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I. Overview

1 About the User Manual

This user manual (hereinafter referred to as "the Manual") introduces the functions, installation, usage and maintenance of the AccuFab-CEL Printer (hereinafter referred to as "the Printer").

1.1 Symbol Convention

Symbol	Meaning
	Note: This symbol is used to inform you of the additional information of the product.
	Caution: This symbol is used to inform you of incorrect operations that may damage the device or result in data loss.
	Warning: This symbol is used to inform you of the potential risks that may result in serious personal injury and other safety incidents.

1.2 Legal Disclaimer

- SHINING 3D Tech Co., Ltd. (hereinafter referred to as "the Company") owns complete intellectual property rights for the contents of this document and, without the written consent of the Company, it is not allowed to copy, transmit, publish, resell, compile or translate any contents of this document for any purpose or in any form.
- The document is a guidance for installing, operating, and maintaining the product. The document does not serve as the quality guaranty for the product. While the Company makes all efforts to ensure the applicability of the content of the document, it reserves the right to interpret and modify the content of the document and possible errors and omissions therein. The contents of the document are subject to changes without further notice.
- Images and diagrams in the document are presented to provide convenience to readers. In the event that any images or diagrams are inconsistent with the physical product, the latter shall prevail.
- The Company shall not be held responsible for any damages and/or losses caused by negligence, environmental factors, or improper maintenance and use, or any other factors other than due to the quality of the Product.
- Disputes arising from the document and related Products thereof shall be governed by the laws of the People's Republic of China.

- In the event of any ambiguity and/or any advice on the contents of the document, please contact us without hesitation.

1.3 FCC Regulations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

> **Note**
>
> - This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
>   - Reorient or relocate the receiving antenna.
>   - Increase the separation between the equipment and receiver.
>   - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
>   - Consult the dealer or an experienced radio/TV technician for help.
> - RF exposure statement:
>   - This equipment complies with radio frequency exposure limits set forth by the FCC for an uncontrolled environment.
>   - This equipment should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.
>   - This device must not be co-located or operating in conjunction with any other antenna or transmitter.

1.4 ISED Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

3. The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

```
French Version:

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR
d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio
exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage.
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est
susceptible d'en compromettre le fonctionnement.
3. Le dispositif fonctionnant dans la bande 5150-5250 MHz est réservé uniquement pour une
utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes
de satellites mobiles utilisant les mêmes canaux.
```

1.5 20Cm: Radiation Exposure Statement

This equipment complies with RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

```
French Version:

Pour se conformer aux exigences de conformité CNR 102 RF exposition, une distance de
séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil ettoutes les
personnes.
```

I.I About the Printer

2 Introduction

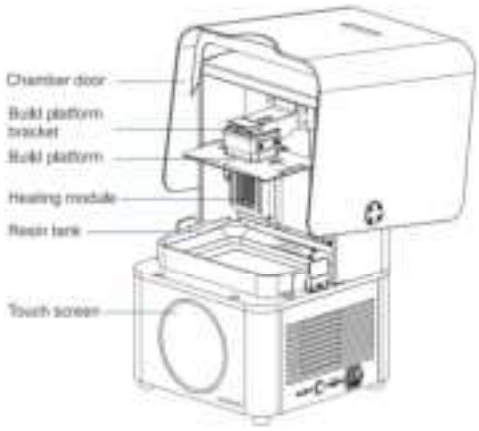
AccuFab-CEL high-precision resin 3D printer (hereinafter referred to as "the Printer") supports high-quality digital model printing with 6K resolution and a large build volume of 194 mm x 120 mm x 180 mm (standard platform) or 70 mm x 70 mm x 180 mm (small platform).
Featuring stable and accurate printing precision. The Printer improves prototyping efficiency and shortens the new product development lifecycle with guiding software and simple operational procedures improves prototyping efficiency and shortens the new product development lifecycle. With diverse resin material options, the Printer can meet diverse demands in restorative, implant, orthodontic applications and other professional fields of dentistry.

- Higher printing precision: up to 90% optical uniformity with adaptive light power adjustment
- Higher resolution: 5760 x 3600 high resolution for rich surface textures and fine features
- More reliable printing efficiency:
  - longer working life for optical components, up to 10,000 hours (about 30,000 times);
  - high power full-array COB light source, increase optical efficiency to 200%
- Richer certificated materials: with the record of medical device certification, support a number of 3D printing applications such as working and orthocontic models

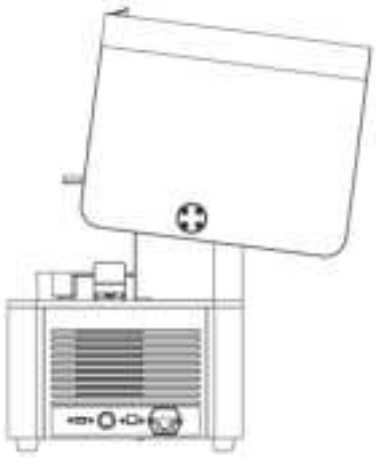
3 Parts List

After unpacking, there are the main equipment, an accessory box, two resin tanks and one power cord.

3.1 Components Overview



The Front



The Back

> **Note**
>
> The equipped FabWare software is controlled via the touch screen.

3.2 Accessories List

Instructions for the use of some of listed accessories are shown in the table below.

Number	Accessory	Description
①	Small Resin Tank	In addition to the assembled resin tank in the printer, a small resin tank (with the serial number of LAC2-XXXX) is enclosed.
②	Flash Drive	Flash drive contains Installer of AccuWare, Printer profile '.sncev', Quick Start Guide and 'Factory test reports'.
③	Angular Knife, Putty Knife	Used to remove models from the platform after printing finished.
④	Brush	Used to clean extra resin on the model.
⑤	Scraper	Used to stir resin in the tank to avoid sediment.
⑥	Electronic Scissors	Used to remove support from the model.
⑦	Cleaning Box	Used to store parts or alcohol.
⑧	Cloth	Used to clean optical path including projector lens, protection glass and resin tank glass.
⑨	PET Card	Used to level the platform and remove the cured layer.

Warning

Please take care and keep safety in mind when using the scraper and putty knife which have sharpened edges.

4 Installation

4.1 Unpacking

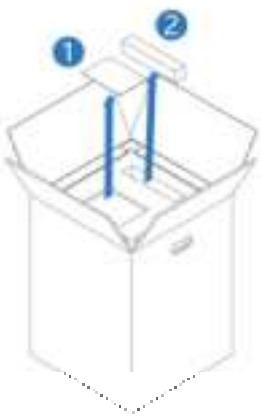
Please follow the steps below to complete unboxing.

Caution

If the printer needs to be returned to the manufacturer, it should be shipped in it's original packaging. Therefore, do not damage or discard any packaging materials.

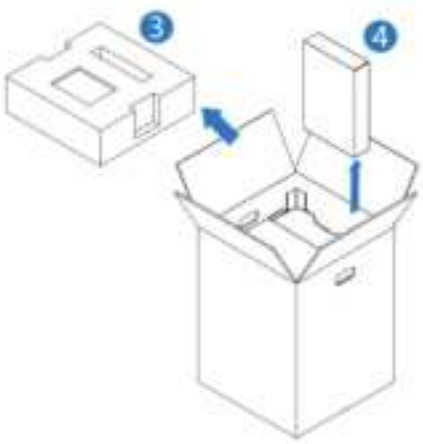
1 Unboxing >

Open the package and take out the "product certificate", "installation guide" ①
and power cable ②.



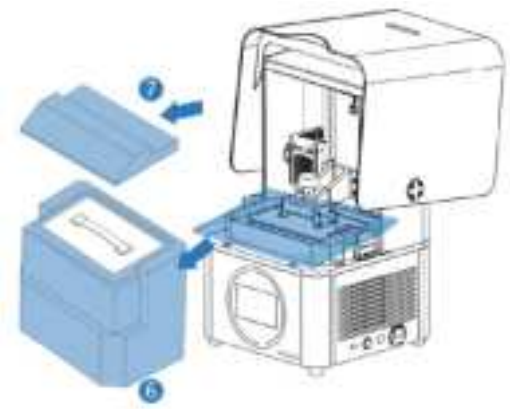
2 Take out the complimentary resin tank >

Remove foam ②, take out the spare resin tank ④ from the back of
the printer.



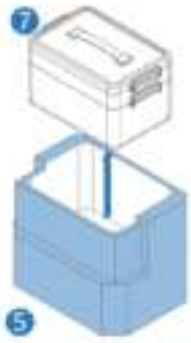
3 Take out the printer >

Remove the package, place the printer on the table and open the
printer chamber door. Remove fixing foam ⑤ & ⑥ inside the printer.



4 Take out accessories

Takeout accessory box ⑦ from fixing foam ⑥.



4.2 Assembling

The build platform bracket will move up automatically after booting the printer, and it is time to **install the resin tank and the build platform.**

1 Remove the protect film >

Open the buckles ⑪ for resin tank and take out the resin tank ⑩. Remove the protect film around the resin tank.

2 Install the resin tank

Put clean resin tank (1) into the position. Lock the buckles (2) for resin tank.

5 Specifications

5.1 Printer Parameters

Parameter	Description
Packing Dimensions	480 mm x 480 mm x 720 mm (X, Y, Z)
Packing Weight	30 kg
Machine Dimensions	350 mm x 350 mm x 530 mm (X, Y, Z)
Net Weight	19 kg
Operating Temperature	20°C - 35°C
Operating Humidity	30% - 70%
Power Supply	110V - 240V AC; 50/60 Hz; 240 W
Data Format	FAB
Interface	USB / Ethernet / Wi-Fi
Authentication	FCC / CE / ROHS

5.2 Optics Parameters

Parameter	Description
Optical Engine	black-and-white LCD screen (9.25-inch 6K screen)
Resolution	5760 px x 3600 px
Pixel Size	0.035 mm
Light Source	400 nm - 405 nm UV
Light Intensity	up to 2 mW/cm²

5.3 Print Parameters

Parameter	Description
Prin. Volume	194 mm x 120 mm x 180 mm (standard platform) or 70 mm x 70 mm x 180 mm (small platform) (X, Y, Z)
Layer Thickness	0.05 mm / 0.075 mm / 0.1 mm
Prin. Speed	up to 100 mm/h
Prin. Accuracy	± 0.05 mm

6 Environmental Requirements

Please ensure the working environment meets the requirements listed below before operating or storing the printer.

> **Warning**
>
> Please ensure excellent ventilation.

Environmental Requirement	Description
Voltage Range	110 V ~ 240 V / 240 W
Temperature Range	20 ℃ ~ 35 ℃
Humidity Range	30% ~ 70%
Other Requirements	• A neat, stable and level platform. • A well-ventilated area with less dust, no direct sunlight, no flames or UV energy.

> ⚠ Caution
>
> - The temperature and humidity have a direct effect on the printing result.
>   - To reach optimal results, it is recommended that you create an environment setting 23℃ ~ 27℃ and 30% ~ 70% humidity.
>   - The printer will periodically sense the temperature and pause the printing process when the temperature is under 15℃.
> - The shaking of the working bench may damage the printer's internal parts and the tilt of the working bench leads to the uneven distribution of liquid resin, which both affect the printing result.

7 Notice for Use

This section provides safety precautions which will also appear repeatedly within this User Manual for reminding.

> ⚠ Warning
>
> Please read and strictly comply with all matters in this section, as failure to do so may result in personal injury or damage to the printer.

7.1 Notice for Operation

- **Lifting Hazard:** Due to its size and weight, do not move or reposition the printer alone.
- **Operators:** Operators should be trained to operate the system and perform all the necessary tasks to build a part.
- **Touch Forbidden:** It is forbidden to touch the model, resin tank, build platform and any other components by hand. Remember to wear disposable gloves when handling the machine.
- **Sharp Tools:** AccuFab 3D printer is equipped with a set of accessories including sharp tools. Protection is required when using these tools.

> 📋 Note
>
> The electromagnetic occurring during printing meets CE / FCC standard and brings no harm.

> ⚠ Caution
>
> AccuFab 3D printer shall only use the original consumables and accessories. Any change to the printer without the manufacturer's permission will invalidate the warranty.

7.2 Notice for Material

Ultraviolet Light

When curing resin or printing, the UV light source under the LCD screen projects 405 nm UV-LED light.

> ⚠ Warning
>
> The UV light is harmful to the eyes, so please avoid direct eye contact.

Ethanol

The ethanol of 75% concentration or above is recommended for cleaning liquid resin.

> ⚠ Warning
>
> - **Irritation:** Please wear disposable gloves when dealing with the ethanol, and always wash skin thoroughly after working with ethanol.
>   - Skin Irritation: If skin contact happens, take off contaminated clothing and wash the skin area thoroughly with soap and cold water.
>   - Eye Irritation: If eye contact happens, flush the eye with water and seek medical care immediately.
> - **Respiratory Danger:** Smoking, eating and drinking are strictly forbidden in the working area. If oral contact happens, gargle, induce vomiting and seek medical care immediately.
> - **Fire Hazard:** Liquid ethanol is flammable, please store it with caution.
>   - Keep the container closed.
>   - Store it in somewhere ventilated and cool (5°C ~ 25°F / -7°C ~ 30.0°C).
>   - Keep it away from direct sunlight, heat, flames, or UV energy.
> - **Spill Hazard:** Always keep the container upright and reseal it after use, in case of spilling over.
>   If the ethanol spills, cover it with sand or the other nonflammable materials, or wash it with plenty of water and then sluice the diluted water to the wastewater system.
> - **Disposal:** Avoid direct contact, and deal with liquid ethanol in ventilated places collectively.

Resin

The printing material used by the Printer is photo-polymerized resin developed independently by SHINING 3D, including pure liquid resin, resin dissolved in solvents or partly cured resin (hereinafter referred to as "the Resin").

The Resin performs stable and safe in the test. **However, the direct contact with the Resin may still cause eye damage or skin irritation, and other adverse irritation reactions.**

In this case, please ask authorized reseller for Material Safety Data Sheet (MSDS) before working with the Resin. When working with the Resin, please wear wear rubber oil resistant gloves, protective clothing, eye protection equipments and protective masks while following the instructions in MSDS strictly.

⚠ Caution

- Sediment treatment: The Resin is classified as mixtures and tends to form small amounts of sediment after standing for a period of time.
  Please follow the instruction in this manual to add resin and shake the storage container before use to reduce sediment.
- Splash Hazard: When adding liquid resin, please keep the liquid level not higher than the MAX line in the resin tank; otherwise, the liquid resin may splash out of the tank during printing.
- Printing Effect: Please add liquid resin in time to keep the liquid level above the MIN line in the resin tank to ensure that the model prints well.

Warning

- **Irritation**: Please wear disposable gloves when dealing with the Resin, and always wash skin thoroughly after working with the Resin.
  - Skin Irritation: If skin contact happens, take off contaminated clothing and wash the skin area thoroughly with soap and COLD water.
  - Eye Irritation: If eye contact happens, flush the eye with water and seek medical care immediately.
- **Respiratory Danger**: Smoking, eating and drinking are strictly forbidden in the working area. If oral contact happens, gargle, induce vomiting and seek medical care immediately.
- **Fire Hazard**: The Resin is flammable, please store it with caution.
  - Store it in somewhere ventilated and cool (5°C ~ 35°F / 10°C ~ 30.0°C).
  - Store it separately from incompatible substances and avoid mixing.
  - Keep it away from direct sunlight, heat, flames, or UV energy.
  - It is not suggested that the Resin be stored in oxygen-free environment, where the material could be frozen.
- **Spill Hazard**: Resin may spill over the resin tank walls if the container fills, so please always keep the resin tank upright and place it on the stable platform. Besides, resin tanks are consumable materials and should be replaced immediately when reaching the end of its working life, in case of printing failure, the spillover of the Resin, or other potential problems.
  - If a little amount of resin spills on the printer exterior, for maintaining printing effect, clean the LCD screen and the resin tank film as soon as possible.
  - More extensive resin spills that reach the inside of the printer may contaminate or erode critical components. For this case, cancel the operation and shut down the machine, keep the chamber hood closed to prevent ambient light from curing the resin, then photograph the spill and contact SLINKING 3D support for further assistance.
- **Disposal**: The Resin is classified as hazardous waste and does harm to aquatic life, so please dispose it discreetly and follow the instructions in MSDS.

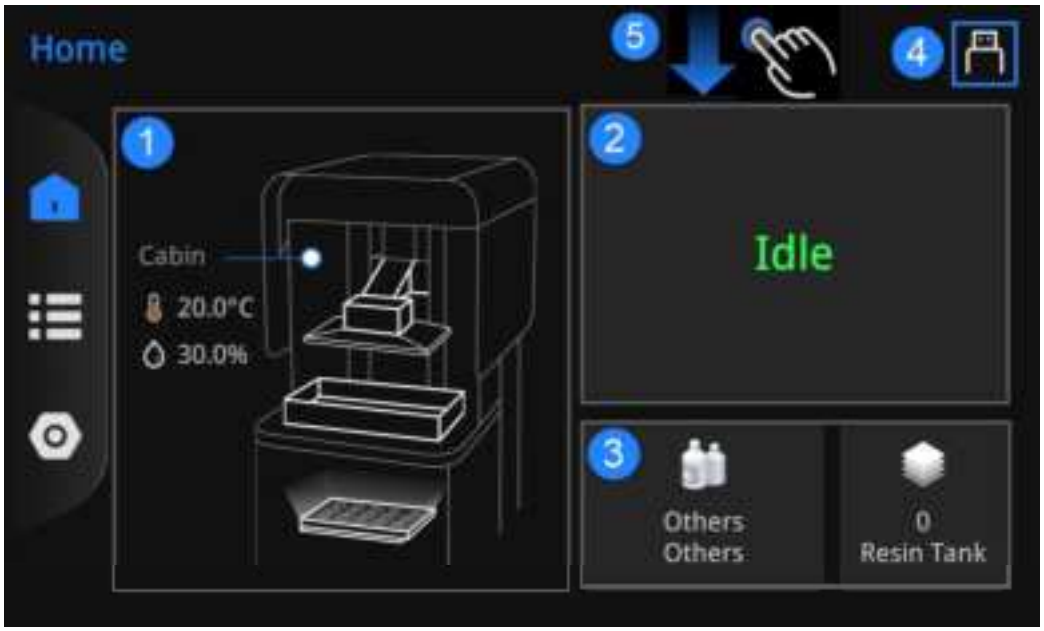
II. Software

II.I Interface

8 Home

On the **Home** interface, check the current status of the printer and the related information of the resin tank.

> **Note**
>
> - When the activation prompt appears, please enter Settings > About > Activate License, follow the instructions to activate the printer for full permissions.
> - When you are prompted that the remaining days are insufficient, please go to AccuWare > Settings > Printer Act and Auth interface to process online activation, or contact Shining 3D Technical supporters to process activation with the activation file.



Switch columns to view the introduction to each field.

① Cabin inspection

: Displays the **Air Temperature** and **Humidity** inside the build chamber.

> **Caution**
>
> - Please ensure that the value displayed meets the environmental requirements.
> - If the solid lines representing the platform in the diagram turn into red dashed lines, it indicates that the platform is not installed or the printed model has not been removed.

② Printer status

Idle: Printing has not started or is completed. Tap the field to enter **Queue** interface to select the file for printing.

Printing: Tap the field to enter **Print Detail** interface to check the printing information and control the printing process.

> ⚠ Caution
>
> Interrupting the printing process will lead to the slices' misalignment.

③ Resin tank information

: Displays the brand and type of the material in the resin tank as well as the number of layers having been printed (automatically sensed by the chip on the back of the resin tank).

Tap the field to enter the **Resin Tank Information** interface to set the resin tank.

- **Replace Resin**: Tap the checkbox to select the brand and type of the alternative resin.
- **Clean Residue**: When cleaning the resin tank, tap **Cure Resin**, the UV light source projects LED light to cure the residue at the bottom of the tank.
- **Resin Tank has been printed for**: Displays the cumulative number of printed layers.
  Tap **Reset Layers** (if there is) to reset.

> ⚠ Caution
>
> - Please use the photosensitive resin independently developed by Shining 3D or other authenticated resin materials.
> - Please select the brand and type of resin actually added to the tank, or the printing may fail; If the resin type is not listed out, select Others instead.

④ Status bar

: The printer has been connected to a wireless network, and operations such as select queue files and network update are available then.

: The printer has been connected to a lan network, and operations such as select queue files and network update are available then.

: USB flash drive has been inserted, and operations such as select USB files, activate license, export logs and flash drive update are available then.

: the chamber door has not been closed yet.

> ⚠ Warning
>
> Keep the chamber door closed during the printing process. It is recommended that tap Settings > Software Settings and enable Activate Cover Sensor When Printing to ensure print quality and reduce safety risks.

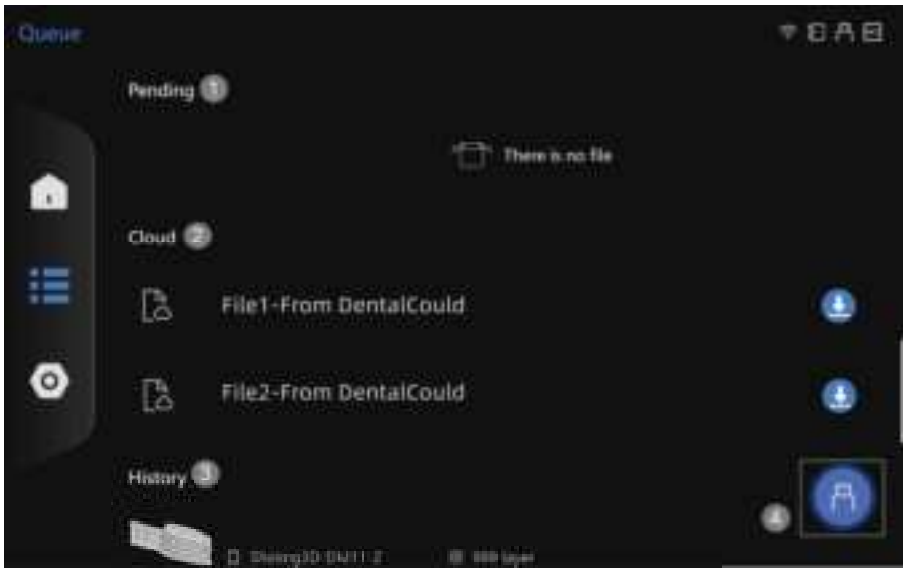
⑤ Printer Status Menu

Swipe down from the top of the screen to bring up the printer status menu, displaying the current network connection status of the printer (tapping this module will enter the **Network Settings** interface), DentalCloud connection status (tapping this module will enter the **Bind to DentalCloud** interface), and curing box & cleaning machine connection status (tapping this module will enter the **Connect FabCure / FabWash** interface).

> Note
>
> Swipe up from the bottom of the screen or tap ⌃ to collapse the printer status menu.

9 Queue

On the **Queue** interface, browse and select the print file.



Switch columns to view the introduction to each field.

① Pending Queue

Displays the files to be printed and the information of designated consumables.

Tap one file bar to check its detailed printing information:

- **Delete**: delete the file from the queue.
- **Print**: print the file.

② Cloud Queue

Displays the files which are sent from the DentalCloud and the information of designated consumables.

- : Download files sent from the DentalCloud. The downloaded files will enter **Pending** queue. for more see select files from **Cloud** queue.
- : Cancel downloading tasks.
  - Tap the download button to download the file again;
  - Tap button again to delete the file directly; the file can be sent through the DentalCloud again subsequently.

③ History Queue

Displays the files having been printed and the information of designated consumables.

Tap one file bar to check its detailed printing information:

- **Export**: Export file information to the flash drive inserted to the printer.
- **Delete**: Delete the file from the queue.
- **Print**: Print the file.

> ⚠ Caution
>
> When running out of the memory, the system will delete files from the bottom of the history queue.
>
> In this case, please review uploaded print jobs on the queue page periodically, and you may need to delete files from the queue to ensure there is sufficient space left for further use, or tap Settings > About > Restore > Clean up Local Files to delete files listed in the queue by one click.

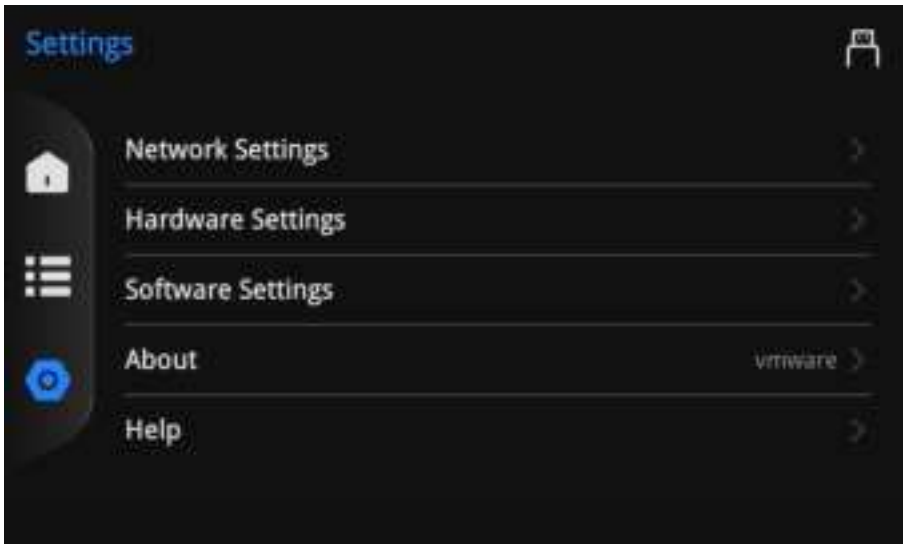
④ USB queue

After inserting the flash drive with SLP file, icon appears in the corner of the Queue interface.

Tap to enter the **Flash Drive** interface and select a file to import it to the **Pending** queue.

10 Settings

On the **Settings** interface, check or update current settings.



> ⚠ Note
>
> The Hardware Settings and Software Settings are not available during printing. Debug the device before printing.

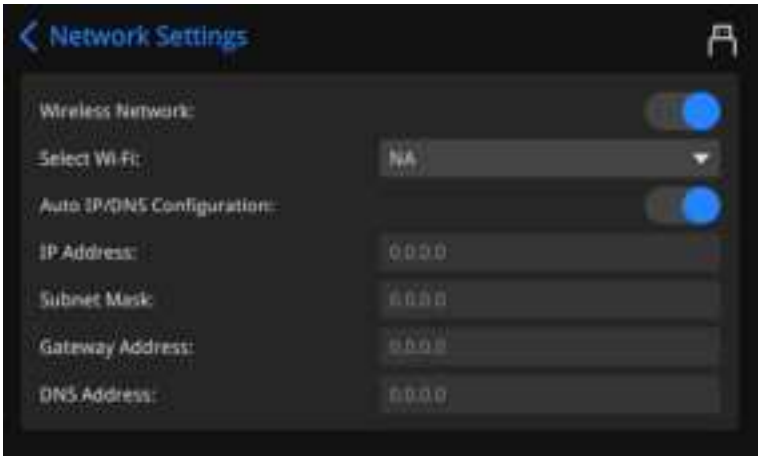
Switch columns to view the introduction of various functions.

Network Settings

- **Wireless Network:**

  Check **Wireless Network** option, select a network and enter the key to connect.

  The icon will appear on the status bar since the network connection being done.



- **Lan Network:**

  After inserting network cable, check **Lan Network** option to connect.

  The icon will appear on the status bar since the network connection being done.

> **Note**
>
> Auto IP/DNS Configuration function is enabled by default, and the automatic filling of IP/DNS information suggests the network connection is successful.

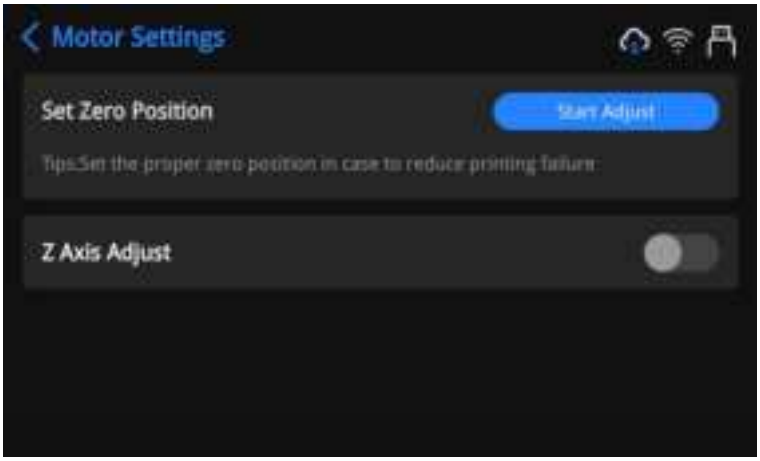
- **Bind to DentalCloud:**

  Bind the printer to your DentalCloud account, and monitor the queue status, printing status and temperature&humicity in real time on the DentalCloud. For more see Bind to DentalCloud.

Hardware Settings

- Motor Settings

> **Caution**
>
> Before setting the motor, it is necessary to clean the printing platform and remove the resin tank to avoid collision.



- **Set Zero Position:** Tap **Start Adjust** to enter the zero position adjustment guide. Please follow the guide to loosen the screws, lay out an A4 paper, tighten the screws, and so on.

> **Note**
>
> - If it prompts that 'Please remove the resin tank', please follow the instructions.
> - Do not perform any operations while the platform is moving. After the prompt 'Zero position adjustment successful.' tap Confirm to return to the Motor Settings interface.
> - If the zero position is adjusted, the exposure compensation time for the enhanced layer adjusted by the AI mode will be reset to 0.

- **Z Axis Adjust**: Enable this function to unfold the settings columns, where you can adjust the moving distance and direction to control the print platform.

> **Note**
>
> The position of the build platform equals to the position of the Z axis; The position of the resin tank equals to the position of the X axis.

> **Danger**
>
> Do not adjust X axis unless you are manufacturer's technical staff, or the model may fail to separate from the the resin tank when the printing is finished.

- **Optics Settings**:

- **Clean Residue**: Tap **Cure Resin**. The printer projects LED light to cure the resin in the tank.
- **Projector Status**: Enable this function to proceed with **Light Uniformity Verify** and **Light Intensity Correction**.

> **Danger**
>
> Do not change any settings of the projector unless you are manufacturer's technical staff.

  - **Light Uniformity Verify**:

    a. Please follow the instructions to remove the resin tank, clean the glass, and tap **Next**; then connect the optical power meter probe and tap **Detection**.

> **Note**
>
> If prompted with 'Please remove the resin tank first.', please follow the instructions.

b. 13 circles will be illuminated on the software sequentially, and please place the probe on the corresponding illuminated circular spot on the projection screen to capture the light power, and the value will be recorded on the corresponding circle on the interface.

> **Note**
>
> If prompted with "Verification fails", please follow the instructions to reverify.

- **Light Intensity Correction:**

a. Please follow the instructions to remove the resin tank, clean the glass, and tap Next; then connect the optical power meter probe and tap Connection.

> **Note**
>
> If prompted with "Please remove the resin tank first.", please follow the instructions.

b. The light will be projected onto the screen, and the printer will enter the medium and high power automatic calibration process, until prompted with "Automatic correction complete".

Software Settings

- **Language:**

  Tap the checkbox to select a language.

> **Note**
>
> If you have inserted the flash drive, it also allowed to tap Import Language to import the language package.

- **AI mode:** With this function enabled, the software will adjust printing parameters automatically based on the reported issues.

> **Note**
>
> This function is enabled as default, and you can see the switch status in the installation guide.

- **Auto Find FabCure/FabWash:**

With this function enabled (disabled by default), the printer will find power-on accessories (curing box & cleaning machine) automatically and synchronize the data about the print material; and a window will pop up on the screen of an idle printer when any accessory which can be connected is found, and tap **Connect** to connect the accessory. Three connection status are listed as follows:

- Connecting: the connection period is 0s ~ 30s, and if the connection is successful, it will display 'Connected'; if it fails to connect after 1 min, it will be deemed as "Connection fails", when you can tap Manual Connection in the lower right corner.
- Connected: Display the firmware version, curing parameter package version and the switch (enabled by default) for automatic synchronization of printing parameters.
- Disconnected: On the interface of 'Connected', tap "Disconnect" in the lower right corner to manual disconnect the accessory.

> **Note**
>
> - Each printer can connect to a maximum of one curing box and one cleaning machine.
> - The pop-up notification for attachment connection only appears on the Home/Queue/Settings interface, and the attachment which is in the Network Settings interface can not be found.
> - If the wireless network signal to which the printer is connected is weak, it may affect the automatic search function.
> - After the printer successfully connects to the accessory, if there is a power outage and reboot, it will automatically reconnect to the same accessory within the same local area network. If the network environment is switched, the connection status will change to 'disconnected,' and upon switching back to the original local area network, it will automatically reconnect.
> - After the printer and the accessory are connected automatically, the accessory will synchronize the print material of the slice file when the print completes; if the connected accessory is still in operation, it will synchronize related data afterwards.
> - After the printer and the accessory are connected automatically, the accessory's material package and firmware will be automatically checked for updates. When a new version is detected, the software will provide a pop-up prompt.

- **Activate Cover Sensor When Printing**

  Enable **Activate Cover Sensor When Printing** helps to ensure print quality and reduce security risks.

> **Note**
>
> If this function is enabled under the mode of Constant Temperature, an error message "Door open, heating stopped" will be displayed when the chamber door is opened.

- **Constant Temperature Mode:**

The **Constant Temperature Mode** is enabled by default. Usually controlled by fan heating to maintain a temperature of 25 +/- 2℃ inside the chamber. It supports the manual setting of the effective constant temperature time. During the constant temperature time, if the temperature inside the chamber is below 23℃, heating will be activated, and if it is above 25℃, heating will be stopped.

> **Note**
>
> - If the temperature inside the chamber is too low, it may result in continuous fan heating throughout the day.
> - If the **Activate Cover Sensor When Printing** function is enabled during the constant temperature time, an error message 'Door open, heating stopped' will be displayed when the chamber door is opened.
> - In constant temperature mode, when starting a print file and the temperature inside the chamber is below 23℃, the print platform will move down to the zero position by 1 mm. At this point, the fan will stop working, and the resin will be heated using the projector's exposure for 1 minute before the printing begins.

- **Enable NFC:**

  Enable NFC, and the printer can automatically recognize the type of the resin tank and the number of printed layers.

- **Push Updates:**

  Enable **Push Updates** option, and the software will display a prompt for update when there is a new version of the system or material packages available for download.

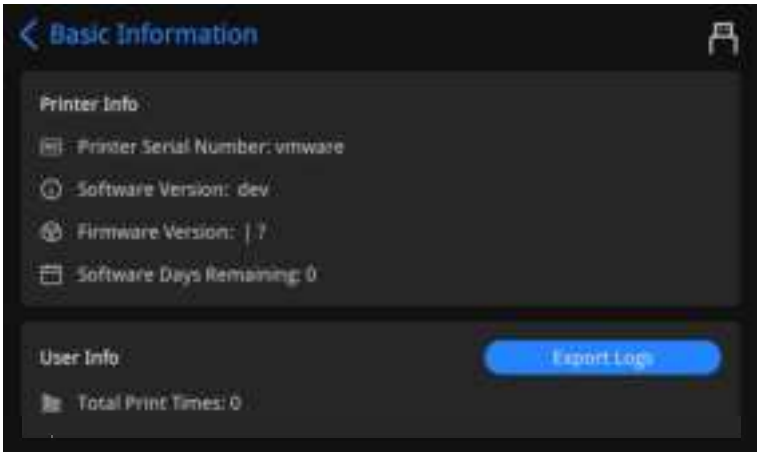
- **Skip Print Guide:**

  Enable **Skip Print Guide** option, the printer will directly enter the Home interface after boot-up.

About

- **Basic Information:**

  Displays the serial number, the version number, and the work log.

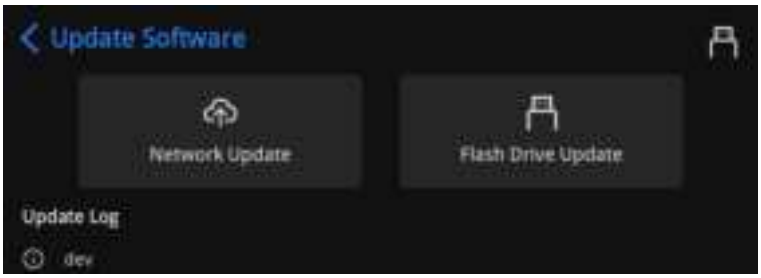


> **Note**
>
> After inserting the flash drive, tap Export Logs to export the work log to the flash drive inserted.
>
> The log records the volume of materials used in each complete printing task and the temperature & humidity of the last 3D printing tasks for traceability.

- **Update Software:**

  When a new version is available, tap **Update Software** to choose **Network Update** or **Flash Drive Update**.

  When there is an update to environment library files, you need to update it via network or flash drive.



> **Note**
>
> Please connect to the Internet before updating environment library files.

- **Activate License:**

  If the software has not been activated yet, it is suggested that tap **Activate License** and follow the instructions below to complete offline activation.

> **Note**
>
> When you are prompted that the remaining days are insufficient, please contact Shining 3D technical supporters to process activation with the activation file.

- **Recovery:**

  : Burn all the data;

  : Clear files on the Queue interface;

  : Restore default settings.

- **Connect FabCure / FabWash:**

  After connecting to wireless network, tap **Connect FabCure / FabWash** and enter the hotspot code of FabCure / FabWash to share their network signal.

> **Note**
>
> - It is recommended that you enable Auto Find FabCure/FabWash in the software settings.
> - A printer can assist the networking of multiple curing boxes / cleaning machines.

Help

- **User Guide:**

  Tap to enter the User Guide.

> **Note**
>
> If this is the first boot-up, the software will walk you through the User Guide automatically.

- **User Manual:**

  Scan the QR code and view the User Manual on web.

II.II User Guide

11 Activation Guide

The User Guide includes the **activation guide**, the **installation guide**, and the **sample print guide**.

> **Note**
>
> - If this is the first boot-up, the software will walk you through the User Guide automatically.
> - If you need to re-enter the User Guide later, go to **Settings** > **Help** > **User Guide**; tap **Skip Sample Printing** / **Skip All** to exit the User Guide and return to the Settings interface.

> **Caution**
>
> - Check whether the build platform moves normally, whether the light processing system works normally, and whether the sample is printed normally during the guidance process. If there is any problem, contact Shining 3D technical supporters for help.
> - Damage to the device, data loss and any other accidents caused by procedures not specified in this Manual are not covered by the warranty.

Please follow the instructions to activate the license:

1 Select the language >

The printer comes pre-installed with 10 languages for choice: **Chinese**, **English**, **Traditional Chinese**, **Japanese**, **Korean**, **Russian**, **French**, **Italian**, **Spain**, **German**.

> **Note**
>
> To change the language later, go to Settings > Software Settings, tap the language selection box and select the large language, or insert the flash drive and tap Import language to import more language packs.

2 Connect to the network >

Wireless Network

Check **Wireless Network** option, select a network and enter the key to connect.

> **Note**
>
> - The icon will appear on the status bar since the network connection being done.
> - In the demo mode, you have only 10 printing chances, and when the remaining printing times are 0, please activate the license in time.

- If the connection is successful, tap the **Demo Mode** button. Confirm and enter the demo mode to guide you through the printer installation and sample print; or tap the **Next** button to proceed with online activation.
- If the connection fails, you can still Enter **Demo Mode** or **Retry**, or tap the text button "Can't find your network? Go to offline activation" to activate the license via offline activation.

Lan Network

After inserting the Ethernet cable into the network port, check **Lan Network** option to connect.

> **Note**
>
> - The icon will be added to the status bar since the network connection being done.
> - The demo mode has only 10 printing chances, and when the remaining printing times are 0, please activate the license in time.

- If the connection is successful, tap the **Demo Mode** button. Confirm and enter the demo mode to guide you through the printer installation and sample print; or tap the Next button to proceed with online activation.
- If the connection fails, you can still Enter **Demo Mode** or **Retry**, or tap the text button "Can't find your network? Go to offline activation" to activate the license via offline activation.

> **Note**
>
> - Auto IP / DNS Configuration function is enabled by default, and the automatical filling of IP / DNS information suggests the network connection is successful.
> - Later you can go to**Settings** > **Network Seattings** to set the network.

3 Activate the license

- **Online Activation**:

  Scan the QR code on the interface or enter the given website address manually, and follow the instructions to complete online activation.

- **Offline Activation**:

  On the **Wireless Network** or **Lan Network**, tap the text button "Can't find your network? Go to offline activation", and follow the instructions as shown below to complete offline activation.

After activating the license, please follow the instructions to install the printer.

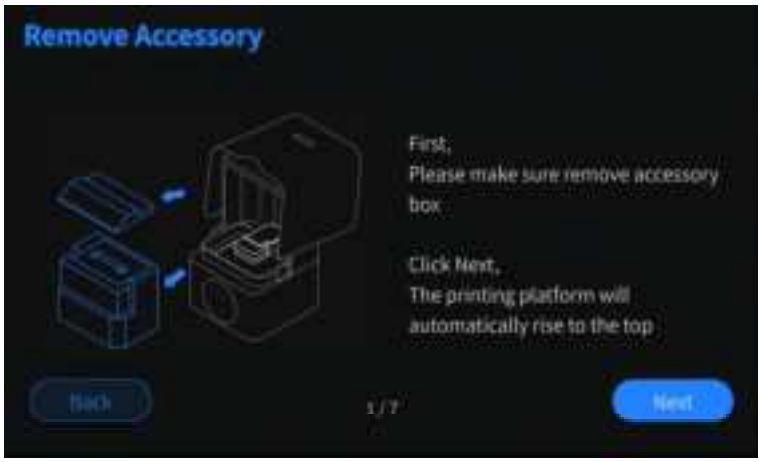
12 Installation Guide

Please follow the instructions to complete the following operations step by step: **Remove Accessory** > **Remove Protective Film** > **Install Resin Tank** > **Install Platform** > **Start Settings.**

> **Danger**
>
> Please read and understand all relevant safety instructions and environmental requirements thoroughly before installing the printer, and ensure that there are no dust-generating devices, direct or intense sunlight when working with the printer, and the working platform is clean and level.

1 Remove Accessory >

Please follow the instructions to remove the accessory packaging box, and the print platform will automatically rise to the top.

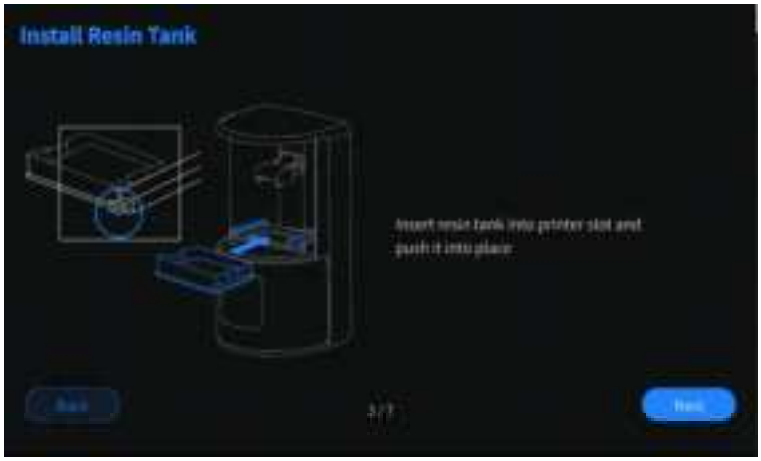


2 Remove Protective Film >

Please follow the instructions to remove protective film.

3 Install Resin Tank >

Please follow the instructions to install the resin tank.



4 Install Platform

Please follow the instructions to install the build platform, and press the handle down.

5 Start Settings

Set the switch status for **Activate Cover Sensor When Printing**, **AI mode**, etc.

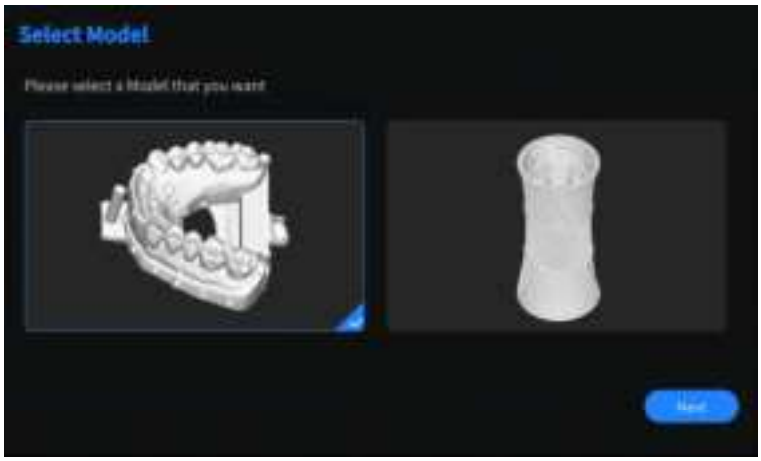
> **Note**
>
> You can go to Settings > Software Settings interface to change operation settings afterwards.

After installation, please follow the instructions to print sample models.

13 Sample Print Guide

Please follow the instructions to complete the following operations step by step: **Select Model > Add Resin > Select Resin > Cabin Inspection > Detail > Print Detail.**

1 Select Model >



2 Add Resin >

> **Danger**
>
> Please read and understand all relevant notice for material thoroughly before adding the resin.

Shake the resin bottle for about 2 minutes, and then pour the fully shaken liquid resin into the material box.

> **Note**
>
> Users can add resin during printing without interrupting the printing process.

> ⚠ Caution
>
> Keep the level of liquid resin between the MAX and the MIN lines so as to prevent the liquid resin from splattering during printing and ensure the printing effect.

3 Select Resin >

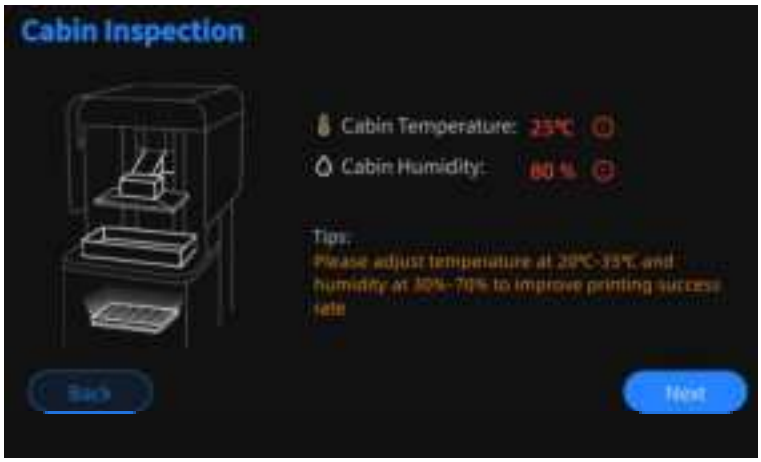
Tap to select the brand and type of the resin to be added.

> ⚠ Caution
>
> - The printing effect can not be guaranteed if the used printing material is not included in the list.
> - Select the brand and type of resin actually added to the tank, or the printing may fail. If the resin type is not listed out, select Others.

4 Cabin Inspection >

Please ensure the humidity and the temperature meets environmental requirements.

If the temperature or the humidity inside the cabin does not meet requirements, the next step cannot be performed, as shown in the figure below.

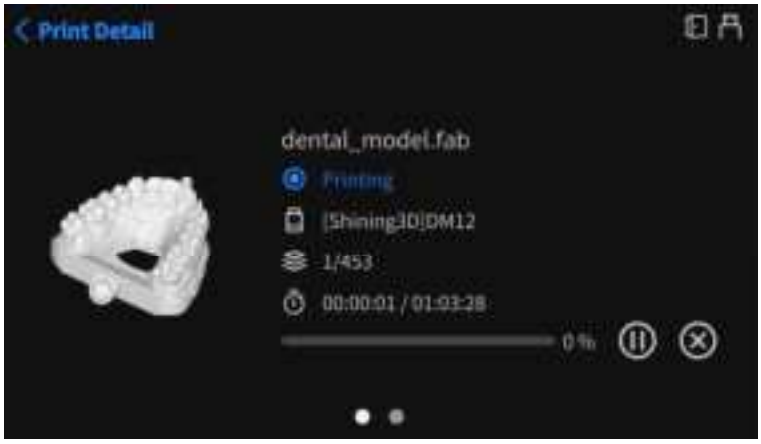


5 Detail >

Check the brand and type of the used resin and the number of slices of the sample model

After confirming the information, tap the Print button to start printing the sample model.

6 Print Detail



Slide to switch between the left and right interface.

Left interface

Displays the name of the slice file of the sample model, the name of the used resin, the printing status, the estimated end time and other information related to the current printing job.

 : Pause printing.

 : Resume printing.

 : Aborts the current print job and return to the Home interface.

> **Caution**
>
> Please use the pause button with caution, as interrupting the printing task will lead to errors in the connection of slices and affect the printing effect.

Right interface

Displays the printing status, the thickness of slices, the serial number and other information related to the current printing job.

After the sample model is printed, the printer will sound 5 beeps, and the touch screen will display **Printing Completed.**

Now you can tap **Return** to return to the Home interface; meanwhile, the build platform will rise to the top of the printing chamber and the printed model will be suspended.

II.III About DentalCloud

14 Bind to DentalCloud

Binding the printer to your DentalCloud account for unlimited cloud storage and real-time monitoring and managing printers.

> **Note**
>
> The printer can only be bounded to 1 organization.

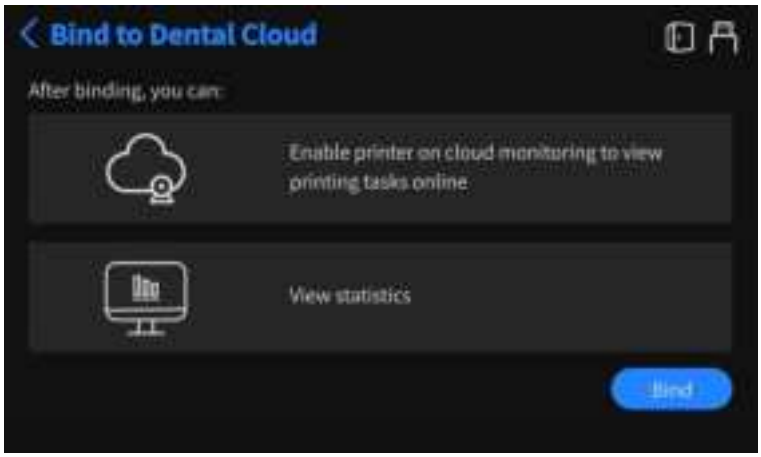
⚠ Caution

- Administrator Authority: Only administrator's accounts have the authority of adding printer to the DentalCloud.
- Net Requirement: Binding the DentalCloud account and all the other functions on cloud necessitates the connection of the Internet.

Please follow the instructions below to bind the printer to your DentalCloud account:

Step 1 >

Tap **Settings** > **Network Settings** > **Bind to DentalCloud**. Then tap **Bind**.



⚠ Caution

The printer should be connected to the Internet before being linked to the DentalCloud, and environment library files should be updated as well.

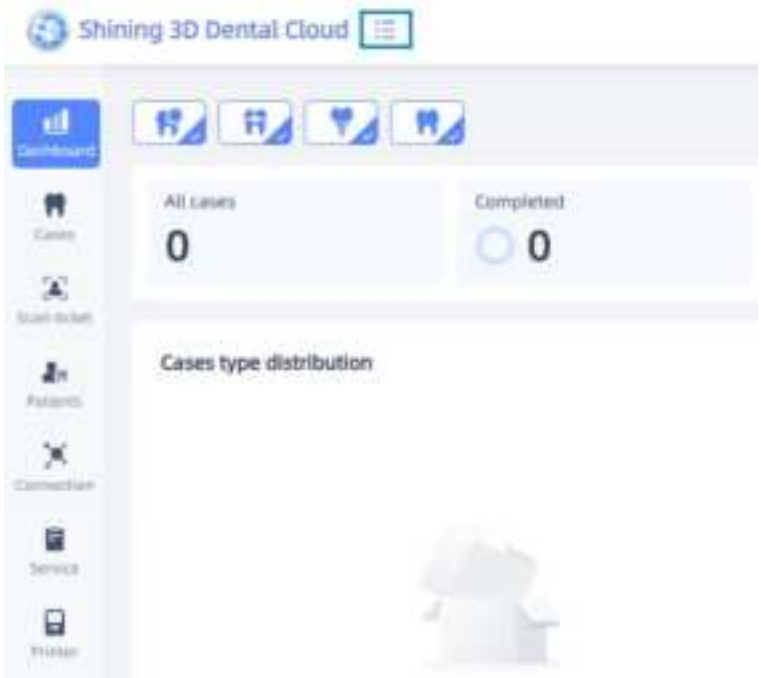
Step 2 >

Tap ↻ for loading the binding code.

Step 3 >

Open the DentalCloud website through the QR code or the link on the interface.

Login with administrator account to the DentalCloud, then click to expand the left-side menu bar and select **printer**.



Step 4 >

Click **+ Add** and enter the binding code.

Step 5

Click **Connect**. The cable to printer will be located and access to the head of the **Printer List**.

Meanwhile, the touch screen displays **Binding Successfully** message and the DentalCloud icon appears on the status bar.

Note

- DentalCloud icon:
  - : The connection works.
  - : The signal is missing, please check the network connection of the printer.
- To unbind, tap Unbind button on the touch screen and Confirm, or login with administrator account on the DentalCloud and then process unbinding steps on the DentalCloud. After unbinding, the data of the printer will not be displayed on the DentalCloud anymore; to find back the missing data, just rebind the printer to the original organization.

15 DentalCloud Operation

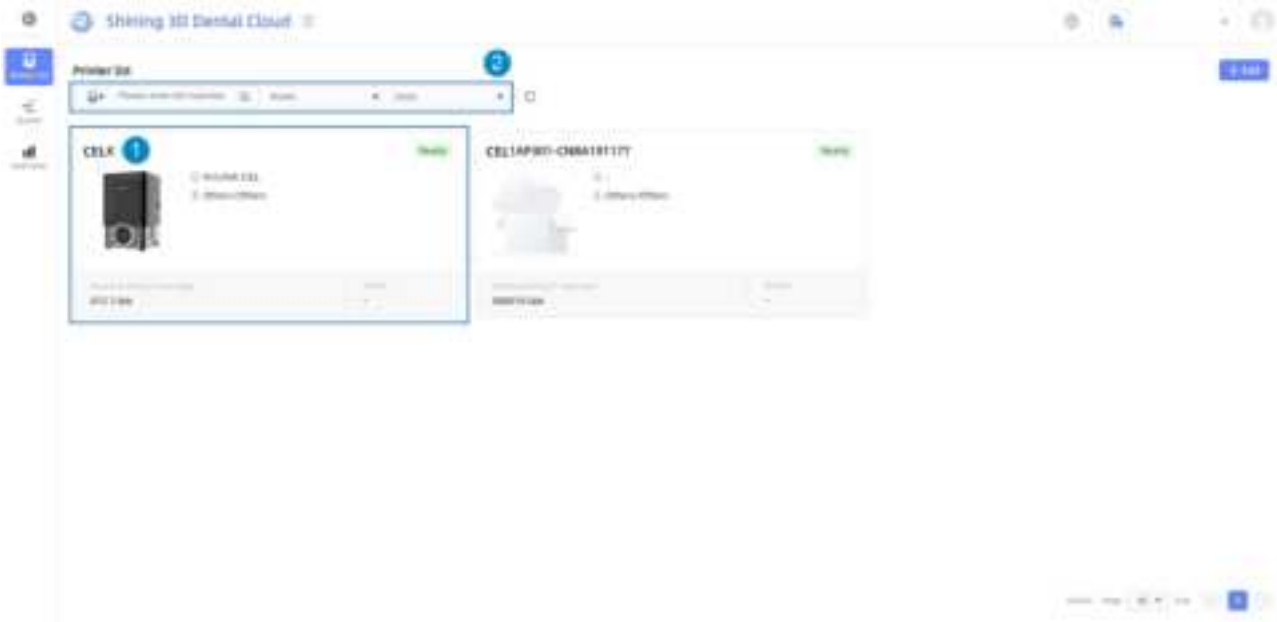
After binding the printer to your DentalCloud account, you can monitor the printer and the status of print jobs in real time as well as managing printers.

> **Note**
>
> The DentalCloud tracks data from printers and supports real-time data updating.

15.1 DentalCloud Page

Printer list

All the printer data belonging to the current organization is arranged in the order of the most recent printing completion time and the printer, as shown in the figure below.



① **Printer cards:**

- Click to get detailed information to the machine (including temperature&humicity, the version of software&hardware, resin tank usage, printing data overview, etc.); for more, please expand the Note section below.

Note

There are 5 different statuses to printers reflected by various printer cards, as shown below.

Error

Completed

Printing

Ready

Offline

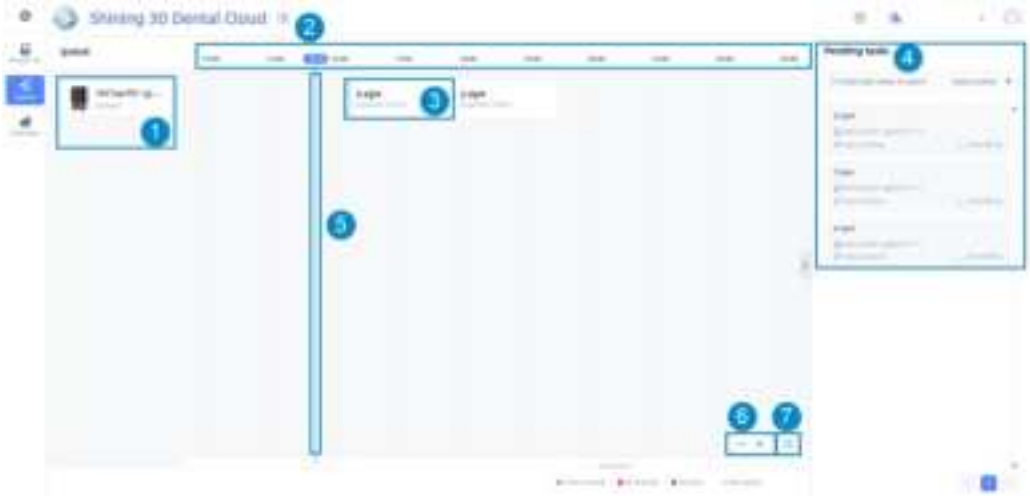
- Click **Queue** on the bottom-left corner of the card to enter the **Queue** page while tracking the location of current machine.

② **List Admin Widget**: Use filtering conditions such as machine name, serial number, type and status to manage the Printer list.

③ **+ Add Button**: Enter the binding page to add printer to the list.

Queue

The **Queue** page records the tasks of all printers bounced to the current organization one week time before and after (14 days) clearly in the form of task cards, as shown in the figure below.



① **Vertical axis:** A list of all printers bounced to the current organization.

② **Horizontal axis:** Time axis.

③ **Task card:** Click on the card to check detailed information about the corresponding printing task (including the number of printing layers, layer thickness, total duration, etc.); for more, please expand the "Note" section below.

Note

There are 5 different statuses to printing tasks reflected by various task cards, as shown below.

Note

- Task cards other than "in the queue" ones show their actual working time. While "in the queue" task cards array equidistantly and indicate estimated time through their length.
- Printing tasks can not be canceled, and tasks in the queue can be cancelled or deleted manually.
- Tasks in the queue correspond to that in the Pending queue of the printer. By dragging and adjusting the order of tasks in the **Queue** page, the **Pending** queue of the printer will also be changed; if a pending task is cancelled due to limited insufficient storage space or other reasons, the corresponding task card will also disappear, and the task can be reissued in the **Pending tasks** list.

④ **Pending tasks**: All the printable files that have not yet been issued by the current organization display the name of the task and the designated printer.

- Support fuzzy search task name or search based on the filtering condition of printer.
- Click each task bar to go to the details page of the corresponding order.
- Click **Issued** button to issue print tasks to the printer's **Cloud** queue.

> **Note**
>
> If the task is not issued successfully, please check the reason for failure in the Pending tasks.

> **Note**
>
> There are methods facilitating seeking target tasks on the time line:
>
> - Zoom in / out the timeline: Use ⑥ Zoom Widget.
> - Move forward or Backward in time: Press and drag the left mouse button, or drag the horizontal scroll bar.
> - Return to the current time: Use ⑦ Refresh Widget for locating to ⑤ Current Time.

Overview

The **Overview** page displays various graphs relating to selected machine(s) within chosen day(s) for making the data self-explanatory.

① **Printer buttons**: Select **all** for viewing the data overview in previous organization in default; select one printer for viewing the printing record of one machine; select multiple printers for comparing the data between them.

② **Calendar**: Select **The day**, **In 7 days**, **In 30 days**, or choose start and end date manually by using the calendar, the duration shall be no longer than 7 days.

15.2 Monitoring Printers

15.2.1 Check States

Enter the Printer List page for checking printers' status.

Click the printer card to get the real-time temperature and humidity, hardware and software information, printing history and overview data of machine.

15.2.2 Check Ongoing Printing Tasks

Check Ongoing Printing Within the Printer List

Find printer card(s) with **printing** tag, click the card to get detailed message such as **the progress bar** to **previous task**.

Check Ongoing Printing Within the Queue

Click for returning to the current time.

Find the current task card(s), which being marked in blue and being divided by a vertical blue line. Click the card to get detailed message such as **printing time predication**.

15.2.3 Check History Printing Tasks

Check History Printing Tasks Within the Printer List

Click target card and then click **history** for entering the printing history page and viewing **the information of all the history printing tasks to this machine.**

Check History Printing Tasks Within the Queue

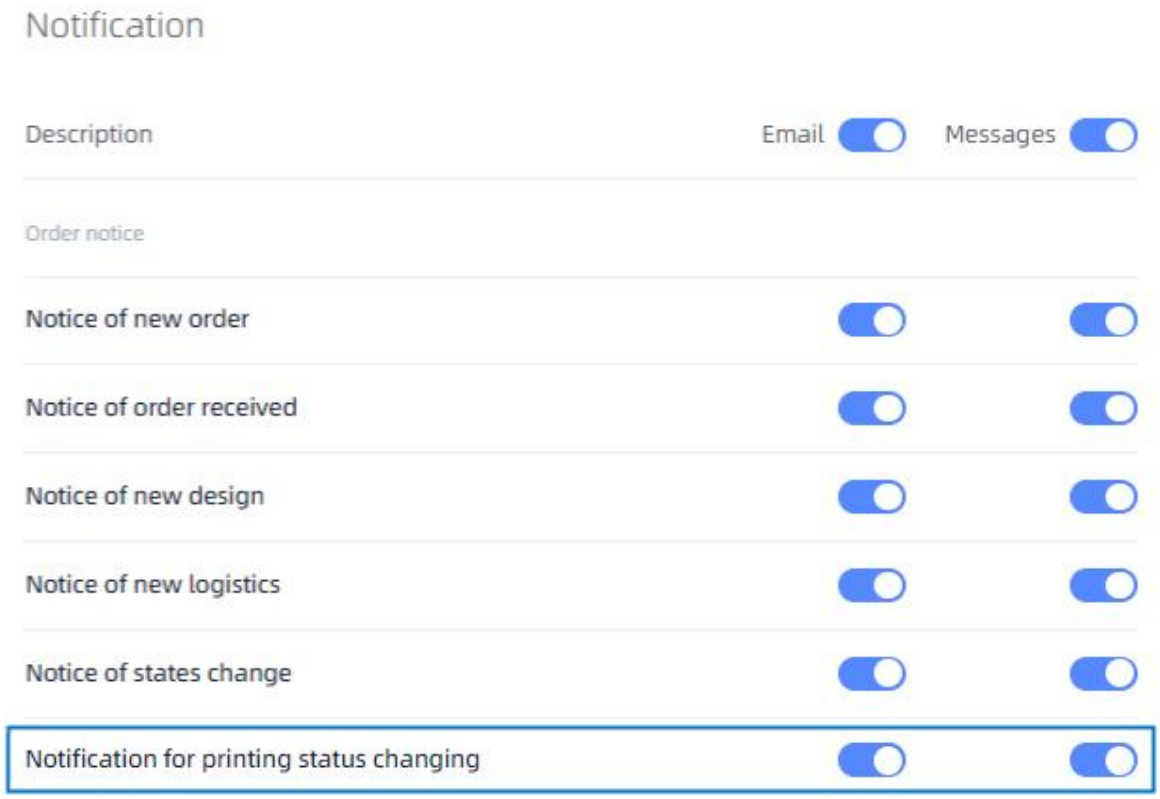
Press and drag the left mouse button, or drag the horizontal scroll bar to the right to find the target card.

Click the card to view **the information to the target task.**

15.2.4 Enable Printing Status Notification

Unfold the account management list in the right upper corner select **Notification.**

Enable the function and set receiving methods by clicking **Notification for printing status changing** sliders. The system will send the error message to the people uploading the printing task as set.



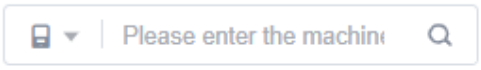
Note

The system will send the error message to the administrator's email if can't find the certain people uploading the printing task.

15.3 Charge Printers

Enter the printer list for charging printers.

15.3.1 Search Printers



Input keywords, then click to filter printer(s) with this keywords in its name or serial number.

15.3.2 Filter by Models

Click the **Models** search box and select a model to filter printer(s) of the same model.

15.3.3 Filter by States

Click the **Status** search box and select a states to filter printer(s) of the same states.

15.3.4 Update Data

Click ↻ for resetting screen condition(s) and loading the latest data of printer(s).

15.3.5 Bind

Specific operation steps are provided in the Binding DentalCloud Account section.

15.3.6 Unbind

> ⚠ Caution
>
> The **Unbind** function on DentalCloud is only available to the administrator account.

To unbind, click the card of the target printer and click ··· button on the detail information page, then select **Unbind** and confirm. The software built in printers also support the unbind function.

> **Caution**
>
> After unbinding, the cloud printer will not be displayed on DentalCloud anymore. To find back the missing data, rebind the printer to the original organization.

III. Printing Process

16 Power On & Off

Please boot up the printer before printing.

> **Danger**
>
> At the very first, please check the environment before starting the device.

16.1 Power on

1. Connect the power cable ⑧ to the printer.
2. Press the power button ⑦ on the right side to awake the Fabware.
3. The printer will sound 1 beep when it is successfully powered on, and the touch screen will display the SHINING 3D startup screen.

> **Note**
>
> - For the first startup, the software will walk you through the User Guide and can not be skipped.
> - For the subsequent startup, the software will enter Home interface after being powered up.

16.2 Power off

Press the power button ⏻ on the right side.

> ⚠ Caution
>
> To avoid wearing on the printer, do not press the power button of the printer frequently.

17 Add Resin

Please select and use appropriate printing material for the model to be printed.

> ⚠ Caution
>
> Damage to the device, data loss and any other accidents caused by procedures not specified in this Manual are not covered by the warranty.

17.1 Resin Type

Shining 3D provides various high-quality resin materials featuring different highlights to apply high-precision resin 3D printers to multiple scenarios.

DM05 Implant Model Material

DM05 is used for printing implant models and removable models. Its high toughness and high pressure resistance and unbreakableness contributes to its excellent fault-tolerant performance, which provides a better experience for removal and insertion.

DM12 V2 Dental Model Material

DM12 is the ideal choice for printing separa tec models for crown anc bridge application. It optimizes model precision through its lower elasticity modulus. The hardness anc mechanical properties of the curec resin allows DM 12 to resist abrasion during sealing anc finishing for crown anc bridge cases. ensuring a perfect fit every time. The yellow color offers maximum celection of margin lines anc acjacent contours. anc cleanup is easy thanks to the low viscosity of the resin.

DM15 Aesthetic Model Material

With gooc molcing stability. DM15 can accurately restore oral cigital models with high color fidelity anc gooc aesthetics results. It has gooc retention anc less cimensional change over a long time. It is the ideal material for crowning shipping models.

GM11 Gingiva Mask Material

Gingiva Mask GM11 is an excellent choice for replicating gingiva contours for cigital implant cases. Its flexibility can assist in planning the emergence profile for cigital implant restorations.

SG01 Transparent Guide Material

SG01 is a clear and bio-compatible resin mainly used to print guide templates for implant, gingival cutting, orthodontic bracket bonding, bone grinding, etc. The printed model has transparent and clear colors, and high stability without warpage and deformation. Besides, its biocompatibility allows for short-term contact with the human body.

DC12 Dental Cast Material

DC12 is a printable wax-like photo-polymer specially developed for metal casting, suitable for dental casting applications such as crowns, bridges, and partial dentures. The printed model has delicate surface and is not easy to deform.

ODO2 Orthodontic Model Material

ODO2 is used to print orthodontic models that can withstand vacuum absorption. The printed model has a high degree of detail reproduction, super surface hardness, and super edge stability. It has a small deformation at high temperatures, making the molding accuracy of invisible braces higher.

TR01 Custom Tray Material

TR01 is a bio-compatible material with a high elastic modulus which makes it an outstanding choice for printing custom trays. The high elastic modulus allows the printed tray to resist flexion under high pressure, leading to more accurate impressions. Its bio-compatibility makes it safe for short-term use in the mouth.

17.2 Operational Procedure

1 Clean residue >

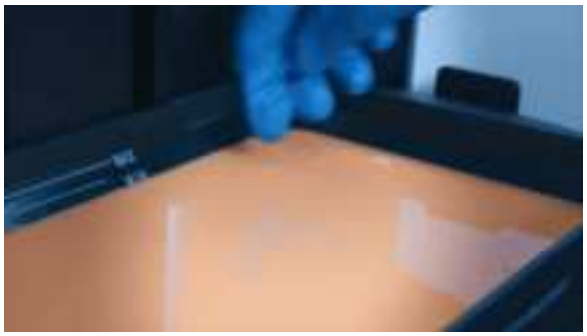
Please check if there is any residual solid resin inside the tank; if there is, please follow the steps below to cure the resin at the bottom of the tank to avoid the residual resin affecting the printing effect and prevent damage to the components.

① Place the resin tank cleaner in the corner.

② Go to Settings > Hardware Settings > Settings or Home > Resin Tank Information. Tap Cure Resin and set curing time.

③ After curing is finished, loosen the buckle and gently remove the resin tank.

④ Wear disposable gloves and remove the cured resin layer from the bottom with the resin tank cleaner, as shown in the right figure.



Note

If there are still some residues floating, use an 80 to 100 mesh filter to filter the residues.

> ⚠ Caution
>
> The bottom of the resin tank is made of a single layer of FEP film which is easy to be broken. Therefore, when removing the solid resin layer, be careful not to poke the bottom of the tank.

2 Add resin >

Please follow the instructions below to add resin materials.

> ⚠ Danger
>
> Please read and understand all relevant notice for material thoroughly before adding the resin.

① Shake the resin bottle for about 2 minutes, and then pour the fully shaken liquid resin into the resin tank.

> ⚠ Caution
>
> Keep the level of liquid resin between the MAX and the MIN lines so that to prevent the liquid resin from splattering during printing and to ensure the printing effect.

② Use the scraper to stir the liquid resin constantly until there is no sediment.

> **Note**
>
> During the printing process, it may be necessary to add resin material to ensure successful printing. Without interrupting the printing program, simply open the chamber door and slowly pour the resin into the resin tank when the build platform is moving upward and the light source is turned off.

3 Set the resin tank

Before printing, set the resin tank first.

Go to **Home**> **Resin Tank Information**. Tap to select the brand and type of the resin in the tank.

> **Caution**
>
> - The printing effect is not guaranteed when the used printing material does not appear in the list.
> - Select the brand and type of resin actually added to the tank, or the printing may fail; if the resin type is not listed out, select Others.

If there is need to change the resin, please clean the resin tank, then add the alternative resin following the procedure mentioned above.

18 Select and Print Files

Here are three ways to send a print job the printer:

- Transmit print files through AccuWare
- Issue print files on the DentalCloud
- Import print files through the flash disk

> **Caution**
>
> - Before selecting the file to print, please make sure that the printing material has been stirred well, the residue at the bottom of the resin tank has been cleaned, and the optical components have been cleaned.
> - The file size limit for printing is 2.5 GB.

Select Pending file

① Open the AccuWare under the same LAN. Transmit the slice file on your computer to the **Pending queue** of the printer.

② Once the file transmission is completed, tap the target file on the **Queue** interface to enter the **Detail** interface to check the brand and type of the resin material and the number of sliced layers of the model.

③ After confirming all the settings, close the chamber door and click **Print** to start printing.

Select Cloud file

① Log in to the DentalCloud and go to **Printer** > **Queue**, select the target file in the **Pending tasks** list on the right side, and click the **Issued** button to issue the file to the **Cloud** queue of the printer.

② Once the file transmission is completed, the files will be downloaded in order and enter the **Pending** queue of the printer automatically; it is also allowed to tap the download button of the target file to change the order.

> **Note**
>
> When running out of the memory (7.5 GB in total), the transmitted files will not be downloaded automatically, and it is required to tap the download button of the large file in the **Cloud** queue manually if needed, and the system will delete earlier print jobs listed in the **Pending** queue.

③ Tap the target file to enter the **Detail** interface to check the brand and type of the resin material and the number of sliced layers of the model.

④ After confirming all the settings, close the chamber door and click **Print** to start printing.

Select USB file

① Plug the flash drive that contains the slicing file into the printer, and **Queue** interface will show the icon.

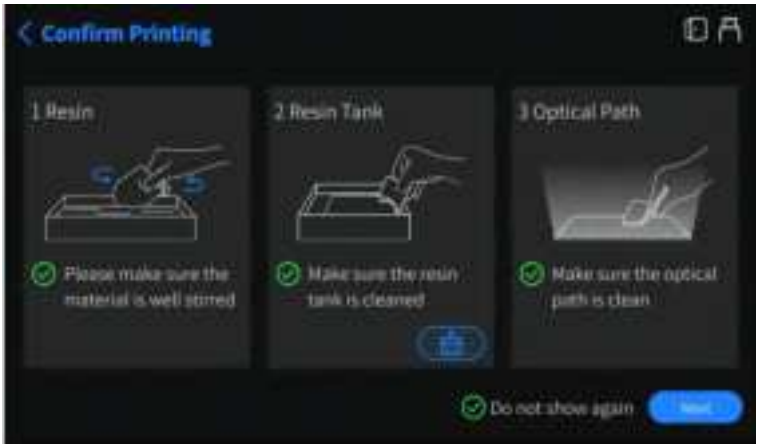
② Tap to enter the **Flash Drive** interface, and tap the target file to enter the **Detail** interface and simultaneously import the file to the **Pending queue**.

> **Note**
>
> The printer can recognize LGB data in the format of FAT32 or NTFS.

③ Tap the target file to enter the **Detail** interface to check the brand and type of the resin material and the number of sliced layers of the model.

④ After confirming all the settings, close the chamber door and click **Print** to start printing.

Finally, click **Print**. The software will pop up a window as below to remind you to check relevant settings before printing.



> ⚠ Caution
>
> - When starting to print, if there is a prompt for "Inconsistent material type", please tap to modify the brand and type of the printing material.
> - When starting to print, if there is a prompt for "Missing print platform" or "Printed model not removed", please follow the instructions before proceeding with the print.
> - When starting to print, if there is a prompt saying the current slice file is only suitable for the standard resin tank, please follow the instructions before proceeding with the print.
> - When starting to print, if the machine is in constant temperature mode and the temperature inside the chamber is below 23℃, the print platform will move down to the zero position by 10mm. At this point, the fan will stop working, and the resin will be heated using the projector's exposure for 1 minute before the printing begins.

19 Check Printing Details

During the printing process, go to **Home** > **Print Detail** interface, and you can slide left and right to view the printing information and control the printing status.

Left interface

Displays the name of the file (the slice file of the sample model), the machine status, the name of the material used, the number of layers, the estimated end time and other information related to the current printing job.

: Pause printing.

: Resume printing.

: Aborts the current print job and return to the Home interface.

> **Note**
>
> If the constant temperature mode is enabled and the temperature inside the chamber has not reached the required level when starting the print, the machine will enter the heating state. At this time, the progress bar will remain at 0%, and the machine status will be displayed as Heating.

> **Caution**
>
> Please use the pause button with caution, as interrupting the printing task will lead to errors in the connection of slices and affect the printing effect.

Right interface

Displays the machine status, the thickness of slices, the serial number and other information related to the current printing job.

After the sample model is printed, the printer will sound 5 beeps, and the touch screen will display **Printing Completed.**

Now you can:

- If the printing is successful, tap < **Print Complete** in the top left corner or **OK** in the lower right corner to return to the Home interface; meanwhile, the build platform will rise to the top of the printing chamber and the printed model will be suspended.
- If there are issues with the print result, tap **Print Failed?** in the top right corner to enter the **Feedback** interface:

Dropped Prints

If you report the **Dropped Prints** issue, the AI mode module (if enabled) will automatically adjust the printing parameters based on the submitted issue.

> **Note**
>
> - If the exposure compensation time for material package is adjusted during updating procedure or receiving slice files, the printing parameters modified by the AI mode will be reset to default values.
> - If the issue still exists, you can tap Go to adjust the zero position, and the printing parameters modified by the AI mode will be reset to default values.

Support Failure

If you report the **Support Failure** issue, the AI mode module (if enabled) will automatically adjust the printing parameters based on the submitted issue.

> **Note**
>
> - If the exposure compensation time for material package is adjusted during updating procedure or receiving slice files, the printing parameters modified by the AI mode will be reset to default values.
> - If the issue still exists, you can adjust settings according to the provided possible reasons or you can scan the QR code to contact technical supporters.

Over-tighten

If you report the **Over-tighten** issue, the AI mode module (if enabled) will automatically adjust the printing parameters based on the submitted issue.

> **Note**
>
> - If the exposure compensation time for material package is adjusted during updating procedure or receiving slice files, the printing parameters modified by the AI mode will be reset to default values.
> - If the issue still exists, you can adjust settings according to the provided possible reasons or you can scan the QR code to contact technical supporters.

Separated Layers & Over Curing Residues

If you report the **Separated Layers & Over Curing Residues** issue, you can adjust settings according to the provided possible reasons or you can scan the QR code to contact technical supporters.

Tap to Confirm the feedback, and the feedback completion interface will appear. Tap OK to return to the homepage.

> ⚠ Caution
>
> - To ensure the printing quality, please keep the chamber door closed during the printing process or when the process just finishes.
> - It is recommended that you tap Settings > Software Settings and enable Activate Cover Sensor When Printing to ensure print quality and reduce safety risks.

IV. Post-process

20 Remove the Model

Please follow the instructions below to remove the printed model

1 Stand model >

After the printing process is finished, leave it on the build platform for about five minutes to let the clinging liquid residue flow down.

2 Remove the build platform >

Lift the fixation handle with one hand, use the other hand to hold the platform horizontally and slide it away from the rail, and then place it on the side of the printer.

3 Remove the model

Use the angular knife to peel the printed model off the build platform.

> ⚠ Caution
>
> Be careful to keep the creaseless ends floating on the surface of build platform to avoid damaging the model or scratching the metal surface of the build platform.

21 Clean the Model

Please follow the instructions below to clean the printed model

> ⚠ Danger
>
> Please read and understand all relevant notice for material thoroughly before using the ethanol.

1 Soak the model >

① Pour a solution of ethanol with a concentration of 75% or higher food-grade corn ethanol into the cleaning box.

② Gently submerge the model into the ethanol liquid, slightly shake it for 30 seconds to remove any liquid resin residue on the surface of the model.

③ Cover the box and let the model soak for 2-3 minutes to remove any remaining liquid resin on the surface.

> ⚠ Caution
>
> The resin will be softened when being soaked in ethanol, so please observe carefully during this process and shorten the time when necessary.

2 Dry the model

Take the model outside of the cleaning box and use an air gun to blow dry the liquid on the surface.

> **Note**
>
> It is recommended that you use an ultrasonic cleaning machine for deeper cleaning.

22 Cure the Model

It is recommended that you perform secondary curing on the printed model twice after cleaning, to make it more stable and easier to store. The post-cured model is also safer as it does not irritate the skin.
Besides, its various properties such as smoothness and hardness are superior to those of the model before the secondary curing.

For more specific principle, please expand the "Note" section below.

> **Note**
>
> During the operation of the Curing Box (Fabware), the specific wave of UV light will cure the photosensitive resin in order to cure the printed resin models twice.

Please follow the instructions below to cure the printed model

1 Place the model >

Wear disposable gloves and open the chamber door of the curing box, and place the cleaned model on the center of the acrylic turntable inside the box.

2 Cure the model

Close the chamber door and process the curing operation.

23 Remove the Support

> **Danger**
>
> Protection is required when using sharp tools to remove supports.

Please tear supports away by hand and then exert grinding papers or a portable grinder to polish the model and reduce the remaining marks.

> **Note**
>
> A polishing machine is recommended for further processing and polishing.

24 Clean the Print Platform

The ambient light can cause the liquid resin on the build platform to solidify and cause adhesion issues. Therefore, please clean the build platform immediately after each print job is completed.

> **Danger**
>
> Please read and understand all relevant safety instructions thoroughly before cleaning.

Please follow the instructions below to clean the build platform.

1 Remove residues >

Use the putty knife to remove residues on the platform.

2 Brush the build platform >

Soak the brush with ethanol and clean the resin liquid on the platform.

3 Dry the build platform >

Gently wipe the metal surface of the platform with a tissue. Lay the build platform in a cool ventilated place for drying it completely before the next use.

4 Install the build platform

Lift the fixation handle with one hand, use the other hand to hold the platform horizontally and insert it into the bracket. Then press the handle downwards to lock the platform.

V. Maintenance

25 Update the Software

During the process of continuous upgrade of the printer, the system will also undergo corresponding upgrades. Please update the hardware, software, material package and environment library files in a timely manner through Network Upgrade or Flash Drive Upgrade to ensure print quality.

> **Note**
>
> When a new version of the system is available, a pop-up notification window will appear on the touch screen, and please click "Confirm" to perform the corresponding update operation.

Network Update

① When the printer is **connected to the Internet**, go to **Settings > About > Software Update** to download and install the latest version of the system.

> **Note**
>
> Please contact Shining 3D technical supporters to acquire the latest version of the system.

② After completing the update, restart FabWare, and the latest operating interface will show the newly imported material package.

Flash Drive Update

① When the printer cannot connect to the **Internet**, insert the flash drive containing the latest version of the system into the device, then go to **Settings** > **About** > **Software Update** and click **Flash Drive Update**.

② On the **Flash Drive Update** interface, select the latest package and then tap **Next** to download and install it.

③ After completing the update, restart FabWare, and the latest operating interface will show the newly imported material package.

When there is an update to the environment library files, you need to update the environment library files through **Network Update** or **Flash Drive Update**.

> **Note**
>
> Please connect the printer to the Internet before updating the environment library files.

26 Set Zero Position

The occasional fall-off of the printer model means the current zero position of the build platform may be inaccurate, so please tap **Settings** > **Hardware Settings** > **Motor Settings** to perform a zero position adjustment in time.

> **Danger**
>
> Be careful to avoid collision when adjusting the zero position; in case of the collision, please contact Shining 3D Technical Supporters immediately to deal with the damaged printer.

> **Caution**
>
> Damage to the device, data loss and any other accidents caused by procedures not specified in this Manual are not covered by the warranty.

27 Clean the Resin Tank

Please maintain and clean the resin tank regularly to maximize its performance and to ensure consistent, high-quality prints over a tank's lifetime.

> **Danger**
>
> Resin may cause skin irritation or an allergic skin reaction, so please wear gloves when handling liquid resin or resin-coated surfaces and wash skin with plenty of soap and water.

1 Clean the residue >

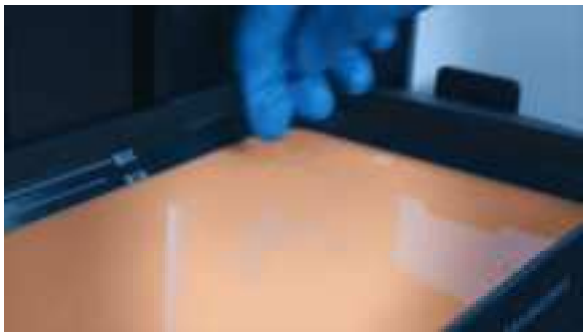
Please follow the instructions below to cure and remove residues at the bottom of the resin tank.

① Place the resin tank cleaner in the corner.

② Go to **Settings** > **Hardware Settings** > Settings or Home > **Resin Tank Information**. Tap **Cure Resin** and set **Curing time**.

③ After curing is finished, loosen the buckle and gently remove the resin tank.

④ Wear disposable gloves and remove the cured resin layer from the bottom with the resin tank cleaner, as shown in the right figure.



> **Note**
>
> If there are still some residues floating, use an 80 to 100 mesh filter to filter the residues.

> **Caution**
>
> The bottom of the resin tank is made of a single layer of FEP film which is easy to be broken. Therefore, when removing the solid resin layer, be careful not to poke the bottom of the tank.

2 Clean the exterior surface

Please follow the instructions below to clean the exterior surface of the resin tank.

① Empty the liquid resin from the resin tank into the original container.

② Use the brush soaked by ethanol and the cloth to clean the liquid resin on the surface.

> ⚠ Caution
>
> The inner side of the resin tank is equipped with an NFC chip, which is used to sense the resin material in the tank and write the tank information. To avoid damaging the chip, be careful to avoid the chip's adhesive location when cleaning the resin tank with an ethanol solution.

After cleaning, lay the resin tank in a cool ventilated place for drying it completely before the next use.

28 Clean Optical Components

To ensure the print quality, it is suggested that clean the LCD screen and other optical components every two weeks to prevent problems such as model detachment and rough surface.

Please follow the instructions below to clean optical components.

1 Remove the build platform >

Lift the fixation handle with one hand, use the other hand to hold the platform horizontally and slide it away from the rail, and then place it on the side of the printer.

2 Remove the resin tank >

① Slide the resin tank out of the printer.

② Empty the liquid resin into the original container and place resin tank upside-down on a clean, flat surface.

3 Remove the back cover >

Loosen 4 screws on the back cover for taking it off.

4 Clean optical components >

- **Clean LED panels:** Use a clean wiping cloth to remove dust on the surface of the LED panels gently.
- **Clean the LCD screen:** Use the cloth dipped with a small amount of clean liquid ethanol to polish the underside and top surfaces of the LCD screen gently until it is completely transparent.

5 Restore the printer

After cleaning, lay the optical components in a cool ventilated place for drying them completely before the next use.

29 Light Intensity Correction

The intensity of the LED light will be weaken over time.

If the weakening of light intensity starts affecting the printing result, please correct the light intensity immediately.

Tap **Settings** > **Hardware Settings** > **Optics Settings** > **Start Correction.** The system will correct the light intensity to meet the set value automatically.

30 Manage Consumables

If any of the following situations occur, please replace the resin tank in time:

- The resin tank has obvious damage or chipping.
- The silicone coating of the resin tank gradually wears out during use, affecting print quality.
- The resin tank has printed 100,000 layers in total

Note

For checking the total number of printed layers, go to Home > Resin Tank Information to determine whether each component has exceeded its working life.

- LED panel: Print 600,000 layers in total.
- LCD screen: Print 200,000 layers in total.
- Resin tank: Print 30,000 layers in total.

31 Schedule of Maintenance

Please perform regular maintenance on the components of the printer according to the maintenance requirements and cycle in the table below to ensure print quality.

Components	Requirements	Maintenance Cycle
LCD Screen	No visible stains or breakages	Every 2 weeks
LED Panel	No visible stains or breakages	Every 2 weeks
Light intensity	Equal to the set value	Every 6 months
Resin tank	No visible stains or breakages, free of cured resin and other debris, the film is of excellent light penetrability	Before every print
Exterior surface	Stay clean	Everyday
Handrail	Stay clean	Every 2 days
Guide rail	Stay well-oiled	Every 3 Months

Caution

Please avoid damaging the optical components such as LCD Screen and LED Panel, or the printer may fail to work.

32 Auto Maintenance Reminder

Featuring with an automatic maintenance reminder, the Printer supports selecting the operating time and usage frequency of the device and its parts, and timely reminds the user to perform maintenance, cleaning or replacement of parts if needed, ensuring a good printing experience.

Z Axis Maintenance Reminder

Note

The Z axis needs regular lubrication to ensure smooth movement and reduce noise, ensuring stable printing effect.

When the Z axis has been running for more than one year, a window will pop up and provide a prompt, as shown in the right figure.
Tap **Go** to scan the QR code to view specific video tutorials; tap **OK** to close the pop-up window, and the notification can still be viewed in the message board on the homepage.

Light Panel Cleaning Reminder

Note

After the light panel becomes dirty, it will lead to a decrease in the light power projected onto the screen, resulting in incomplete curing, and ultimately causing problems such as model cropping and delamination.

When the device has been in operation for more than one year, a window will pop up and provide a prompt, as shown in the right figure.
Tap Go to scan the QR code to view specific video tutorials; tap OK to close the pop-up window, and the notification can still be viewed in the message board on the homepage.

Fan Filter Cleaning Reminder

> **Note**
>
> After the fan filter becomes dirty, it will lead to poor heat dissipation of the device, which will in turn affect the lifespan of the light panel and reduce the printing stability.

When the device has been in operation for more than half a year, a window will pop up and provide a prompt, as shown in the right figure.
Tap Go to scan the QR code to view specific video tutorials; tap OK to close the pop-up window, and the notification can still be viewed in the message board on the homepage.

Resin Tank Film Replacement Reminder

Note

The film needs to be replaced after reaching its lifespan, so as to ensure printing effect.

When the number of printed layers of the resin tank exceeds the specified value, a message will appear in the message board on the homepage: The resin tank has reached the maximum number of printed layers, please replace the resin tank to ensure stable printing effect.

33 Problem-solving Guide

Only one side of the build platform can be used to print the model/ the model falls off during printing/ the height of the model does not match the pre-set value.

Reason: The zero position is not accurate.

Solution: Adjust the zero position.

The model is not printed well.

Reason: There are impurities remaining at the bottom of the resin tank.

Solution: Cure the resin.

There are abnormal noises from the tilting motor when peeling off the model.

Reason: The frictional resistance is too high.

Solution: Apply lubricating oil to the screw of the tilting motor.

There are abnormal noises when the printer platform is reset after peeling off the model.

Reason: The processing parameter package does not match.

Solution: Contact Shining 3D Technical supporters for appropriate parameter package.

The model is displayed in red.

Reason: The file size exceeds the build platform or the model needs repair.

Solution: Reduce the size of the model to within the platform range or repair the model.

A "Print error" prompt pops out.

Reason: The printer does not function properly when printing SLP files.

Solution: Reprint or restart the printer.

A "No device" or "No material" prompt pops up.

Reason: The device or material was not selected before the operation.

Solution: Select the device or material first before performing other operations.

A "No selected model" prompt pops up.

Reason: There is no model selected at the moment.

Solution: Select at least one SLP file before performing other operations.

A "The target device does not respond" prompt pops up.

Reason: The device or material was not selected before the operation.

Solution: Select the device or material first before performing other operations.

A "Unknown interruption" prompt pops up.

Reason: The file transfer is interrupted.

Solution: Re-transfer the file.

A "Sending failed" prompt pops up.

Reason: Fail to obtain the SLP file.

Solution: Resend the file.