

# eufyMake UV Printer E1 User Guide

## 1. Important Safety Instructions



- Read these instructions. All safety and operating instructions must be read before operating this product.
- Please refer to the information on the exterior bottom enclosure for electrical and safety instructions before installing or operating the product.
- If the power cord is damaged, it must be replaced with a special cord or assembly, which is available from the manufacturer or its service agent.
- Do not disassemble the product. Take it to a qualified service person for servicing or repair. Incorrect reassembly may result in a risk of fire or electric shock.
- Do not install this equipment in a confined space. Ensure that it is kept well-ventilated. Do not cover the ventilation openings with items such as newspapers, tablecloths, or curtains.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or a lack of experience or knowledge, unless they have received supervision or instruction regarding its use from a person responsible for their safety.
- This equipment is not suitable for use in locations where children are likely to be present. Children should be supervised to ensure that they do not play with the appliance.
- The maximum operating temperature is 35°C (95°F).

### Hygiene & Personal Protection

- **Use eye protection.** Always wear protective glasses or goggles. Avoid wearing contact lenses while working. Never look directly at the UV radiation source (lamps) even with eye protection.
- **Use protective gloves.** Purchase gloves from reputable suppliers, as inferior quality gloves may increase the risk of developing contact dermatitis (irritation, etc.). Be aware that protective gloves may increase entanglement. Keep hands away from operating rotating shafts, rollers, and other equipment with moving parts.

- Eating, drinking, and smoking are prohibited in all areas where this device is located.
- Wear solvent-resistant protective gloves when cleaning the equipment or floor stains with solvents.

### **Operating**

- Make sure that the printer is operated in a well-ventilated workplace with proper air circulation.
- Do not move the device while it is plugged in or operating.
- Use only the original ink cartridges supplied by the manufacturer. Using the wrong cartridge can cause damage to the printer and affect the quality of the printed material.
- Ink cartridges should be stored in a cool, dry place away from direct sunlight and heat sources. Spills should be cleaned up immediately.
- Use only the original power adapter supplied by the manufacturer.

### **Battery**

- Product contains non-replaceable RTC coin battery. Battery Model: CR1225, 3V rating.
- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. DO NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death. Call a local poison control center for treatment information.
- Do not recharge non-rechargeable batteries.
- Do not attempt to force discharge, recharge, disassemble, heat above 100°C (212°F), or incinerate. Doing so may cause injury due to venting, leakage, or explosion resulting in chemical burns.
- Keep new and used batteries out of the reach of children.
- The coin battery can cause serious or fatal injury in 2 hours or less if placed in any part of the body.



### **Indoor Use only**



**Caution: Moving Parts! Keep body parts away from moving parts.**

## 2. About this Product

### 2.1 Introduction to UV Printing Principle

#### **Printing Principle**

UV printers utilize piezoelectric inkjet technology. This means there's no direct contact with the material's surface. Instead, the print head uses voltage to precisely eject ink droplets from the nozzles onto the substrate. This "non-contact" or "gap" inkjet method allows for printing on a vastly wider range of materials. A single machine can print on materials like glass, tile, acrylic, metal, leather, and more.

#### **Curing Principle**

UV curing occurs when the photoinitiators in the UV ink react with the ultraviolet light emitted by the LED lamps. This chemical reaction causes the ink to solidify almost instantly, not through traditional heat baking or air drying. This rapid curing process, taking only a few seconds, significantly reduces production time. Because UV ink itself often has a matte finish, printed images can sometimes appear slightly dull. To address this, a clear varnish (gloss) can be applied over the printed image to create a brighter, high-gloss effect.

#### **Color Principle**

5-color UV printers (C - Cyan, M - Magenta, Y - Yellow, K - Black, W - White) can satisfy most printing needs, and we also have the gloss for better effect. Other colors are created by mixing these primary colors using color management software. Beyond standard color printing, this printer, through software control, can achieve special effects. For example, white ink or gloss can be layered to create raised, textured surfaces, enabling embossed (relief) effects.

### 2.2 Special Features

#### **ColorMaestro™ Technology: Create Up to 5 mm of 3D Texture**

Modern printing technology is increasingly focused on the feel of print. This device achieves superior 3D relief printing for enhanced dimensionality and texture. This is accomplished through a combination of software and hardware. First, the software uses AI to convert the user's original print image into a depth map. The user sets the desired print height, and the software automatically determines the number of layers and color mapping required. The hardware then performs layered printing, building up the 3D effect by precisely depositing layers of white ink or gloss, achieving a relief effect of up to 5 mm.

### 3-in-1 Modular Design for All Your Printing Projects

This device supports multiple attachments, including flatbed printing, rotary printing, and roll-to-roll printing (under development). This allows you to print on a variety of sizes and types of objects with a single machine.

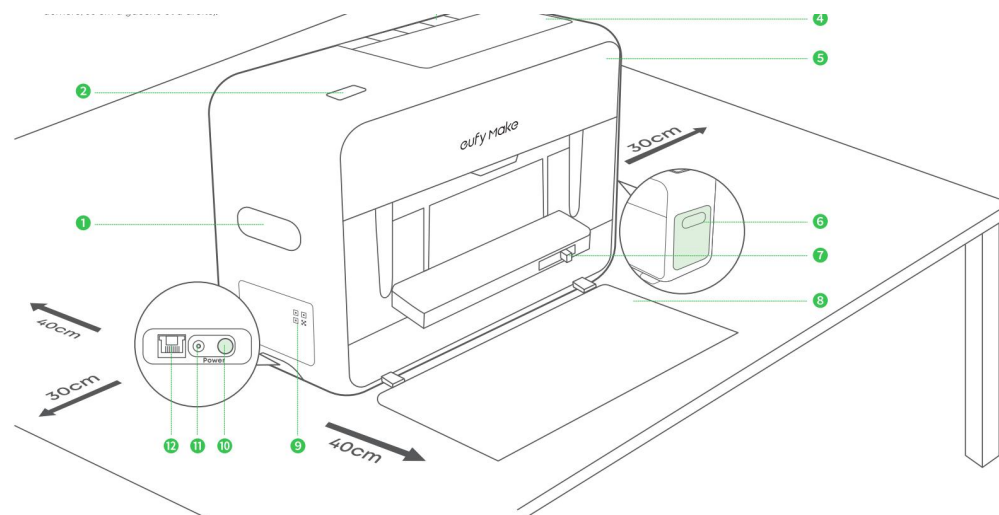
### JetClean™ System: Reduces Clogs Automatically

Because conventional UV printer nozzles are prone to problems and require frequent maintenance, this device is equipped with JetClean™ automatic nozzle cleaning and maintenance technology. This system automatically infuses cleaning solution and moisturizing solution into the nozzles after use, keeping them clean and moist even when the printer is idle. This automated process ensures optimal nozzle performance and reduces manual maintenance.

### Precise Auto-Positioning with Dual Lasers and a Built-In Camera

To accurately capture the target printing position and measure height for subsequent design and printing, we've incorporated dual lasers and a high-resolution camera. The built-in camera captures images, while dual lasers measure height, making it easy for users to locate and target the printing area. Furthermore, automatic distortion compensation and other calibration algorithms are included to enhance accuracy, achieving truly intelligent printing.

## 2.3 At a Glance



1. Handle
2. START/STOP Button
  - Press to start or stop printing
  - Press to confirm device connection

3. Ink Cartridge Slots
4. Top Cover
5. Air Filter Compartment
6. Cleaning Cartridge Compartment
7. Flatbed Lock
8. Printer Compartment Door
9. QR Code for Adding Device
10. Power Button
  - Press to turn on the device and inject ink when powered off.
  - Press to turn on the device, clean the print head, and inject ink when powered off by accident.
  - When powered on, press and hold for 5 seconds to conduct the cleaning, then power off.
  - When powered on, quickly press twice and wait for the main light flashes for 2 seconds, then press and hold for 5 seconds to stop all operations, clean the print head, then delete all user data.
11. DC Input Port
12. Ethernet Port

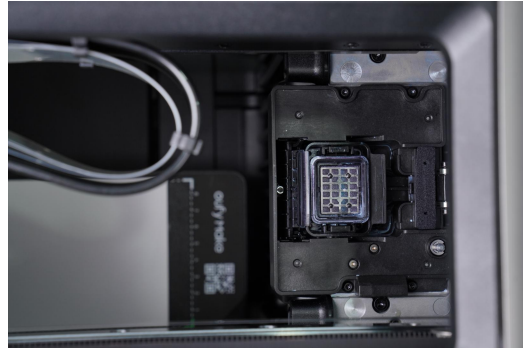
## 2.4 Main Modules and Functions

### **Motion Control System**

The motion control system manages essential functions in the UV printer. It controls the displacement of the print head and substrate. The UV print head moves along the X-axis, while the Y-axis printing accessories and flatbed platform perform vertical movement.

### **Print head and Ink Pad**

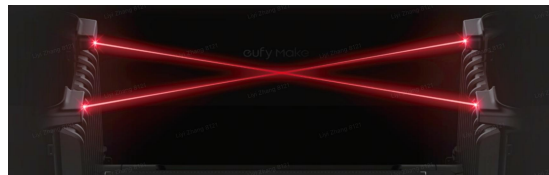
This printer is equipped with a single six-channel UV print head paired with an ink pad. During printing, the print head uses voltage to eject ink droplets from the nozzles onto the substrate, ensuring there is no direct contact with the material. This serves as a key module of the UV printer. The ink pad minimizes the risk of clogging and damage to the print head.



### Sensor Measurement System

This printer includes a built-in sensor measurement system containing a camera and dual laser sensors. The camera identifies the print platform and substrate, and then extracts contours, while the dual lasers automatically measure the object height before printing, then adjust the printing platform height accordingly.

The through-beam laser sensor measurement system uses a high-precision, non-contact mechanism. The system consists of a laser emitter and receiver installed above the platform. To measure substrate height, place the object on the flatbed platform. Move the platform to bring the object into the laser detection zone. When the object enters the laser beam, the sensor triggers and captures the real-time height information of the object's top. The system then calculates the exact object height by measuring the displacement between the initial platform position and the position where the laser beam becomes blocked. This process responds rapidly and provides high accuracy, keeping measurement error within 1 millimeter. The system meets the requirements of applications demanding precise dimension detection.



### Ink Cartridge and Cleaning Cartridge

This printer equips ink and cleaning cartridge for color printing and print head maintenance. The ink cartridges contain C (Cyan), M (Magenta), Y (Yellow), K (Black), W (White), and G (Gloss). CMYKW inks achieve multi-color printing, layered printing, and other special effects, while the gloss layer is also available to enhance the vibrancy of the printed colors. The cleaning cartridge infuses cleaning solution into the nozzles after printing for automatic cleaning and maintenance.



## AI-Powered

The integration of AI features significantly improve user experience, with AI contour recognition and AutoFill ensuring more precise and efficient printing operations.

**1) Contour Recognition:** AI contour recognition system precisely locates the printing area to improve efficiency and quality of this UV printer. Key functions include:

- **Printing Area Detection:** Quickly detect the contour of the target object to prevent printing outside the substrate or on blank areas.
- **Contour Extraction:** Use the camera to capture substrate images, extract edge or shape features, and then generate the design canvas accordingly.
- **Efficient Positioning:** Apply AI to processes complex background interference for rapid and accurate substrate contour detection

Nevertheless, AI contour recognition faces clear limitations in detecting transparent substrates such as glass and acrylic for the following reasons:

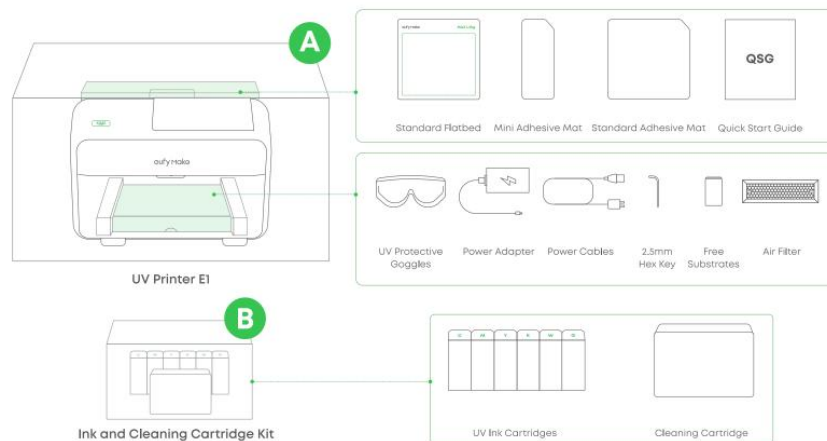
- **Optical Properties:** Transparent objects refract, reflect, and transmit light, causing blurred or lost boundaries that conventional RGB images cannot capture clearly.
- **Background Interference:** Transparent substrates merge with the background, making contour features difficult to distinguish.
- **Surface Reflection:** Bright reflective zones may be misidentified as substrate edges or contours.

**2) AutoFill:** AutoFill targets multi-substrate printing scenarios. The camera captures images, and the AI model generates contour information for each substrate. After users design patterns based on contour data in the control software, AutoFill automatically applies the design to all substrates on the flatbed platform, reducing repetitive manual positioning and angle adjustments across multiple substrates.

## 3. What's in the Box

**Check inventory in 2 shipping packages. If any are missing contact [support@eufy.com](mailto:support@eufy.com).**

*\* The quantity of power cables vary by country or region.*



## 4. Preparing

**To receive timely tutorial videos on using the UV Printer E1, we recommend subscribing to our YouTube channel.**

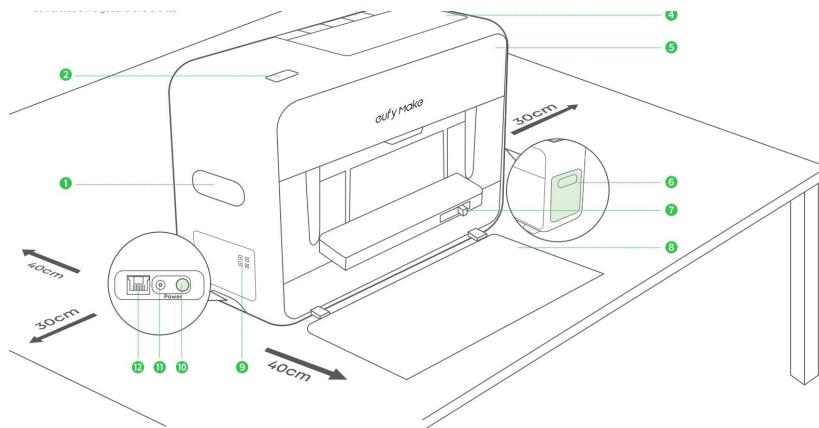
<https://www.youtube.com/@eufyMake/videos>

### 4.1 Placement

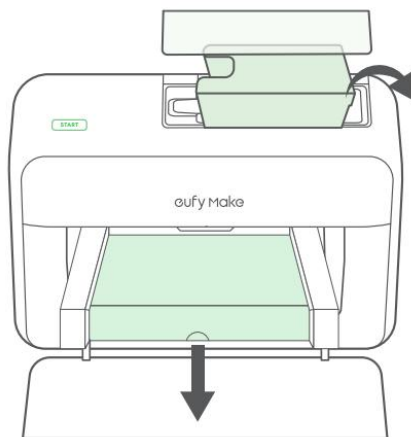
1. Place the printer on a flat, stable desk and allow enough space around it (15.7 in / 40 cm in front and back, 11.8 in / 30 cm to the left and right).

\* Place it in a well-ventilated area with good air circulation.

\* Avoid placing the printer directly against walls on either side, as this may lead to ink contamination of the wall.

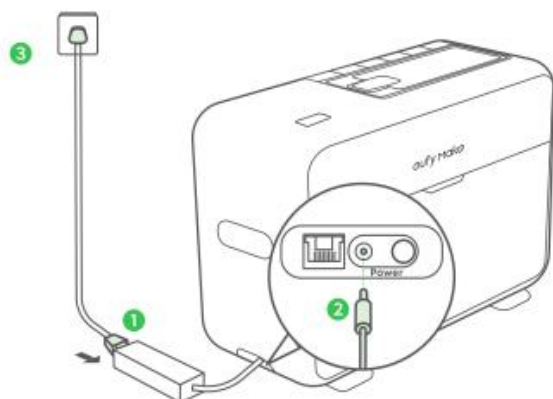


2. Lift the top cover, remove the protective foam inside, and then close it. Open the front door and take out the accessory box, then gently close the printer compartment door.



## 4.2 Power On

Plug into a power socket, and the power indicator will turn green.

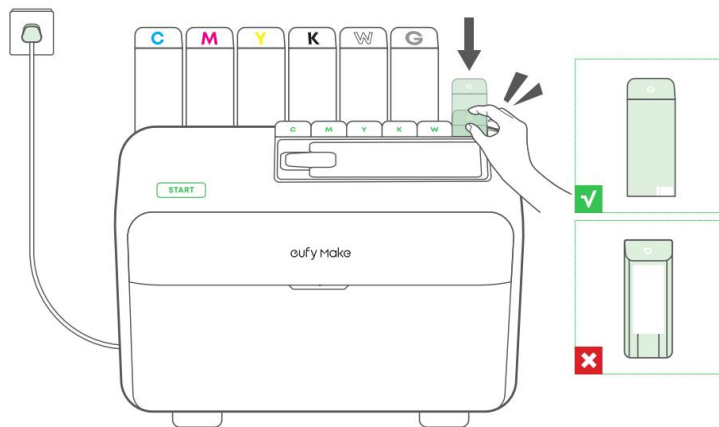


## 4.3 Installation

1. Install all 6 UV ink cartridges in the correct slots in order by color. A "click" sound indicates successful installation.

\* You can check the remaining ink capacity in the eufyMake app after system setup.

\* Only use the original ink cartridges provided by the manufacturer. Using non-original ink cartridges may cause damage to the machine.



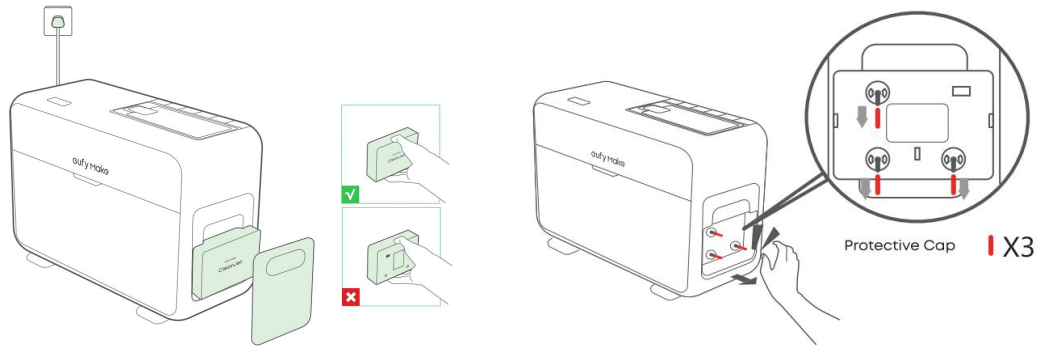
### About UV Ink Cartridges

The UV printer uses the following six types of cartridges. These cartridges are used for color printing, textured effects, and varnish finishing.

Each cartridge is clearly marked with its color label on the front and top, and includes a built-in chip for insertion recognition and real-time ink level monitoring.

|          |                  |                                                                                      |
|----------|------------------|--------------------------------------------------------------------------------------|
| <b>C</b> | <b>Cyan</b>      |  |
| <b>M</b> | <b>Magenta</b>   |                                                                                      |
| <b>Y</b> | <b>Yellow</b>    |                                                                                      |
| <b>K</b> | <b>Key Plate</b> |                                                                                      |
| <b>W</b> | <b>White</b>     |                                                                                      |
| <b>G</b> | <b>Gloss</b>     |                                                                                      |

2. Remove the three protective caps, then insert the cleaning cartridge in the correct orientation.



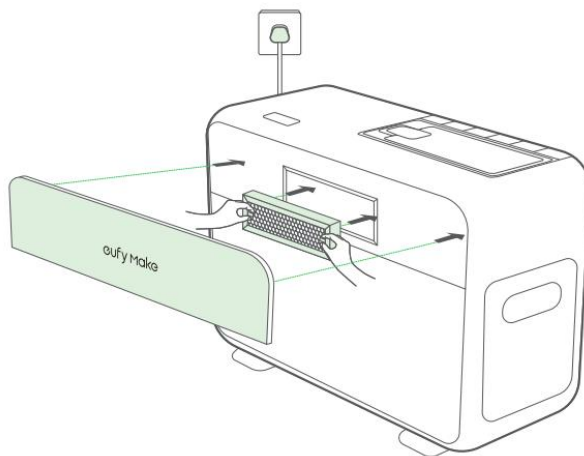
### About Cleaning Cartridge

The cleaning cartridge integrates three key functions: cleaning, moisturizing, and waste ink collection. It contains built-in cleaning and moisturizing solutions used for nozzle cleaning, daily maintenance, and keeping the print head in optimal condition.

It also includes an internal waste ink tank to collect excess ink discharged during printing and maintenance cycles.

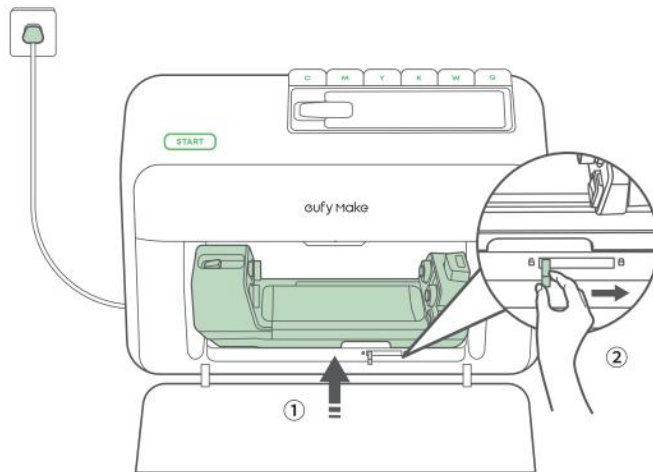
This accessory is designed for official use only. Use of third-party cleaning cartridges is not supported and may affect printer performance.

3. Using both hands, hold the tags and push the air filter into place. Press down the cover and you will hear a click.

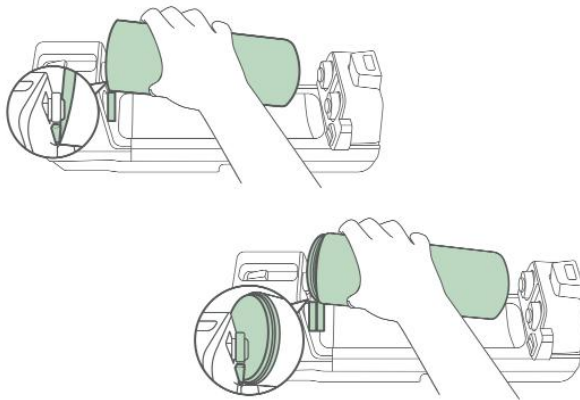


## 4.4 Install Rotary Printing Attachment (Optional)

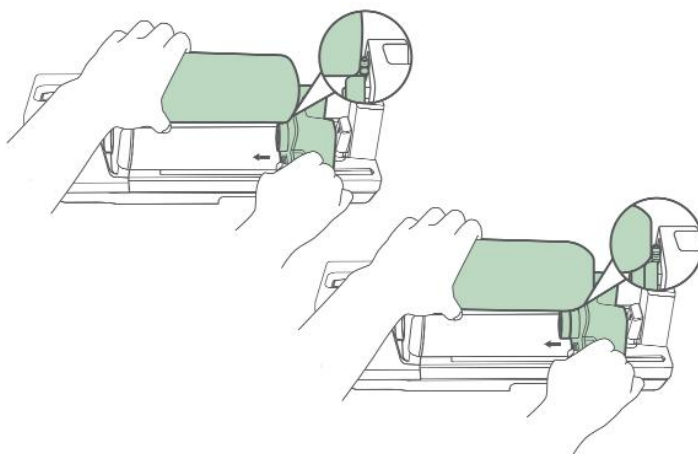
1. Slide the latch to the left to remove the pre-installed flatbed, then place the rotary printing attachment on the UV printer ray and slide the latch to lock it in place.



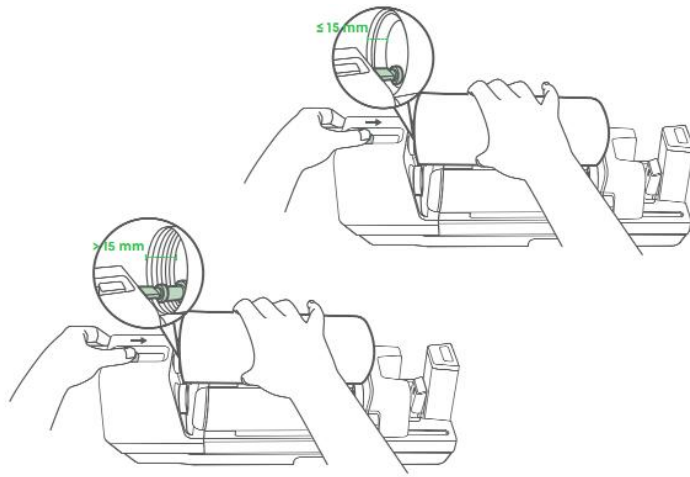
2. With the cup opening facing left, push against the front stop pin and then place the cup opening on the drive wheels. If the cup opening is stepped or rounded, use the drive wheel bushings provided to extend the drive wheels.



3. Press and hold the unlock button to move the slidable end so that the rear stop pin is against the bottom of the cup. Place the bottom end of the cup on the follower wheels and, if necessary, use the follower wheel bushings provided to extend the follower wheels.



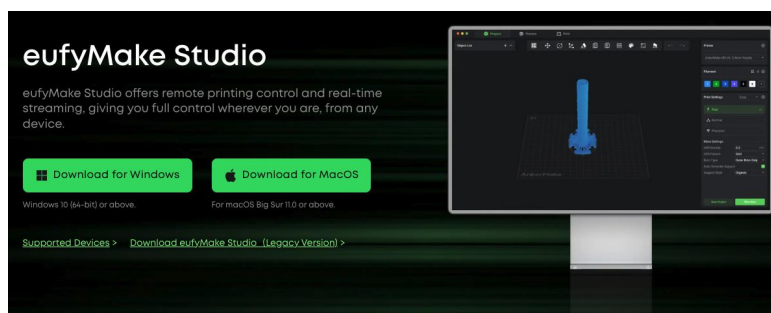
4. Drag the slidable strut to the right until it stops to prevent the cup from moving. If the internal thread of the cup mouth is deeper (depth > 15 mm), use the strut spacer provided to extend the strut.



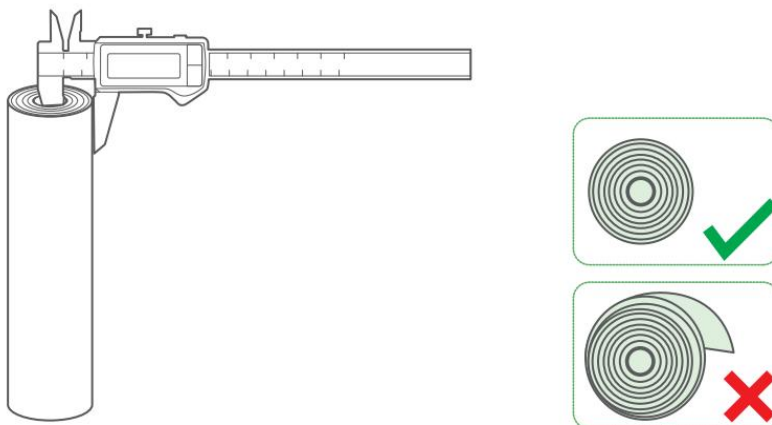
## 4.5 Install Roll-to-Film Attachment (Optional)

1. Download the eufyMake Studio software using the link below.

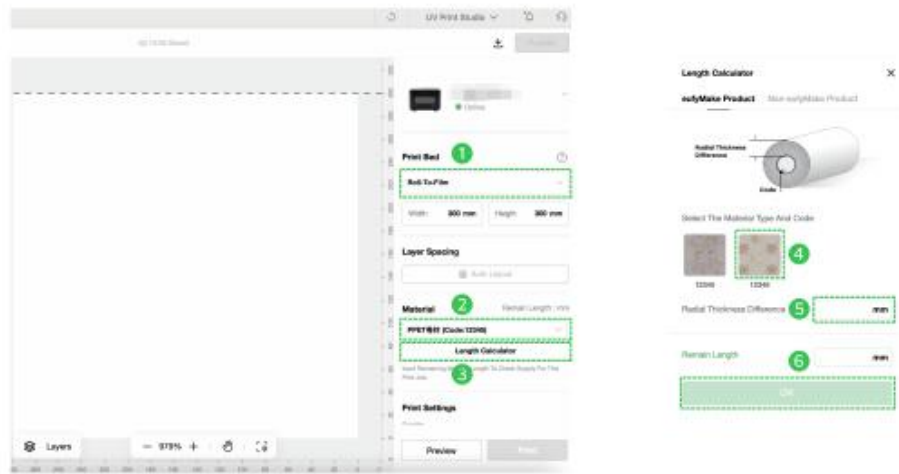
<https://www.eufymake.com/eufymake-studio>



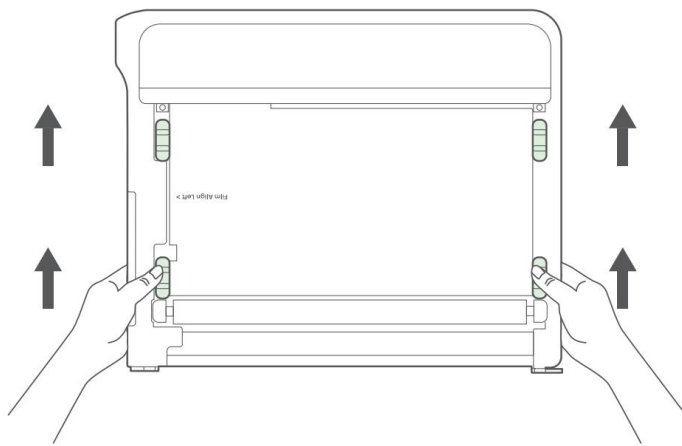
2. Wind the roll film tightly and use a calliper to measure the thickness of the exterior and interior diameters.



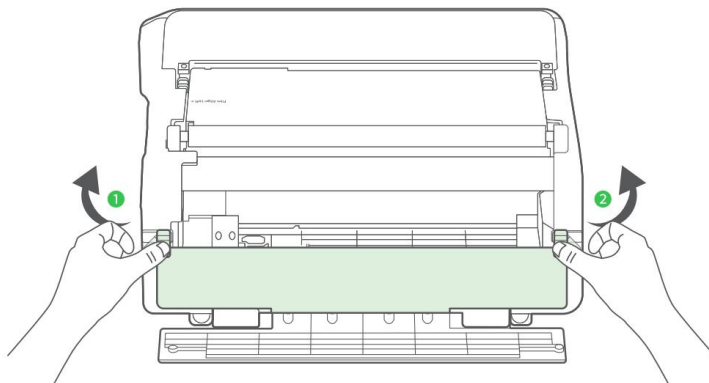
3. Enter the measured values into the eufyMake Studio software to get the remaining roll length.



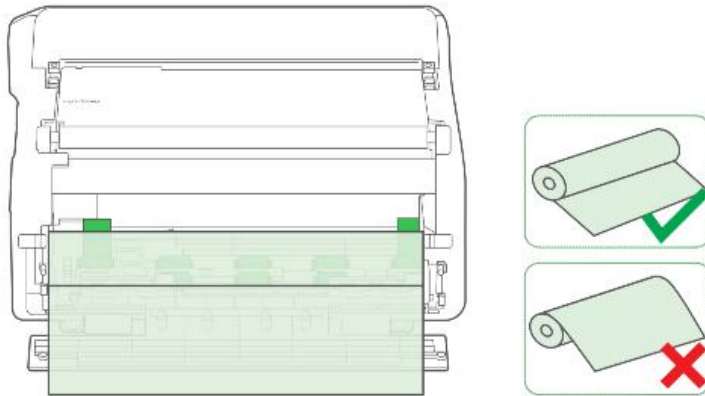
4. Unfasten the buckle locks to raise the feeding roller and outfeed roller.



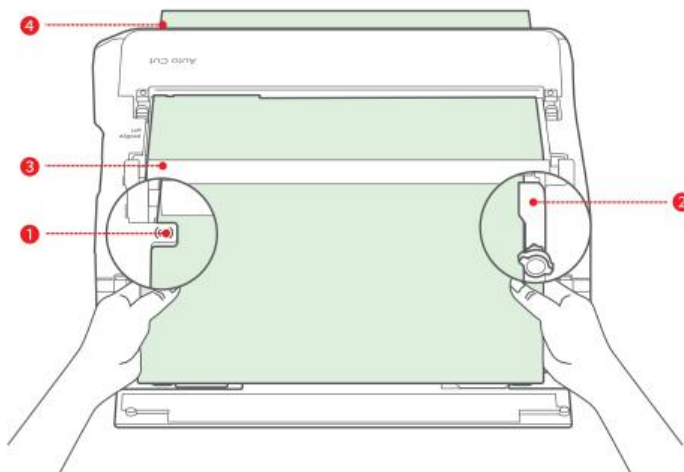
5. Twist the inlet cover knobs to open the inlet cover.



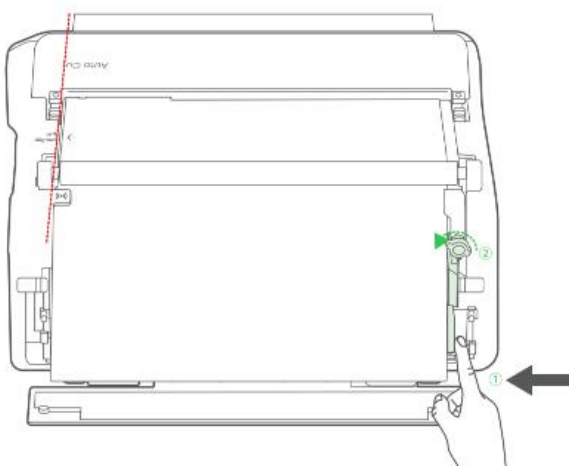
6. Load the roll film onto the support rollers in the correct direction.



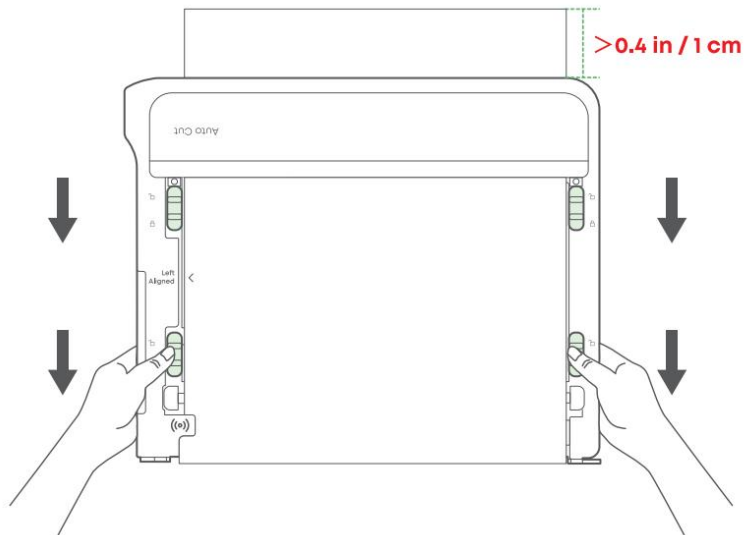
7. Unroll the roll film and feed it sequentially through the feeding detector, the feeding roller and then the outfeed roller.



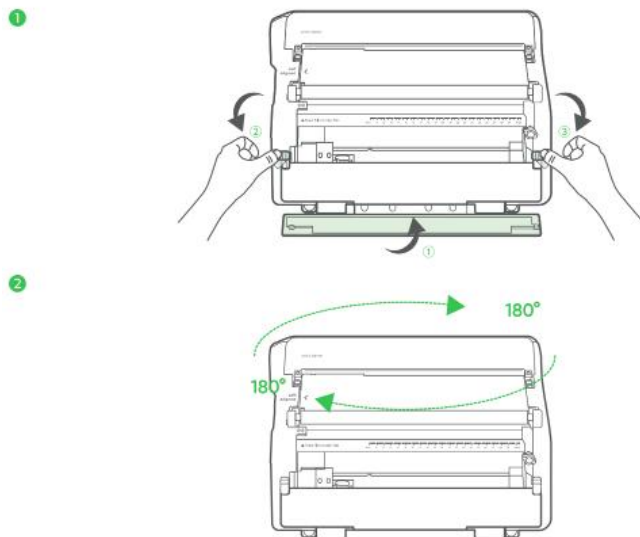
8. Align the left side with the limiters, then hold the alignment baffle against the right-hand side of the roll film. Secure it in place by turning the knob.



9. Pull out the roll film by around 0.4 in / 1 cm, then fasten the four buckle locks to secure the feeding roller and outfeed roller in place.

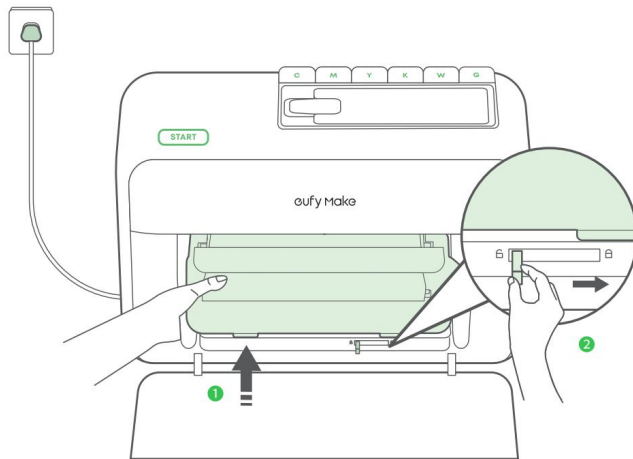


10. The roll film is now loaded. Close the cover and twist the knobs to secure. Turn it over so that you are facing the front.



11. Slide the attachment into the printer compartment with one hand and secure it by closing the latch with another hand.

\* To prevent the finished product from getting dirty or scratched if it is accidentally dropped, keep the landing area clean and tidy.



12. You can now start the printing process using the eufyMake Studio software or eufyMake app.



## 5. Setting up the System

1. Now that you're ready. Please download the eufyMake app to complete the initial setup.



2. Follow the in-app instructions to complete the setup and try an initial printing.

## 6. LED Indicator Guide

|                          |                                                                                     |                |                                                                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Main Button LED</b>   |    | Steady Blue    | Powered on but not connected to Wi-Fi                                                                                                                       |
|                          |    | Steady Green   | <ul style="list-style-type: none"> <li>Powered on and connected to Wi-Fi</li> <li>No printing task in 5 minutes</li> <li>Printing task completed</li> </ul> |
|                          |    | Breathes Green | <ul style="list-style-type: none"> <li>Printing task received but not confirmed yet</li> <li>Printing task confirmed</li> </ul>                             |
|                          |                                                                                     | Light Off      | No printing task more than 5 minutes                                                                                                                        |
|                          |  | Breathing Blue | Firmware upgrading                                                                                                                                          |
|                          |  | Flashes Red    | Error: Short of ink, Full waste ink, 运动堵塞无法打印状态                                                                                                             |
| <b>Ink Cartridge LED</b> |  | Steady Green   | Ink cartridges inserted successfully and plenty of ink<br>常绿 5S 后熄灭                                                                                         |
|                          |  | Steady Red     | Ink cartridges inserted successfully but short of ink                                                                                                       |
|                          |                                                                                     | Flashes Red    | Out of ink or no ink cartridge inserted                                                                                                                     |
| <b>Print Head LED</b>    |                                                                                     | Light On       | In working status                                                                                                                                           |
|                          |                                                                                     | Fading         | In standby mode                                                                                                                                             |
| <b>Power LED</b>         |                                                                                     | Steady Red     | Plugged but not powered on                                                                                                                                  |

|  |  |              |                                                                                                                     |
|--|--|--------------|---------------------------------------------------------------------------------------------------------------------|
|  |  | Steady Green | <ul style="list-style-type: none"> <li>• Plugged and powered on</li> <li>• Plugged and in working status</li> </ul> |
|--|--|--------------|---------------------------------------------------------------------------------------------------------------------|

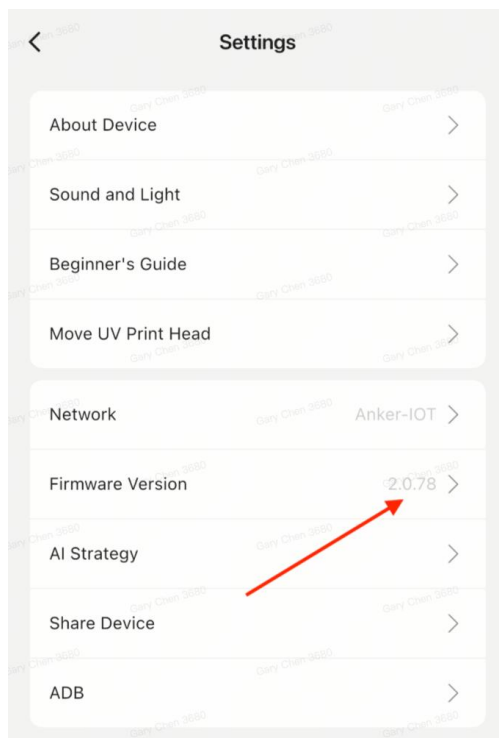
## 7. Maintenance & Cleaning

## 8. Upgrade Firmware

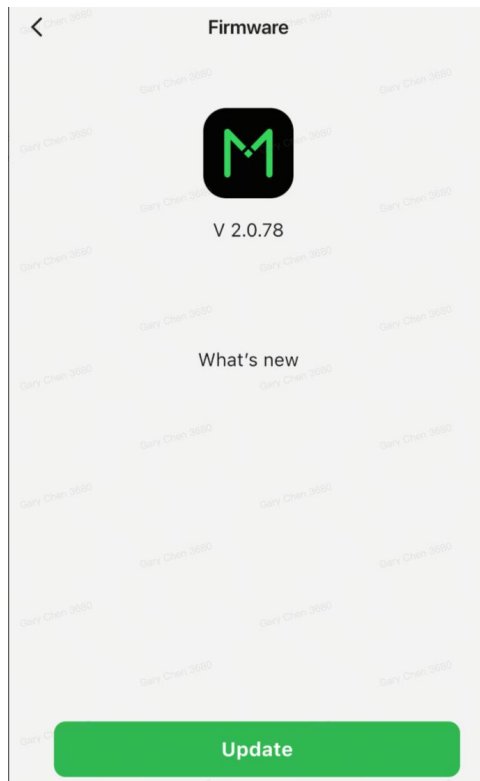
You will receive a notification if a new firmware is detected.

You can check and upgrade the firmware version via either eufyMake app or studio on your PC.

1. Tap "Settings" > "Firmware Version" to check if new version is available for upgrade.



2. If there is a later version, tap "Update" to download and install.



## 9. Restore Factory Settings

1. To start the factory reset process, press and hold the POWER and START/STOP buttons simultaneously for more than five seconds.



2. The device will carry out cleaning and moisturizing operations. The current complete cleaning process takes 22 minutes. If the cleaning process fails, the factory settings will not be terminated.

3. Once cleaning and moisturising are complete, data recovery will be performed and the device will restart.

## 10. Specifications

|                                 |                                                                 |
|---------------------------------|-----------------------------------------------------------------|
| Input                           | 110-120V ~, 50/60Hz (US, JP)<br>220-230V ~, 50/60Hz (EU, China) |
| Power Consumption               | 90W                                                             |
| Printing Method                 | Piezo Ink-Jet Method                                            |
| Color Channel                   | CMYK + W (White) + G (Gloss)                                    |
| Printing Resolution             | Max 1,440 DPI (Dots Per Inch)                                   |
| Printing Mode                   | Platform, Rotation, Large Platform                              |
| Speed                           | 1.2 m <sup>2</sup> / h                                          |
| Supported File Formats          | JPG, PNG, TIFF                                                  |
| Automation                      | Auto Maintaing, Auto Leveling                                   |
| Working Environment Humidity    | Relative Humidity 20%-85%                                       |
| Working Environment Temperature | 15°C-35°C (59°F-95°F)                                           |
| Product Dimensions              | 595 mm(W)*242 mm(D)*395 mm(H)                                   |
| Product Net Weight              | 15 kg                                                           |