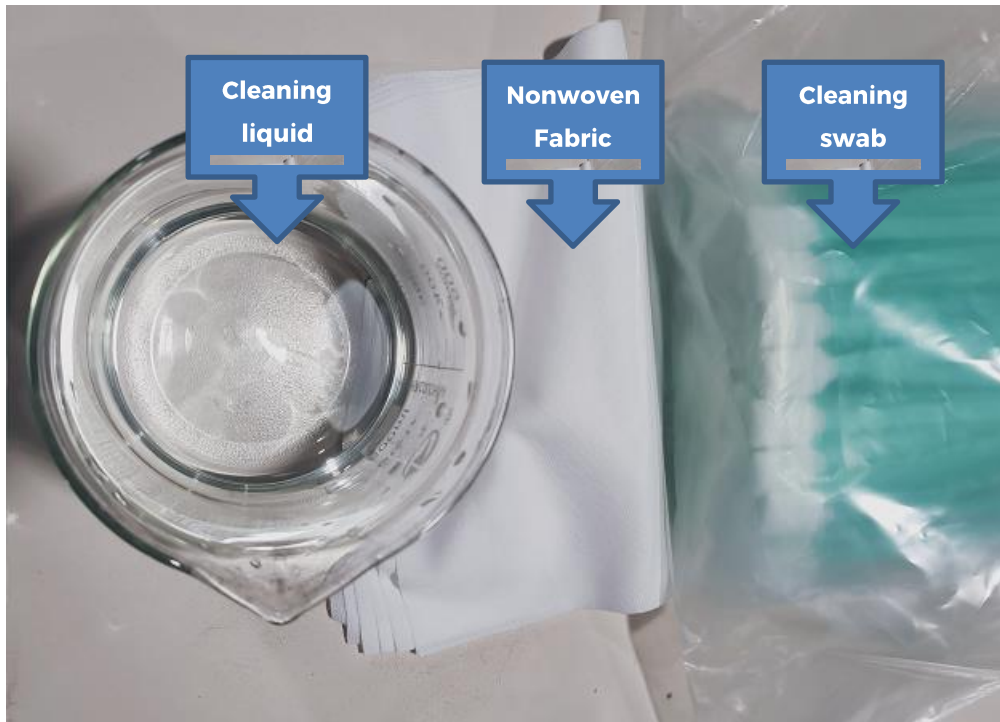
	Weekly	Monthly	As Needed	Long Term Storage (1-2 weeks)	Long Term Storage (2+ weeks)
Check Waste Bottle					
Check Ink Bottle					
Clean Encoder Strip					
Clean Media Rollers					
Clean Tension Sensor					
Shake Color Ink Bottles					
Media Replacement					
Clean Exterior Surfaces					
Clip Ink Tubes					
Wet Cap					
Empty Ink Tank					
Pour Cleaning Solution					

8.5 Wearing parts maintenance

Daily maintenance on nozzle and ink station

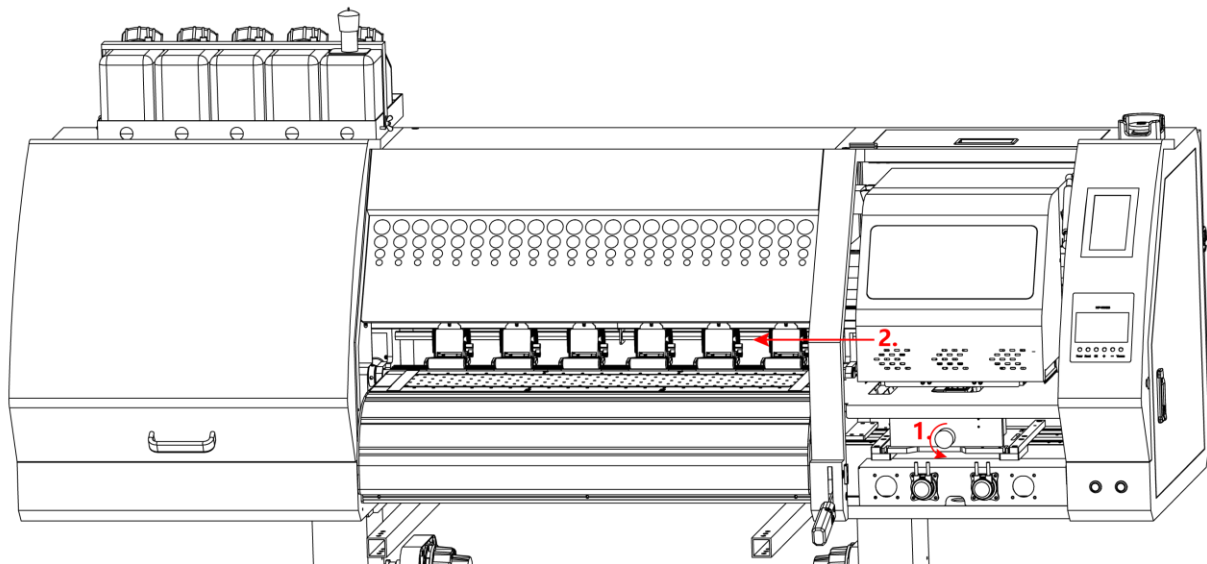
Preliminary preparation

Cleaning liquid (or pure water), non-woven cloth, cotton swab

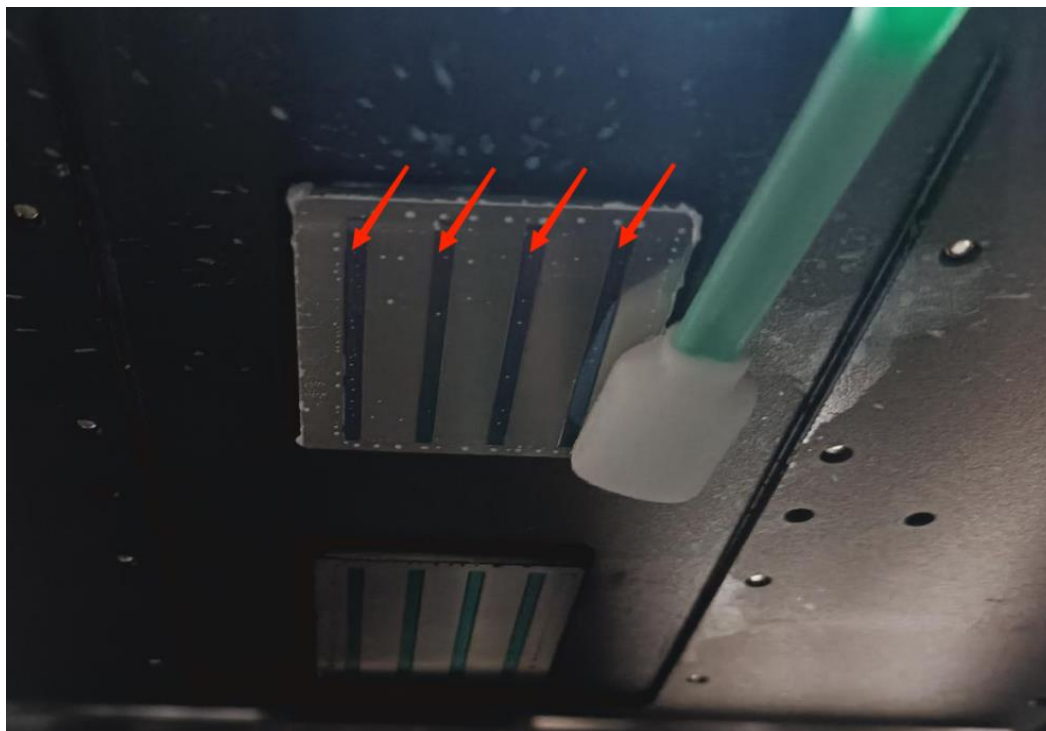


8.5.1 Nozzle maintenance

1. Unlock the ink station and move the carriage to the left end of the platform, as shown in the figure;

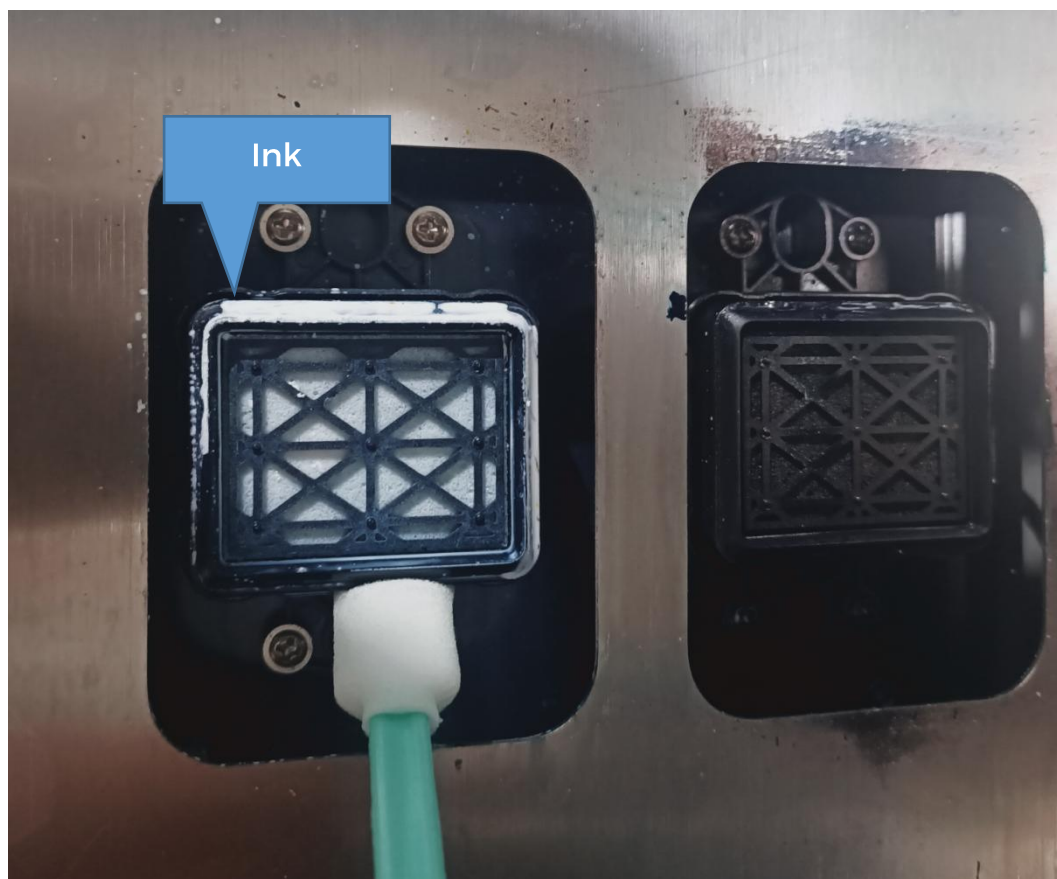


2. Wipe the nozzle side with cotton swab dipped with cleaning liquid or purified water, and wipe the ink block around the surface of the nozzle. Pay attention to the nozzle chip shown in the picture, it cannot be cleaned with swab.



8.5.2 Ink station maintenance

Wipe the ink station cushion with cotton swab dipped with cleaning liquid or purified water.



After wiping, use non-woven cloth to clean the excess cleaning fluid and ink, you can see the restoration shown in following figure:



8.5.3 Wiper maintenance

Clean the wiper with cotton swab dipped with cleaning liquid, and dry it with non-woven cloth.



You can see the restoration shown in following figure:



After maintenance, it is necessary to driver the carriage back to the origin, and make the nozzle and ink absorption cushion sealed.

IX. Warranty

- > Lifetime **Technical Support**
- > Limited to **2-year warranty** on **non-consumable parts**
- > Warranty on parts only for printer(s) using CALCA DTF inks, films, and printer(s) under proper maintenance and usage.
- > The use of non-CALCA ink and film will void any warranties offered for the CALCA DTF Roll Printer.

Company or person requesting warranty repair shall contact CALCA for pre-authorization and selection of a qualified repair technician to service the equipment prior to performing service on the equipment. Failure to request pre-authorization for service repair and selection will result in denial of a warranty claim.

CALCA will not be liable for labor or material costs associated with graphic production, graphic application, equipment downtime or any other consequential damages including loss of profits or potential business sales, arising out of a warranty claim. It is the user's responsibility to secure the equipment and surrounding area to prevent damage from damages arising from a warranty claim. CALCA is not responsible for damages from improper care, maintenance or repair of equipment associated with normal operation.