

烫画打印机保养手册 DTF Maintenance

一、保养基本原则 Basic Maintenance Principles

1. 预防优于维修：坚持执行计划性的常规维护，而非仅在故障时被动维修。

2. 先断电后操作：所有涉及内部清洁和电气检查的操作，务必先关机并拔掉电源线。

3. 工具专用化：使用专用清洗液、保湿液、无尘布、软毛刷、专用棉签；禁用纸巾、硬毛刷或强酸碱清洁剂。

4. 记录可追溯：每次维护详细记录，建立设备运行档案。
- △ 安全提示：墨水及清洁液可能对健康有害，维护时请佩戴防护手套和护目镜，保持通风。溶剂蒸汽易燃，禁止吸烟、饮水或进食。

1. Prevention over repair: Adhere to scheduled preventive maintenance rather than reacting only when failures occur.

2. Power off before service: For all internal cleaning and electrical inspections, always shut down the machine and unplug the power cable first.

3. Use dedicated tools: Use only approved Moisturizing liquid, lint-free cloth, soft-bristle brushes, and dedicated swabs. Never use tissue paper, hard brushes, or strong acid/alkaline cleaners.

4. Keep traceable records: Document every maintenance action in detail to build a device operation archive.
- △ Safety Notice: Inks and cleaning fluids may be hazardous to health. Always wear protective gloves and safety goggles during maintenance and ensure adequate ventilation. Solvent vapors are flammable — no smoking, eating, or drinking near the machine.

序号 (NO.)	保养项目（Maintenance item）	每日 Daily	每周 Weekly	每月 Monthly
1	环境温度 20-35℃（68-95°F），湿度 35%—70%RH。 The printing' room should be kept at a temperature of 20—35℃ (68—95°F), humidity: 35%—70% RH.	√		
2	机器及四周环境整洁、无杂物、无尘 Keep the machine and its surroundings clean, free from sundries, and dust-free.	√		
3	清洁喷头表面及小车底板 Clean print head's surface and trolley bottom.	√		
4	清洁刮片 Clean the wiper.	√		
5	清洁墨栈及墨垫 Clean the ink stack station and ink capping.	√		
6	开机，关机时候都要打测试条确认喷头状态，并保留白班夜班开机和关机喷头测试条 Need to print the test strip everyday to check the nozzle state. Retain the test strip when you power on and power off for day and night shifts.	√		
7	光栅条三个星期用无尘布蘸点酒精擦一次，导轨一个月加一次润滑油 The grating strip is wiped with a dust-free cloth with a little alcohol once every 3 weeks, and the guide rail is added with Lubricating Grease once a month.			√
8	清洁机器电箱的散热风扇灰尘 Clean the dust from the cooling fan of the machine's electrical box		√	
9	清洁收放纸感应器及小车原点和墨栈感应器 Clean the sensor of the paper feeder and rewinder, the trolley origin sensor, and the ink stack sensor.		√	
10	重点传动部位涂抹润滑油 Apply lubricating oil to key transmission parts.		√	
11	机器超过两天不用需要用保湿液浸泡打印头（浸泡打印头详情看另外发送的视频），下班的时候墨管夹好防止虹吸漏墨； Once the printer no need working for more than 2 days ,we advice that you should soak the printhead With moisturizing solution (see the video of how to soak the printhead), and the ink pipe need be clamped to prevent siphon ink leakage after work.	√		
12	检查过滤器每三个月更换 Check if the filter is replaced regularly, it can be replaced every three months.			√
13	检查墨管有无磨损必要时更换 Check the ink tube for wear and replace if necessary.			√
14	每周检查墨囊墨量：低于 1/3 时及时补充，避免打印墨水不流畅。 Check ink level in the dampers weekly: refill if below 1/3 to ensure smooth printing.		√	
15	每周检查墨路：墨囊、墨管有无老化、渗漏或气泡。 Inspect ink tube weekly: look for aging, leaks, or air bubbles in the damper and ink tube.		√	
16	定期清空废墨桶，防止溢出损坏电路。 Empty the waste-ink container regularly to prevent overflow and circuit damage.	√		

二、细节 Details：（There may be differences among different printer accessories）

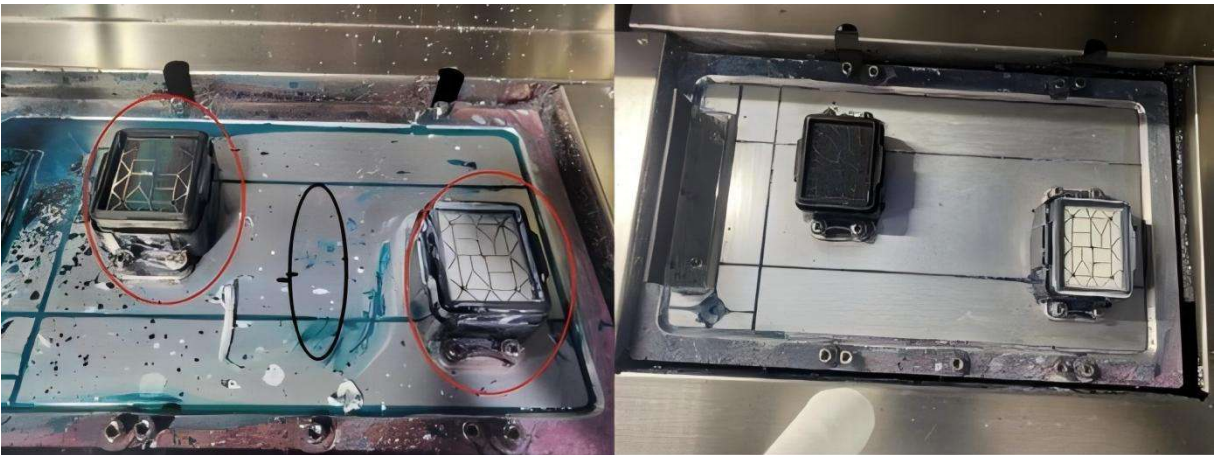
1. 刮片、墨垫、墨垫平台、压纸片、打印平台、小车底板每天下班前使用无尘布清理干净；
Wiper, Ink Capping, Ink capping station, Paper Press clip, printing platform and Carriage bottom should be cleaned with dust-free cloth every day before leaving work;

刮片 (Wiper)



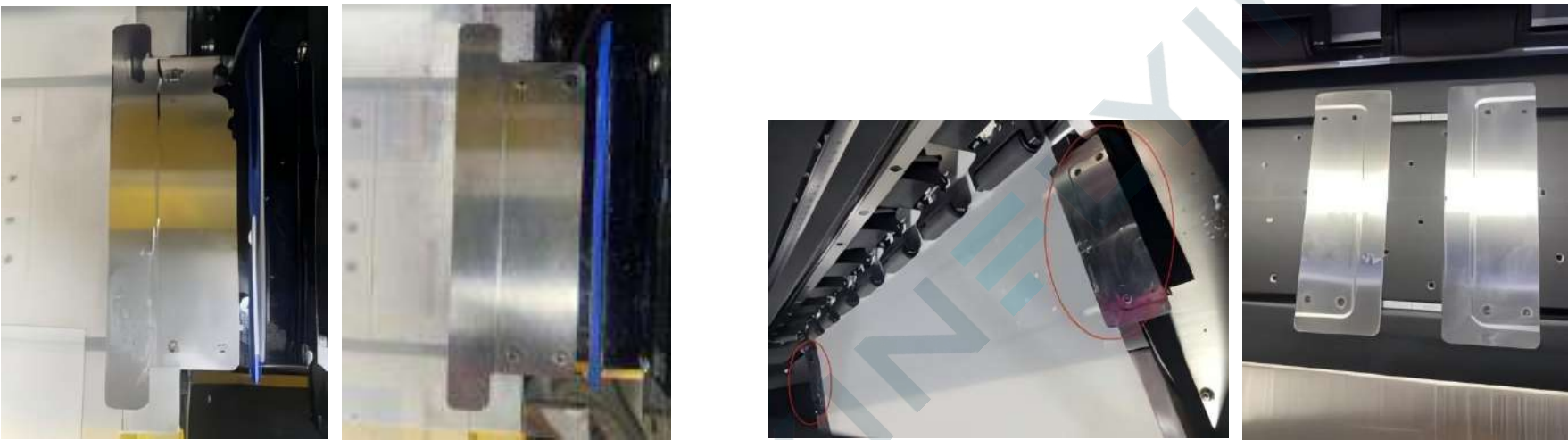
清理前 (Before cleaning) 清理后 (After cleaning)

墨垫 (红色圈圈) 和 墨垫平台 (黑色圈圈)
Ink capping (red circle) and ink capping station (black circle)



清理前 (Before cleaning) 清理后 (After cleaning)

压纸片 (Press clip)



清理前 (Before cleaning) 清理后 (After cleaning) 清理前 (Before cleaning) 清理后 (After cleaning)

小车底板 (Carriage bottom)



清理前 (Before cleaning) 清理后 (After cleaning) 清理前 (Before cleaning) 清理后 (After cleaning)

注意： 在清理小车底板及喷头表面之前，需要先关闭机器电源，然后将旋钮（如图 1 中红圈所示）逆时针旋转，以降低平台高度，最后手动将小车推到图 2 所示的位置。
Notice: Need to **turn off the machine** firstly before cleaning the bottom of the trolley and the surface of the printheads, then turn the knob (Red circle in Figure 1) counterclockwise to lower the height of the platform, finally manually push the trolley to the position in the Fig. 2

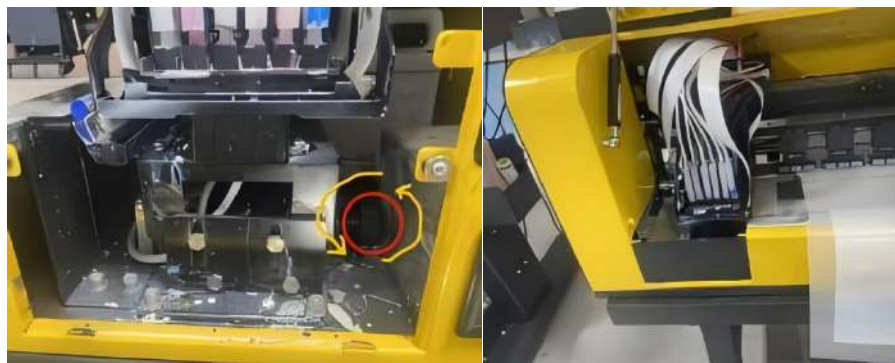


图 1 (Figure 1)

图 2 (Figure 2)



图 1 (Figure 1)

图 2 (Figure 2)

2. 喷头表面 3 天清理一次，用无尘布蘸点蓝色清洗液从上往下擦；

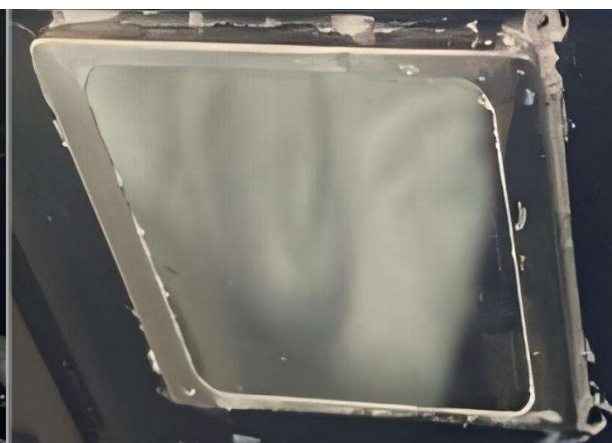
Clean printheads' surface once every 3 days. Wipe it with a dust-free cloth dipped with blue cleaning solution from top to bottom.



清理前 (Before cleaning)



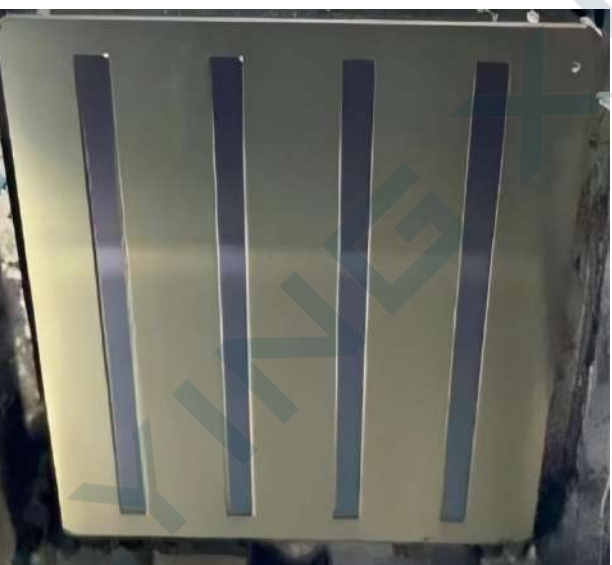
清理后 (After cleaning)



清理前 (Before cleaning)



清理后 (After cleaning)



蓝色清洗液 (Blue cleaning solution)



无尘布 (Dust-free cloth)

3. 光栅条三个星期用无尘布蘸点酒精擦一次，导轨一个月加一次润滑脂 (二者擦拭须沿单一方向擦拭，不可来回摩擦)

The Grating strip should be wiped with a dust-free cloth with a little alcohol once every 3 weeks, and the guide rail needs to be added with Lubricating Grease once a month; (When wiping either component, always wipe in a single direction; do not rub back and forth.)

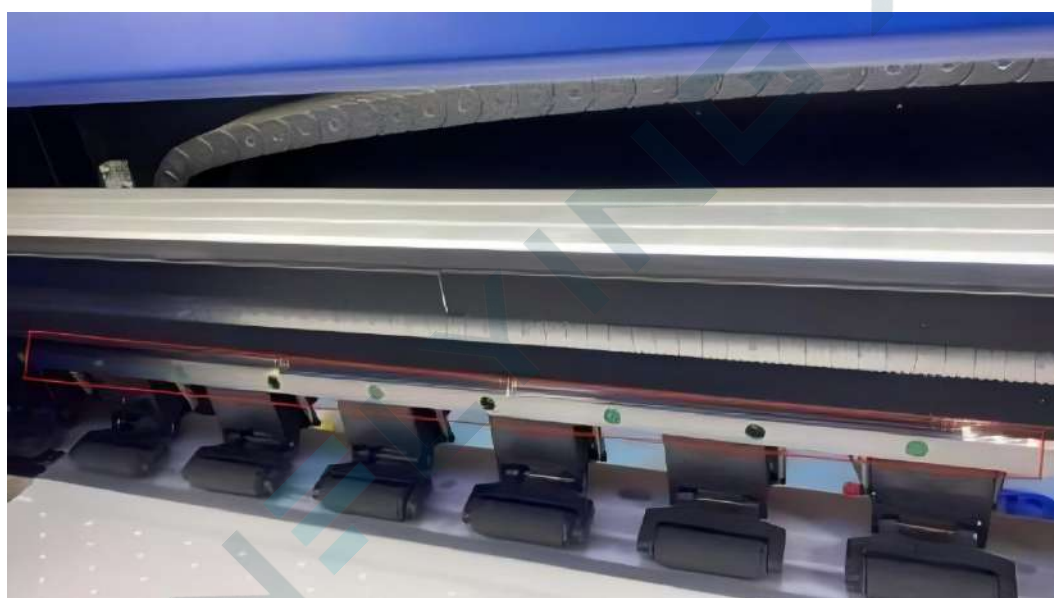
光栅条 Grating Strip/ Encoder strip



导轨 Guide rail

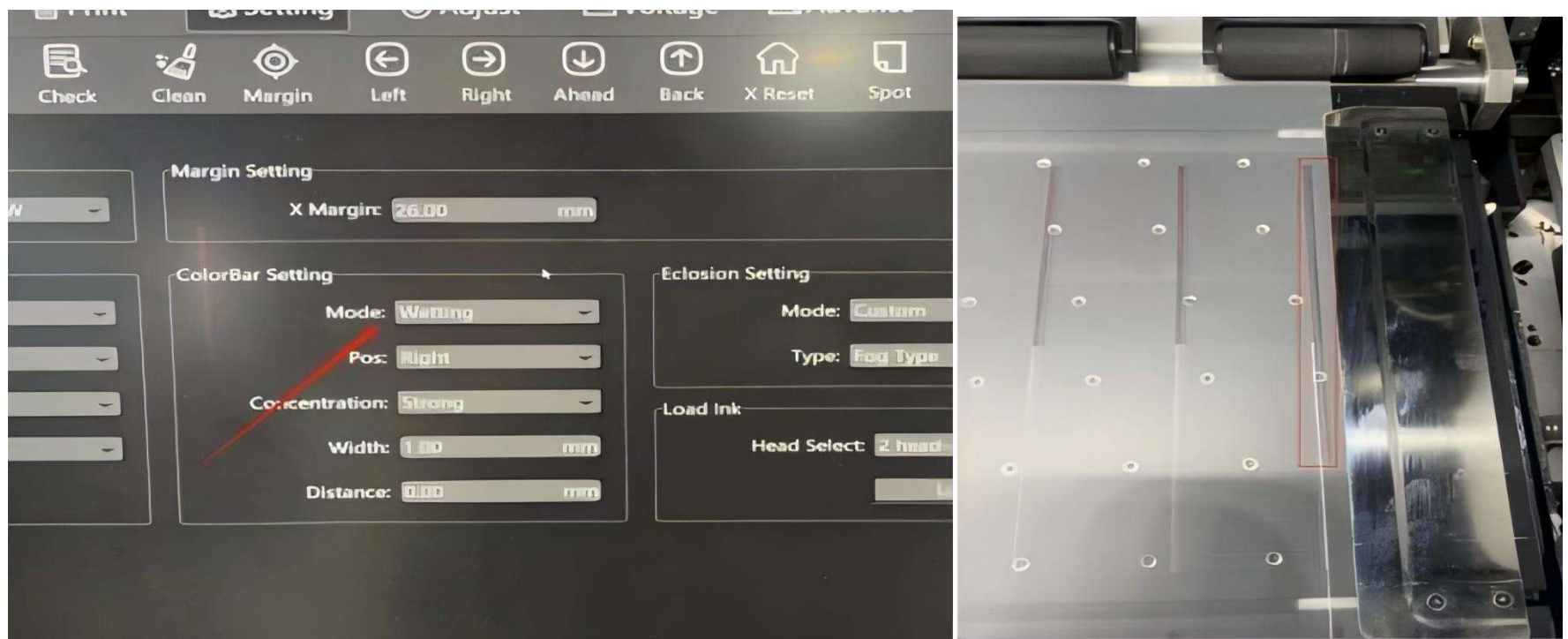


润滑脂 Lubricating Grease



4. 打印中要加彩条，防止打印中堵头；

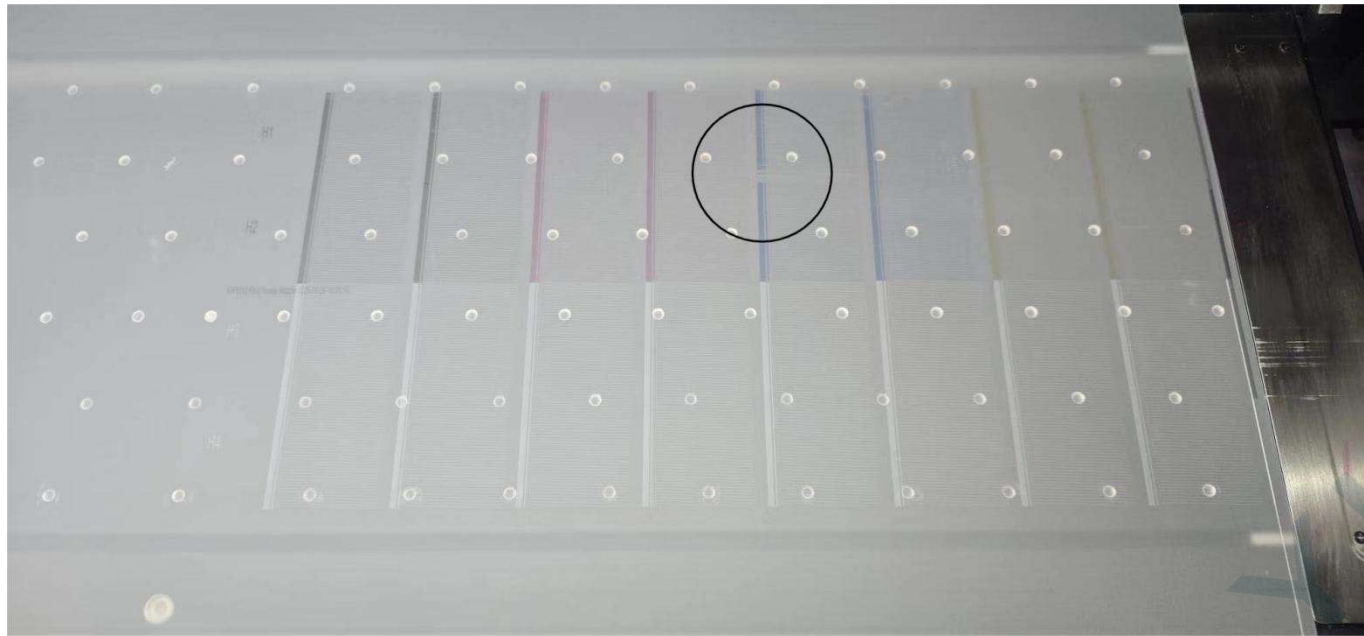
When printing, the "ColorBars" should be set to "Wetting" by printexp. software to prevent print head from clogging;



5. 打印前先打个测试条，确认没断墨再打印（出现断墨就要清洗好再打印）；

Before printing, run a "Check" by the printexp. to print a nozzle test to confirm that the ink is performing well. (If the ink performance is not good, the printheads should be cleaned well, and then print again[Once printing, you need to print a nozzle test firstly as mentioned above]);

IF DON'T KNOW HOW TO CLEAN, please contact us. If there is no improvement after "weak clean" for three times, please contact our techs.



测试条断墨 Test Strip with problem (ink not come out 100%, and all color not show in single line)



正常的测试条 Normal Test Strip (all ink come out 100% and all color show in single line)

6. 打印过程中出现断墨（图案有线条），需要暂停并且清洗；清洗了两三次不行，需要联系我们技术

During printing, if there is ink cut off (The pattern with lines) , you should stop printing and do some cleaning for printer heads



红色断墨 (Red ink cut off)

白色断墨 (White ink cut off)

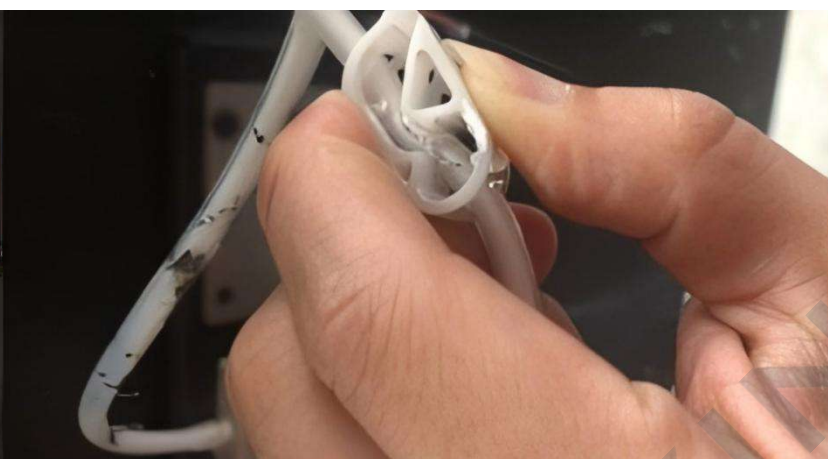
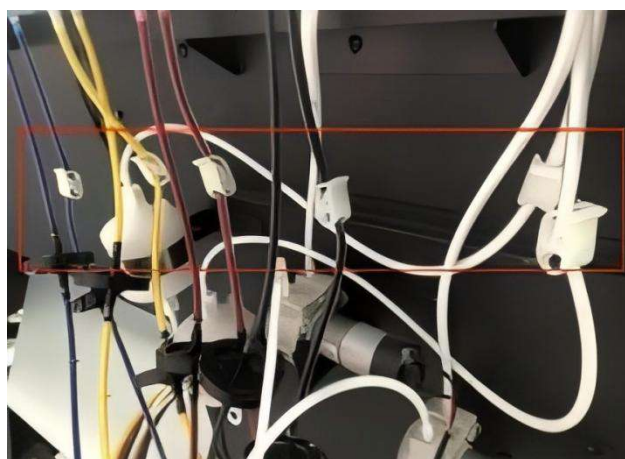
清洗 (Cleaning button)

7. 每天关机前需要打个测试条 (正常测试条看保养第五条)。如果是断墨状态, 则要清洗好再关机;

Please print a nozzle test before you shut down the machine everyday (According to NO.5, the maintenance about the nozzle test). If the ink performance is bad, you should clean the printhead well before the shutting down the machine .

8. 机器**超过两天不用**需要用保湿液浸泡打印头 (浸泡打印头详情看另外发送的视频); 墨管夹好防止虹吸漏墨;

Once the printer **NO NEED working** for more than 2 days ,we advice that you should soak the print head with Moisturizing liquid (see the video of how to soak the print head,if you do not have, just contact us), and the ink pipe need be clamped to prevent siphon ink leakage;



9. 如果两三天没有使用机器, 要启动白墨循环, 循环 15 分钟后关闭循环, 静止 10 分钟, 然后喷头注墨 15 秒再清洗, 最后打测试条检查打印头状态;

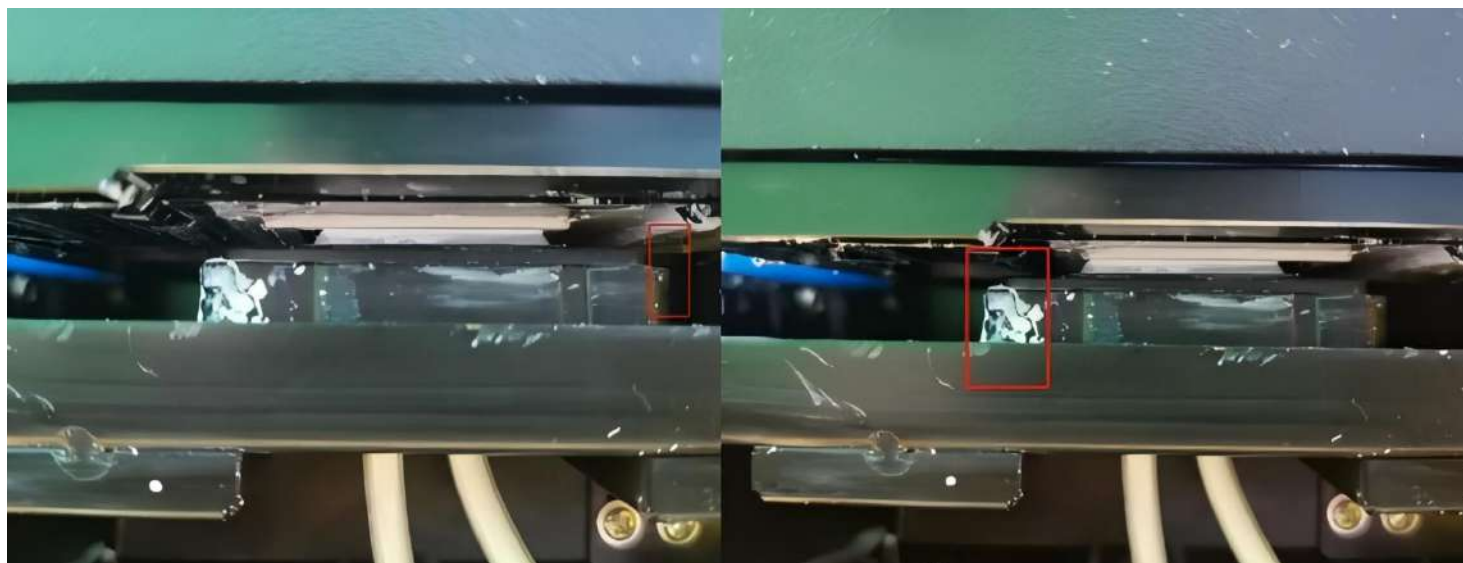
Every two to three days, run the white ink circulation routine as follows: Turn on the white ink circulation system, let it run for 15 minutes, then turn it off. Wait 10 minutes, then click "Load Ink" for 15 seconds and perform a weak cleaning via software. Finally, print a nozzle test to check the printhead status.



白墨循环开关 White ink cycle switch

10. 关机前, 需要将小车正确复位。必须观察喷头和墨垫是否对齐, 喷头居中闭合状态才能保湿好, 防止堵头。

Before shutting down, the carriage must be properly reset. Ensure the printheads and the ink pad are aligned. The printheads must be in a centered and closed position to maintain good moisture retention and prevent clogging.



位置不对， 偏右（Incorrect position, it is too far to the right）

位置不对， 偏左（Incorrect position, it is too far to the left）



喷头居中并对齐墨垫（Best position, Center the print head on the ink pad ）

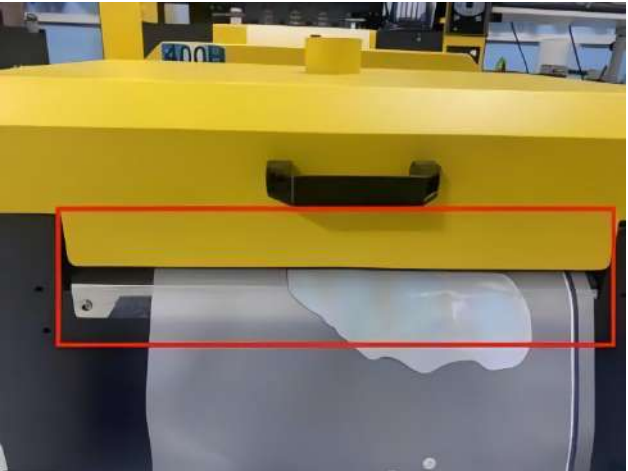
11. 打印环境保持温度，环境温度 20-35℃（68-95°F），湿度 35%—70%RH。

The printing environment should be kept at a temperature of 20 – 35° C (68 – 95° F) and a relative humidity of 35% – 70% RH.



三、注意事项 NOTICE:

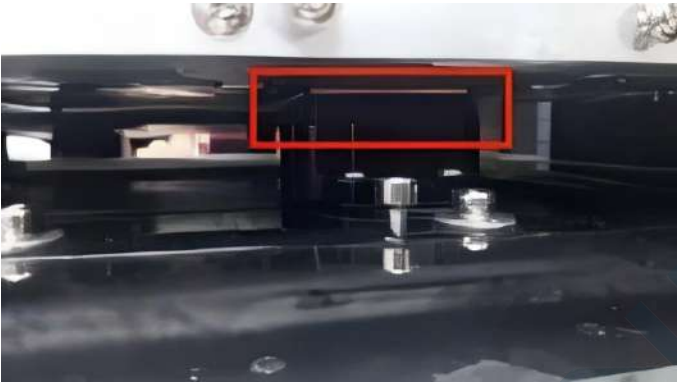
- 1. 打印过程中不要触碰打印膜，以免打印膜刮伤喷头；
DO NOT touch the PET film during printing to avoid the printheads from being scratched by PET film.
- 2. 加墨水前要用力摇晃墨水瓶子防止沉淀；
Before adding ink, shake the ink bottle vigorously to prevent sedimentation;
- 3. 打印膜和热熔粉保持干燥不能受潮，热熔粉超过 3 天不使用需要用密封袋密封，打印膜超过 3 天不使用需要使用保鲜膜包好；
The printing film and hot melt powder should be kept dry and be away from moisture. If the hot melt powder is not used for more than 3 days, it shall be sealed with a sealing bag. If the printing film is not used for more than 3 days, it shall be wrapped with a fresh-keeping film;
- 4. 膜从抖粉机出来前要盯一下，以免膜变形出不来顶在抖粉机内部；
Keep your eyes on the film before it comes out from the shaker, just in case that it's distorted and gets stuck in the shaker;



- 5. 抖粉机每天下班要清理干净机身上的粉（除了粉槽和底下抽屉）；
The powder on the shaker body should be cleaned every day, except for powder tank and the bottom drawer;
- 6. 打印中突然停电，需要手动把小车推回原位喷头复位保湿好。（保养手册第 10 条）
The power went out suddenly during printing, the carriage need to reset (push it back to home) and keep the printhead wet. (Maintenance NO.10)



小车复位原点 Carriage reset (Back to home)



打印头表面和墨垫密封保湿 (Printhead surface and ink capping need to seal and moisturize)

- 7. 必须使用设备配套或认证的专用墨水，劣质墨水易堵塞喷头。
Use only the OEM-specified or certified proprietary inks — low-quality inks clog printheads easily.
- 8. 禁止混用不同品牌或配方的墨水， 更换墨水品牌时，必须彻底清洗墨盒墨管
Never mix inks of different brands or formulations. When change ink brands, must wash and clean the ink tube, ink cartridges thoroughly before refilling.
- 9. 墨水存放于阴凉干燥处，密封保存；开封后尽快用完。
Store ink in a cool, dry place, sealed; use opened bottles promptly.

四、打印机需要定期更换和清洗的配件：

Accessories that need to be replaced and cleaned regularly:

1. 墨囊、彩墨过滤器每半年更换一次，白墨过滤器每三个月更换一次；
Ink dampers and color ink filter need to be replaced every six months, and replace the white ink filter every three months.



墨囊 (damper)

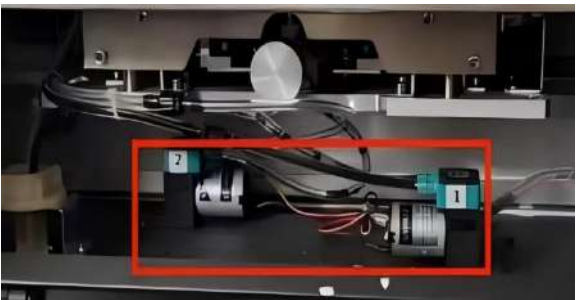


彩墨过滤器 (Color ink filter)



白墨过滤器 (White ink filter)

3. 刮片（图片在保养第一条）、墨垫（图片在保养第一条）、墨泵每半年到一年更换一次；
The wiper (see picture in maintenance item 1), ink capping (see picture in maintenance item 1) and ink pump should be replaced every six months to one year;



墨泵 (Ink pump)

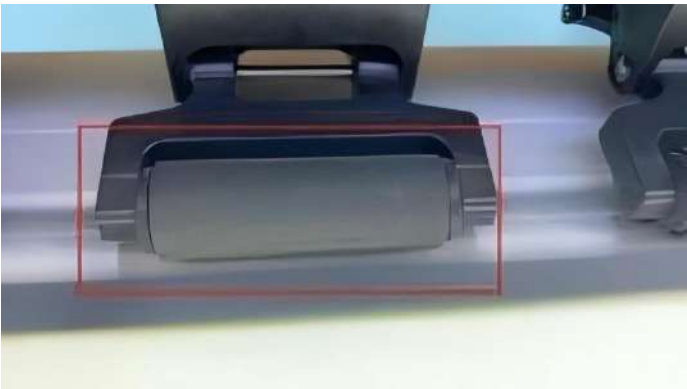


墨盒 (Ink cartridge)

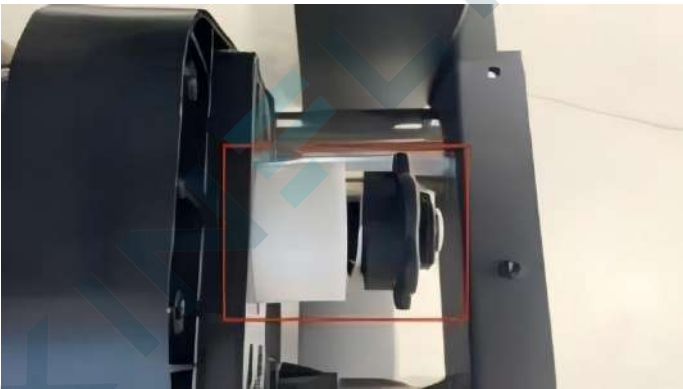


墨管 (Ink tube)

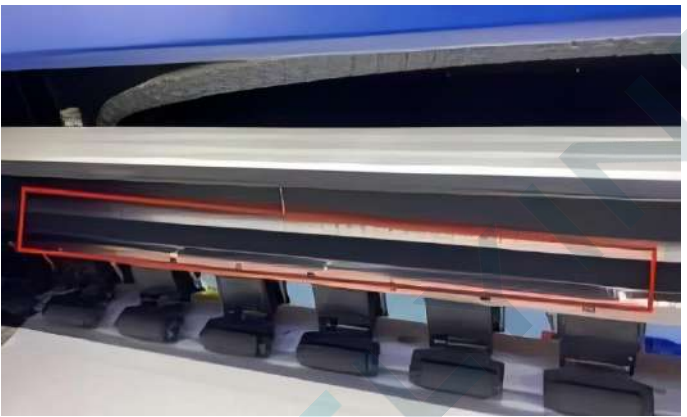
4. 光栅条（图片在保养第三条），压纸轮，阻尼器，小车长皮带，减速皮带每一到两年更换一次（出现磨损需要更换）；
The grating strip (As mentioned as above of the maintenance), pinch roller, buffer, carriage long belt, and decelerated belt should be replaced every one to two years(replacement is required in case of abrasion);



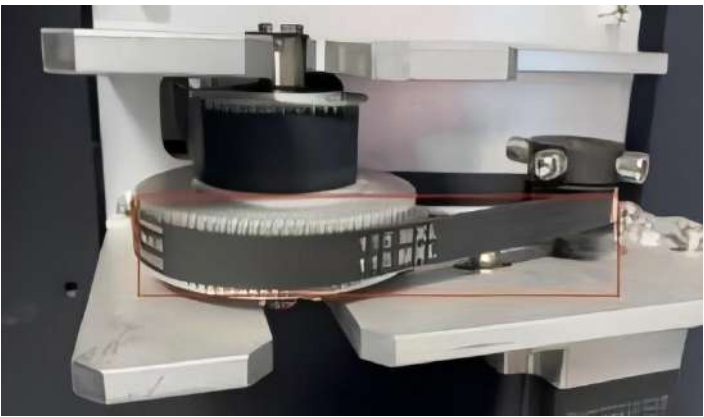
压纸轮 (Pinch roller)



阻尼器 (Buffer)



小车长皮带 (Carriage long belt)



减速皮带 (Decelerated belt)

5. 易损配件出现损坏时更换或其他配件出现损坏时也需更换。
Wear Part Replacement or replace other accessories when they are damaged.

五、禁止操作 风险说明

Prohibited Operations Checklist

- ✗ 用酒精或其他腐蚀性液体清洁喷头 腐蚀喷孔边缘，导致出墨不均匀
- ✗ 用尖锐工具（镊子、刀片、硬毛刷）清理喷头 划伤喷嘴，造成永久性损伤
- ✗ 在未断电状态下拆卸、安装喷头或电子元件 损坏各系统使用寿命，危害喷头
- ✗ 使用两种不同品牌墨水混杂使用 化学反应导致喷头堵塞
- ✗ 将喷头卸下后裸露放置 墨水干涸导致永久性堵孔
- ✗ 在设备运行时添加墨水 墨水溢出污染电路
- ✗ 随意修改设备参数（如喷头电压、加热温度） 参数错误可能导致喷头烧毁、面料损坏
- ✗ 设备运行时推动滑架 容易造成各种错位和机械损伤
- ✗ 停用时完全断电不做任何防护 喷头墨水干结堵塞，传动部件锈蚀

Prohibited Action	Risk Explanation
✗ Clean the printhead with alcohol or other corrosive liquids	Corrodes nozzle edges, causing uneven ink ejection
✗ Use sharp tools (tweezers, blades, stiff brushes) to clean the printhead	Scratches the nozzle face, causing permanent damage
✗ Install/remove the printhead or electronic components while powered on	Reduces component service life and damages the printhead
✗ Mix inks from two different brands	Chemical reaction clogs the printhead
✗ Leave a removed printhead exposed to air	Ink dries out, causing permanent nozzle blockage
✗ Add ink while the machine is running	Ink overflow contaminates circuits
✗ Modify device parameters arbitrarily (head voltage, heating temperature, etc.)	Incorrect parameters may burn the printhead or damage media
✗ Push the carriage manually while the machine is operating	Causes various misalignments and mechanical damage
✗ Completely power off without any protective measures during idle periods	Ink dries in the printhead; drive components rust

六、关于打印机的假期维护（为期 1 至 2 周）：

- 1.如果印刷室有人，您每天只需打印测试条即可，这非常适合打印机的维护工作，而且无需执行后续步骤。
- 2.如果打印室里没有人，您需要检查打印头是否正常工作，首先打印出测试条，如果发现有墨水缺失（出墨不完整），则需要先清洁好，再检查打印头以确保其处于良好状态，然后按照以下步骤操作：
- 无保湿液方法：（操作简单，但如果机器长时间未使用，存在打印头堵塞的风险）
- （1）将打印头浸泡在保湿液中，联系我们获取视频。
 - （2）打印头必须密封并进行润湿处理。这意味着打印头必须与墨盒对齐并闭合以密封并润湿打印头。否则，打印头会堵塞。
 - （3）使用墨管夹子夹住所有墨管
 - （4）紧固所有墨盒盖。
 - （5）清理废墨
 - （6）密封热熔粉和打印膜以防止受潮
 - （7）在机器上盖好防尘布，防止灰尘污染光栅条解码器等。
 - （8）在左右箱体里放好樟脑丸，以防老鼠咬断电线；
 - （9）放假期间打印机必须完全切断电源；

3 周以上

- 使用保湿液的方法：（操作较为复杂，但若机器长时间不使用，此方法可降低打印头堵塞的风险）
- 1.将剩余的墨水倒入一个干净且空的墨盒中，以防止墨水沉淀。建议：最好提前将打印机墨盒中的墨水用完。
- 2.清洗墨管和墨囊。首先，取出墨囊，用注射器抽出墨囊和墨管中的墨液，然后用纯净水/蒸馏水冲洗墨盒和墨管。（我们会将视频发送给您，以展示清洁方法，您只需观看前面的部分即可）！
- 3.使用带有细软管的注射器，将纯净水注入打印头以进行冲洗。确保打印头内没有墨水。然后使用带有套管软管的注射器，缓慢将保湿液体注入打印头的每个通道中。力度不宜过大。（操作过程中，在打印头的两侧放置纸巾或无尘布，以防止液体流入与打印头及电缆接触的地方，因为这会烧坏打印头）

4. 拧紧所有墨盒盖。
5. 清理掉废墨。
6. 将热熔粉末和印刷薄膜密封起来，以防止受潮。机器用保鲜膜或者大袋子盖住机头放干燥剂，做好防潮。
7. 在机器上盖好防尘布，防止灰尘污染光栅条解码器等。
8. 在左右箱体里放好樟脑丸，以防老鼠咬断电线；
9. 放假期间打印机必须完全切断电源；

如果您有任何疑问，请随时与我们联系。

当你再次使用打印机时，如果向打印头中注入了保湿液，那么你需要用纯净水冲洗掉打印头中的保湿液，确保打印头中没有保湿液，然后才能吸取墨水并加载墨水。

Regarding the holiday maintenance(for 1-2 weeks) for the printer:

1.If there is someone at the printing room, you can just print the nozzle test everyday, which is perfect for the printer's maintenance, and there is no need to do the follow steps.

2.If there is no one at the printing room. You need to check whether the print head is normal, print the nozzle test strip firstly, if there is ink missing(The ink came out that is not good, the nozzle test is not complete), it is need to Weak Clean first to ensure that the nozzle test is complete. Check the print head to ensure it is in good condition, and then follow these steps:

Method Without Moisturizer: (Simple operation, but there is a certain risk of print head clogging if the machine is not used for a long time)

- (1) The print head should be soaked in moisturizing liquid contact us for the video.
- (2) The print head must be sealed and moisturized.It means that the print head must be aligned and closed with the ink pad to seal and moisturize the print head. Otherwise, the print head will be clogged.
- (3) Use ink tube clips to clamp all ink tubes
- (4) Tighten all ink cartridge cover.
- (5) Clean up the waste ink
- (6) Seal the hot melt powder and printing film to prevent moisture
- (7) DO NOT let your printer and shaker with dust, please take good measures to prevent dust from the machine.

Moisturizer Method: (for >2 weeks of inactivity), Complicated operation, but it can reduce the risk of printhead clogging if the machine is not used for a long time)

1. Pour the remaining ink into a clean and empty cartridge to prevent ink precipitation. Advice: It is best to use up the ink in the ink tank on the printer in advance..
2. Clean the ink tubes and dampers. Firstly, take out the damper, use a syringe to draw out the ink in the dampers and ink tubes, then rinse the ink cartridges and ink tubes with pure water/distilled water. (And we will send the video to you, for showing how to clean, just watch the front part)!!
3. Use a syringe with small hose to flush the print head with pure water. Make sure there is no ink inside the print head. Then use a syringe with sleeve hose to slowly inject the moisturizer into each channel of the print head. The force should not be too strong. (During the operation, place tissue or dust-free cloth on both sides of the print head to prevent liquid from flowing into contact with the head and cables, because it will burn the heads)
4. Tighten all ink cartridge cover.
5. Clean up the waste ink.
6. Seal the hot melt powder and printing film to prevent moisture.
7. DO NOT let your printer and shaker with dust, you can use a cloth to cover them.

If you have any questions, please feel free to contact us.

When you back to use the printer, if you inject the moisturizing liquid into the printheads, you need to use pure water to flush out the moisturizing liquid that in the printheads, make sure there is no moisturizing liquid in the printheads then you can suck ink and load ink.