UV DTF™ 3000

Printer Instruction Manual

Please read this manual carefully before use - Keep this book for reference

# Contents

1.Product Introduction

The UVDTF3000 is an A2 UV label machine with convenient operation, simple process, no plate making, no waste discharge, good gloss, friction resistance, can print one graphic and meet the requirements of batch processing and customization. It is suitable for a wide range of applications and is the best choice for individuals, small and medium-sized enterprises.

2. Model specification

Model Type	UVDTF3000
Print head	XP600
Resolution	1080DPI 1440DPI
Speed	High Photo: 2 m^2/h Fine Photo: 2 .5m^2/h
Color control	ICC color profile with adjust function
Print Width	420 mm / 17 inches
Ink	UV
Operation Environment	Temperature 25°C-28°C, Humidity 50%-70%
Power	50HZ/60HZ 110V 7A
System	Windows10 or Above
Applicable materials	Plastic, Glass, Ceramics, Paper, Metal, Wood etc.
Image format	PNG, Tiff, Jpeg, Eps, PDF
Printer size	Machine size：51.8 X 20 X 23 inches (LXWXH)
	Packing size：67 X 32 X 30 inches (LXWXH)
Printer weight	Net weight： 221 LBS Gross weight：313 LBS

3. Printer parts and location
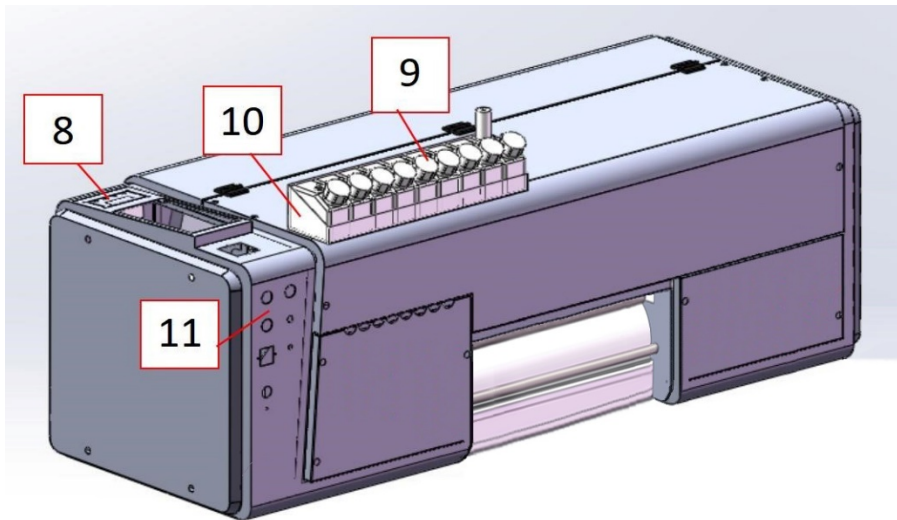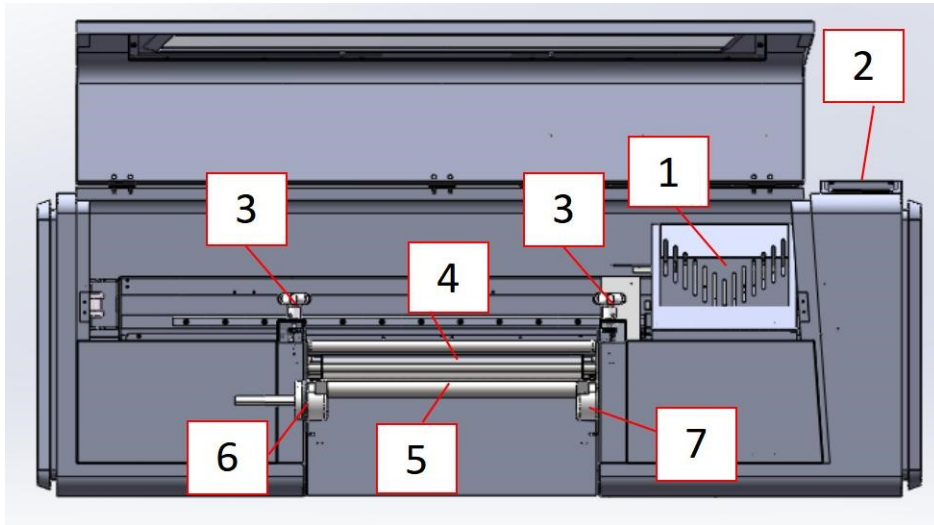
| 01 Carriage assembly	02 Control panel	03 Rubber Roller Lifting Handle	04 Laminating rubber roller (heating)
05 Stepping rubber roller	06 B film holder left	07 B film holder right	08 Rubber Roller Heating Controller
09 Ink Tanks	10 Ink tank holder	11 Switch panel	

3.2 B film holder installation

Step 1: Open the packaging box of the machine, remove the cushion foam block and protective film, take out all the accessories and check whether the host and accessories are damaged.

Note: If any parts are missing.
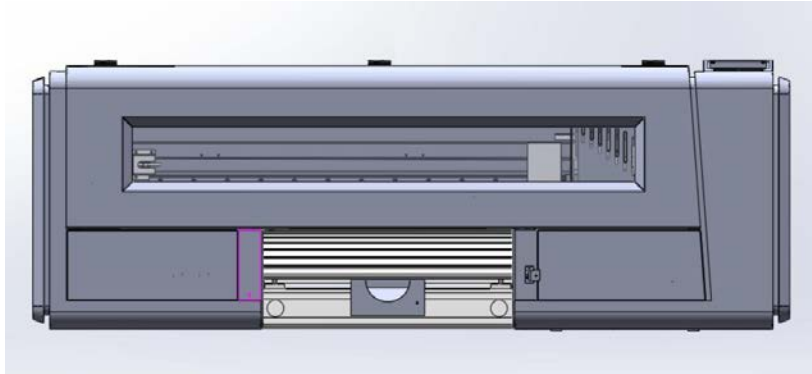
Step 2: Install the B film holder, install the left and right feeding holder separately, and fix them with screws as the picture shows:
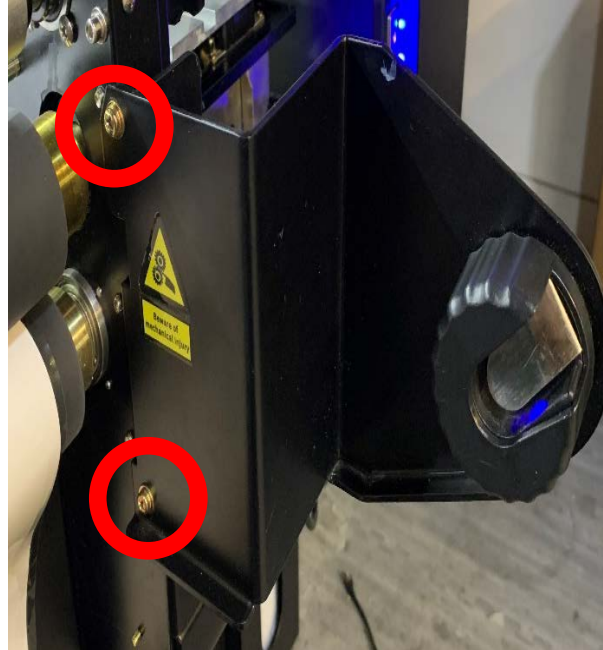
4. Software installation and setup

4.1 Computer configuration requirements

Computer configuration requirements:
1. Computer system: Windows 10 64-bit computer system.
2. CPU configuration: use i5 or above i5 CPU.
3. Memory RAM: 8G or above.
4. Network card: Gigabit or above.
5. Network cable: Category 6 or above
6. Hard disk configuration: It is recommended to use a 500G

4.2 Installation of printer control software

4.2.1 Printing software installation

Open the Green USB to find PrintExp_X64_5.8.1.1.69_BS_YW_20230424 compress folder containing control software package. Extract the folder to your local desktop. Not to Cloud or Onedrive.

Open software folder and locate the software icon PrintExp_X64 , Double-click to run the software.

When the software launches the link icon will blink red until the LAN connection is set.

4.2.2 IP address set

1. On your PC, find and open the control panel.
2. Select the network and sharing center.
3. Click on "Change Adaptor settings".
4. Find the corresponding LAN port, Right click Local Area Connection and select Properties (see image)
5. Internet Protocol Version 4, and then click Properties (see image)
6. Click to "Use the following IP address" and set the following:

IP address: 192.168.127.1
Subnet mask: 255.255.255.0
Default Gateway: 192.168.127.10
Preferred DNS: 192.168.127.20
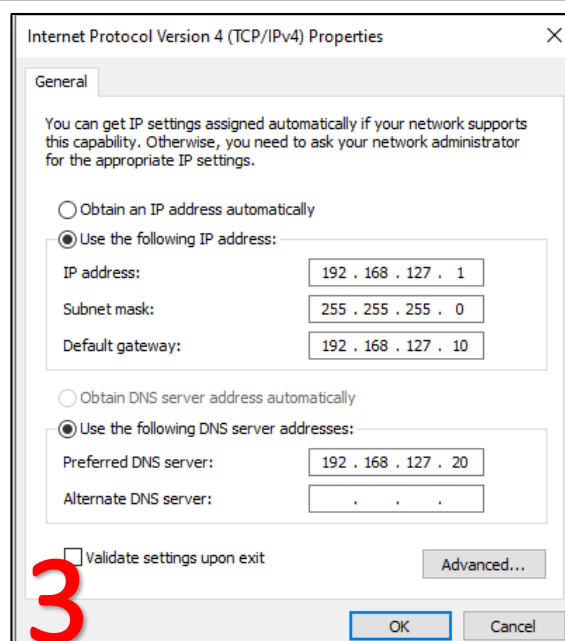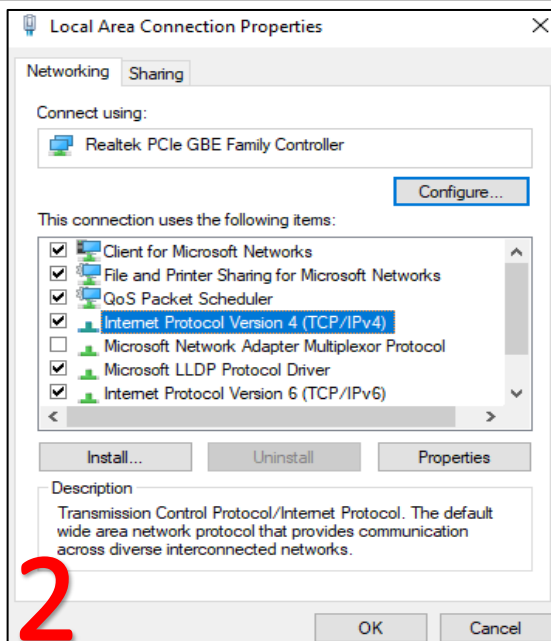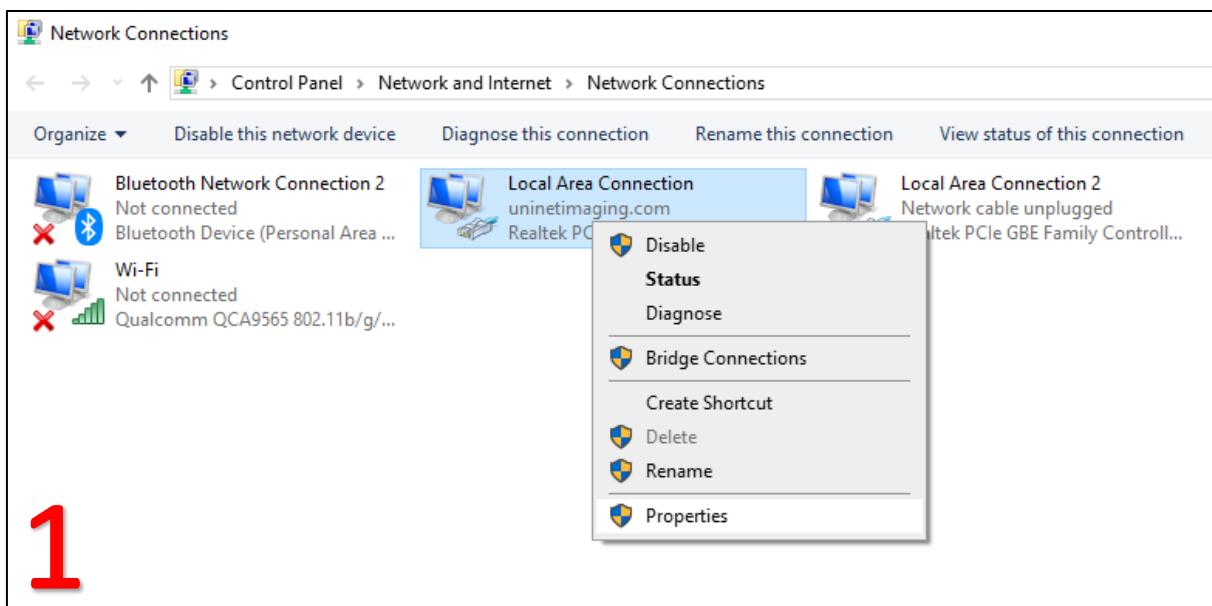
4.2.3 Connect Gigabit Network Cable

You must connect the printer directly to your PC via Ethernet connection. Cannot be connected via USB, Wi-Fi, or Bluetooth, nor can it be connected through a router or switch. One end will be connected to the printer mainboard. Connect the other end to the network port of the computer.

Note: New laptops may not have a built in Ethernet card and may need a USB to Ethernet adaptor as picture below

4.3 RIP software installation

4.3.1 Activation of RIP software

Instructions for activation of RIP software:

Open your web browser and enter the activation website in the browser https://www.saicloud.com
Enter the activation code box on the software box label after entering the webpage.

1.Install and activate software on an online computer

1. Launch your browser and type https://www.saicloud.com in address bar and press enter, then input your activation code, then click **Activate**, activation code can be found in the code label in software package.
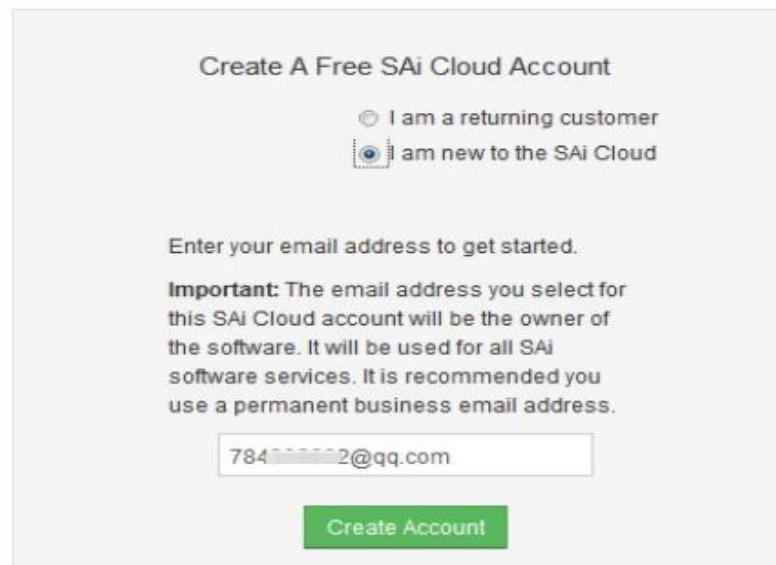
Activation Code

Please enter the activation code that accompanied your software purchase.

Activation Code   5H4L▓▓▓▓2ZHTT▓▓37YZDU

Activate

2. In login section, click **I am new to the SAi Cloud** and input your email address, then click **Create Account**, an email will be sent to your mailbox.

Create A Free SAi Cloud Account

○ I am a returning customer
● I am new to the SAi Cloud

Enter your email address to get started.

Important: The email address you select for this SAi Cloud account will be the owner of the software. It will be used for all SAi software services. It is recommended you use a permanent business email address.

784▓▓▓▓▓2@qq.com

Create Account

Select 'I am new to the SAi Cloud', enter your email address and create an account. A confirmation email will be sent to you. Click the link in the email, enter the account password and other registration information to complete the account registration.

3. Check your mailbox and click website link in the email then complete the information fields.

Create Account

Step 2. Add Software to your SAi Cloud Account

Add To SAi Cloud Account

This software license will be added to your SAi Cloud Account.

**Activate Now**

Click Activate Now. Once activated, install the USB drive included with package.

4.3.2 RIP software installation

Install the USB drive, open the Autorun executable file in the directory, select the installation language, accept the software license agreement and set the software installation directory.
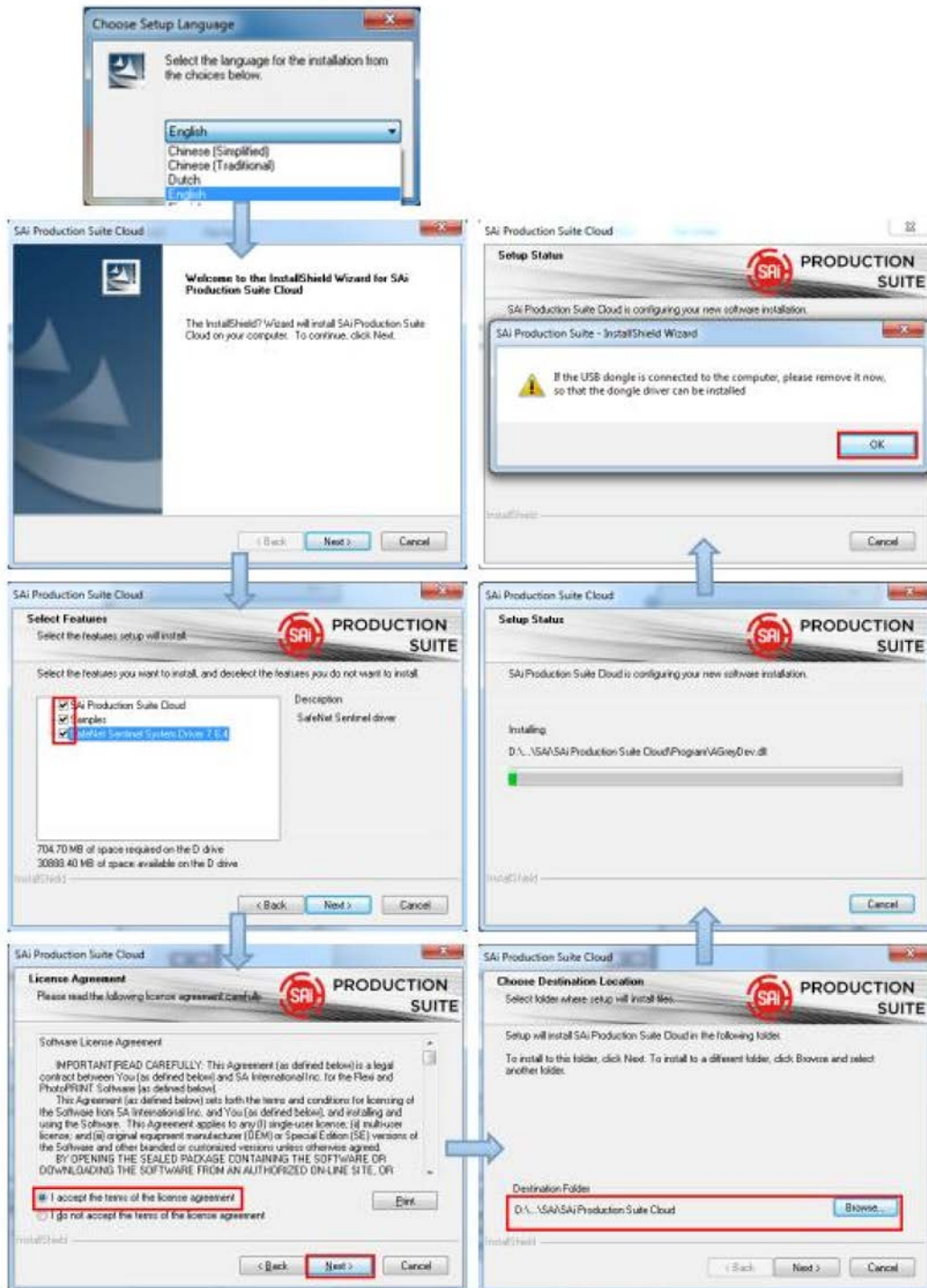
When installing, make sure the laptop/PC is connected to the Internet. The software will connect to the SAi cloud to verify the license has been activated.

5. Paste your code into activation code field.
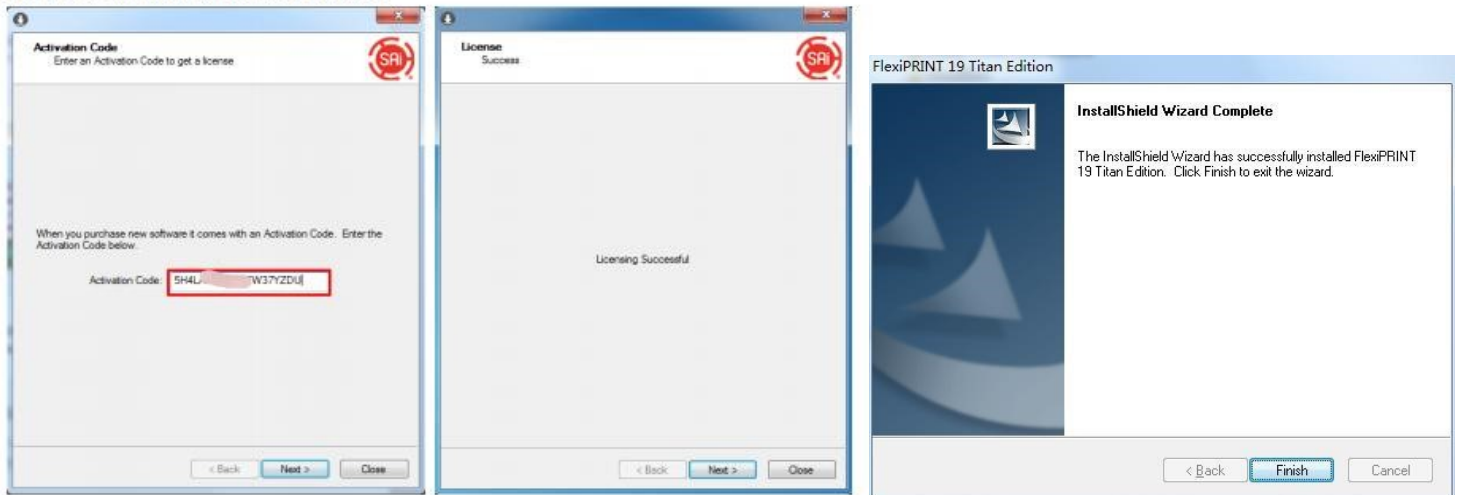
After the completion dialog box pops up, the software installation is completed.

1. To prepare ICC profiles, green USB Drive you will find the ICC profiles. ICC.zip Extract the folder to your desktop.

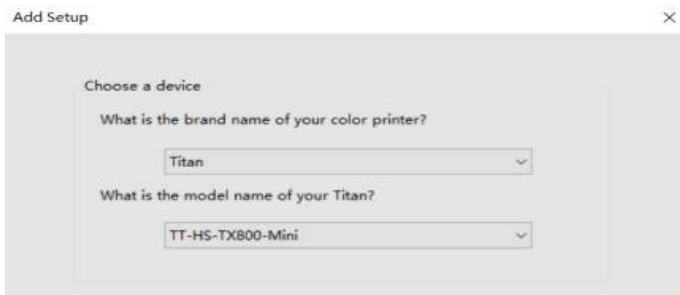**2. Prepare Flexi Product Manager settings.**

Run icon FlexiPRINT For new installations, the software will pop up the add device option automatically. For existing installations Open the software, click "Settings" in the menu bar "Add Device".
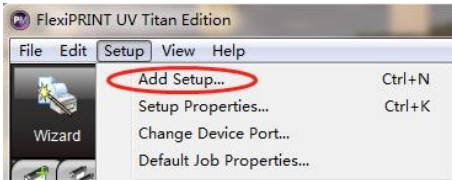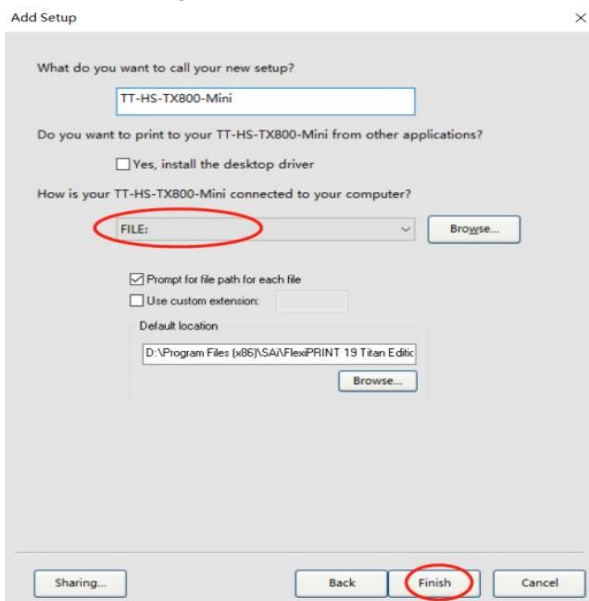

Under printer brand, select "Titan"

Under printer model select "TT-HS-TX800-Mini"
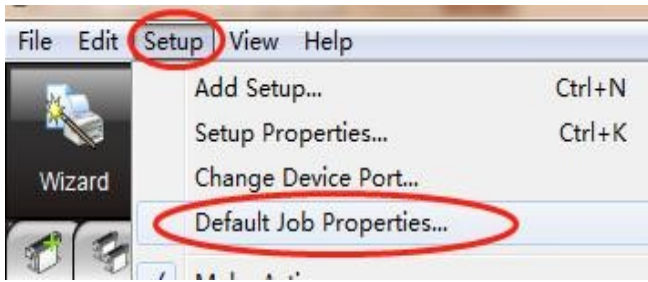
Then click "Next"

How to connect to a computer, choose FILE:
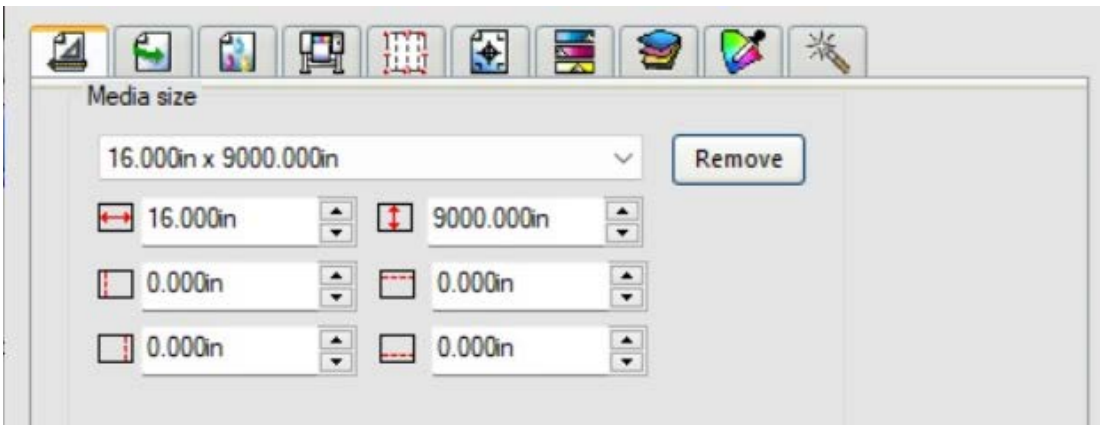
After confirming, click Done.

3. Setting up the Job Properties

Click "Setup" in the menu bar then click "Default Job Properties"
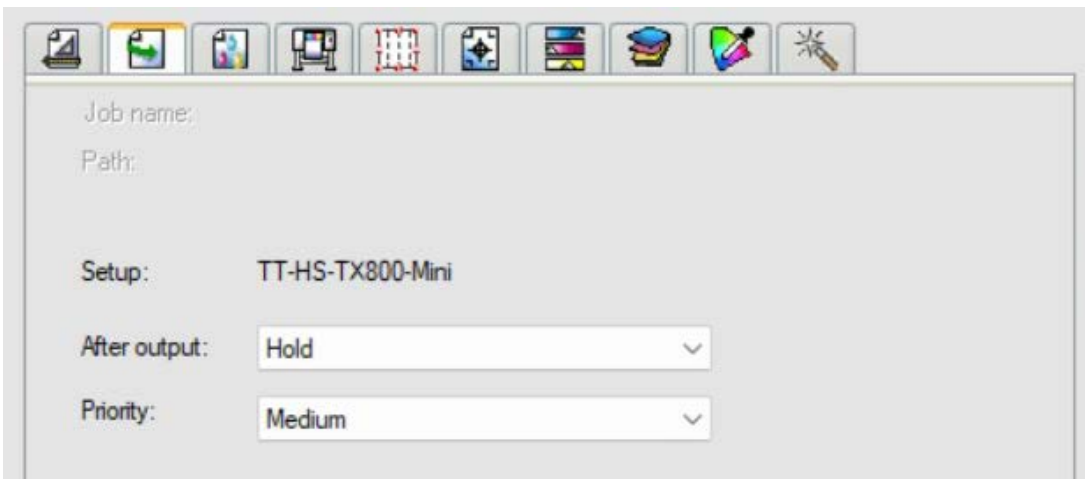

4. Select "Layout" tab.

- Change the width size to 16 inches.

5. Select "WorkFlow" tab.

- Change the "after output" to "Hold" to keep the job in the queue after saving. Leaving it in delete will delete it after saving.

6. Select "Color Management" tab.

- Press the "Add" button for the "Output Configuration Field. Search for the ICC extracted folder and select the two ICC configuration file, and then add the ICC files.
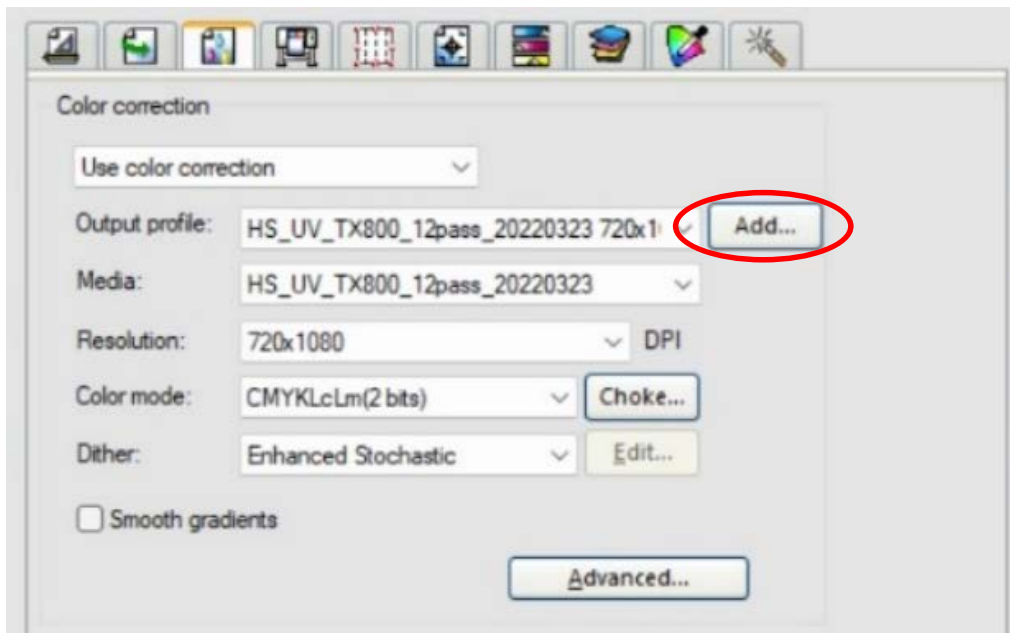
HS_UV_TX800_8pass_20220323 720x720
HS_UV_TX800_12pass_20220323 720x1080

- In the Media field select the matching ICC profile as in the Output profile feed. They need to match or an error symbol will appear.
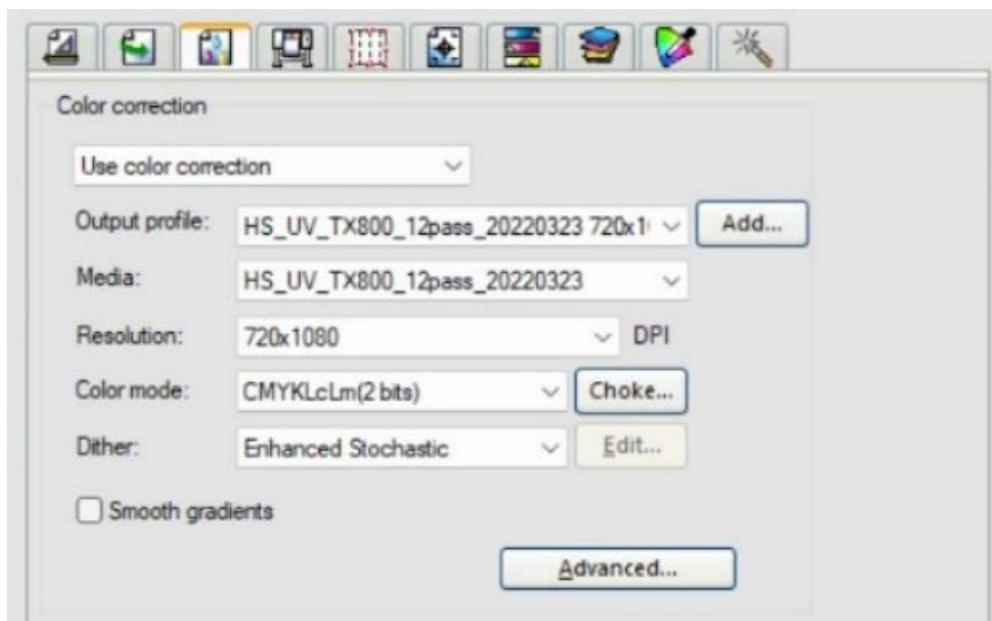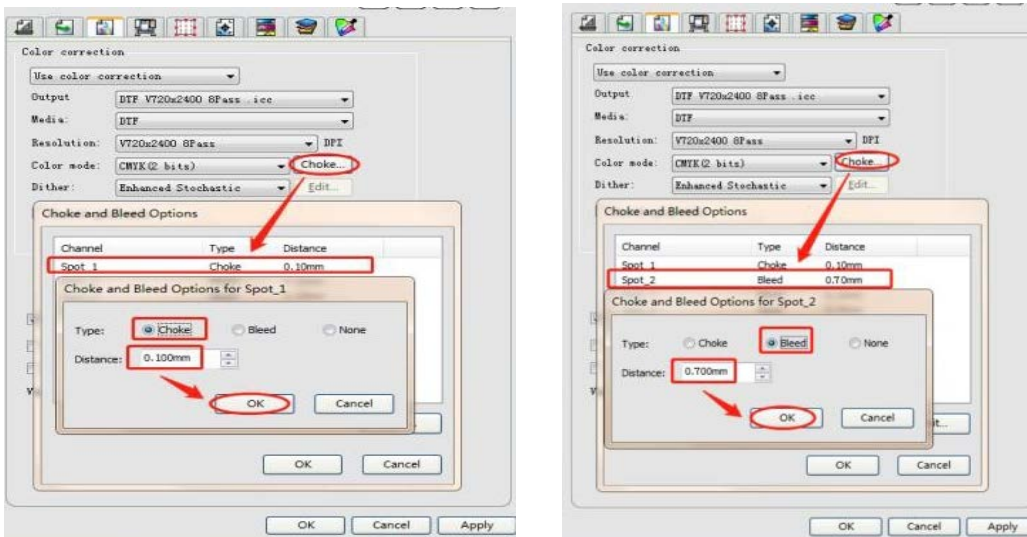
7. Setting up the Choke and the Bleed.

- Click on the "Choke" Button
- Select the spot 1 line and press "Edit"
White spot color choke function: choke---spot 1---Type: choke, distance: 0.1mm (modified according to different needs)
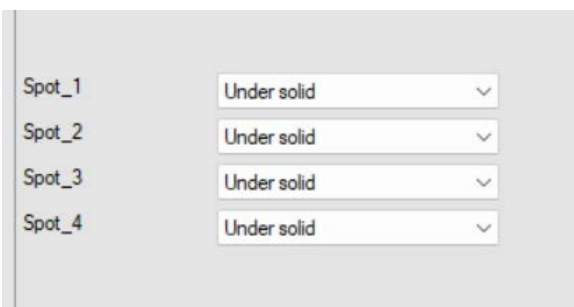
- Select the spot 2 line and press "Edit"
Varnish spot color bleed type: choke--spot 2 --- Type: Bleed, distance: 0.3mm (modified according to different needs)
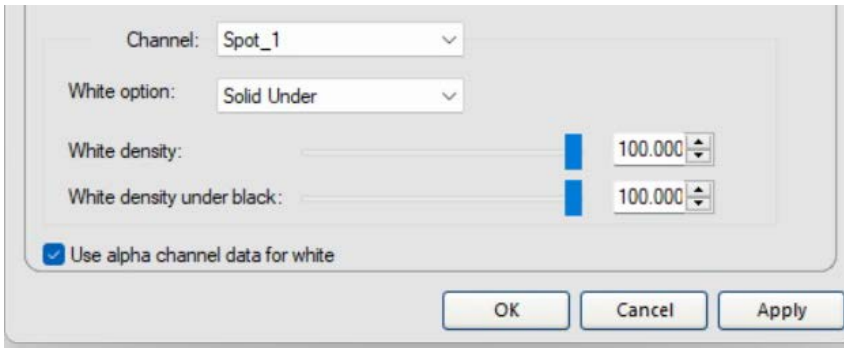

Spot_1：White spot
Spot_2：Varnish spot

8. Setting up the "Printer Options" setting:

- All spot colors should be set to Under solid
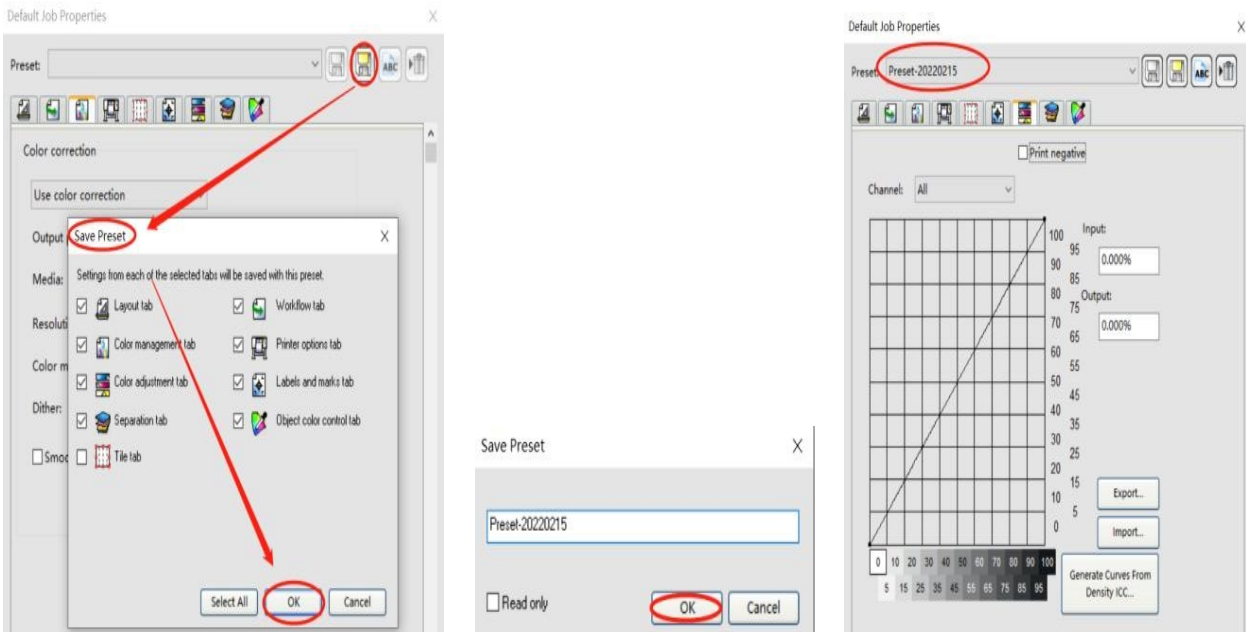

9. Setting up the "transparency" settings:

- Select "Spot 1" for Channel and "Solid Under" for the white option.
- Activate the "Use alpha channel data for white" by checking the box.

10. Save the preset name and set it as the default job attribute.

Set different settings on the preset, which can be saved as different names.

Once all the parameters are set, click "OK" to save the settings.

Importing artwork:

Open the "Job" icon on the main interface of the software, and directly add the print image file.


Nest Jobs:

When there are multiple pictures that need to be printed together, after adding multiple pictures, select the picture that needs to be typeset together, and then right-click the mouse to select "Nest Jobs".
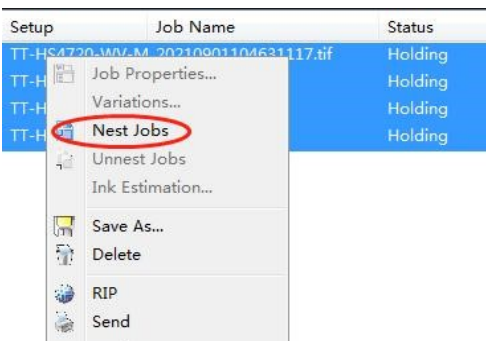
Job attributes:

1. Job size, you can scale the picture size according to your needs; (to check manual nesting)

2. Position, the distance setting from picture to page edge and header; (to check manual nesting)

3. Copies, you can copy multiple pictures and typeset at the same time according to your needs;

4. Spacing, when multiple pictures are typeset, set the horizontal and vertical spacing of pictures;

5. Manual nesting, you can manually adjust the position of the picture after checking;

6. Mirror, image output and printing; (to cancel manual nesting)

7. Rotate ,choose the direction of the image rotation according to your needs. (To check manual nesting)
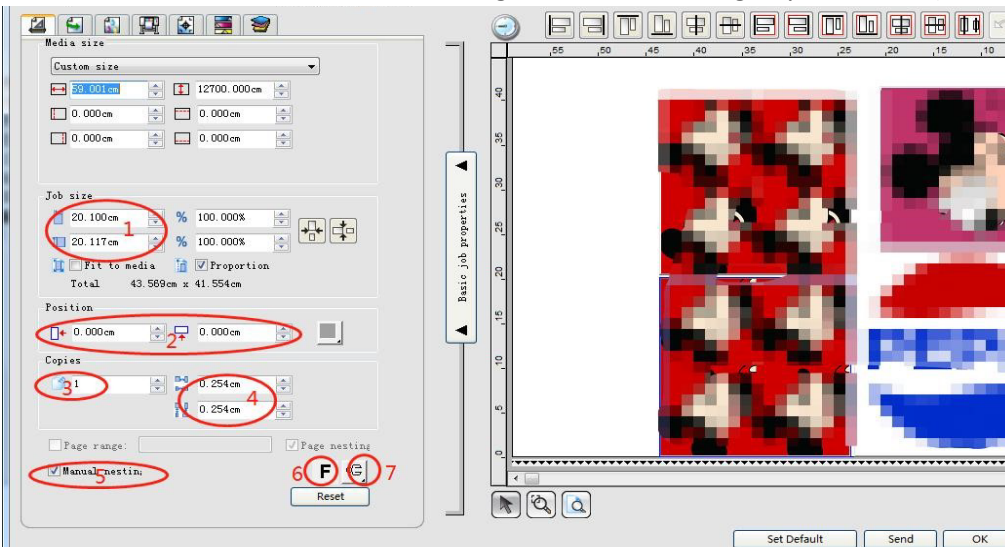
4.4 Initial Machine Set up

Before machine is powered on, the carriage must be released by removing the "L" bracket. Using the Allen key included with the spare parts box, remove the screw shown below.


Once the L bracket is removed along with the screw and foam, manually move the carriage to the center of the printer.

4.4.1 Ink tank installation

1. Install and fix the screws on the main ink tank bracket, then put the ink tanks in order, and connect the corresponding color ink tanks and the corresponding marked ink tubes.
2. The ink tank of white ink is connected to the power cord of the white ink stirring motor.
3. Install the battery in the liquid level alarm buzzer of each ink tank, insert the connection terminal, and finally add the corresponding color ink into the corresponding ink tank.
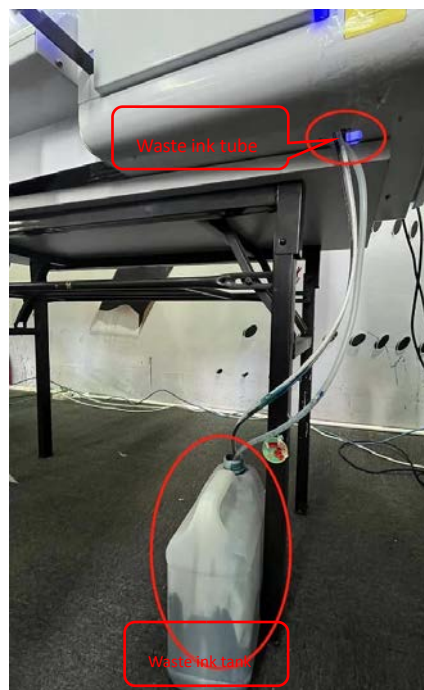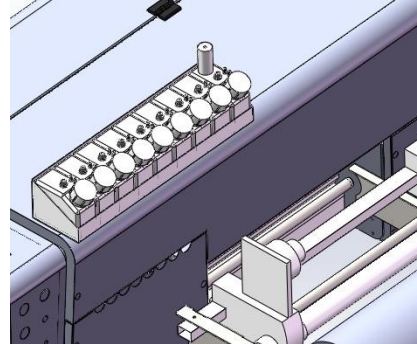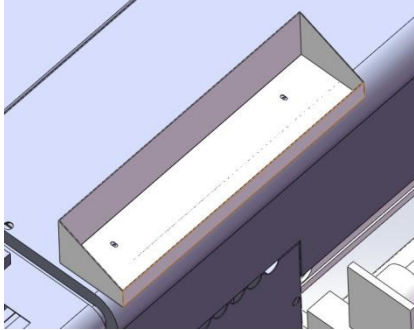
4.4.2 Button settings and instructions
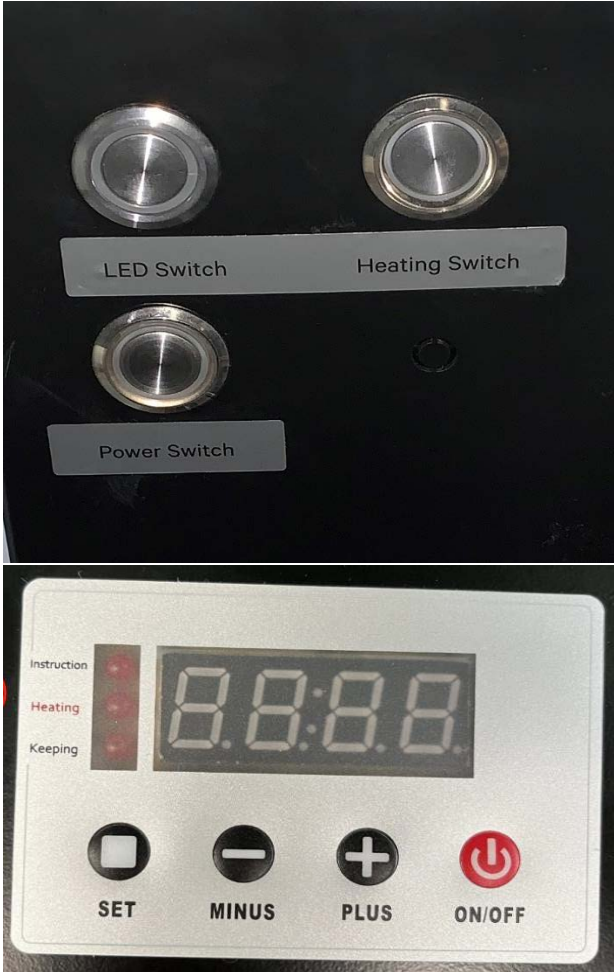
1： Printer table lighting

2： Rubber roller heater switch

3： Printer power supply switch

4： Rubber roller heating temperature setting and regulator (Usually the heating temperature is set at 40-60℃)

4.4.3 Establishing a Link Between Printer and Software

Turn printer ON. The printer mainboard contains parameter information. Printer should be ON before the software is opened on the laptop/PC. When turning OFF the printer, first close the software and then the printer.

Open PrintEXP control software by double clicking on the icon , the machine and the printing software will now connect. The link icon in the PrintEXP software will turn green when link is established.

Note: The temperature icon will blink orange because this system uses 3 heads instead of 4.

In the control software interface, use the mouse to control the left and right of the carriage and ahead and back to check the "Step" function runs normally. Click Clean to confirm whether the ink absorption and squeegee height of the ink stack is normal.

4.4.4 Priming the Dampers

Make sure the printer is in the home position, with the capping station locked to the carriage.

Using a syringe and green tip, suction the waste lines coming from the damper system.
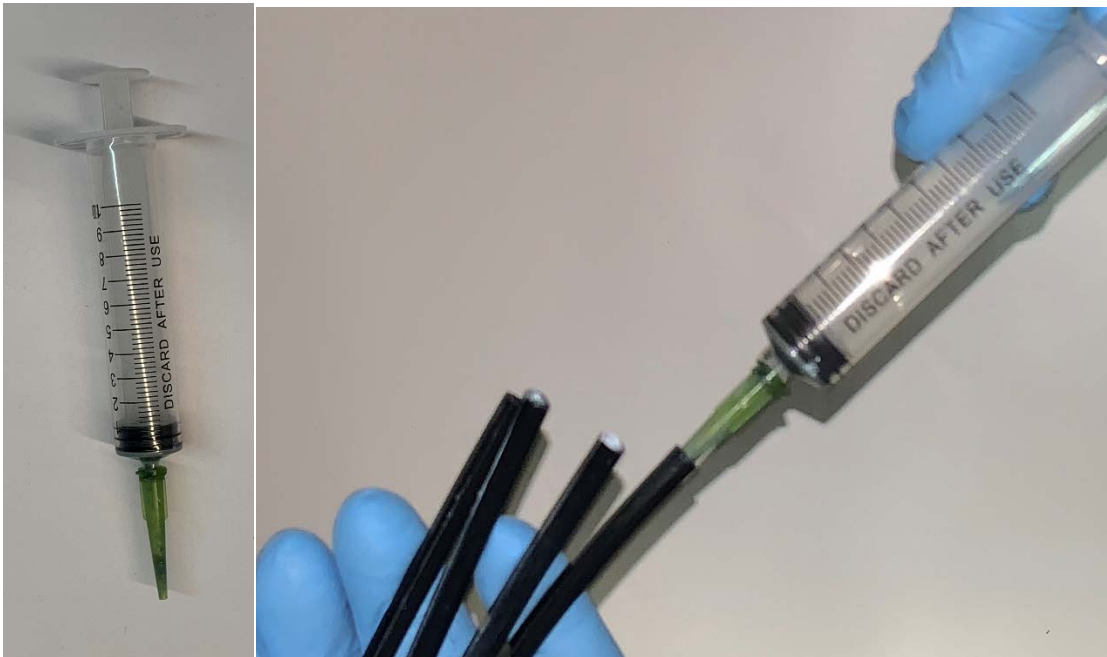
Continue suction until ink reaches the syringe. 3 out of the 4 hoses will release ink. The 3rd will not because it is not locked to a print head. The others are and you can be determined by the backpressure felt when suctioning. Once you pulled ink from all three hoses you can stop. Place the hoses into the waste bottle.

4.4.5 Media set up (A Film and B Film)

1. Load A Film on the bottom roll holders. Roll will need to unwind from the top side.

2. Use the adjustment knob to shift the holder from left to right to center the roll.

3. Tension the A Film holders by rotating the tension knob on the right and left of the film holder. First, release the tension completely by turning the knob Counter Clockwise until it stops. Once it stops tighten the tension by turning the knob clockwise 7 full rotations. Once you tension the first side, proceed to the next side.
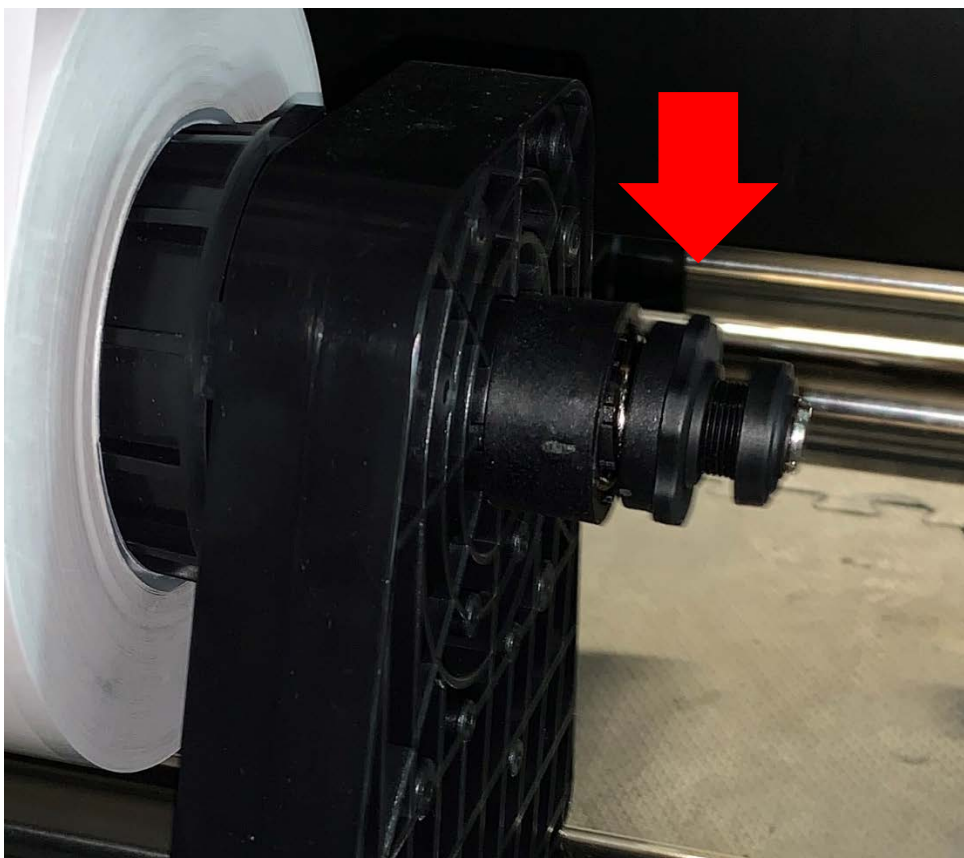
4. The film needs to be centered when entering the printer, roughly 1 ¾ inch space on the Right and Left of the film. Film should go over the first free spinning roller and under the second adjustable roller. This will insure you clear the proximity sensor that detects the film.

5. Raise the heat roller by rotating the knobs located on the front of the printer. Left side turns Counter-Clockwise to lift and Clockwise to lower. Right side turns Clockwise to lift and Counter Clockwise to lower.
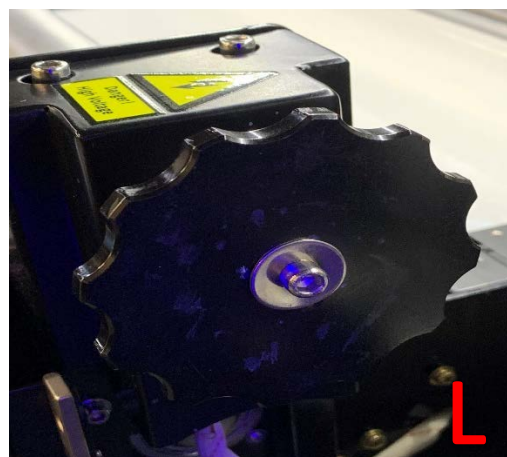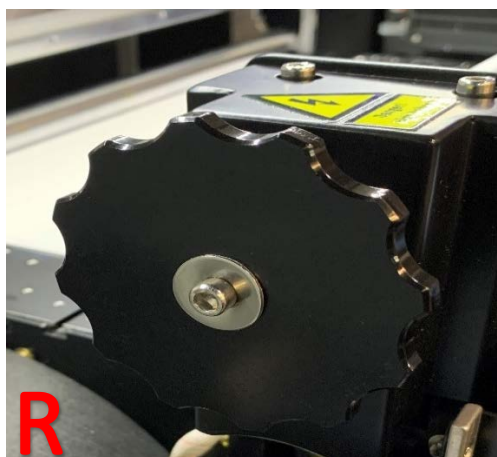
6. Pass the A Film through the printer and through the between the two heating rollers (Note: Having the printer ON will have the suction ON and can help hold the A Film in place)

7. Pull at least 2 feet of film between the rollers. Grabbing the film, pull in your direction while shifting the film to the right and left to feel for the center. Where the tension is even on the right and the left. Once its centered, lower the rubber heat rollers to pinch the film in place.
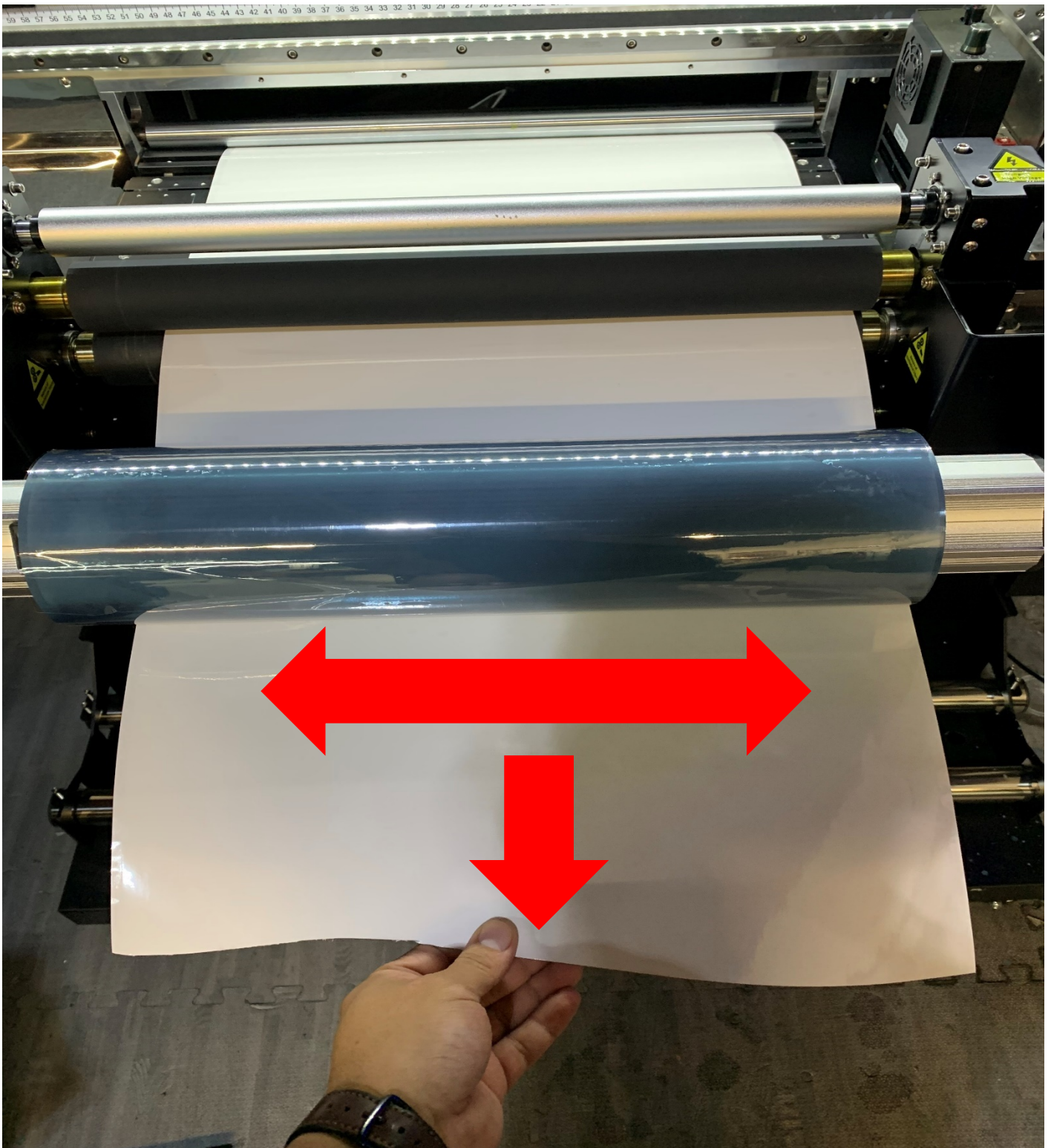
8. Check that the film if feeding straight by pressing and holding down the "Down" button on the control panel. Feed about 1 to 2 feet of A Film. Check the printing area if the film is "lifting" from both right or left side of the film.

9. Check the following areas to make sure the film is pulling straight and with the correct tension.

Printing area:
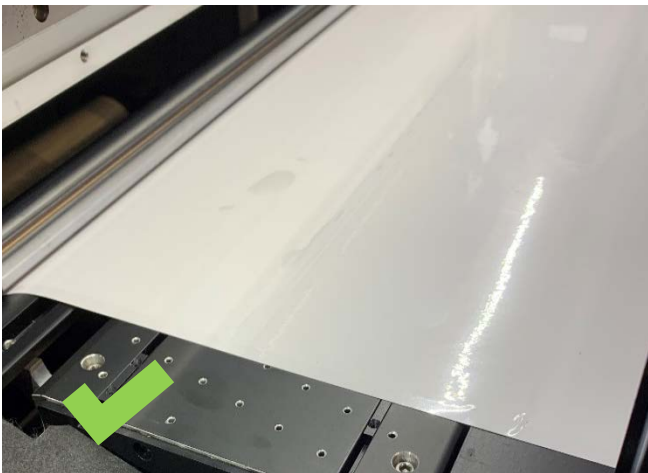
Rear film rollers:
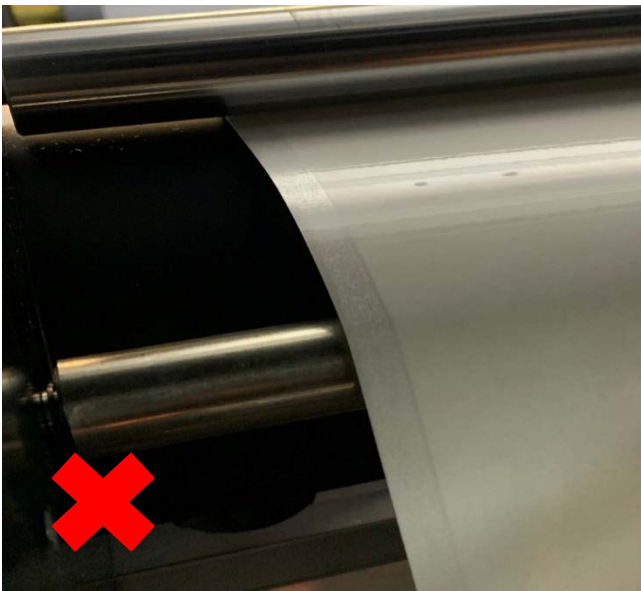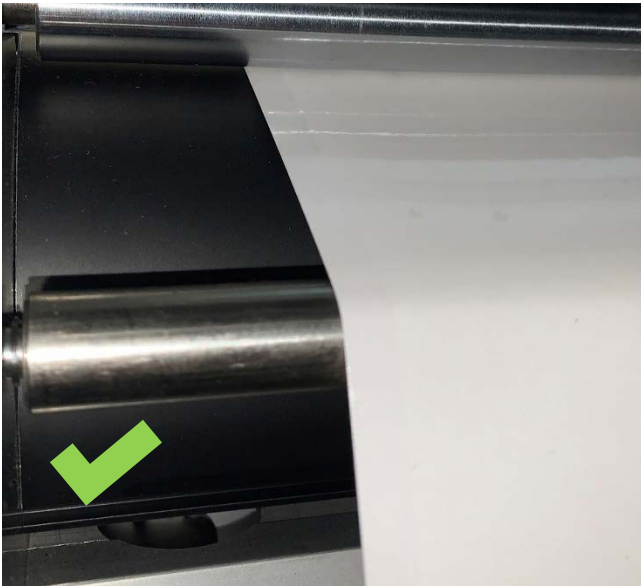
10. Once the film is positioned correctly and tensioned install the laminate and laminate shaft. Install the Laminate roll (B Film) on the roll shaft. The laminate is positioned on the front of the printer. The left side is installed first to interlock the holder.
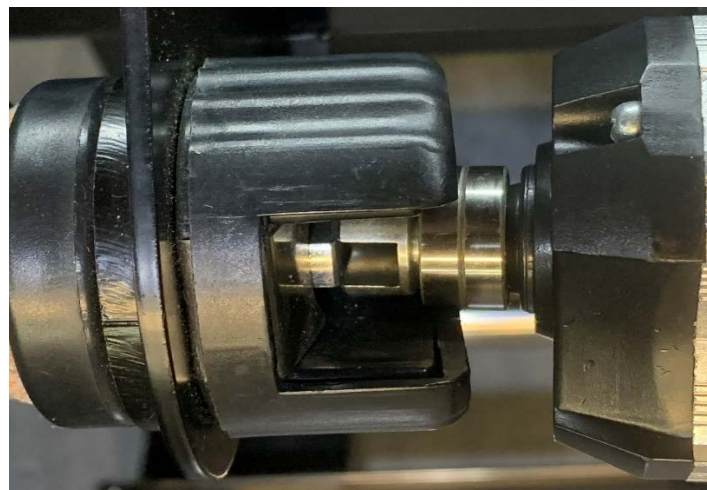
11. The laminate roll is ½ inch wider than the A Film. Use the slack of the A Film to align the B Film, it needs to exceeds the A Film on both sides.
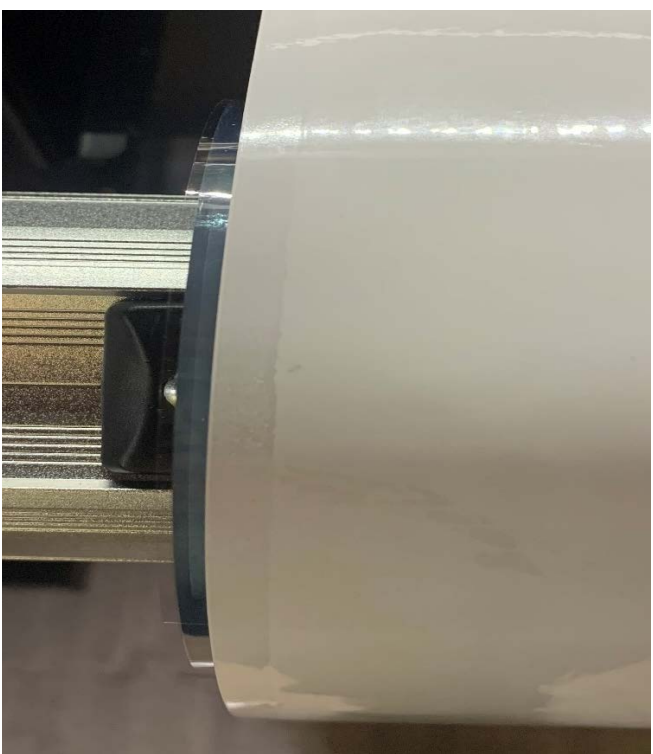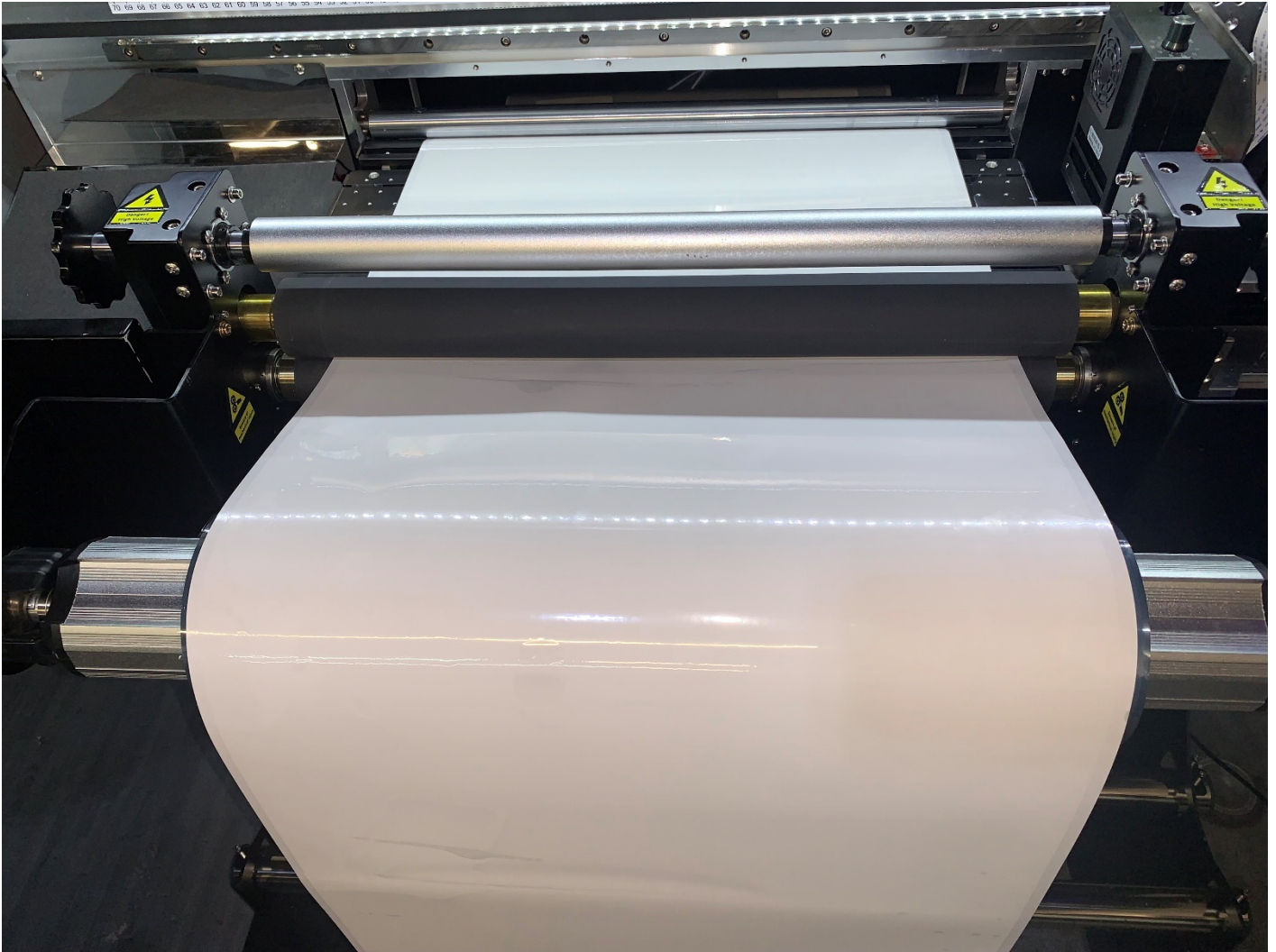
12. Once aligned redirect the A Film to fall downward after the passing the rubber heat rollers. The B Film is installed with the film unwinding from the bottom of the roll. It while go over the aluminum free spinning roller.
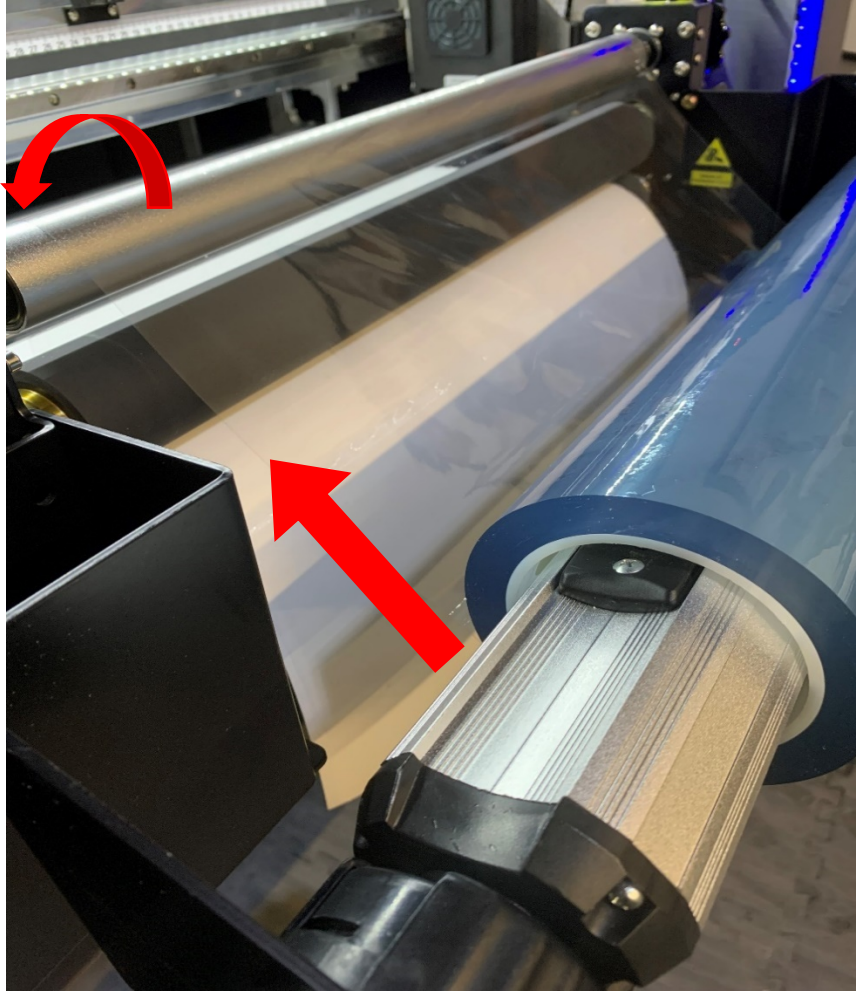
13. Guide the B Film between the small support shaft and rubber heating roller.
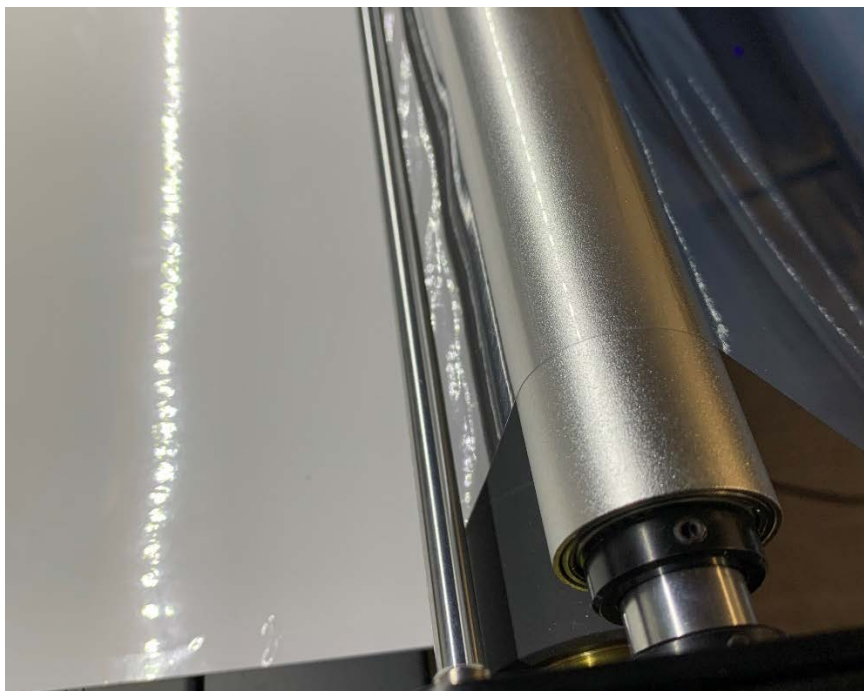
14Hold the B Film against the rubber heat roller while pressing the "Down" button on the control panel. Be careful not to pinch your fingers when the roller rotates.

15Check that the B Film overlaps the A film after the rubber heat rollers.
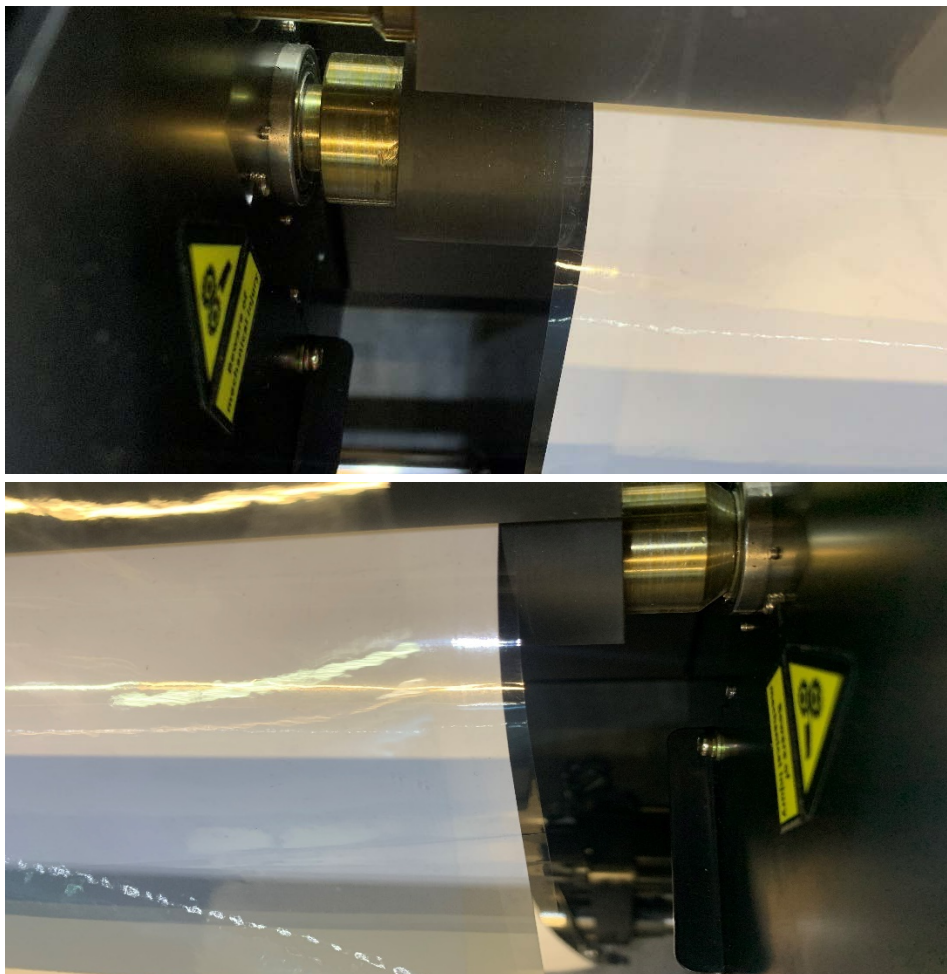
16. Proceed with calibration section 4.6. Printing over the adhesive backing first will confirm if the film is set properly.

17. Once the calibration is finished, reveal the adhesive by cutting the top of the A Film using a blade. Cut deep enough to only cut the clear film. Do not cut the white A Film.

18. Pull the clear film over the aluminum roller and pass it to the back of the printer. Tape the clear film to the rear rewinder.
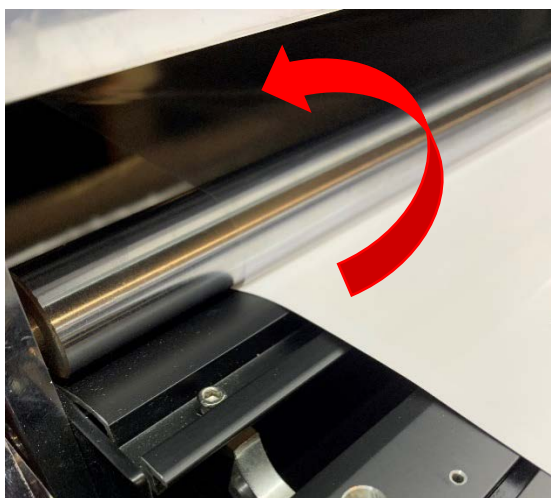
19. Adjust the tension on the rear rewinder using the tension knob on the righthand side of the holder. Loosen the tension knob counter clockwise until it stops for the starting point. Tighten the knob by turning it clockwise 3 ½ turns. The goal is to have enough tension to pull the clear film without lifting the A Film.

Note: Rear rewinder runs independently from the printer. Make sure to turn OFF the rewinder when printer is not in use.
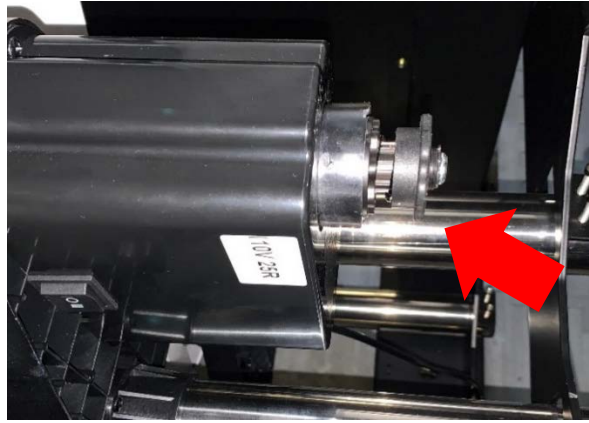
4.5 Print head installation position and cable connection

4.5.1 Print head installation

Note: Printheads will be pre-installed. The following is only for reference. Skip to 4.6 Calibration.
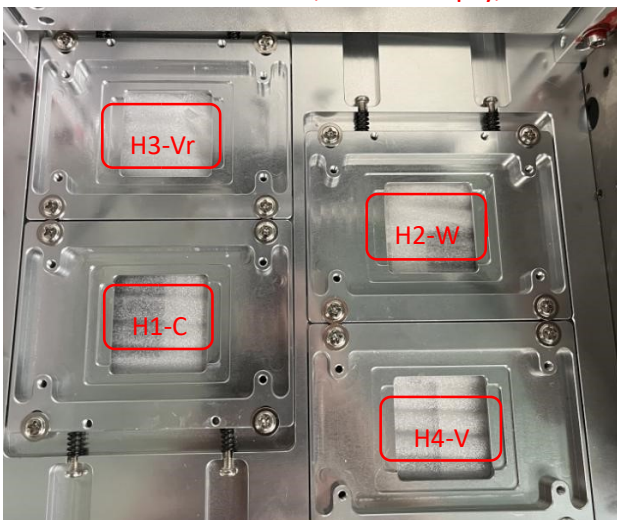
1. Cable installation, the print head cable is one 29P cable on the left and right.
(Note: Be careful when plugging in to avoid damaging the printhead or cables!)

After the cable is plugged in, the cable interface is sealed with tape to prevent foreign objects or ink from entering the cable interface.
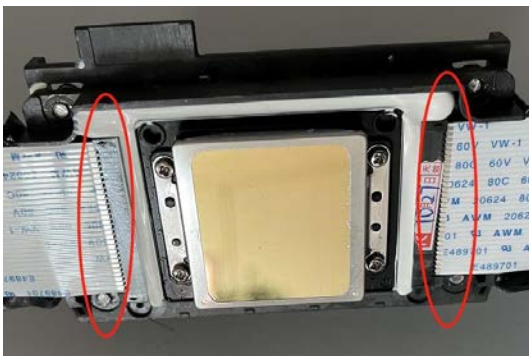
H1-C:color,H2-W: white, H3-Vr:empty, H4-V:varnish.

2. **Print head installation (H2 white print head)**

Put the print head to the left and back, close to the bottom plate, and install and secure it with the screws. (Note: do over tighten the print head mounting screws)

The print head and the damper are connected, and the ink sequence is set: First connect the damper to the corresponding ink tube, and then use a syringe to pump the ink from the ink tube to the damper.


3. **Print head installation (H1 color print head)**

Put the print head to the left and back, close to the bottom plate, and install and secure it with the screws. (Note: do not over tighten the print head mounting screws)

The print head and the damper are connected, and the ink sequence is set: First connect the damper to the corresponding ink tube, and then use a syringe to pump the ink from the ink tube to the damper.

Then connect the damper to the print head in order, from left to right: K C M Y Lc Lm .

4. Print head installation (H4 varnish print head)

Put the print head to the left and back, close to the bottom plate, and install and secure it with the screws. ((Note: do not over tighten the print head mounting screws)

The print head and the damper are connected, and the ink sequence is set: First connect the damper to the corresponding ink tube, and then use a syringe to pump the ink from the ink tube to the damper.
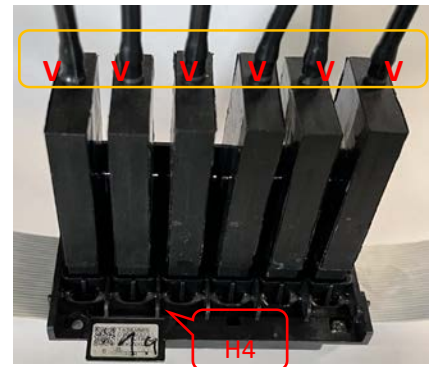
4.5.2 Print head data cable connection adapter board

The connection sequence of the data cable corresponds to the markings on the head board and the print head in turn

(Note: Plug and unplug the print head data cable must be operated with the power turned off.)
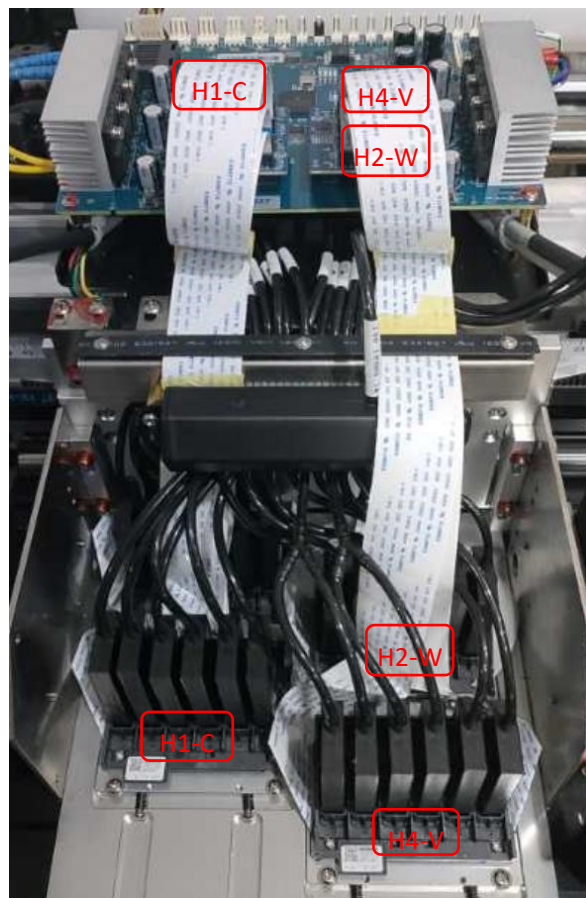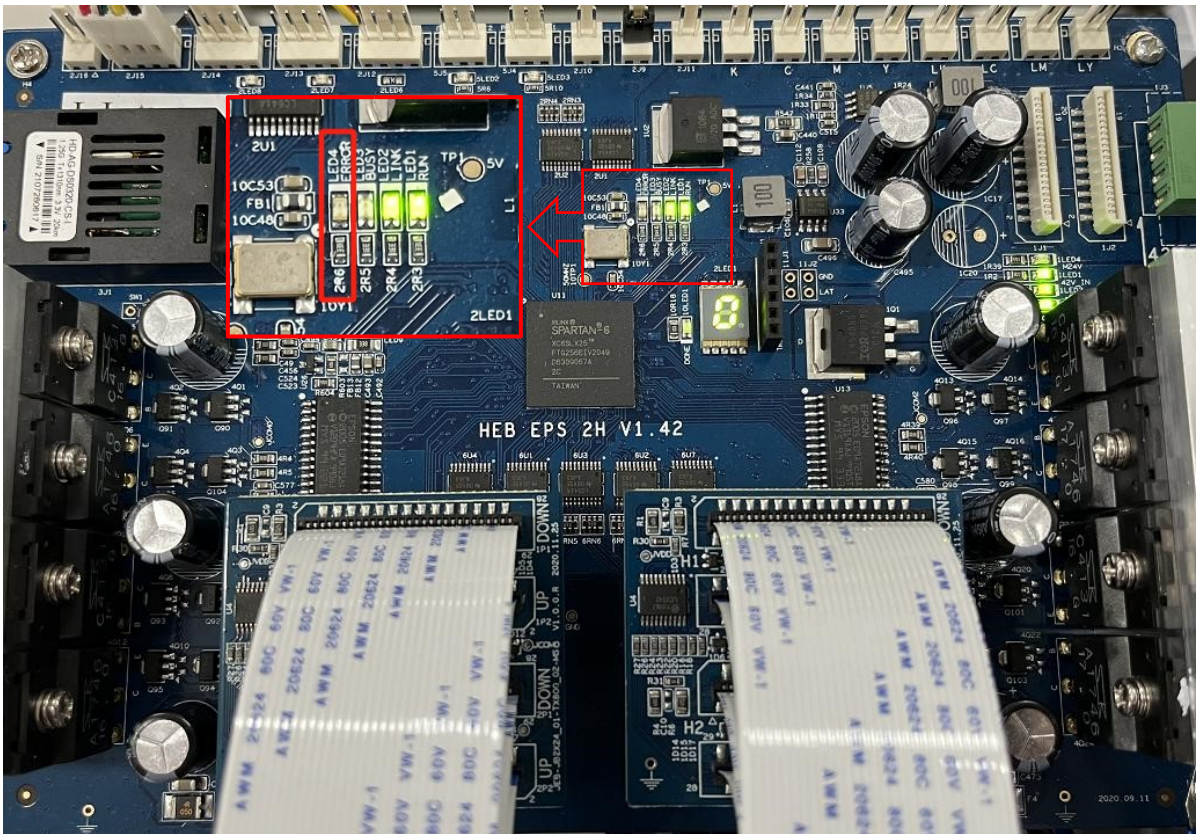 H1-C: color, H2-W: white, H3-Vr: glue, H4-V: varnish.
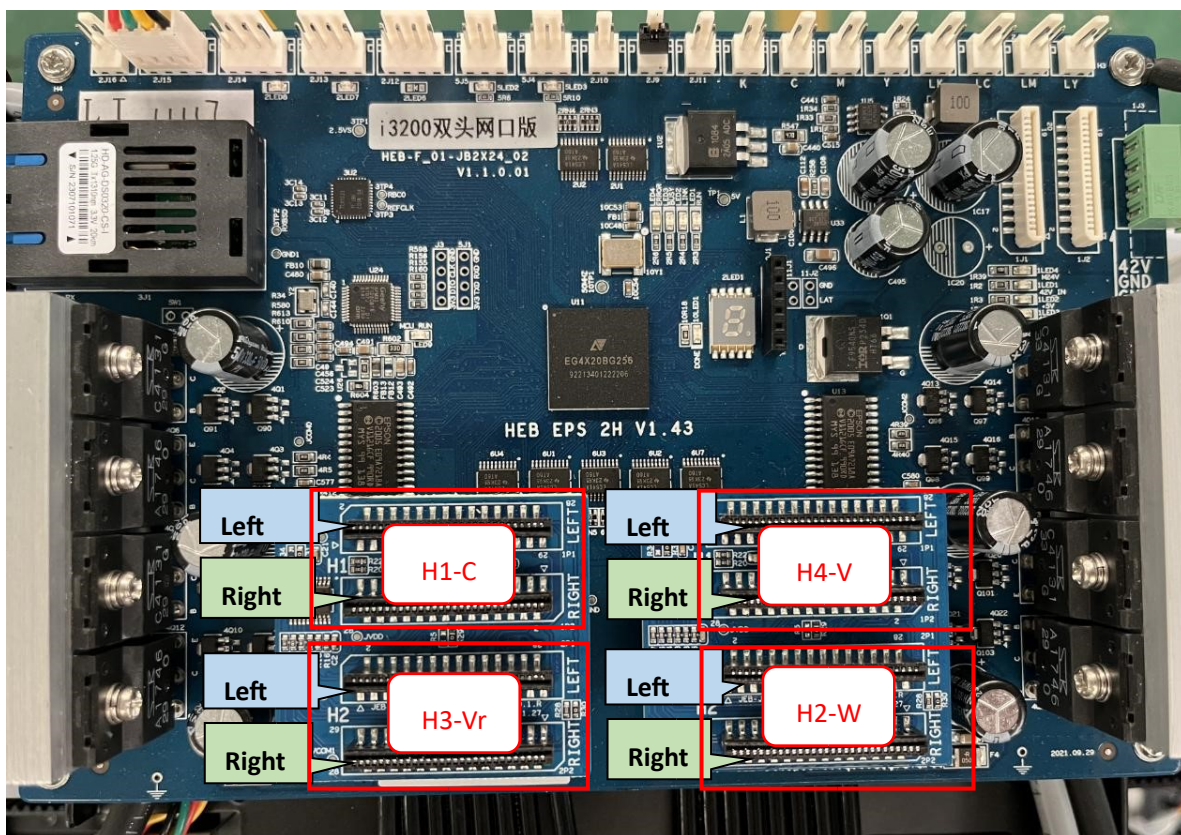
Insert the print head cable into the adapter board in sequence according to the indication.
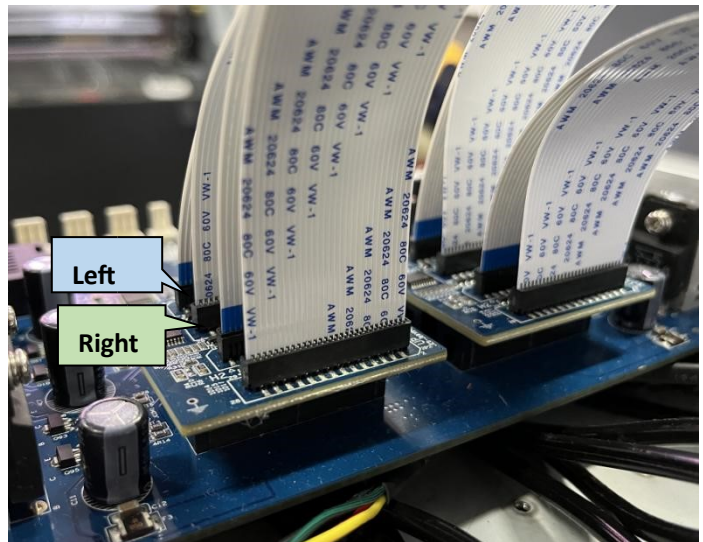
Tidy up the cables:

After confirming that the data cable of the print head is connected correctly, turn it on and observe whether the "ERROR" light on the head board is on. If the light is on, it is abnormal. Power off immediately and check.

4.6 Calibrating the Printheads before Printing

4.6.1 Print nozzle test

Connect the machine to the power supply and launch the printing software interface. (Note: the ink stack should be close to the nozzle after the machine self-check is completed) Click the "Load ink" icon to confirm that ink is flowing out of the waste ink tube, and click the fill ink icon again to cancel. Click the "Clean" icon again. After cleaning is complete, confirm that the platform is free of obstacles, load the material, click the "Check" icon, print the nozzle test, and confirm that the print head is in good condition. (Use clear print film first, because the color is lighter).
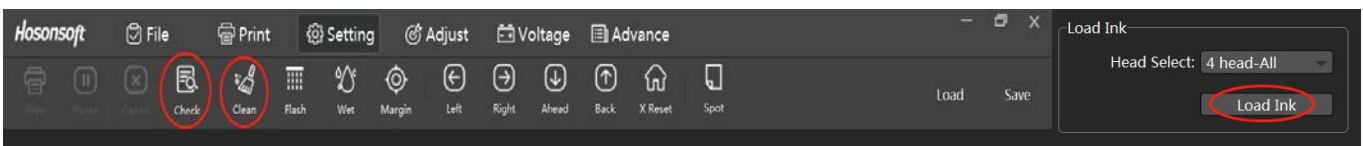
4.6.2 Vertical alignment of the print head

Enter the software option "Adjust" interface and align the print head vertically "Print Adjust".
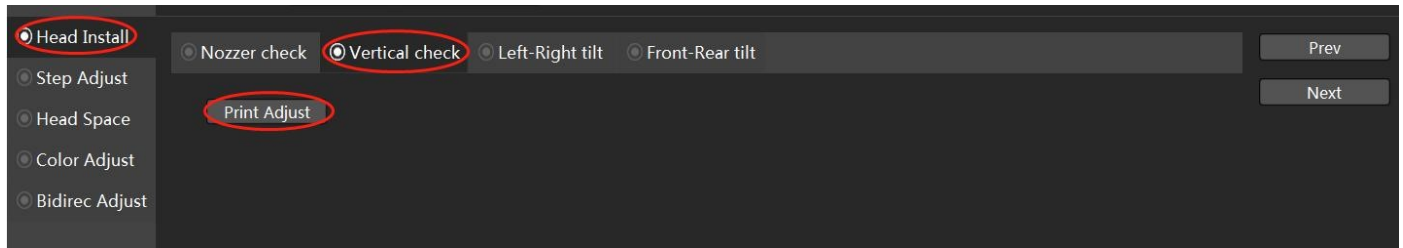
For vertical calibration, the vertical direction of the test chart required to be printed is a straight line. The vertical calibration chart below shows that the print head has been tilted and needs to be calibrated.

If there is a deviation, loosen the fixing screw of the print head and adjust the position of the print head. You can "push the print head up to the left". Then Print Adjust again, reach to form a line.

4.6.3 Step
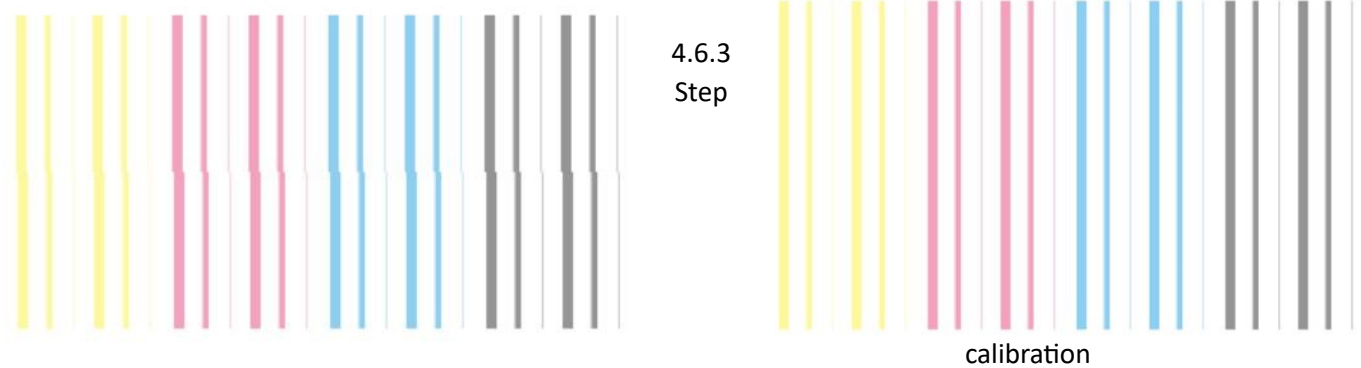
calibration

Step calibration, Print Adjust.
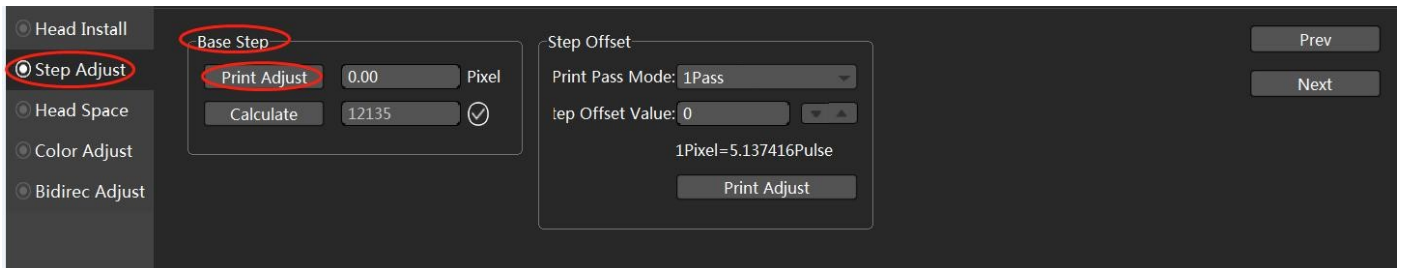
The calibration chart is at the value -2, and the lines completely overlap.
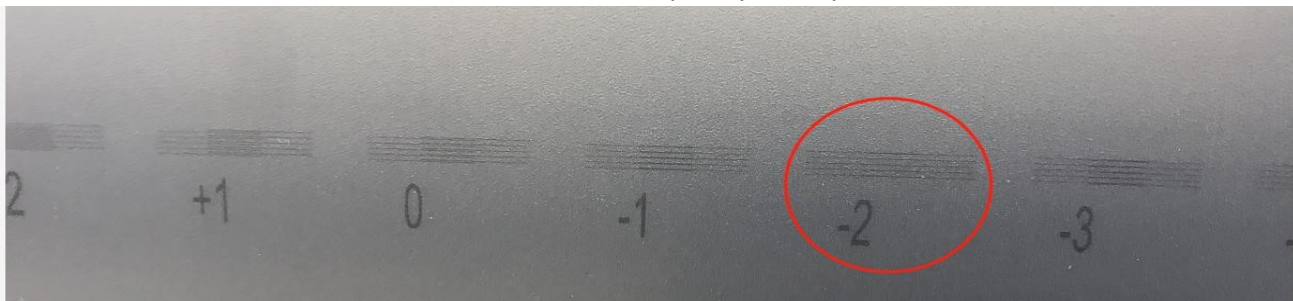
Enter the value -2 in the corresponding input box, and then click Calculate.
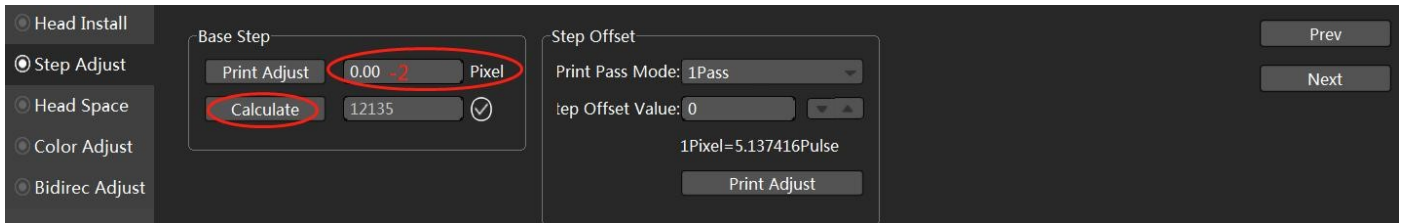
Print Adjust again and confirm that the line at the value 0 is the most uniform. Click the "Save" button in the upper right corner.
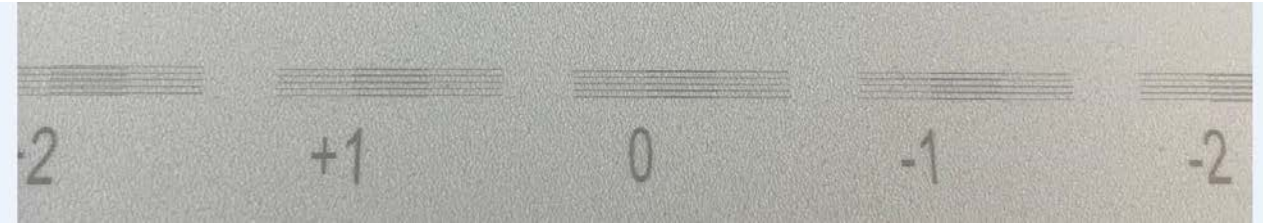

4.6.4 Calibration of nozzle horizontal space

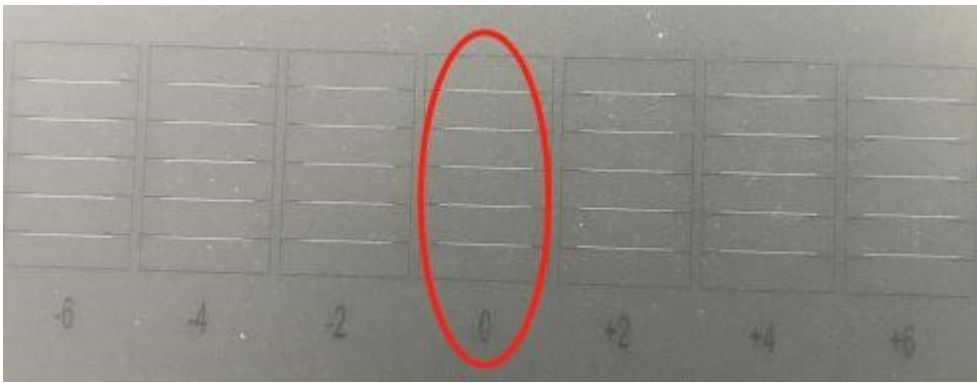Calibration of the horizontal distance between the print heads,Print Adjust.
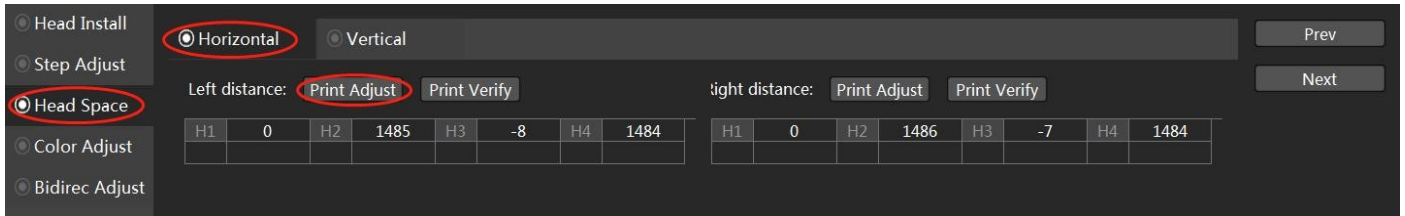
The calibration chart is at the value +2, and the lines completely overlap.
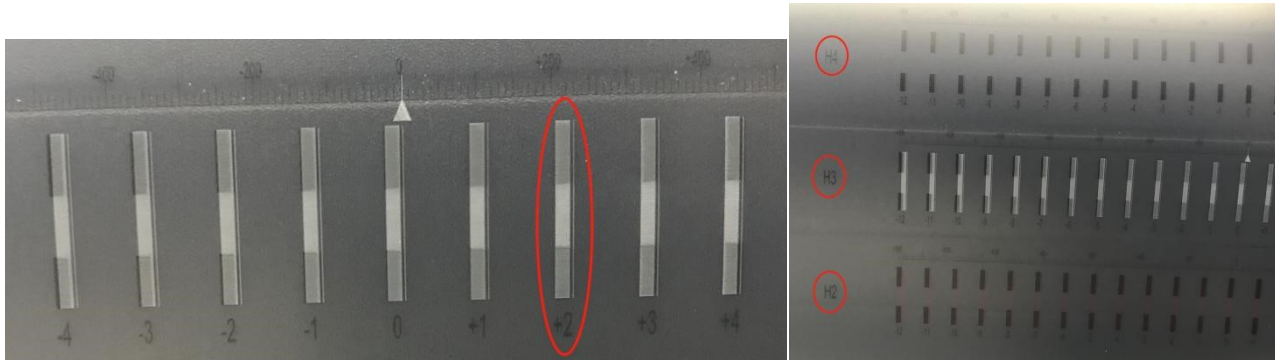
In the corresponding print head, increase or decrease the corresponding value in the input box of the corresponding printing direction.
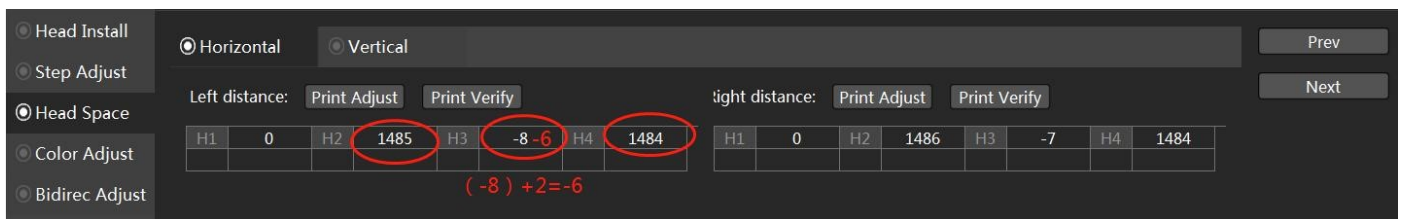
Print Adjust again and confirm that the line at the value 0 is the most uniform. Click the "Save" button in the upper right corner.
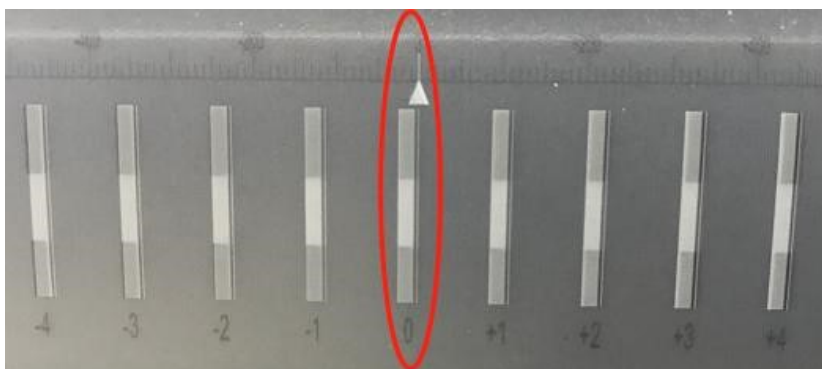
Then calibrate the direction to the right, the steps are the same as above.

4.6.5 Nozzle vertical space calibration

Calibration of vertical spacing between nozzles. Print Adjust.

The calibration chart is at the value -2, and the lines completely overlap.
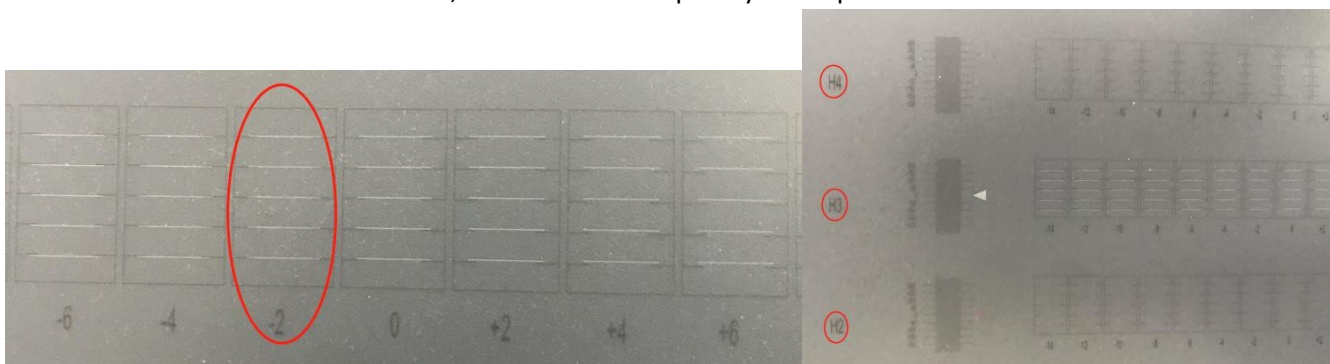
In the corresponding print head, increase or decrease the corresponding value in the input box of the corresponding printing direction.
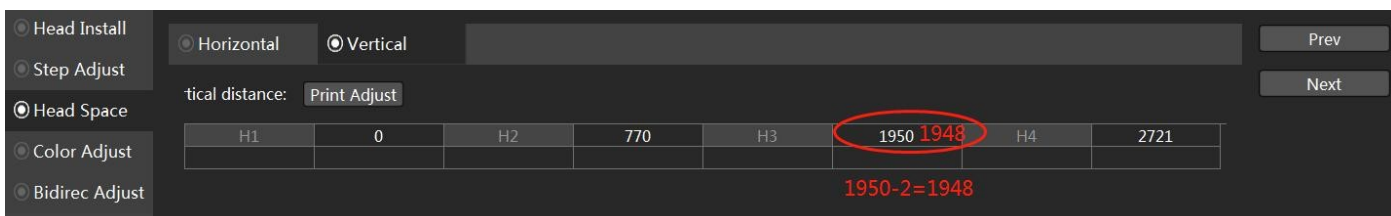
Print Adjust again and confirm that the line at the value 0 is the most uniform. Need to click the "Save" button in the upper right corner.

4.6.6 Bidirectional printing calibration

Finally, perform bidirectional printing calibration, Print Adjust.
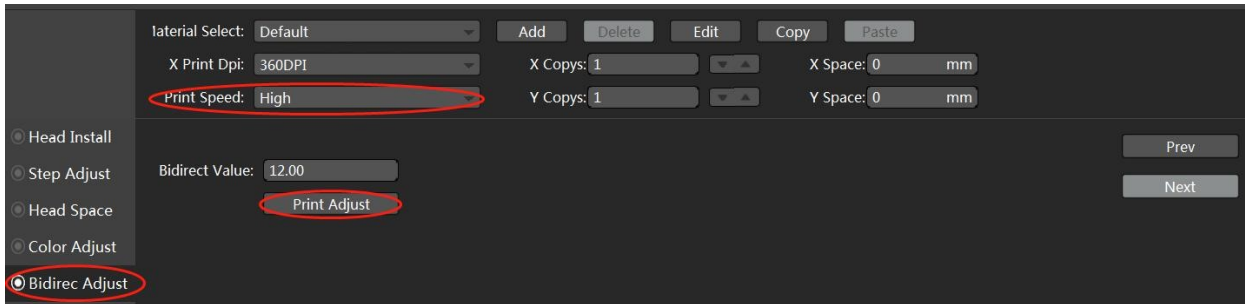
The calibration chart is at the value -3, and the lines completely overlap.
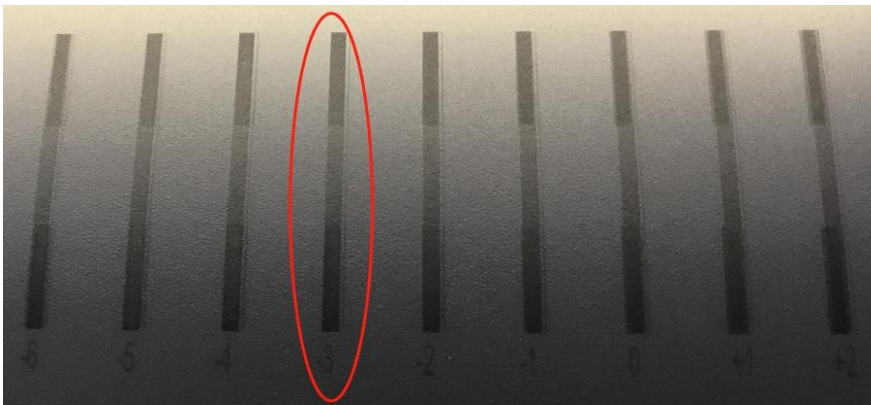
Select the corresponding printing speed, and increase or decrease the corresponding value according to the calibration chart.
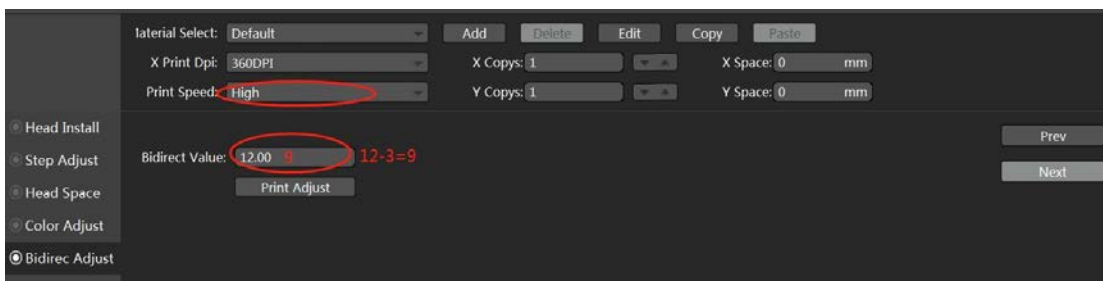
Print Adjust again and confirm that the line at the value 0 is the most uniform. Click the "Save" button in the upper right corner.
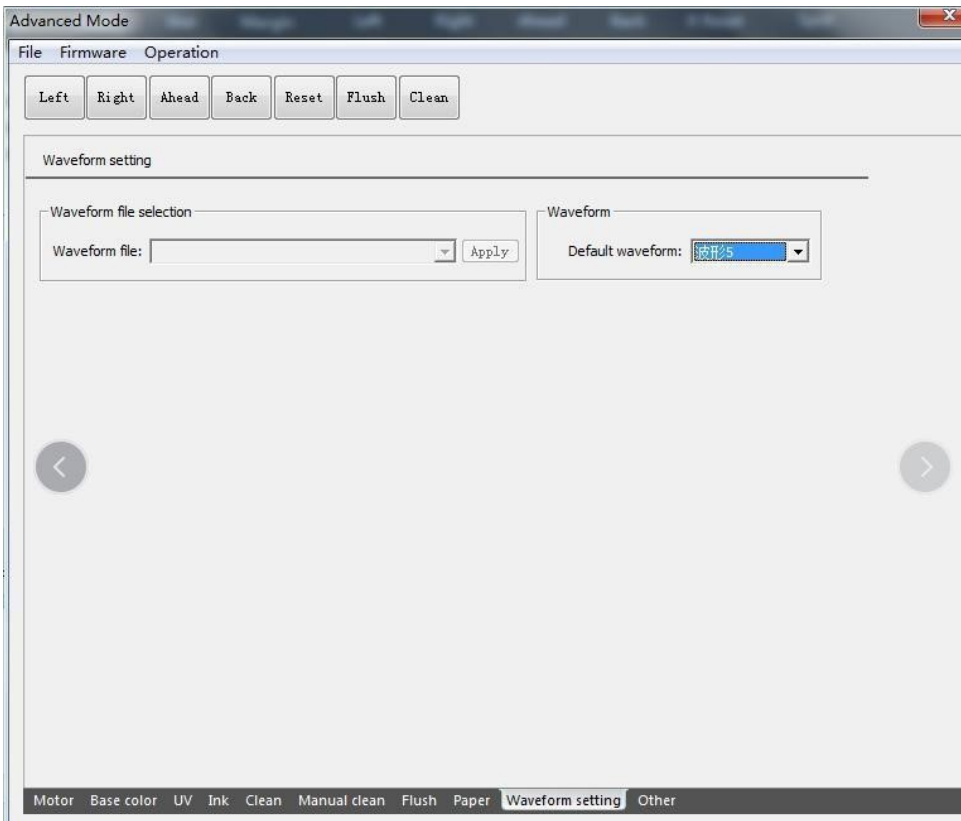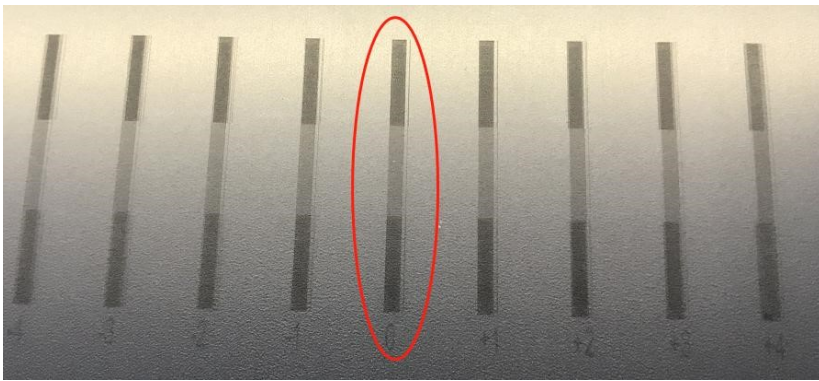
Shortcuts

Shortcut	Function description
	Printing start button to execute the print command
	Print head check button to execute print head printing state
	Printing pause/resume button
	Printing cancel button to execute the end printing command

	Print head cleaning button to execute print head cleaning command
	Flash spray on/off button
	White edge positioning button
	Moisturizing off/on button
	Reset button
	X motor left shift button
	X motor right shift button
	Feed button
	Return button
	Stepping fine adjustment reduction button
	Stepping fine adjustment increase button
	Two-way fine adjustment reduction button
	Two-way fine adjustment increase button

Status bar

Status bar icon	Description
	Network cable normal connection

	Network cable disconnection
	Offline
	Turn on the flash spray
	Turn off the flash spray
	System functions normally
	System error
	System warning
	Offline
	Normal print head temperature
	Abnormal print head temperature
	print head temperature warning
	Offline

5.Precautions for printing equipment

5.1 Recommendations for the process requirements of the film-passing machine

1. Pressure: 0.6MPa

2. The film is passed twice: The first time the film is cold-pressed at room temperature The second 35 ℃ temperature pressing through the film

3. Film speed: 3-5CM/S

5.1 Maintenance of printing equipment

1. After starting the machine, the nozzle must be cleaned.

2. Print a test strip once for each switch on and off.

3. Close the software before shutting down and check whether the car is reset.

4. The machine must be maintained once a week.

Notes for users using Epson lift ink stack:

Do not manually push the trolley to move before the machine is turned on, it will damage the ink stack structure and scratch the print head.

The ink stack is a precision mechanism and should not be deformed by external force.

The lubricating level of the ink stack screw and positioning tip will decrease after a period of application, and the user should add lubricating oil regularly. (Butter, recommend 3 and check once)

Once the front, back, left and right positioning of the ink stack is adjusted, the position cannot be adjusted at will or the origin of the machine can be changed.

Precautions for machine repair and maintenance:

The ambient temperature was kept at room temperature (15-30°C).

Switch on and off the machine once each test strip, if there is a disconnection, deal with it in time.

The machine must be maintained once a week, cleaning dust, refueling the rails, etc.

The ink sac must be replaced every three months to avoid clogging of the nozzle.

Do not plug or unplug any line on the machine with power on, otherwise it will cause damage to the main board and the nozzle.

The machine must be connected to the ground wire, otherwise the ink will fly, or the individual ink dots of the print head will be damaged.

Do not use a knife to manually cut the paper on the machine, which will cause the machine to scratch and affect the appearance.

Tips:

The nozzle must pay attention to sealing and moisturizing.

The machinery and equipment should be regularly maintained and maintained.

In case of holidays, the machinery and equipment should be well maintained.

If you have any questions, you can contact the relevant personnel at any time. And I wish your company a prosperous development and abundant financial resources.