



SHINING 3D®

# AccuFab-L4D & L4K

## User Manual



V3.3.20

SHINING 3D®




# Foreword

## General

The user manual (hereinafter referred to as "the Manual") introduces the functions, installation, usage and maintenance of the AccuFab-D1s printer (hereinafter referred to as "the Printer").

- Accuware is a software for your PC. Use it to design models etc.
- Fabware is a built-in software of the Printer. Use it to print models.

## Safety Instructions

Signal	Meaning
	Additional information for particular situation.
	Improper actions or conditions that may damage the product or injury, and consequently void your warranty or service contract or lose the patient data or system data.
	The safety instructions that you must precisely follow to avoid injury. Failure to observe can cause damages to your product, or result in personal injuries, or even death.

## Revision History

No.	Version	Revision Content	Release Date
1	V3.3.20	<ul style="list-style-type: none"><li>● Update network connection features.</li><li>● Update Fabware snapshots and features.</li></ul>	November, 2021

## FCC Regulations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) 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.



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.

## About the User Manual

The Manual is related to your safety, lawful rights and responsibilities. Please read it carefully before installing and using the product.

- Shining 3D Tech Co., Ltd. (hereinafter referred to as "the Company") owns complete intellectual property rights of the Manual. No part of the Manual may be reproduced, transmitted, distributed, adapted, compiled or translated in any form or by any means without the prior written consent of the Company.
- The Manual is a guidance for installing, operating, and maintaining the product, including the device, software, or other products provided by the Company, to which the Manual is applicable. The Manual does not serve as the quality guaranty for the product. Every effort has been made in the preparation of the Manual to ensure accuracy of the contents. The company reserves the right to interpret and modify possible errors and omissions therein. Contents of the Manual are subject to changes without notice.
- Images and diagrams in the Manual are presented to provide convenience to readers. If any of them is inconsistent with the actual product, the actual product shall prevail.
- Please read the Manual carefully before using related products. Trained professionals or technicians are recommended to operate related products. The Company shall not be held responsible for any damages and/or losses caused by negligence, environmental factors, improper maintenance, improper use, and/or any other non-quality problems.
- Disputes arising from the Manual and/or related products thereof shall be governed by the laws of the People's Republic of China.
- If you have any ambiguity or suggestion about the contents of the Manual, please contact us by the contact information provided in the Manuals.

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# 1. Safety

## 1.1. Printing Material

The printing material of AccuFab printer is a photo-polymerized resin material independently developed by SHINING 3D. The resin solution is stable, safe, and no substances harmful to the human body were found in the test, but direct contact with skin may cause adverse irritating reactions. During use, operators should strictly follow of the Material Safety Data Sheet (MSDS) instructions for each material.

## 1.2. Emergency Measures

Direct skin contact may cause skin irritation dermatitis. During use, operators should wear rubber oil-resistant disposable gloves.

- Skin contact: Take off contaminated clothing and wash skin thoroughly with soap and clean water.
- Eye contact: Open the upper and lower eyelids immediately, rinse with running clean water or normal saline for at least 15 minutes, and seek medical attention.
- Ingestion: Rinse mouth and drink water immediately, induce vomiting, perform lavage and seek medical attention.

### **Note:**

For resin material contact and leakage hazard treatment, please refer to the latest Material Safety Data Sheet (MSDS) or call the National Chemical Accident Emergency Response Hotline.

### **Warning:**

No smoking, eating, or drinking in the workplace. Keep the resin solvent properly and keep it away from children.

## 1.3. Light Source

- During the printer and post-curing box device operation, the light source emits light with a wavelength of 405 nm, which is harmful to your eyes. Please avoid direct contact.
- Do not open the chamber door during printing.

## 1.4. Alcohol (Ethanol) Solvent

- Alcohol solvent is a flammable and explosive chemical. Please store in a cool and ventilated environment, and keep the bottle cap of the container closed. Keep away from children.
- Alcohol solvent is used as the recommended solution to clean the liquid resin (the recommended concentration is 75% or above) for post-processing of the printed parts of AccuFab.
- Wear disposable gloves when treating parts and surfaces with alcohol or uncured resin. Avoid direct skin contact.

## 1.5. Sharp Accessories

AccuFab 3D printer accessories include sharp tools such as flat-headed tweezers, cleaning shovels, and utility knives. Personal safety protection is required when using these tools for model stripping and support removal.

## 1.6. Electromagnetic Interference

Electromagnetic, produced by AccuFab 3D printer and Fab Cure post-curing box products during operation, has passed CE/FCC standard test and is complied with Class A digital device limits, and will not cause harm to the human body.

## 2. Instructions for Operation Environment

### 2.1. Site Requirements

AccuFab 3D Printer	
Power Supply	110-240V/360W
Operating Temperature	20°C-35°C
Humidity	30%-70%
Printing Environment	The working platform shall be clean and smooth, avoid direct sunlight and strong light, and keep away from the dust-borne device.
Frequency Range	2400–2483.5MHz
Maximum Output Power	18dBm
Transportation&Storage Temperature	-20°C -70°C
Maximum Altitude	1000m

Fab Cure Post-Curing Box	
Power Supply	110-240V
Temperature	20°C-30°C
Humidity	40%-60%
Working Environment	The working platform shall be clean and level, avoid direct sunlight and strong light, and keep away from the dust-borne device.

### 2.2. Computer Recommended Configuration

AccuWare	
Operation System	Win10 (Recommended)
CPU	E3-1230 3.30GHz and above (Recommended configuration: I5 8500)
Memory	8G and above (Recommended configuration: 16G)
Graphics Card	GTX 750 Ti and above (Recommended configuration: GTX1050)

### 2.3. Material Storage

Resin Materials	
Temperature	10°C-30°C
Storage Conditions	Storage conditions: Store in a cool and ventilated room and avoid direct sunlight. Other instructions: The storage container shall be kept closed at all times to avoid contact with fire sources. The resin material is a mixture, and it is easy to form a small amount of sediment after standing for a while. It is recommended to shake the storage container before use to reduce the probability of sediment formation.

## 2.4. Others

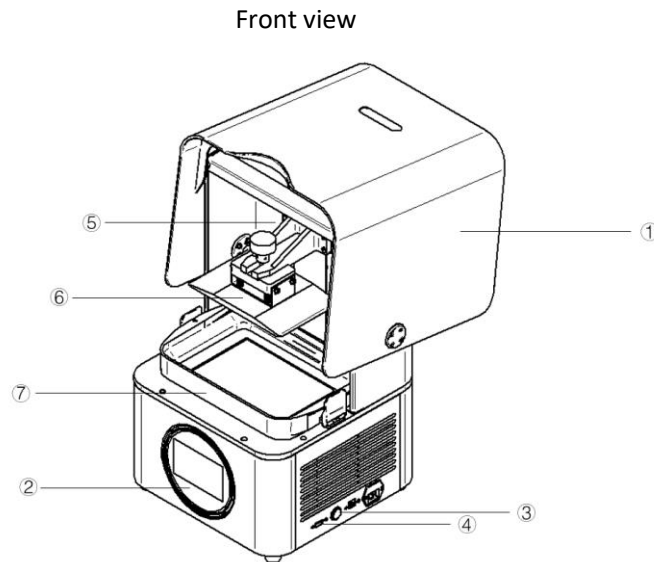
- Ensure that the AccuFab 3D printer only uses the original consumables and accessories. Any change to the printer without the manufacturer's permission will result in device failure, which will invalidate your warranty.
- Ensure that the AccuFab 3D printer works in the recommended printing environment, and the incongruent printing environment will affect the printing accuracy and printing success rate.
- To guarantee the printing quality of the model, keep the chamber door closed during operation or just finished the operation, and do not touch the model, resin tank, platform, or other parts of the device by hand.



### 3. Product Introduction

#### 3.1. AccuFab Printer

##### 3.1.1. Structure Preview



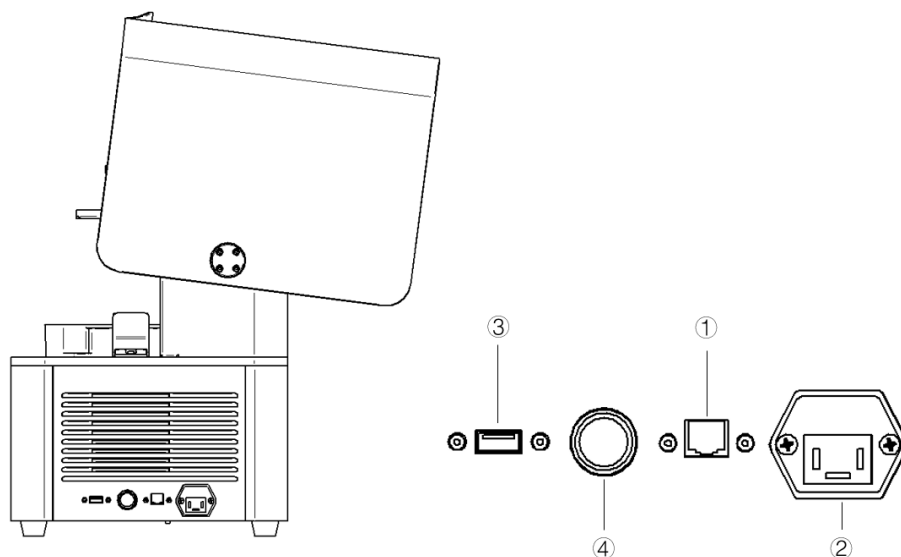
Printer components

No.	Name	No.	Name
1	Chamber door	2	Touch screen
3	Power button	4	USB port
5	Build platform bracket	6	Build platform
7	Resin tank	—	—

**Note:**

Take proper protective measures as the surfaces of the build platform and resin tank is easy to wear. Slight dirt and scratches on the surfaces will not cause printing failure.

Side view



### Printer components

No.	Name	No.	Name
1	Network port	2	Power port
3	B-type USB port	4	Power button

### 3.1.2. Technical Parameters

Parameter	Description
Model	AccuFab-L4D; AccuFab-L4K
<b>Optics</b>	
Light Engine	Mono LCD
Resolution	3840 × 2400
Pixel Size	0.05 mm
Light Source	LED
Wavelength	405 nm
Light Intensity	>3 mw/cm <sup>2</sup>
<b>Print</b>	
Print Volume (W x D x H)	192 mm × 120 mm × 180 mm
Print Speed	10 mm/h-50 mm/h. Print speed varies on materials and layer thickness.
Print Accuracy	±0.05 mm
Layer Thickness	0.025 mm/0.05 mm/0.075 mm/0.1 mm
Material Compatibility	Shining 3D material; certified 3rd party material
<b>Printer</b>	
Printer Dimensions	360 mm × 360 mm × 530 mm
Weight	19 kg
Operating Temperature	20°C-30 °C
Operating Humidity	40%-60%
Power Requirements	110 V-240V AC; 50/60 Hz; 360 W
Connectivity	USB dongle; Wi-Fi; Ethernet
Printer Control	5" touchscreen
Alerts	Touchscreen alerts; LED status indicators; buzzer alerts
Packing Dimensions	480 mm × 480 mm × 660 mm
Packing Weight	25 kg
Certification	FCC/CE/ROHS

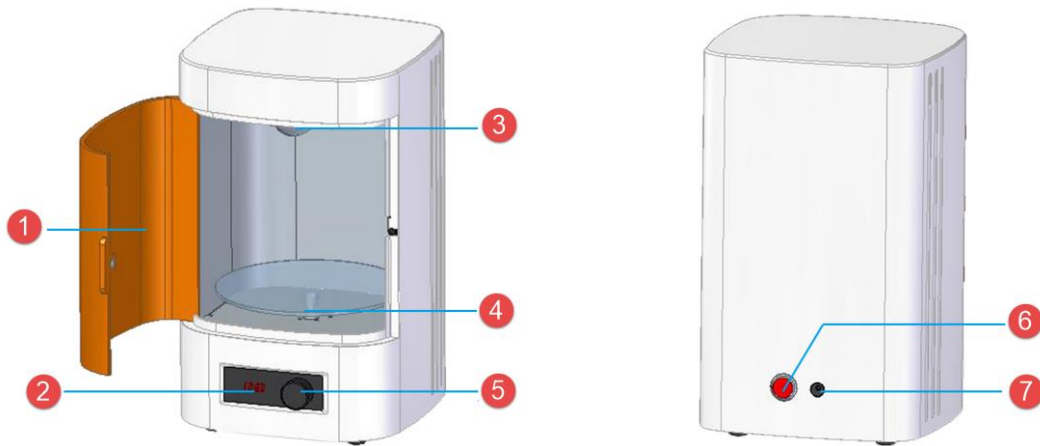
### 3.2. Standard Accessories

Device Module	Components	Quantity
Printer Host	Printer	1
	220V power adapter	1
	Build platform	1
	Build platform bracket	1
Accessories	Warranty card	1
	Manufacturer certificate	1

	Quick start guide	1
	Silicone scraper	1
	Double-faced velvet mirror cloth	2
	Soft rubber brush	1
	Flat pry knife	1
	Putty knife	1
	Electronic scissors	1
	PET sheet	20
	Disposable gloves	10
	Cleaning box (accessories)	1
	USB flash drive	1
	Harness-network cable (2m)	1
	USB cable	1
	Resin tank	1

### 3.3. Preview of Curing Box Structure

For more details, refer to *Fab Cure Post-Cure Oven\_User Manual\_V2.0*.



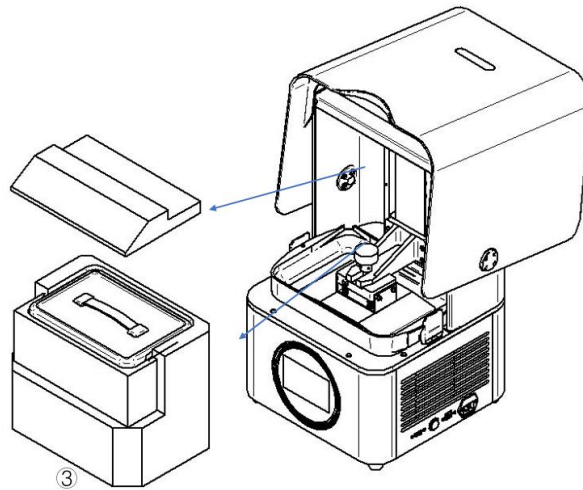
Components

No.	Name	No.	Name
1	Shading door	2	Display screen
3	UV lamp	4	Acrylic turntable
5	Knob	6	Power button
7	Power port	—	—

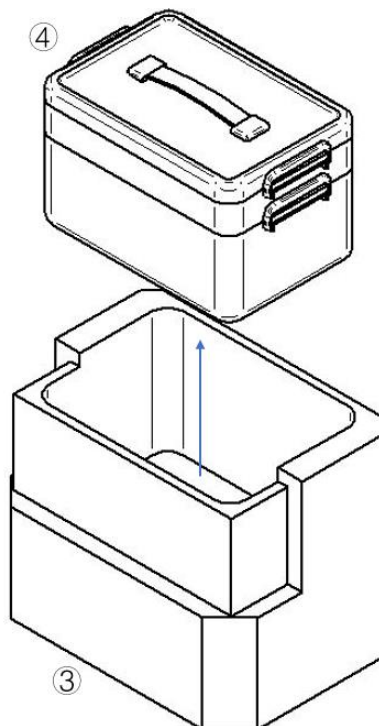
## 4. Installation

### 4.1. Unpack the Package

Step 1: Remove the package and place the printer on the table. Remove the foam ③ inside the printer.

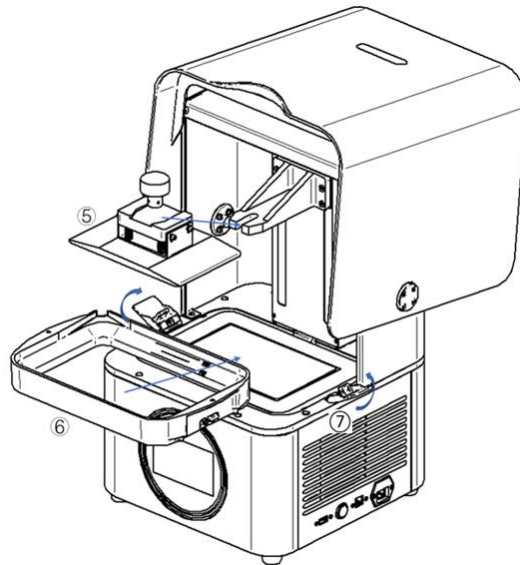


Step 2: Take out accessory box ④ from fixing foam ③ inside the printer.



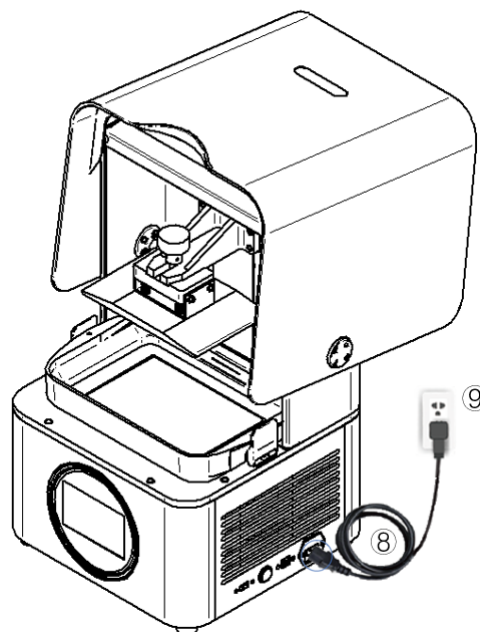
### 4.2. Install the Printer

Step 1: Insert build platform ⑤ into the guide slot and tighten the screw on the platform.



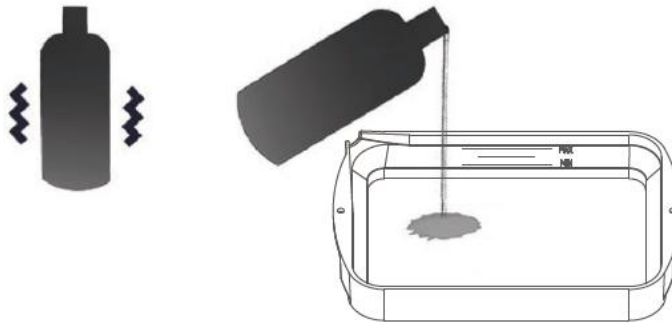
Step 2: Insert resin tank (6) into the position. Lock the buckles (7) of the resin tank to lock the resin tank.

Step 3: Connect the power supply as the picture shows, and press the power button on the right side of the printer.



### 4.3. Add Material

Shake well before pouring material into the resin tank. Note that the resin level should be between the indicator lines of minimum and maximum.



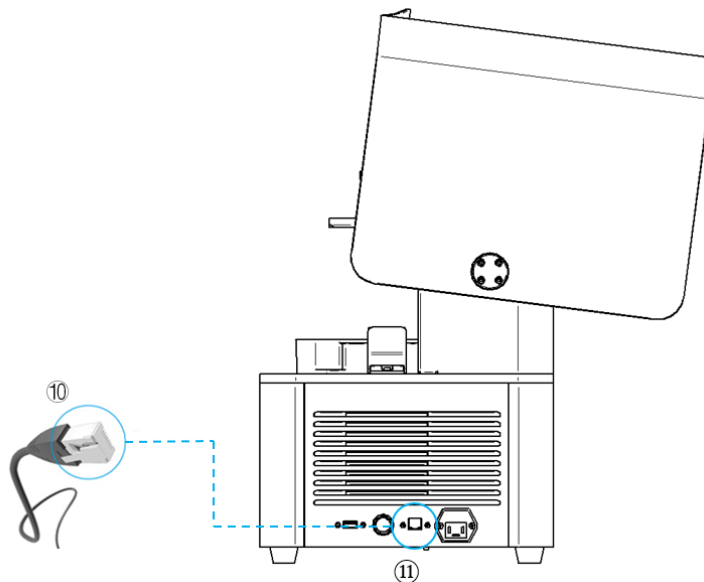
**Note:**

You can also add resin during printing without pausing.


## 4.4. Connect to Network

Connect the Printer to network by Ethernet cable or Wifi.

### 4.4.1. By Ethernet Cable

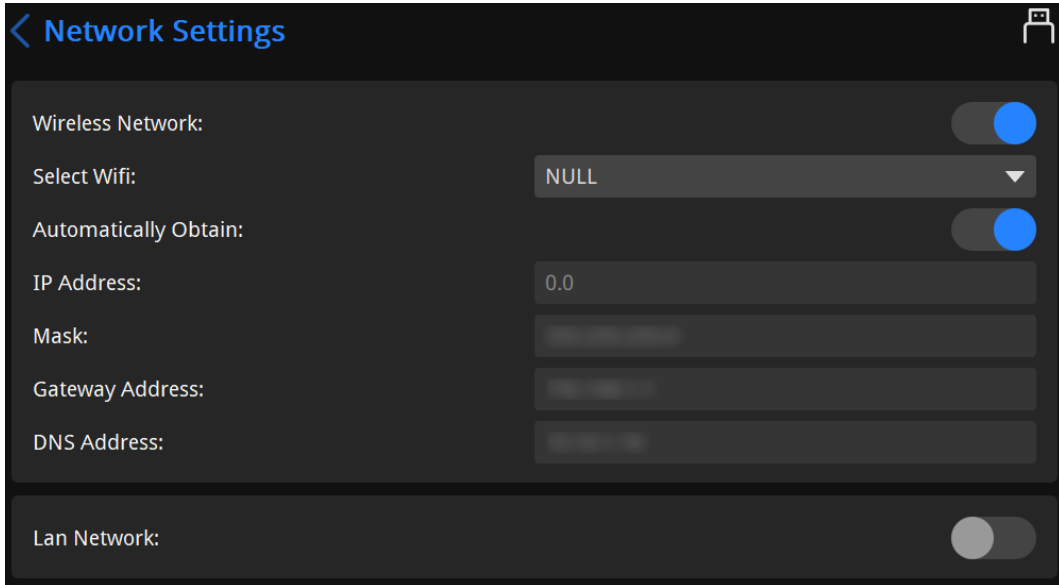


Step 1 Connect one end of Ethernet cable ⑩ to the network port ⑪, and the other end to the Ethernet port.

Step 2 On the Fabware main interface, tap  and then **Network Settings**.

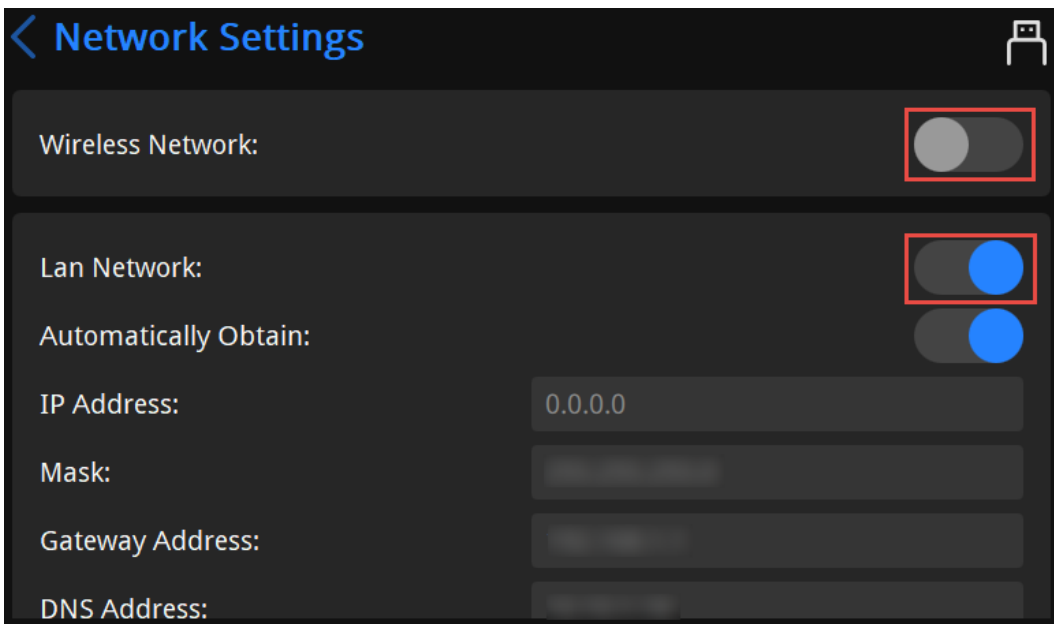


Fabware is a built-in software of the Printer.



The Network Settings interface

Step 3 Disable wireless network and enable Lan network.




Disable wireless network and enable Lan network

Step 4 Configure network settings:

- Enable **Automatically Obtain** (enabled by default): When connected to network, the Printer shall obtain an IP address sent by Lan network automatically.
- Disable **Automatically Obtain** and configure network settings manually: Fill in parameters such as IP address, mask and gateway address.

#### 4.4.2. By Wi-Fi

Step 1 On the Fabware main interface, tap  and then **Network Settings**.

Step 2 Ensure the wireless network is enabled.

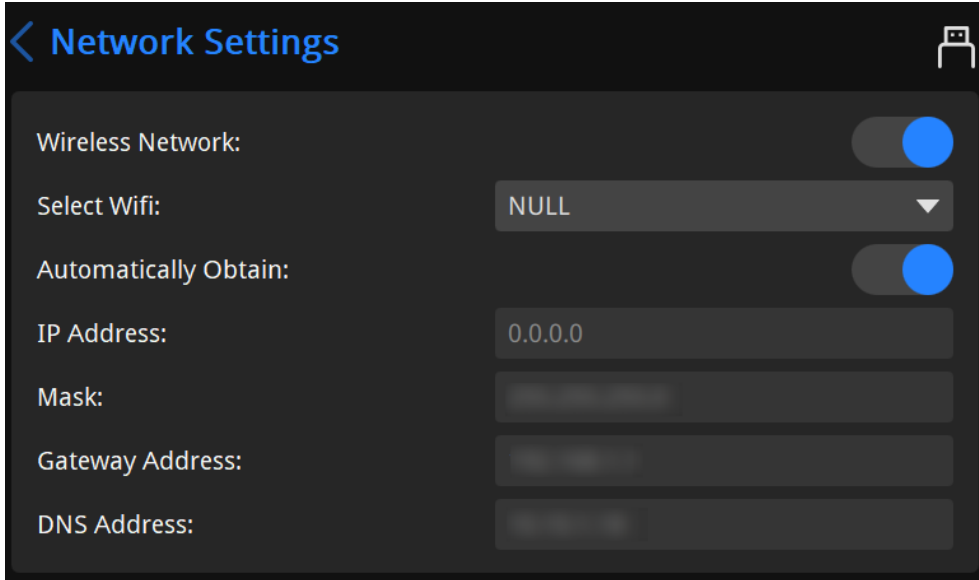


For first-time use, the wireless network is enabled by default.

Step 3 In the drop-down list of **Select Wifi**, select needed wireless network.



Select the wireless network where AccuWare is located. Fill in the wireless network password and confirm logging.



Select Wifi

## 4.5. Update Fabware

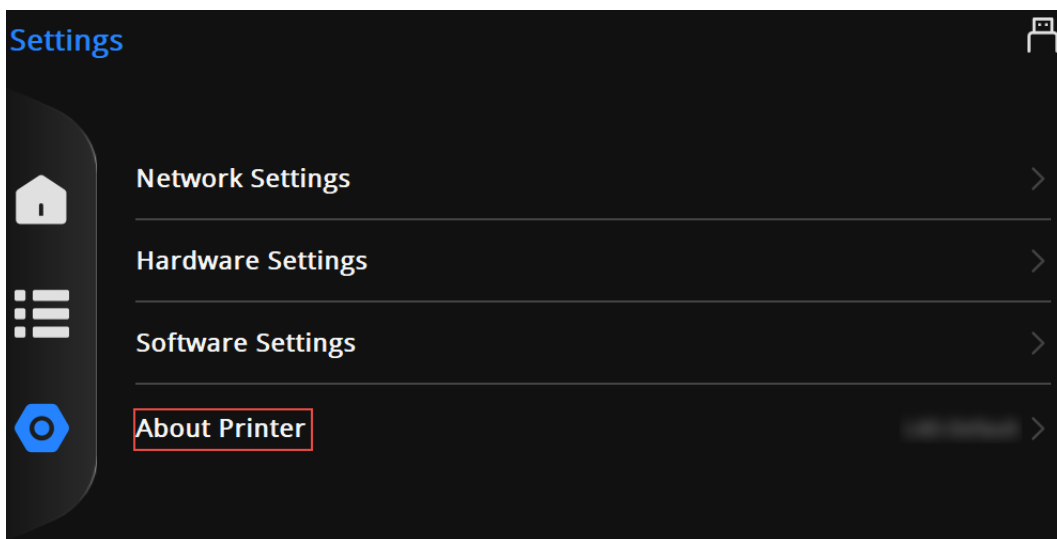
Update Fabware by Network or by USB flash drive.



When new Fabware versions are detected, you will be prompted to update Fabware.

### 4.5.1. By Network

Step 1 On the Fabware main interface, tap  and then **About Printer**.



Click About Printer

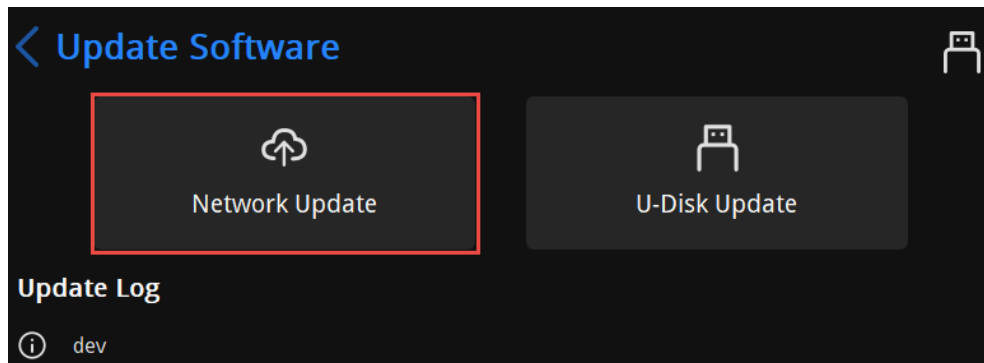
Step 2 Tap **Update Software**.





Click Update Software

Step 3 Select **Network Update**.



Select network update

Step 4 Select the latest Fabware version and tap **Update**.


Step 5 After finishing update, shut down and reboot the Printer.

#### 4.5.2. By USB Flash Drive

Insert the USB flash drive with the latest Fabware version into the Printer. Then select the version to update.

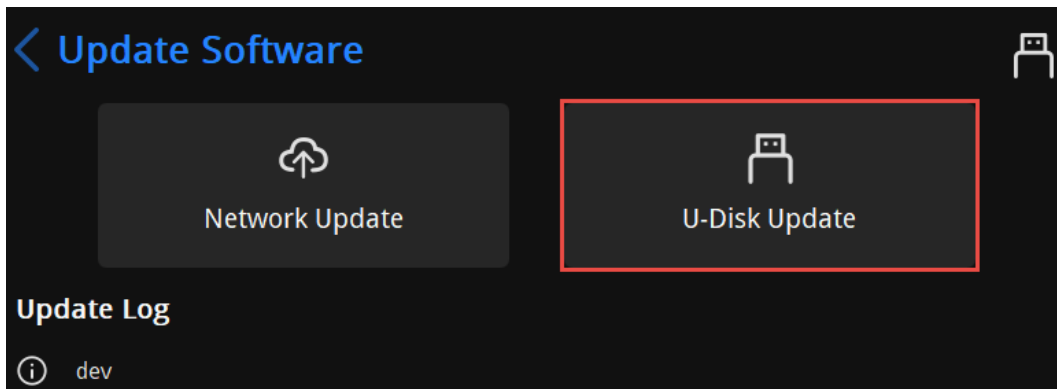


When you cannot find the matched material type of Fabware with that of AccuFab, you can update Fabware first. Then you can update material types.

Step 1 On the Fabware main interface, tap  and then **About Printer**.

Step 2 Tap **Update Software**.

Step 3 Select **U-Disk Update**.



Step 4 On the USB flash drive list, tap to select the latest Fabware version.

Step 5 Click **Next** to update Fabware. After finishing update, shut down and reboot the Printer.

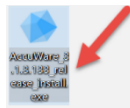
## 4.6. AccuWare Software

The matched slicing software of AccuFab 3D printer is AccuWare model processing software independently developed by SHINING 3D (hereinafter referred to as "software"), which has the Office interface style and is easy to use and operate.

AccuFab 3D printer only supports "\*.slp4" format model printing files. Before printing, the 3D model file in STL format shall be arranged and sliced with AccuWare software, and the sliced "\*.slp4" file can be provided to AccuFab printer to be printed into 3D objects. Here is a description of the installation steps of AccuWare software in the Windows system.

### 4.6.1. Installation

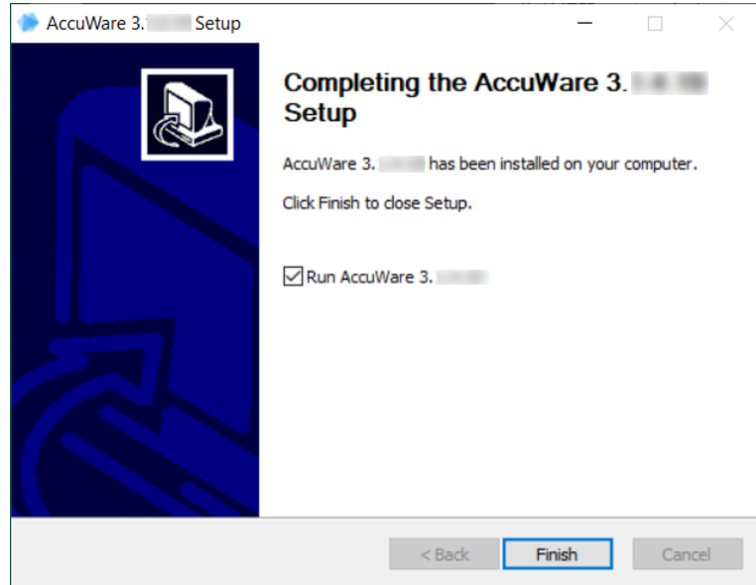
Step 1: Insert the USB flash disk as shown on the accessories list into the computer, find the installation file (.exe) in the USB flash disk file list, and double click to run it.




Step 2: Enter the software installation wizard, click **Next** to enter the License Agreement interface, and click **I Agree**.

Step 3: Select the software installation path and click "Install" to automatically install the software.

Step 4: Click **Finish** to exit the installation wizard and finish the installation of AccuWare.

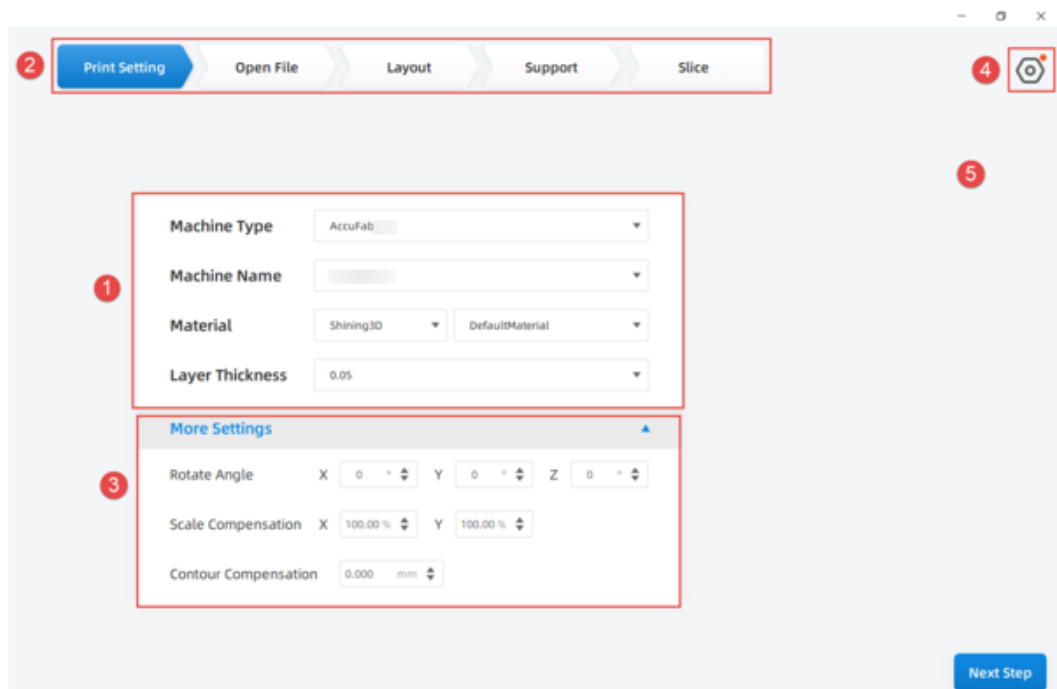


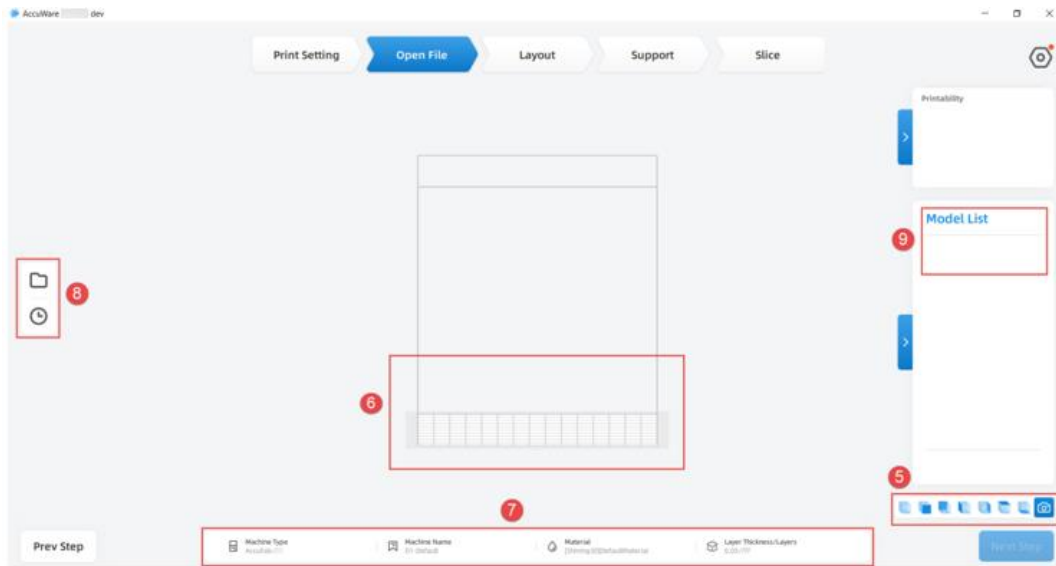
Step 5: After installation, double-click the desktop software icon  (shown in the figure) to open the software.

Note:

For first-time software start, all machine types are selected by default.

## 4.6.2. Interface




















Parameter description

No.	Parameter	Description
1	Printer information	Machine type: current device type. Machine name: current device name. Material: current printing material. Layer thickness: layer thickness of printing material.
2	Top menu	Printing settings, open file, layout, support, slice.
3	More settings	Click the expandable list button to set relevant parameters.
4	Settings	Loading project, saving project, machine list, layer preview, change language, remote assistance, dongle, material management, import to machine, software update, About. Note: Selected devices are displayed by default on the machine list.
5	View	Model display from different perspectives.
6	Main display area	Model display preview.
7	Printer information	Device name, model printing layer thickness, and time estimation information.
8	Import STL	Open file, a record of recently imported files, drag STL.
9	Model list	Displays name of imported model.

### 4.6.3. Function Description

No.	Function Module	Function Name	Icon	Function Description
1	File	Open File		Insert STL file selected by the user in the current file.
2		Recent File		Link to the recently used STL model, and click it to load the model into the software.

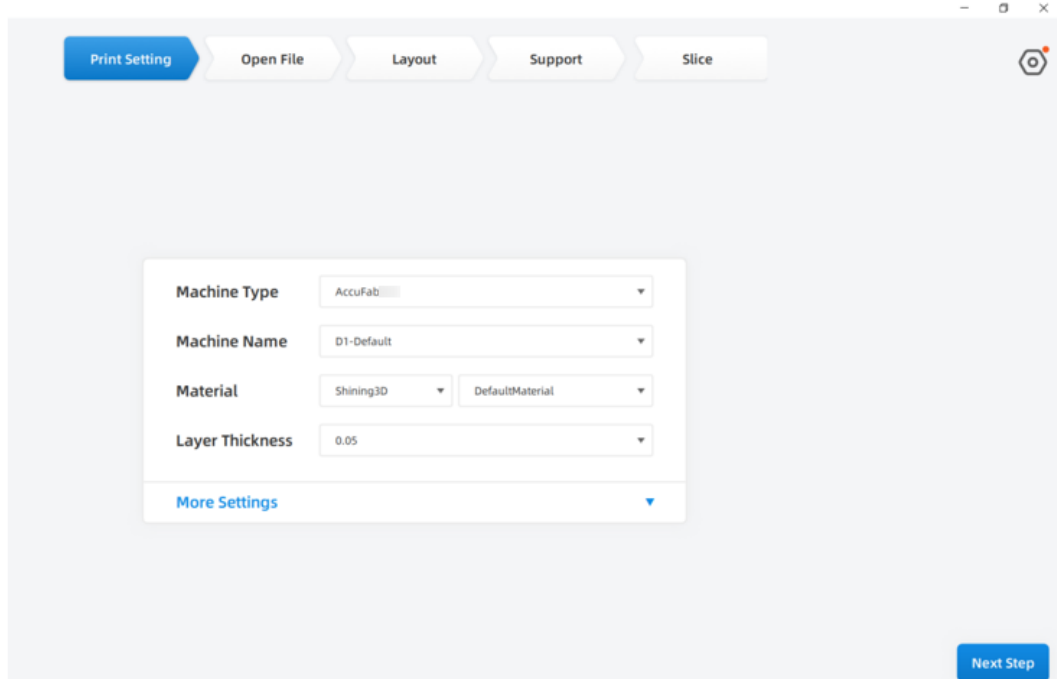
3		Exit	×	Close the software and exit the program directly.
4	Edition	Select All	—	Select all models.
5		Copy	—	Copy the selected model.
6		Hide	—	Hide the selected model.
7		Delete	—	Delete the selected model.
8		Details	—	Display the name, path, dimensions, occupied space, triangle patch of the model, and whether any problem with the model.
9		Move Model		Move the model in XYZ axial directions.
10		Rotate Model		Rotate the model in XYZ axial directions.
11		Scale Model		Scale the model in XYZ axial or equal scale.
12		Automatic Layout		Intelligent layout of the loaded model in XY plane.
13		Automatic Support		Set support parameters for the model file and automatically generate support.
14	Manual Support		Set support parameters for the model file and manually generate the support.	
15	Slice		Generate a "*.slp4" path file for the data whose printing parameters have been set, and set the path of exportation.	
16	View	Default View		View the model selection area from "upper front."
17		Front View		View the model selection area from "front."
18		Back View		View the model selection area from "back."
19		Left View		View the model selection area from "left."
20		Right View		View the model selection area from "right."
21		Top View		View the model selection area from "top."
22		Bottom View		View the model selection area from "bottom."
23	Settings	Settings		Contains some file contents and tools in the software. Click this button in the upper right corner to view for operation.

24		Loading Engineering	—	Import the saved *.accu file order into the software.	
25		Storage Engineering	—	Save the current order locally.	
26		Machine List	—	Display the name of the printer for connection.	
27		Layer Preview	—	View the current model by layer.	
28		Accuracy Calibration	—	Calibration settings for the accuracy of printed models.	
29		Material Management	—	Display local material information.	
30		Import to Machine	—	Import new machine parameters from PC/LAN.	
31		System Settings	—	Change Language	Chinese/English system language conversion settings.
				Remote Assistance	TeamViewer technical support remote assistance shortcut entrance.
				Dongle	Dongle driver installation and registration access.
				Software Update	Accept update push, and prompt update when connecting with dongle.
				About	Enter/exit administrator rights, display dongle information, etc.

#### 4.6.4. Use Description



### Printing Settings

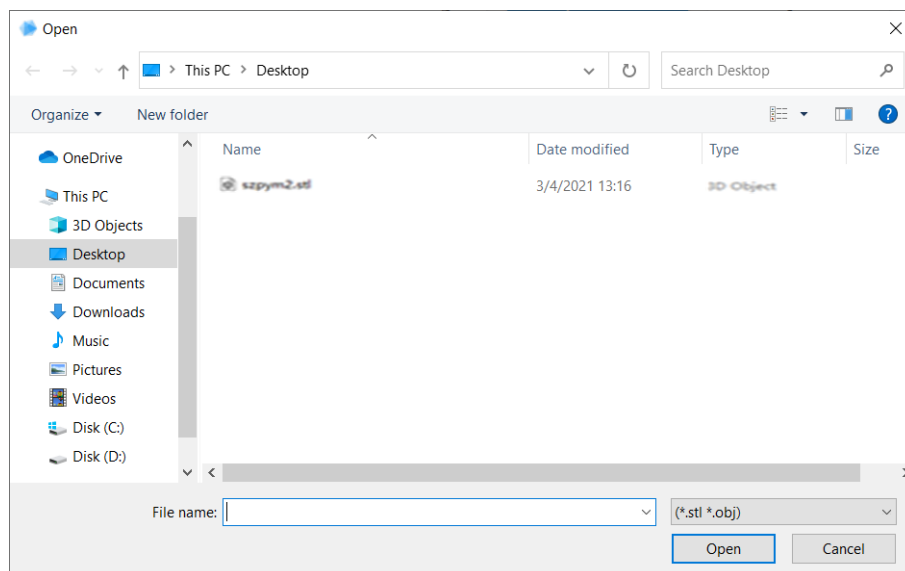
Open AccuWare software to display the printing setting interface, which can select the machine type, machine name, material and layer thickness of the printer to be printed, and set the rotation angle, scaling offset and contour offset of the imported model.



## Open File

AccuWare software can only carry out subsequent edition and slice data generation after loading the target model. Users can open the model root folder by clicking the menu bar on the left side of the software: "Open File

 /Recent  ", select the model to be loaded, and then click the "Open" button to load the target model. or click "recent". If it is the first time to use a model that has not been imported before, this option will display without records. If the model has been imported, the model name will be displayed. Double-click the model name to import the model into the software ". "\*.stl" can also be dragged into the software.



## Observe Model

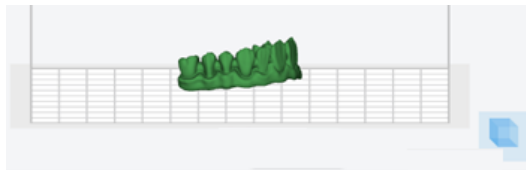
After the model is successfully imported into AccuWare software, users can use the mouse to rotate the platform to view the model status from different angles, or use the software panel "Perspective Selection Button" to

realize quickly. The following shows the preview effect of the sample model from different perspectives.

Note:

When in 6 positive views, only circles rotated along the normal axis in the view are displayed.

Default direction



Front



Back



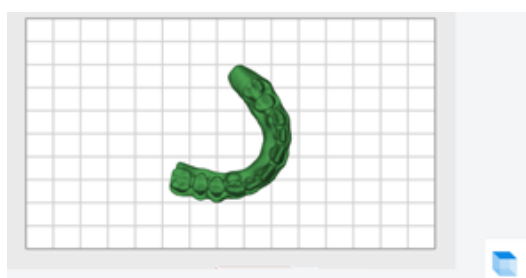
Left



Right



Top





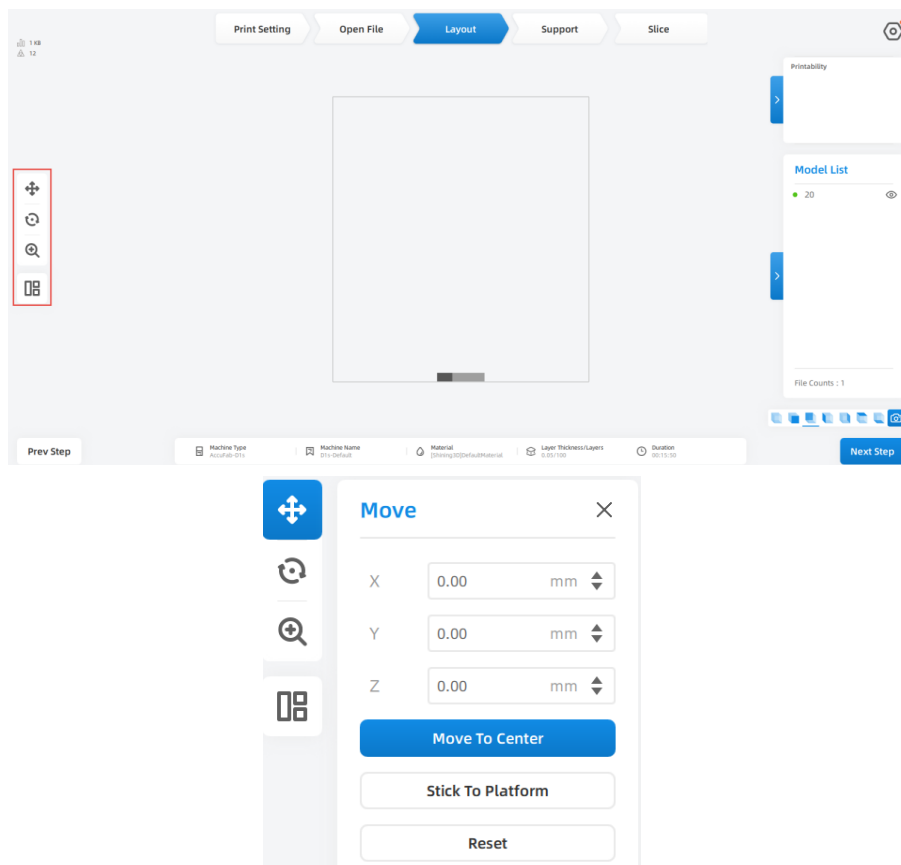
Bottom




**Note:**

The model view function can help users to view the position of the model on the printing platform from different angles, which is helpful to adjust the printing position of the model.

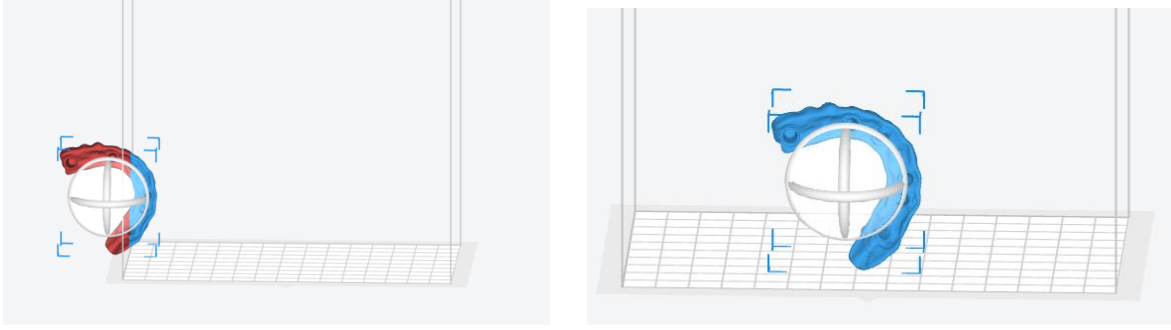
## Layout



-  : Function trigger. Display the spatial position coordinates of the model on the current build platform, and the value in use changes with the change of position.
  - **XYZ coordinate values (0, 0, 0) when the model is in the center of the platform.**
  - **Enter other values in the box of XYZ axis coordinate values, and hit the “Enter” key to move the model position accordingly.**

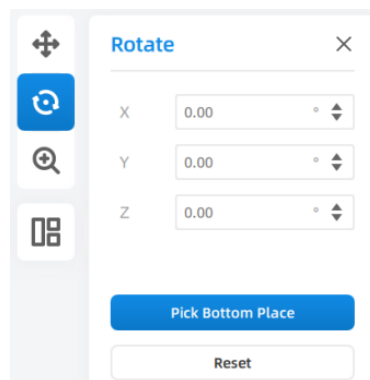
- : Return the Z axis coordinate of the selected model to zero after triggering.
- : The selected model can return to the center position of the platform after triggering, and the XYZ coordinate value will return to zero.
- : The selected model can be reset and return to the platform center position after triggering, with XYZ coordinate values returning to zero.

**Note:**  
After the model is imported into the software, if the preview color is red, it indicates that it is beyond the printing range. Therefore it needs to be moved to a suitable position on the printing platform by using the 'move' function until the preview color is blue after moving, as shown in the figure:



Before adjustment                      After adjustment

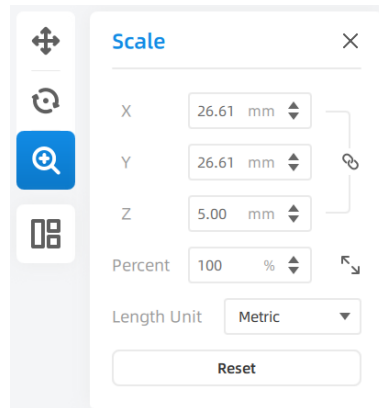
## Rotate the Model



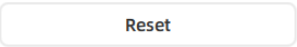


- : Function trigger. Display the spatial angle coordinates of the model in the current build platform, and the value changes with the change of angle in use.
  - The XYZ coordinate values are based on the initial loading position of the model, and the initial values are (0.00°,0.00°,0.00°).
  - Input other angle values on the XYZ axis coordinate value box, and press the “ENTER” key to change the model angle accordingly.
- : It can reset the selected model's rotation operation after triggering and

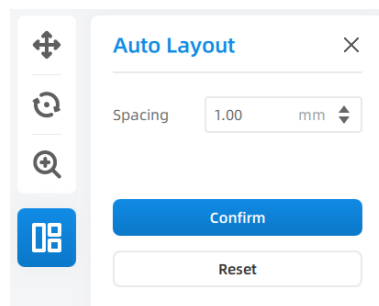
restoring the XYZ angle to the initial value when loading when the coordinate value is zero.

## Scaling the Model



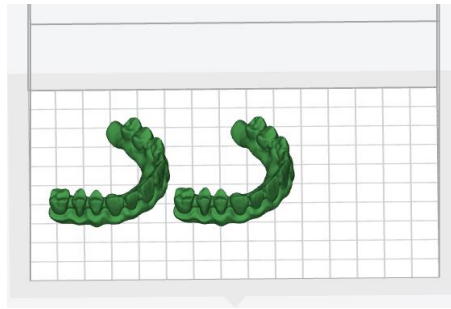
-  : Function triggering.
  - The value of XYZ axis reflects the dimension of the model and the value varies with the size.
  - The percentage value is the scaling percentage of the model, 100% is the current dimension of the model. If the value > 100%, it means that it is larger than the current model, and if the value < 100%, it means that it is smaller than the current model. Use percentage scaling under any model state.
  -  Unified scaling, enter the value XYZ axis after activating this option, and the model will be scaled proportionally.
-  : Reset the scaling operation of the selected model after triggering, and restore XYZ dimension to the initial value.

## Automatic Layout

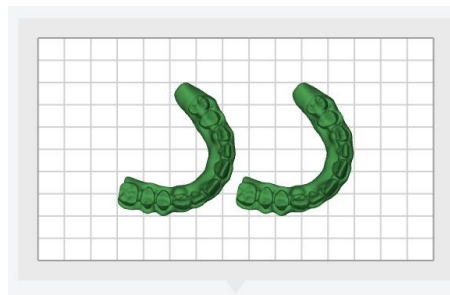


- Automatic layout: Intelligently arranges the imported model on XY plane.
  - Spacing: The shortest distance difference of models.
- The graph shows the display of normal layout and automatic layout.

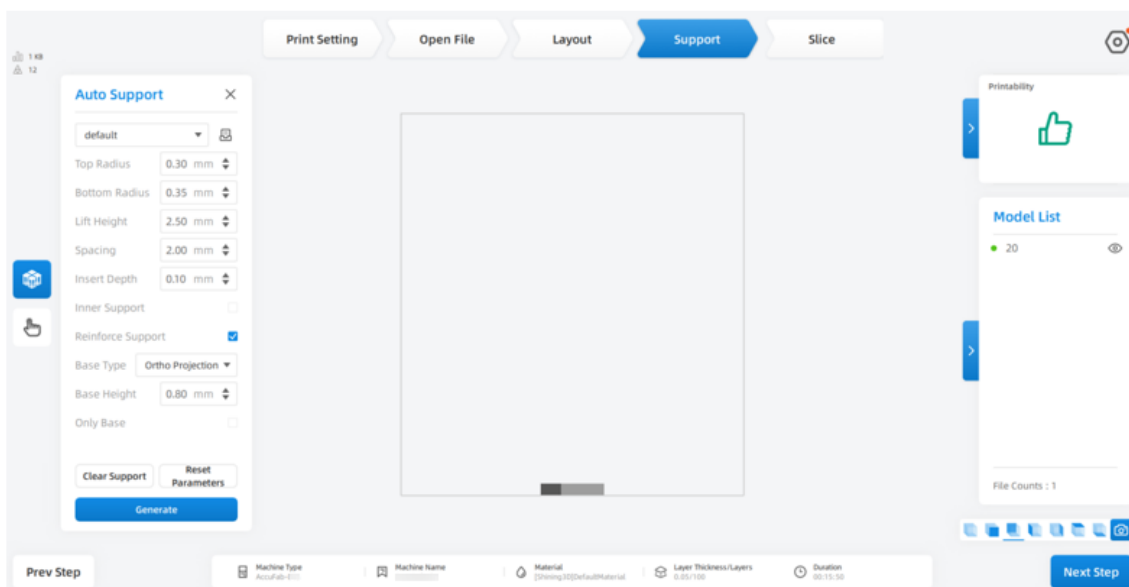
Result of normal layout






Results of automatic layout

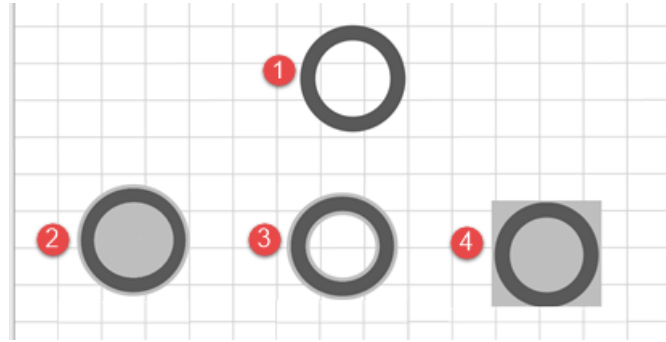


## Support Interface



AccuWare supports Auto support and Manual support. User can add support Manually or generate Automatically by the support settings.

- Function trigger: Support interface or ,  button.
- Support type: Inner support, reinforced support.
- Base type: No base, bounding box, orthographic projection, outer contour.
-  : The selected model can be restored to the initial position.

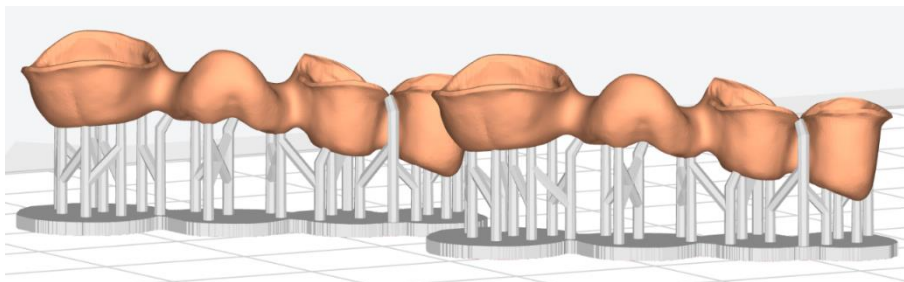


Parameter description

No.	Description	No.	Description
①	No base	②	Outer contour
③	Orthographic projection	④	Bounding box

- **Setting Parameters of Other Supports**

- **Base height:** The thickness between the base and the build platform.
- **Top radius:** The radius of the circular support at the top.
- **Bottom radius:** The radius of circular support where the support contacts the platform.
- **Lifting height:** The lowest height for generating supports.



- **Spacing:** The distance between adjacent supports.
- **Insert depth:** The depth at which the support is inserted into the model.
- **Inner support:** If checked, the generated support contains inner support, which is generally used for printing hollow parts such as jewelry.
- **Reinforced support:** If checked, tree-shaped reinforced support will be generated intelligently.
- **Base only:** Only generate the base at the bottom without support.

Hide

Auto Support

Clear Support

Delete

Details

- **Auto support:** Supports are automatically generated with set size and shape.
- **Clear support:** Abandon the current editing of supports.

➤ Delete: Delete the model.

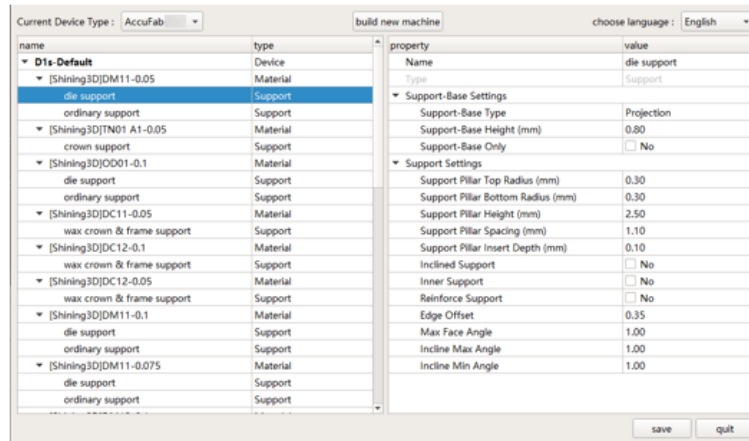
- **Edit Support**

Enter the corresponding value to generate new support. Click the support parameter library to add a new support option.

- **Add quick support for the current machine**

Callout the current setting options, select material management, click the selected material in the material interface, and right-click the mouse to select "Add Support."

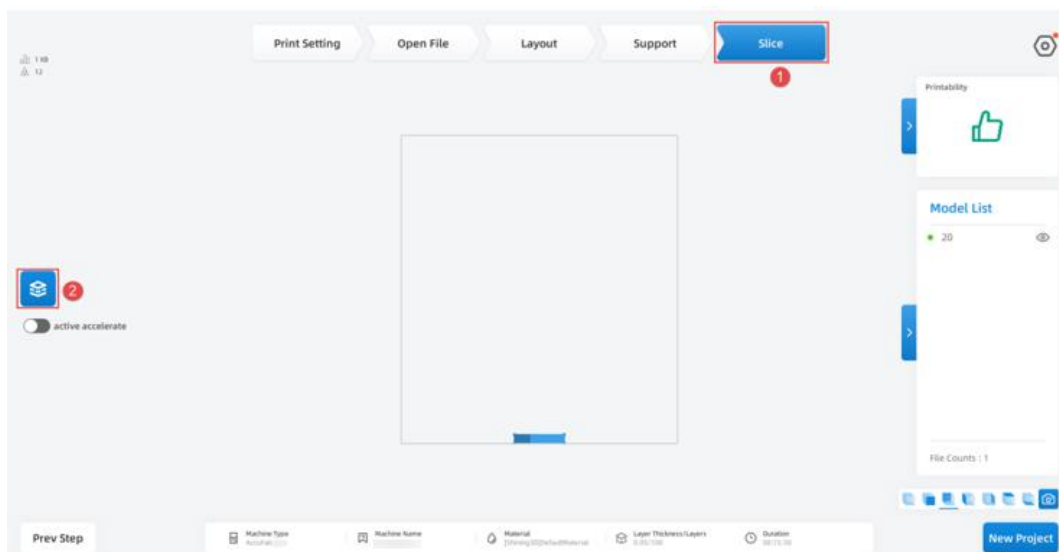
Click the "Value" selection area on the right of the interface, and the user can manually set the support parameters, then click "OK" to complete the saving.



After finishing common supports setting, they can be directly applied to the printing device, printing mode and support type.

## Slice

After the users adjust the printing parameters (printing position/angle/dimension/support parameters), click "Slice" button to generate "\*.slp4" printing files.



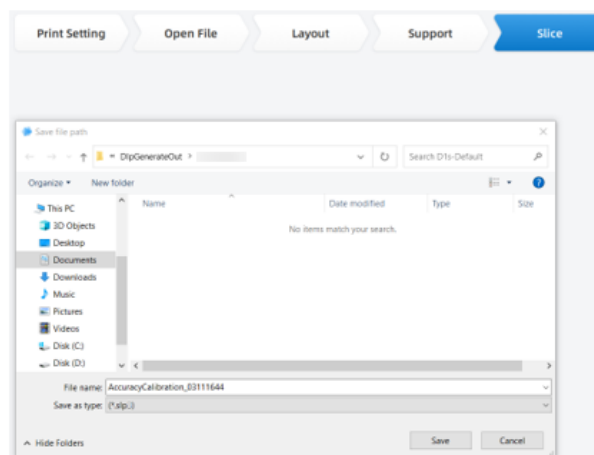
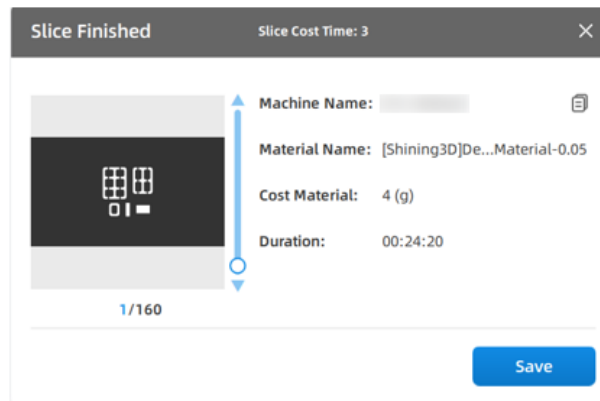
Step 1 Click the slice icon to pop up the slice preview interface.

Note:

- AccuWare supports GPU accelerate for the slicing function. With a graphic card of GTX 750 or

higher. The slicing time will be greatly shortened. For example: slicing time for a model of 500 layers will be 5 – 24 s.


- Software will show the info of the graphic card and CUDA version. Check the upper left corner of the slicing interface. The information displayed in red indicates that the GPU switching conditions are not met.
- If the CUDA version shows "undefined," it means the driver version is not the latest version. Please update.



Step 2 Click “Save” of the software the interface of the computer system file pop up. Select the destination folder and click "save" to complete the slicing of the model and export sliced files.

Note:

- After slicing is complete, click Send to enter the machine list, automatically send the current file to the corresponding device, while showing the sending progress. No secondary confirmation and selection of files is implemented.
- If the current device is offline or busy, it will indicate in red “The printer is offline and cannot be sent” or “The printer is busy and cannot be sent”.

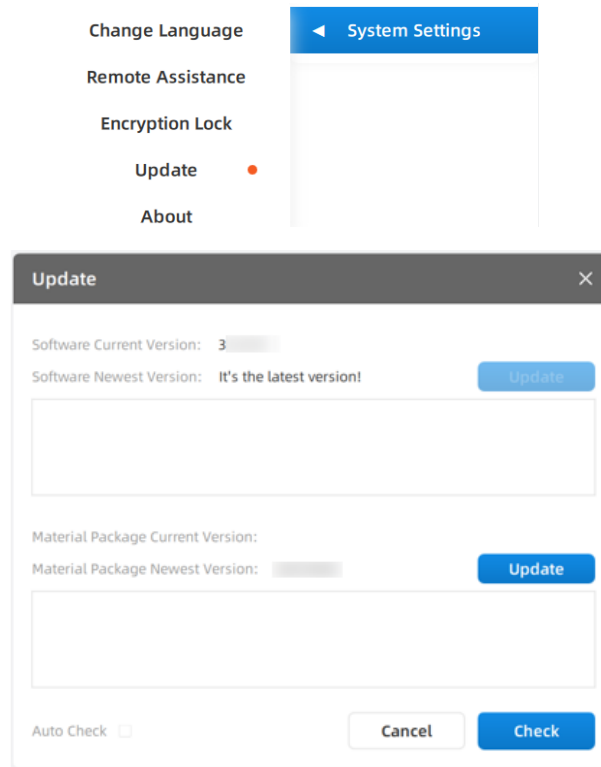
Step 3 It is also possible to click “cancel” after generating slices, and re-slice by clicking the slice button  on the interface’s left.

The exported model file can be saved locally or directly to USB devices.

**Note:**

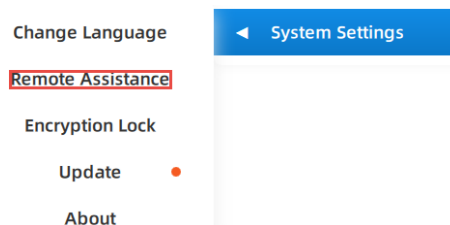
Users shall slice STL files into ".slp4" format files through AccuWare software, and send them to the device. Then they can be identified and printed by the device.

## Software Upgrade

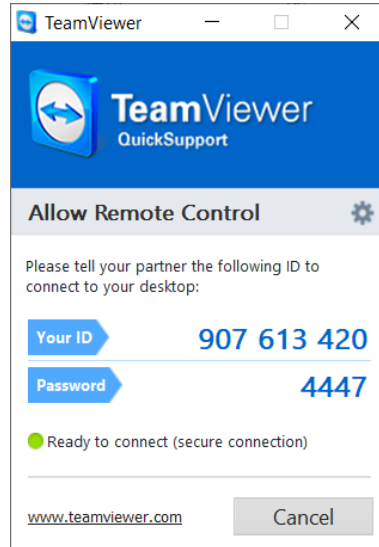


Users are recommended to check "Settings - System Settings - Software Update -Auto Update". After checking, the setting module will be marked with a red dot when a new version of the software is available and the network is in normal condition.

## Remote Assistance



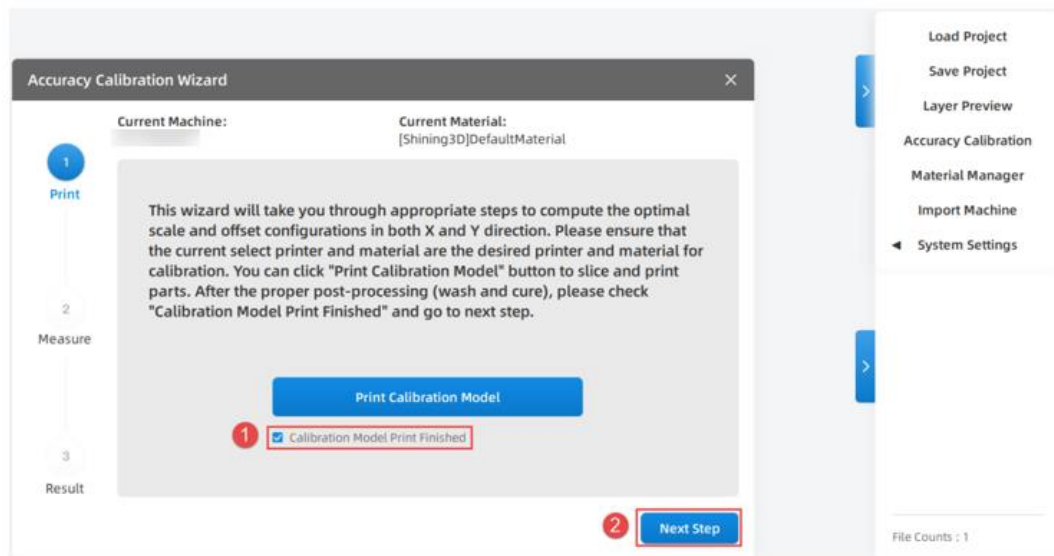




Click "Settings - System Settings - Remote Assistance", inform the technical support of the ID/ password on the page to obtain real-time remote assistance.

Install "TeamViewer" software on your computer before remote assistance.

## Accuracy Calibration



Click **Print Calibration Model**, and the platform displays the calibration model for slicing.

Check the option "Calibration Model Print Finished" to highlight the button of "Next Step", and click "Next Step" to enter the measurement interface.

**Accuracy Calibration Wizard** ×

Current Machine:       Current Material: [Shining3D]DefaultMaterial      Unit: mm

1  
Print

2  
**Measure**

3  
Result

	Axis	Standard	Average	Measure 1	Measure 2	Measure 3
	X	18	17.897	<input type="text" value="17.900"/>	<input type="text" value="17.900"/>	<input type="text" value="17.890"/>
	Y	24	23.847	<input type="text" value="23.860"/>	<input type="text" value="23.840"/>	<input type="text" value="23.840"/>
	X	15	14.877	<input type="text" value="14.880"/>	<input type="text" value="14.870"/>	<input type="text" value="14.880"/>
	Y	20	19.857	<input type="text" value="19.840"/>	<input type="text" value="19.850"/>	<input type="text" value="19.880"/>
	X	8	7.940	<input type="text" value="7.930"/>	<input type="text" value="7.940"/>	<input type="text" value="7.950"/>
	Y	10	9.930	<input type="text" value="9.940"/>	<input type="text" value="9.920"/>	<input type="text" value="9.930"/>
	X	1	0.967	<input type="text" value="0.970"/>	<input type="text" value="0.960"/>	<input type="text" value="0.970"/>
	Y	2	1.970	<input type="text" value="1.960"/>	<input type="text" value="1.970"/>	<input type="text" value="1.980"/>

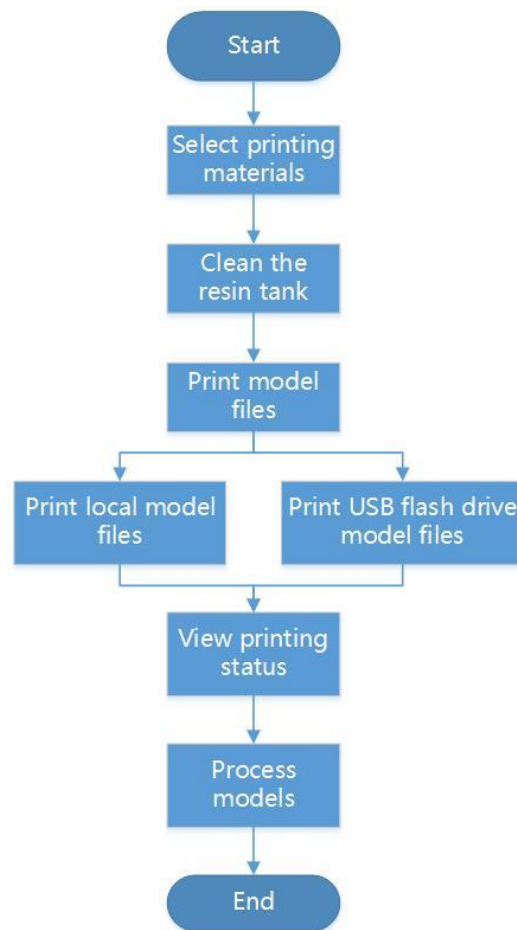
\* Measure and record data according to the diagram  
 \* When "Average" is red color, please check measure procedures and completeness of calibration parts

Prev Step
Next Step

Enter the measurement value in the measurement interface, and the “Next Step” button will be highlighted, then it will forward to the results page. Click the “Apply” button on the results page, apply the “scale offset” and “contour offset” value to the current material.

## 5. Print

### 5.1. Workflow



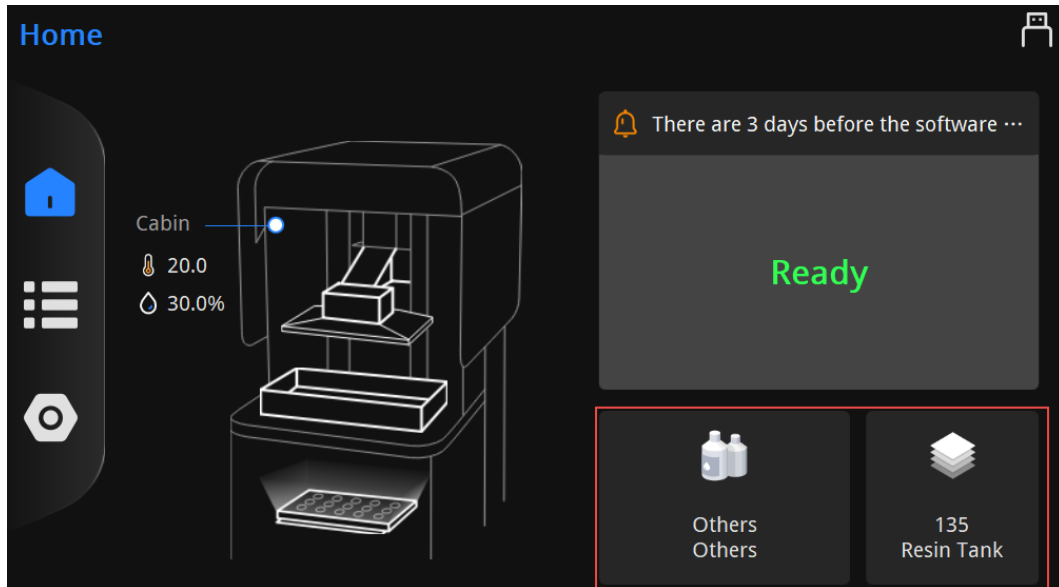
Workflow

### 5.2. Set Parameters

Select the material brand and type before printing models.

On the Fabware main interface, tap **Shining3D DC11** area or **N/A Resin Tank** area to enter the **Resin Tank Information** interface.

Select the material brand and type corresponding to the file to be printed. If there are no corresponding brands and types, select **Others**.



Select material brand and type

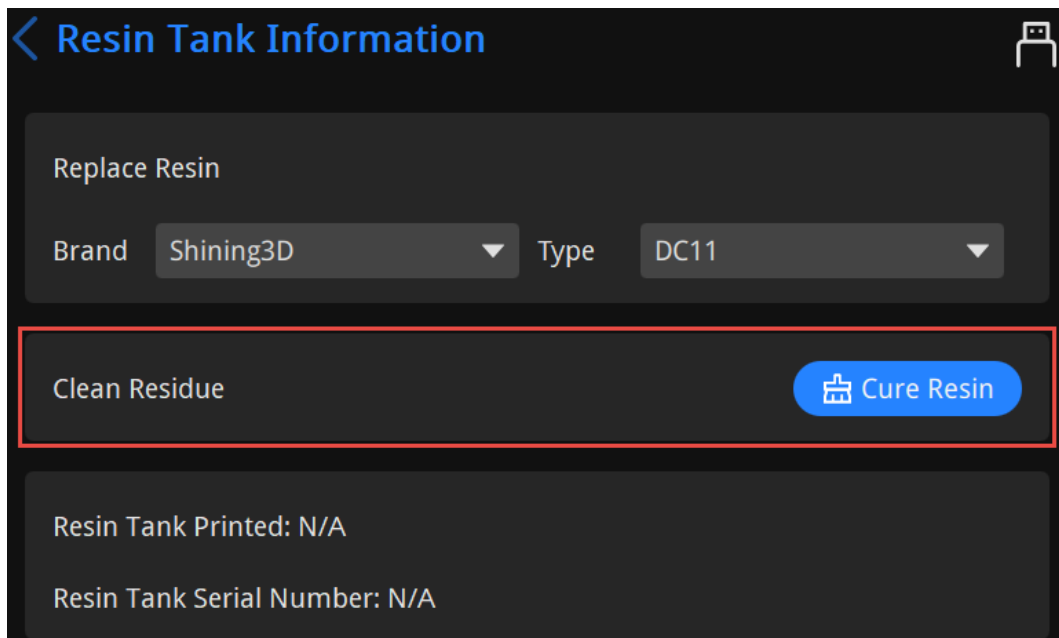
### 5.3. (Optional) Clean Resin Tank



When printing models for the first time, you don't need to clean the resin tank.

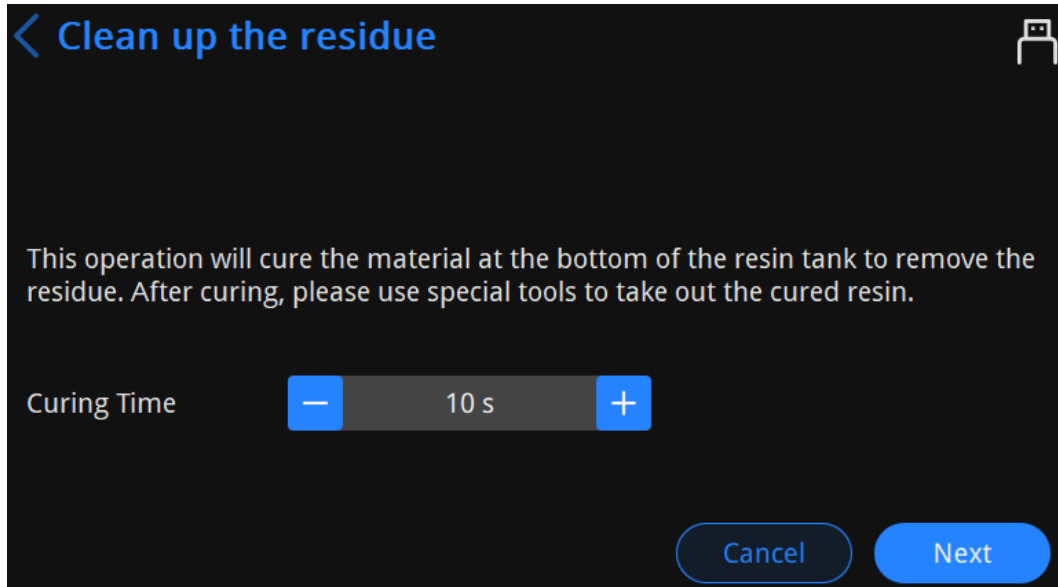
Step 1 On the Fabware main interface, tap **Shining3D DC11** area or **N/A Resin Tank** area to enter the **Resin Tank Information** interface.

Step 2 Tap **Cure Resin** close to **Clean Residue**.



Cure resin

Step 3 Select curing time and tap **Next**.



Select curing time

Step 4 After curing materials, remove the resin tank. Wear rubber gloves and clean the residue with a small shovel. Avoid too much residue to ensure printing effect.

## 5.4. Select Printing Methods


Select local printing or USB flash drive printing according to the actual printing scenarios.

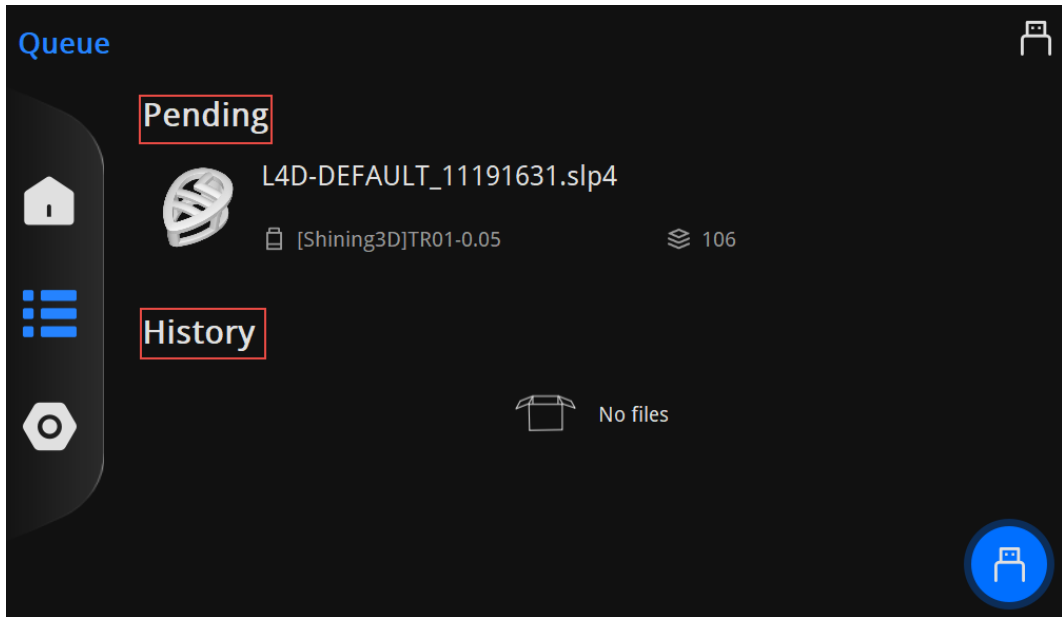


To ensure the model printing quality, keep the chamber door closed when the Printer is printing or just finished printing. Do not touch the model, resin tank, build platform or any other Printer parts.

### 5.4.1. Local Printing

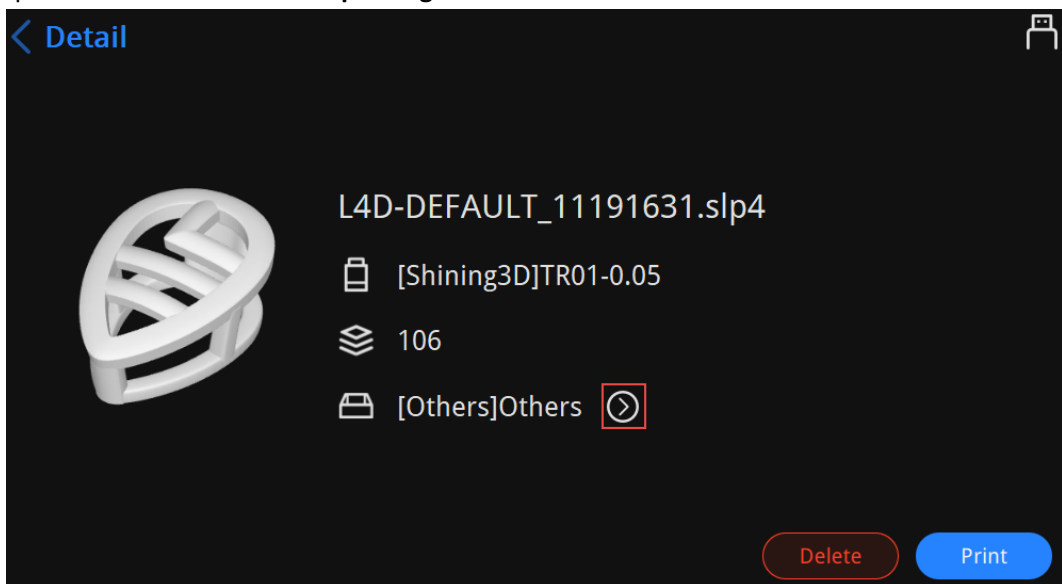
Local printing is to print model files in the Printer.

- Step 1 On Fabware main interface, tap  to enter the printing interface.
- Step 2 Select files to be printed at the **Pending** or **History** area.




Select files to be printed

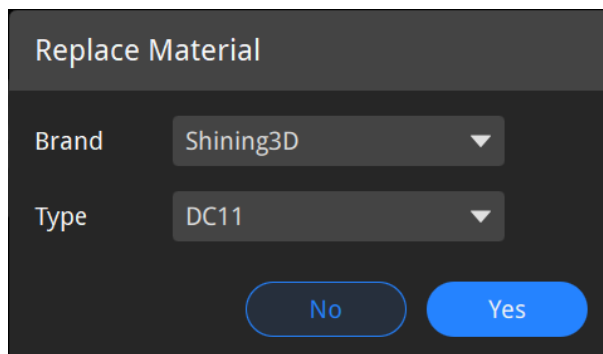
Step 3 Tap **Print** to enter the **Confirm printing** interface.



Tap Print

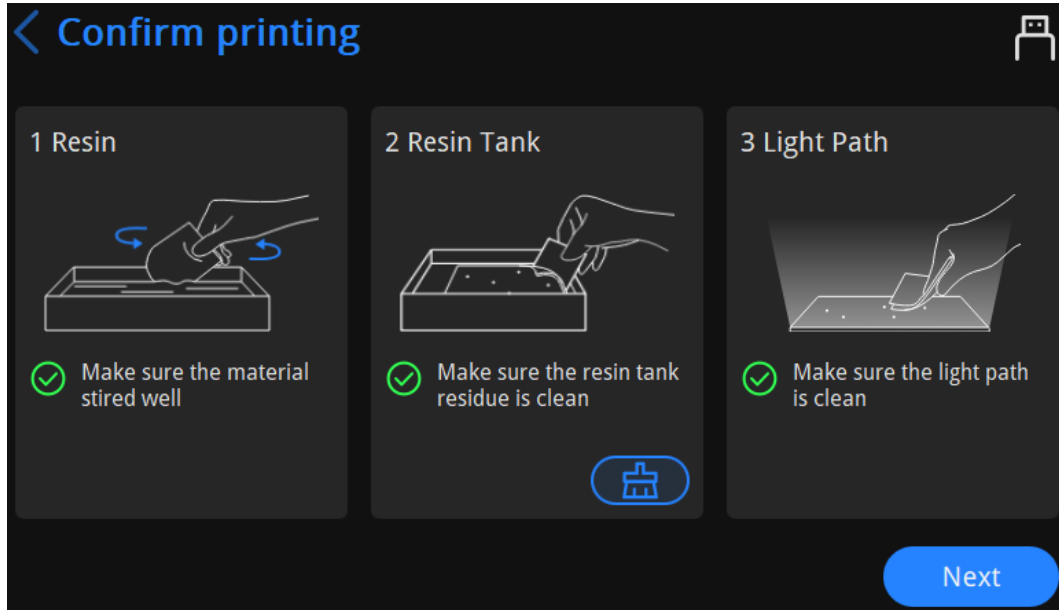


If the interface prompts that material types of Accuware and Fabware are not consistent, tap  to modify printing brand and type.



Modify printing brand and type

Step 4 Confirm printing prompts and tap **Next**.



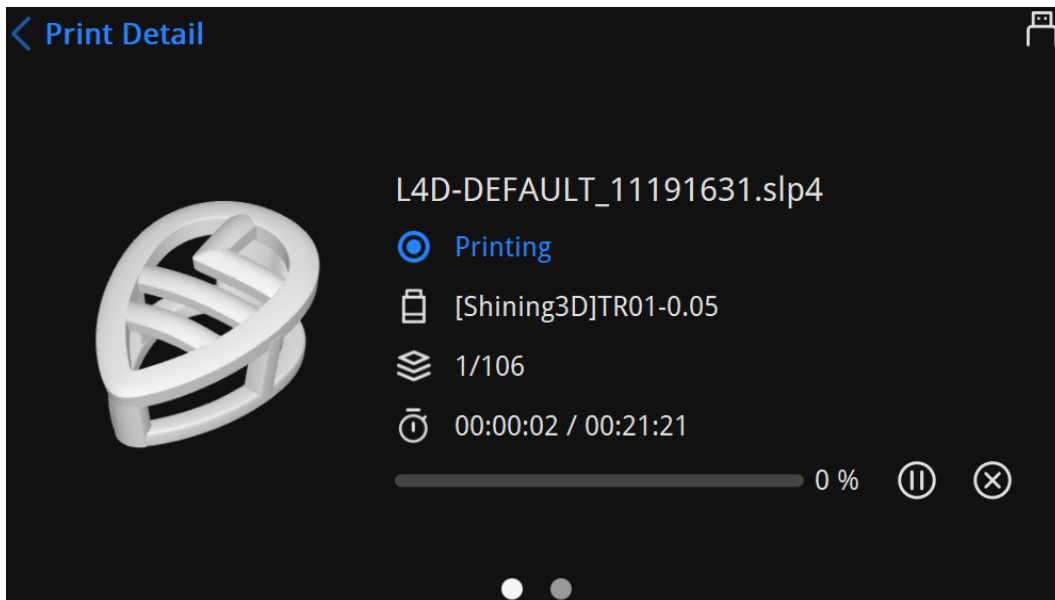
Printing prompts



Tap  to enter the **Clean up the residue** interface. Then select curing time and cure models. See 5.3

(Optional) Clean Resin Tank.

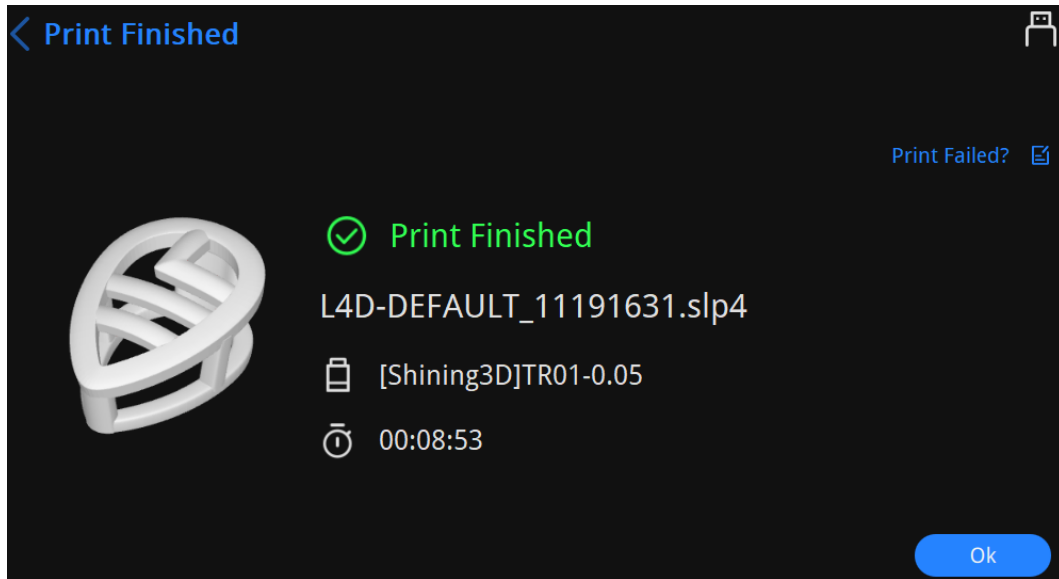
Step 5 Tap **Next** to start analyzing and printing the model data file.



Analyze and print model data file

Step 6 After finishing printing models:

- For successful printing, tap **OK** to return to the printing file selection interface.
- For unsuccessful printing, click **Print Failed?** to select a reason. Then tap **OK** to return to the printing file selection interface.



Finish printing

## 5.4.2. USB Flash Drive Printing

Insert a USB flash drive with model files into the Printer. Then you can print the model files in the USB flash drive.


### Preparation

Copy .slp4 files generated by Accuware to a USB flash drive.

### Procedure


Step 1 Insert the USB flash drive with model files into the Printer front panel.

Step 2 On Fabware main interface, tap  to enter the printing interface.

Step 3 Tap  to enter the USB flash drive list interface.


Step 4 Select files to be printed.



- If the interface prompts that material types of Accuware and Fabware are not consistent, tap  to modify printing brand and type.
- The Printer only recognizes USB flash drive data in FAT32 format.
- Sliced data are saved under: This PC/Documents/3DDlpDocuments3/DlpGenerateOut/"Folder (with corresponding Printer serial number)"

Step 5 Confirm printing prompts and tap **Next**.



Tap  to enter the **Clean up the residue** interface. Then select curing time and cure models. See 5.3

(Optional) Clean Resin Tank.



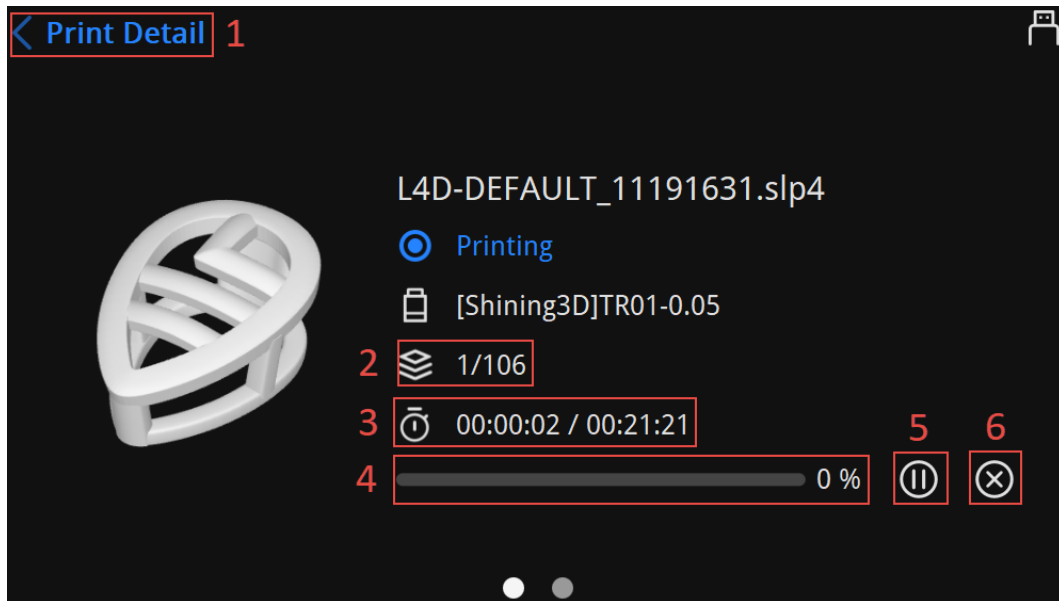
Step 6 Tap **Next** to start analyzing and printing the model data file.

Step 7 After finishing printing models:

- For successful printing, tap **OK** to return to the printing file selection interface.
- For unsuccessful printing, click **Print Failed?** to select a reason. Then tap **OK** to return to the printing file selection interface.

## 5.5. View Printing Status

View and control printing status in the operation panel when the Printer is printing.



View printing process

Printing description

No.	Name	Description
1	Print detail	Tap to return to the previous interface.
2	Print layer	View model slicing parameters. Printed layers/Total layers.
3	Time	Time that printing has costed/Time that printing needs in total.
4	Percentage bar	Latest finished printing percentage.
5	Pause	Tap to pause and tap again to resume.
6	Stop	⚠ The operation is unrecoverable. Tap to stop printing.

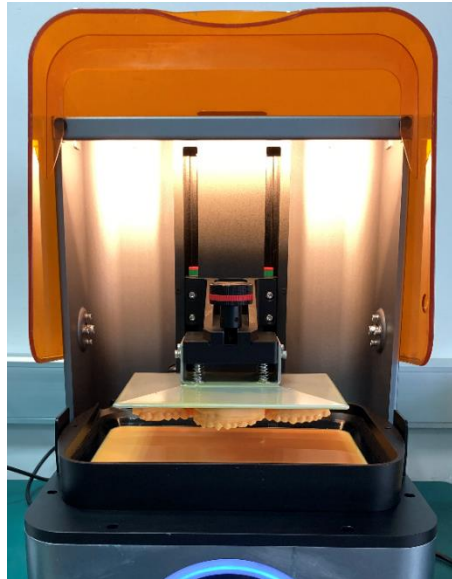
## 6. Process Model

### 6.1. Take Out Model

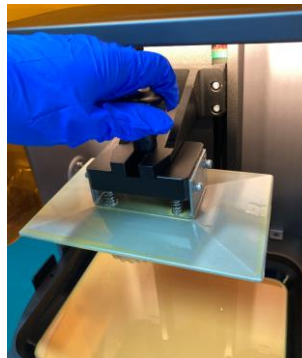
Note:

For appearance, AccuFab-L4D and AccuFab-L4K differ only in sunshield colors. This chapter takes AccuFab-L4K as an example.

Step 1 After the model printing finishes, lift and suspend the build platform for 5 minutes. Thus, the residual resin material attached to the model's surface drops back to the resin tank.



Step 2 Use silicon scraper provided in accessories to scrap off the resin material on the build platform obliquely. Release the tongue depressor, take out the build platform, and place the platform sideways on the bench.



Step 3 Select "Flat Pry Knife" in the accessories list to take the printed model from the platform. Mind that flat pry knife direction cannot be towards any human body part.



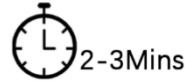
## 6.2. Clean

### 6.2.1. Model

Step 1 Select the "Cleaning Box" in the accessories, and pour in alcohol (concentration of 75% or above).



Step 2 Put the printed model in the cleaning box, shake slightly for 30 seconds (turbo cleaner suggested), cover the cleaning box and soak for 10-15 minutes. This operation can remove the residual resin from the surface of the printed model.



**Note:**

If it is still not cleaned, use a high-pressure air gun.

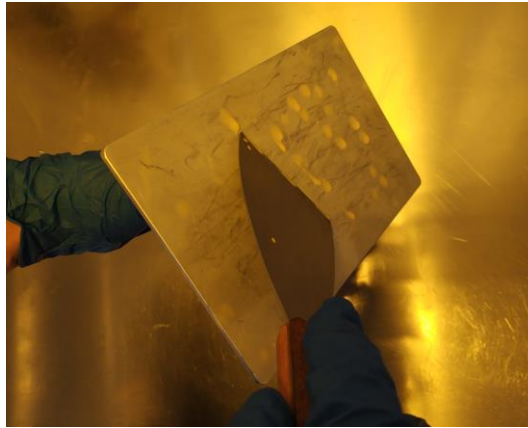
For smaller parts, reduce the soaking time accordingly, because over-soaking will cause the model to soften.

Step 3 Take out the printed model from the cleaning box, dry the resin and alcohol on the surface, and standing to dry the model.

### 6.2.2. Build Platform

Step 1 Use a putty knife to clean up the model residue on the build platform.

Cleaning platform with a putty knife

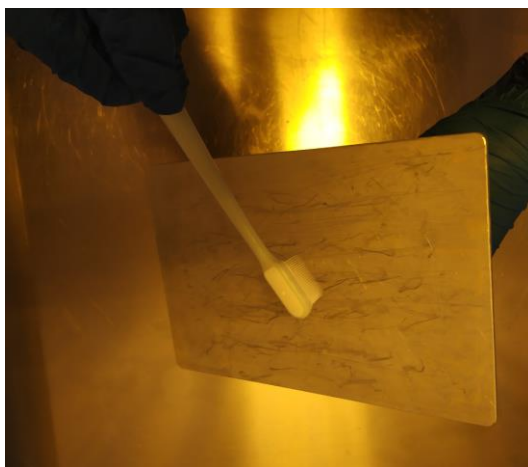


Wear disposable gloves and judge whether the residue is clean

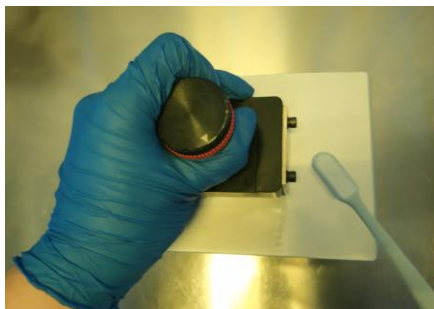


Step 2 Use the soft glue brush with wet alcohol to clean up the residual resin on the surface of the build platform.

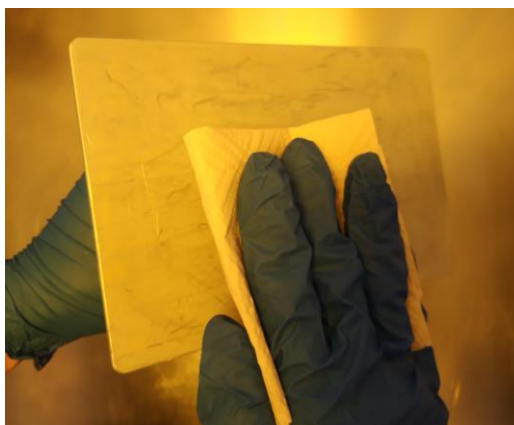
Clean the front of the build platform



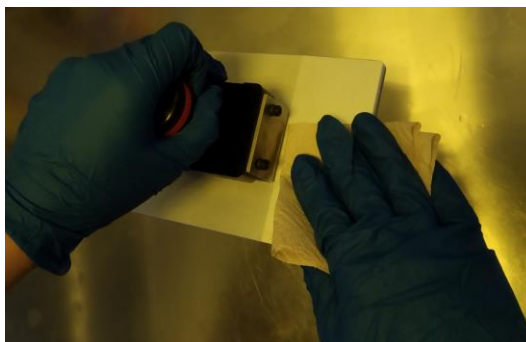
Clean the back of the build platform



Step 3 Dry the surface of the build platform with a paper towel, and dry in a ventilated place before reuse.  
Wipe the front of the build platform



Wipe the back of the build platform



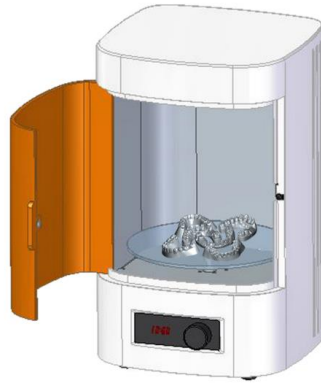
### 6.3. Cure Model

Use Fab Cure post-processing machine for the secondary curing treatment of the model. This machine uses the principle that the photosensitive resin material will be cured and molded under the irradiation of a UV lamp with a specific light wavelength.

Models after secondary curing can be stored for a long time without irritating human skin, and the model's overall performance (smoothness, hardness, etc.) is better than ordinary models.

Step 1 Place the model into the curing box.

Wear disposable gloves, open the shading door of the curing box, uniformly place the cleaned model on the center of the acrylic turntable of the curing box, close the shading door after placing.




### Step 2 Set curing time.

Press the power button of the curing box, and the time will display on the screen. Turn the preposition time knob of the curing box according to the “*Recommended Curing Schedule of Resin Materials*” to set the curing time, and press the knob for confirmation.



### Step 3 Waiting for curing.

After the time is confirmed, the UV lamp of the curing box turns on lights up and the acrylic tray rotates to enter the curing working mode.  shows the Printer is under curing. Do not touch it.



#### **Note:**

Opening the shading door during the curing process will cause the UV lamp to go off, the turntable to stop rotating and the curing process to stop.

### Step 4 Take out the model.

After curing, the buzzer of the curing box will ring to prompt. Then the shading door can be opened to take out the model.

#### **Note:**

Clean the foreign matter on the acrylic turntable and curing box after curing. Keep the curing box clean for future use.



## 6.4. Striping Support

The cured model support is easy to be peeled off and not easy to destroy the model surface. Select tools such as a putty knife, utility knife to peel off the support on the model, or peel manually.



Operation description

No.	Description	No.	Description
①	Before support stripping.	②	Remove support manually.
③	Support stripping finished.	—	—

**Note:**

- Be careful to prevent scratches when using sharp tools such as utility knives.
- Remove the build platform before replacing the resin tank to avoid the resin polluting the leak-proof glass.
- The exposure time parameters of different printing materials are different.
- Adhere the utility knife to the build platform to avoid the deformation of the model when taking off the model, and clean the platform with paper towels after cutting.

## 7. Product Care and Maintenance

Maintenance Content	Maintenance Requirements	Maintenance Cycle	Note
Appearance	Keep clean and neat.	Once/per day	Wipe it with alcohol immediately and keep it clean when splashing resin on the guide rail or on the cover.
Alcohol in cleaning box	Keep clean.	Once/every two days (during operation)	The wax pattern cannot be soaked in alcohol for too long, which will cause the wax pattern to soften.
LCD panel	Confirm whether it works normally.	Once/per week	—
Build platform leveling	Confirm the leveling state.	Once/every 30 days	—
Guide rail and screw rod	Keep lubricant.	Once/every 3 months	Maintain lubrication with lubricating oil.



## 8. FAQs and Troubleshooting

### AccuFab problems

No.	Phenomenon	Possible Reason	Solution
1	The model drops when printing.	Inaccurate zero position.	Level the Printer manually.
2	Improper height of the model.	Overpressure of the build platform.	Level the Printer manually.
3	Residue found in the resin tank.	Last print was not successful.	Follow the resin tank clean procedure to cure the bottom layer and remove it.
4	Disorder of printing interface during printing.	Program error.	Restart the printer after printing if not affecting the operation.
5	The build platform can print on one side but not on the other side.	Build platform is not set to be level.	Reset zero adjustment.
6	Grainy screen.	USB flash drive might contain a virus.	Carry out antivirus or formatting process to the USB flash disk (into FAT32 format).
7	Printer display screen crashed.	Program crashed.	Restart printer.
8	Printing error.	Having error when printing slp4 file on the device.	Reprint/restart the device.

### AccuWare problems

No.	Phenomenon	Possible Reason	Solution
1	Model shows red!	File size exceeds the build platform/model needs recovery.	Adjust the model into the range of the platform/repair the model with error.
2	No selected model!	No selected model currently.	Click the model to select one model at least before performing the operations.
3	No response of target device!	The network of the device is interrupted.	Recheck the network connection before performing other operations.
4	Unknown interruption!	File transfer suddenly stops.	—
5	Sending failed!	Failed to acquire slp4 file at the device.	Resend.
6	Password incorrect!	Password incorrect.	Reenter password.
7	STL slice failed.	Failure of slicing because of too many holes on the model surface.	Slice after recovery.
8	No device or material.	No device or materials selected before operation.	Select device or materials before performing other operations.

9	Model incorrect. Please use repair function!	There are holes on the loaded model surface.	Select "Cancel"/"Repair."
10	Repair failed. Open the model interface, and the model still displays red.	Failure of repair for too many holes on the surface of the model.	Multiple recoveries after saving.

## 9. Decommissioning and Disposal

The product is disassembled into different parts (clumps) and grouped by the type of material sharing common characteristic or physical relationship (waste fractions) primarily based on the treatment requirements as set out in the WEEE directive annex VII, followed by the current state of the art recycling and recovery technology available in Europe. Materials for which currently no recycling technology is available or where the recycling is economically not feasible, or which contain hazardous substances, are assumed to be shredded, incinerated or disposed of to landfill without further use.

When this product reaches its end of life ,take it to a collection point designated buy local authorities.The separate collection and recycling of your product and/or its battery at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

## Contact Us



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Shining3D Dental Homepage



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