DM250

DLP 3D PRINTER

User manual

carima

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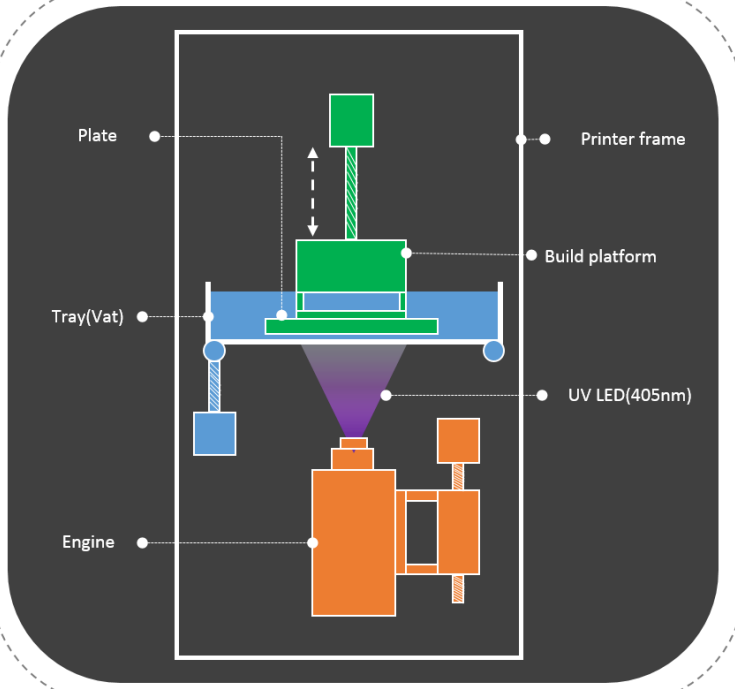
DLP Print Method



What is DLP 3D Printing?

DLP: Digital Light Processing Mask Projection Image Hardening Method

- A cross-section photograph of the output is laminated by irradiating the photo-curable liquid resin with UV light..
- Due to the optical mask, the cross-sectional photograph of the output is totally inspected.
- Because of this surface unit lamination method, the output speed is fast and the surface roughness high, so it is possible to make use of precision.

I DM250 Summary

Hello.

This manual provides instructions on how to use the "DM250".

Understand how to use "DM250" through the manual and experience "DM250" easily and conveniently.

Check List

01 **DM250 Information**

02 **Component**

03 **Precaution**

04 **Whole Process**

I DM250 Summary

01. DM250 Information

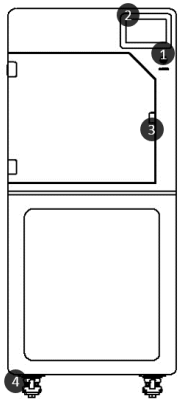
The DM250 is a 3D printer capable of large output, allowing a variety of printing tasks.

Model Name	DM250
Projection Resolution	1980 X 1080 (pixel)
Light Source	UV LED(405nm)
Printing Size(mm)	250 x 140 x 250
Lamination Thickness(mm)	0.025 / 0.05 / 0.075 / 0.1
Pixel Size	130 μm
Product Size(mm)	650 x 460 x 1490
Weight(kg)	92
Power	100-240V, 50/60Hz, 2.5A, 260W
Material	DLP, SLA Resin
Control Type	Control method using embedded touch screen
Using Environment	18-26 (℃) / 20% - 50% (% humidity)

+ If you use the printer in this environment, it will help you to printing better.

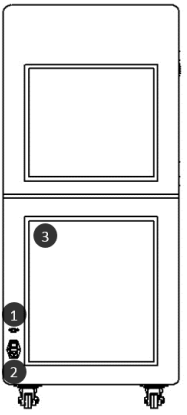
02. Component

A Front



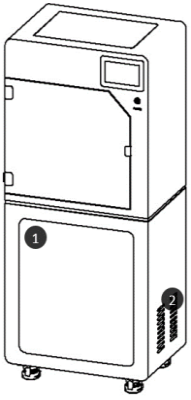
1. LED Chrome Button
2. LCD Touch Screen
3. Push Lock-On Door
4. Fixed / Height Adjustable Sliding Wheel

B Back



1. Ethernet Port
2. On/OFF Cable and Switch
3. Engine Room Cover(Back)

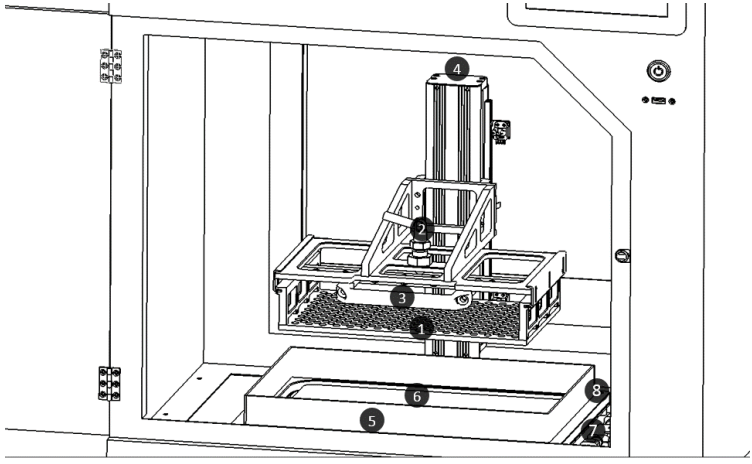
C Equal Angles



1. Engine room cover (front)
2. Vent

1. USB port
2. Low Noise Cooling Fan

C Internal Structure



1. Formative Plate
2. Plate Fixed Pin
3. Plate Knob
4. Plate Up-Down Movement Spindle
5. Tray
6. Trans Parent Sheet
7. Tray Tilting Spindle
8. Tray-Fixed Hexagonal Screw

D Real Size

03. Precaution

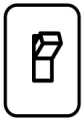
This information is intended to protect your safety and property damage.

For your safety, please be aware of the precautions to prevent personal injury or printer damage.

When you print out the printer, it may cause the resin to smell distinctive, so please install the printer in a well-ventilated place.

When using volatile objects near the printer, do not use it because there is a risk of fire or explosion.

When moving the printer, be sure to completely shut down the printer, and then remove the resin or tray to avoid overflowing the resin in the tray.



If the printer is on, do not off the power switch located on the back of the printer. Forcible termination can shorten the life of the printer engine and cause mechanical failure. Press the Exit button on the LCD panel to shut down the printer.

If some objects such as water or other liquids, metal chips, or other conductive materials are introduced into the printer, it may adversely affect the printer, such as mechanical malfunction. In addition, do not operate with wet hands because of the risk of electric shock, please wear the nitrile gloves and using.

If you touch the door or touch screen strained with gloves or tools, it may cause malfunction(Touch screen malfunction, door crack, etc.).

If the tray removed while the plate attached after printing, impurities may fall inside and cause a failure. First, remove the plastic plate, remove the tray afterwards.

When removing the tray, be careful that the bearings that were used as the bearing may be lost (If you lose, you may incur costs).

After the output, take out the resin remaining in the tray with a syringe, filtering residue with a sieve, and store it separately.

If you put the resin in the tray due to frequent work, keep it closed that is not exposed to the external environment as much as possible.

If the dyestuff of the resin stored in the tray is separated, it must be mixed with a rubber spatula before printing.(If the sheet is damaged by storing the resin in the tray for a long period of time, this is the customer's fault.)

After the output is completed, When you remove the plastic plate with the printout, be sure to move the tray (tray) that supports the resin that falls down so that the material does not fall inside the product. If the material falls inside the product, it may cause deformation or breakdown.

If the printer power cable and USB cable are damaged due to being pulled or stepped on the rough surface, please note that sparking or voltage malfunction may occur. Also, if there is a lot of current in the power cord or outlet, there is a risk of fire due to overheating.

The printer has potential risks in terms of chemical composition and voltage. To prevent injuries to children and pets, install a printer in a safe place to prevent accidents.

If the printer is installed in a location where there is a lot of humidity or temperature changes, it may cause deformation or malfunction of the product.

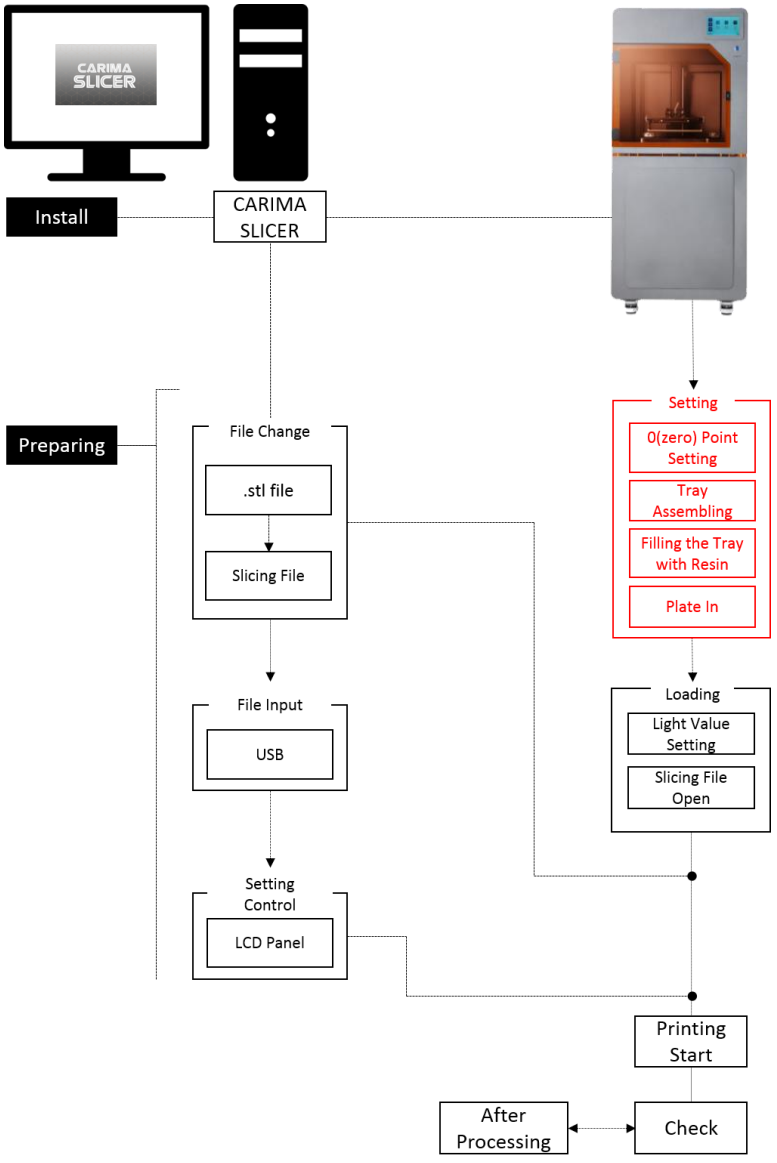
If you disassembling or remodeling the printer artificially, the warranty benefits will be lost and you will not be held liable for any loss caused by this.

For inquiries regarding A/S inquiries and product warranty, please contact Carima Co., Ltd. for a friendly consultation.(82-2-3663-8877).

Malfunction or trouble due to non-compliance, tuning, disassembly, etc. are recognized as customer errors and will be charged during the warranty period.

04. Whole Process

To output to the DM250, the following procedure is required.



II Software Install and Using

If you are using the DM250, you must install the slicer program provided by Carima.

Realize your imagination and experience creation with Carima Slicer.

Check List

01 **Carima Slicer Install**

02 **Carima Slicer Using**

II Software Install and Using

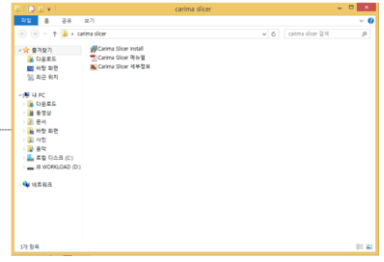
01. Carima Slicer Install

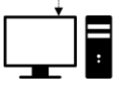
The Carima Slicer is a program that helps you to output from the DM250.

Carima Slicer is a self-made slicing program from Carima Co., Ltd. It is a program that slices each model to output and makes it into a picture form. It is easy to save it as file such as stl, jpg, crv.

2.0 USB

The Carima Slicer Setup program is attached to the USB provided by Carima. Install CarimaSLICER with USB.

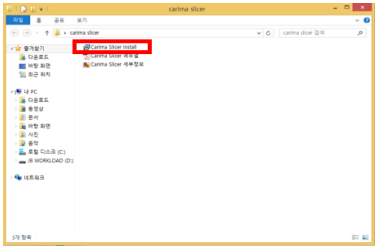




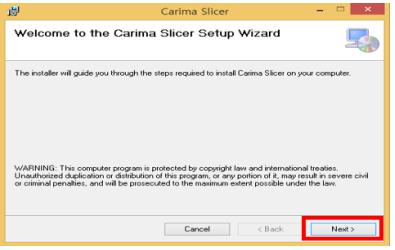
CarimaSLICER can not be installed on any other PC (or notebook) other than one PC (or notebook).

★ CarimaSLICER is compatible only with 3D printers manufactured by Carima Co., Ltd. You can not use CarimaSLICER with other 3D printers.

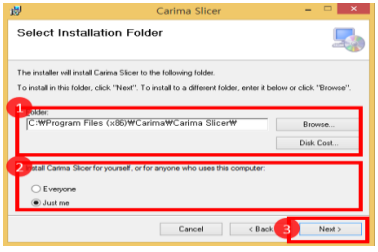
You can install Carima Slicer in the following process.



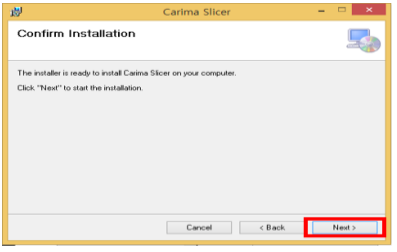
a. Double-click the Carima-Slicer Install file.



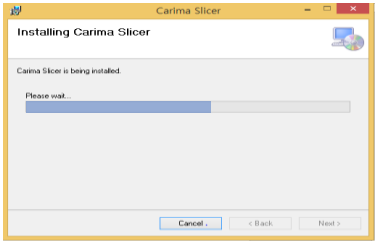
b. Carima-Slicer Install Setup file screen. Click Next>.



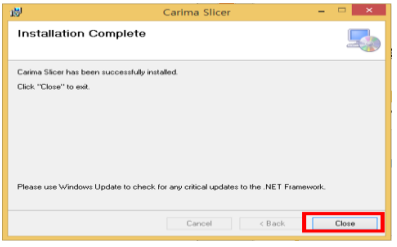
c. After specifying the path where Carima-Slicer will be installed, select one of "Just me" or "Everyone" of the Windows account and click Next>.



d. After completing the setup, please proceed to the final installation with the message that installation is completed. Click Next>.



e. Click Next> to proceed with the installation.



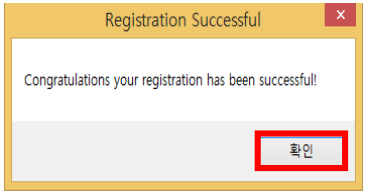
f. When the installation is finished, click Close.

02. Carima Slicer Setting

You can apply a variety of settings to ensure easy use of the Carima slicer.

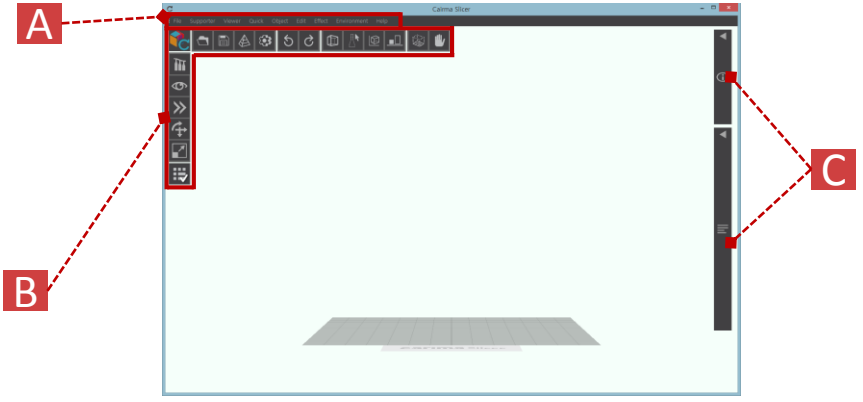
Once you have completed the installation, the Carima slicer icon will be created on your desktop. Double click the icon and start Carima slicer.

When you run Carima Slicer program, you can see the following registration screen.
On the registration screen, only information about serial number and computer information is displayed.

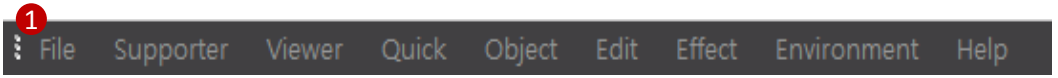


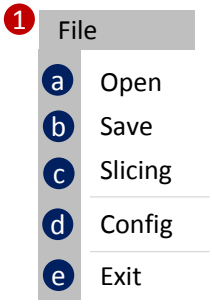
Serial Number and Computer Information are automatically formed, so if you click Registration immediately, you will get a message that the registration is as follows. Click OK and meet Carima Slicer!

After registering, if you run Carima Slicer program,
you can see the following interface screen.



★ If CarimaSLICER is not installed properly, please contact the following address. Carima 82 - 2 - 3663 - 8877





a Open

Stored files such as "stl" can be loaded.

b Save

You can save models that you have worked with a Carima slicer in slt, crv, and other file formats.

c Slicing

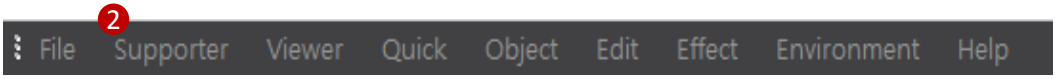
The imported modeling files can be sliced into single-sided photo files. The file is in JPGE format.

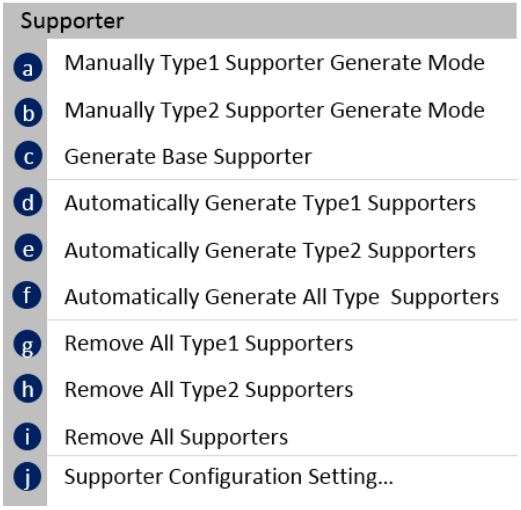
d Config

You can change the color of the modeling file, set the user name, build size, resolution, and image pixels.

e Exit

Exit the Carima slicer.





Type 1. supporter
(Yellow)

Type 2. supporter
(Blue)

a Manual formation of type 1 supporters

Type 1 supporter manually formed from printout and bottom

b Manual formation of type 2 supporters

Type 2 supporter(Blue) that is manually formed between printout and output

c Base supporter

Outputs and supporters serve as support from bottom

c Type 1 supporter automatic formation

Automatically form type 1 supporter that serves as a support from the printout and from the bottom

e Type 2 supporter automatic formation

Automatically form type 2 supporter that serves as a support from the printout and from the bottom

f Automatic formation of all supporters

All supporters automatically formed

g Delete all type 1 supporters

Delete all formed Type 1 supporters

h Delete all type 2 supporters

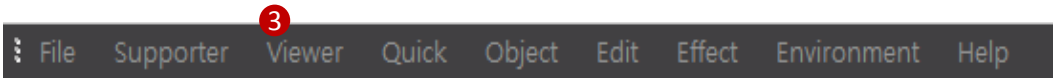
Delete all formed Type 2 supporters

i Delete all supporters

Remove all formed supporters

j Supporter Settings

Change setting value such as supporter size and length



3 Viewer

- a Front
- b Top
- c Left
- d Right
- e Bottom

a Front view

The loaded model can be seen from the front.

b Top view

The imported model can be seen from above.

c Left view

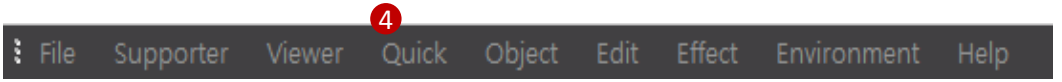
You can see the loaded model on the left.

d Right view

You can see the loaded model on the right.

e Bottom View

The imported model can be seen below.



4 Quick

- a Reflection in the X axis
- b Reflection in the Y axis
- c Reflection in the Z axis
- d Move to the Center of X-Y Plane
- e Move to the Bottom of Z axis

a Invert to X axis

Reversing the direction of the model along the X axis

b Inverse to Y axis

Reverse direction of model in Y axis

c Invert to Z axis

Reversing the direction of the model along the Z axis

d Centered on X-Y axis

Centered on X-Y axis

e Z axis positioning

Zero position from the current position to the bottom of the Z-axis (molded plate)

a **Move model**

You can move the model.

b **Model rotation**

You can rotate the model.

c **Model Size**

You can change the size of the model.

d **Origin placement**

You can place the moved or rotated model back to the origin.

e **Copy**

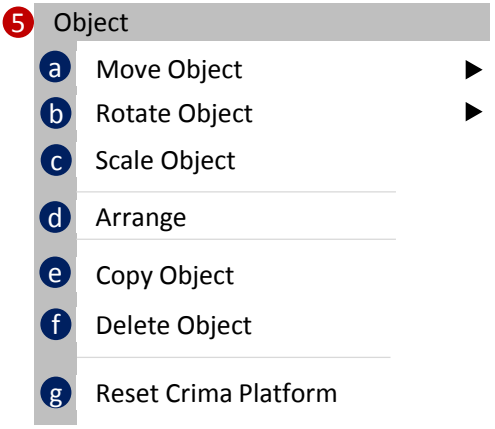
You can copy the model the same way.

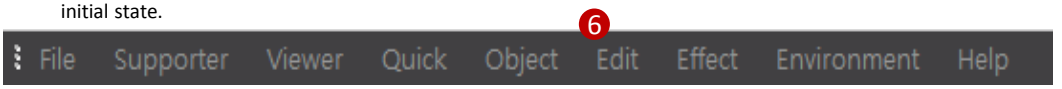
f **Delete**

You can delete the model.

g **Initial Screen**

The first time the Carima slicer returns to its initial state.





a **Back to Previous Work**

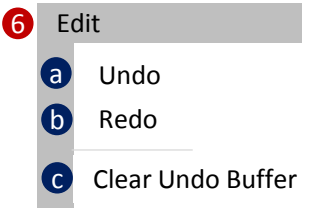
You can return to the previous operation.

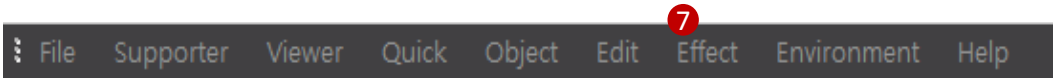
b **Go back to work**

You can go back to work later.

c **Initialize workload**

You can initialize the imputed computer memory because of the large amount of nested workloads.





7 Effect

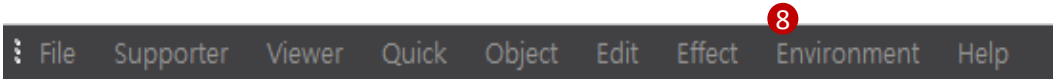
- a Alpha Blending
- b Marking Slope Area
- c Boxing Selected Object
- d Outline Selected Object

a **Translucent effect**
The model has a translucent effect.

b **Show supporter formation part**
The part where supporters will be formed is displayed.

c **Model Box Formation**
A corner angle appears as the size of the model.

d **Model contouring**
Displays the outline of the model.



8 Environment

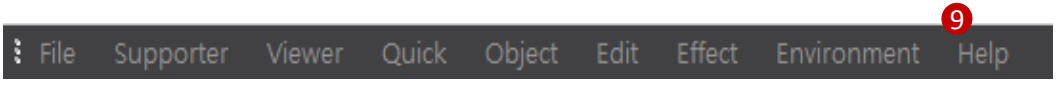
- a Expand Displayed Toolboxes
- b Rearrange Displayed Toolboxes
- c Show Build Platform
- d Show Notice Boundaries

a **View all action tools**
All work tools appear to be visible.

b **Rearrange all working tools**
Rearrange the wrong work tools.

c **Build view**
Builds can be viewed in clear boxes.

d **Show and hide frontal display**
You can hide or show the front panel.



9 Help

- a User Manual
- b About

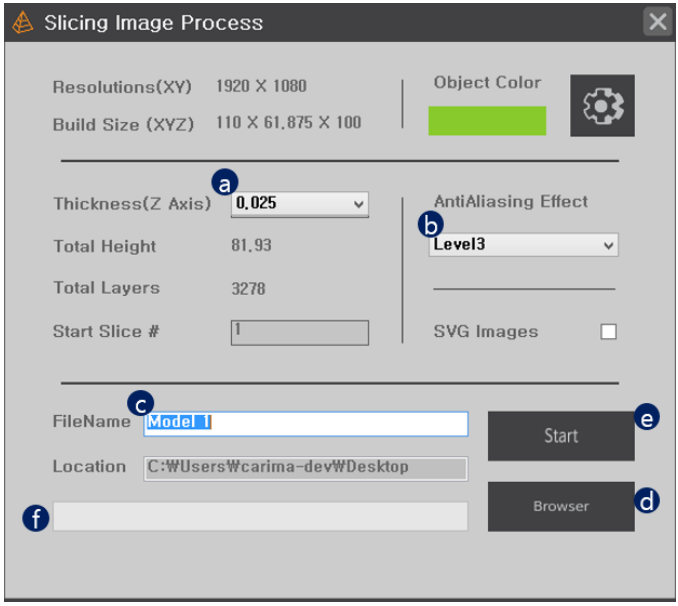
a **Download the Manual**
You can download the Carima slicer manual in PDF format.

b **About the Carima Slicer Program**
You can check the current slicer program information.

Slicing Process

The initial start point of Start Slice # is set to 1.

If slicing is in progress, error, or pause, the slicing must be resumed and the starting point can be set using Start Slice #.



a Precision setting

Precision can be set in micron (㎛) units. The lower the number, the greater the number of slices.

b Anti-aliasing effect

You can reduce the appearance of the staircase type shown in the sliced picture.

c File name

You can set the file name to be sliced.

d Set file storage location

You can set the location of the file to be saved. The files are stored in crv, jpg format files.

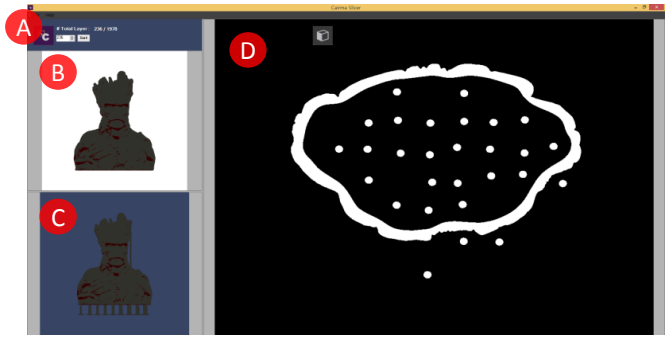
e Getting started with slicing

Slicing begins.

f Show slicing progress

You can check the slicing progress.

a partial cross section

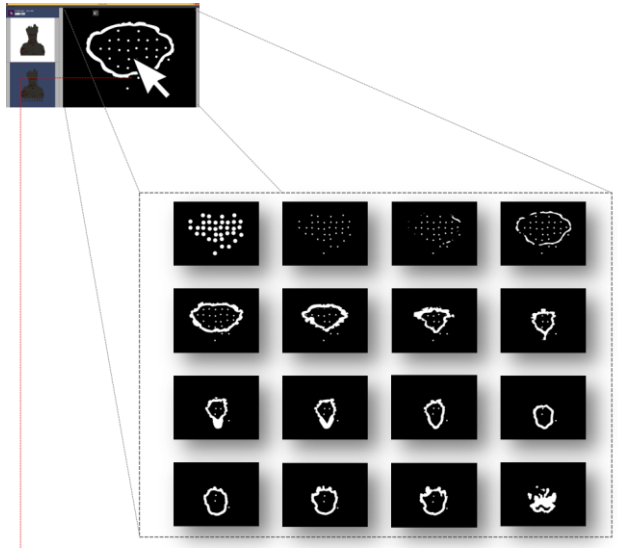


A Identify the entire slicing file

B Check the front of the printout

C Supporter of printout

D Checking the image of a section slice of the output



With the mouse wheel up and down, you can see all the cross-sectional layers of the sliced output one after another.

Open file

You can import modeling files such as stl.

sliced

The imported modeling files can be sliced into single-sided photo files. The file is in JPGE format.

Save the file

You can save models that you have worked with a Carima slicer in slt, crv, and other file formats.

Detailed settings

You can change the color of the modeling file, set the user name, build size, resolution, and image pixels.

undo

Reverts to the previous operation.

Redo

Go back to the next operation.

Bounding

A corner angle appears as the size of the model.

Show supporters

The part where the base is formed is displayed (red part).

Translucent effect

The model has a translucent effect.

Rearrangement

You can place the moved or rotated model back to the origin.

Build platform

The build platform is formed in the form of a box, so you can see clear build rules.

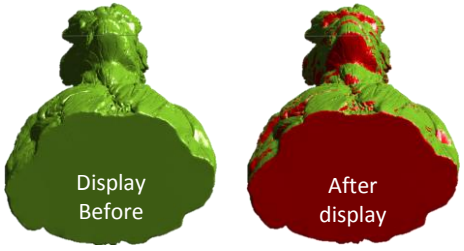
Border mark

During modeling, if the model is outside the build platform scope, a boundary mark appears.

Supporter Tool

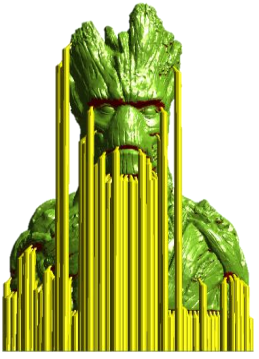
There are all the options associated with the support that you set up to secure your output.

The model displays the part where the supporter runs.



A supporter is created in the red area (the supporter will be created even if it is not red).

Type 1 supporters can be created (manual).



Type 1 supporters can be created (automatic).

The Type 2 supporter is a supporter that connects between the two to make the most of the fine or precise part of the model.

You can create a type 2 supporter (manual).

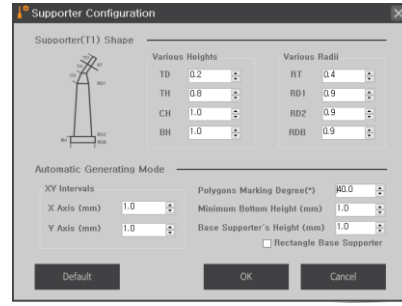
Type 2 supporters can be created (automatic).

You can remove the type 1 supporter that you created.

You can remove the type 2 supporter you created.

You can remove all generated supporters.

Type 1 and Type 2 supporters can be created automatically (random settings).

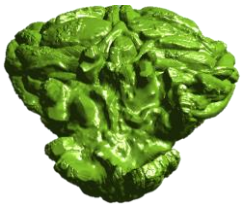


You can add a base supporter to the output (yellow base).

You can set supporter length, size, thickness and so on.

View Manu

You can set the output to be viewed in various ways.



Top view

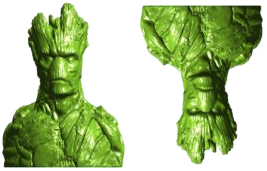
Bottom View

Front view

Right view

Left view

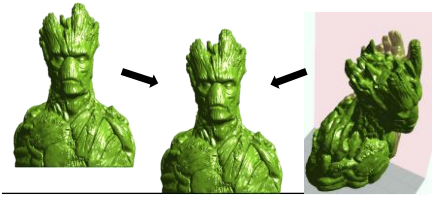
This menu allows you to change the output direction to various directions.



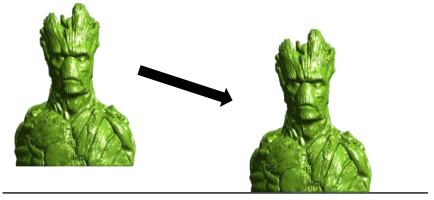
Switching up and down

Tilting left and right

Forward and backward switching

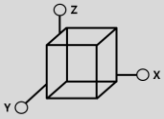


Bottom (Zero) All axis coordinate alignment

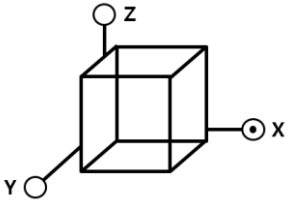


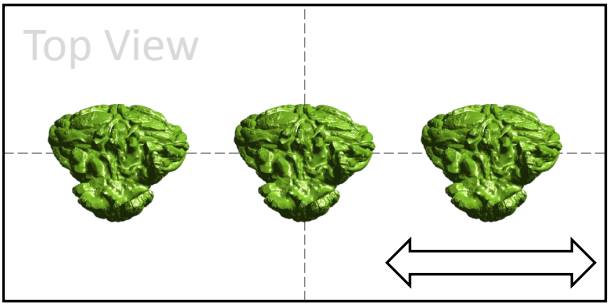
Bottom (Zero) Z-axis (Up and Down) Coordinate alignment

Move Manu

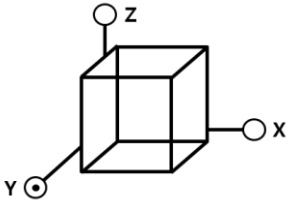


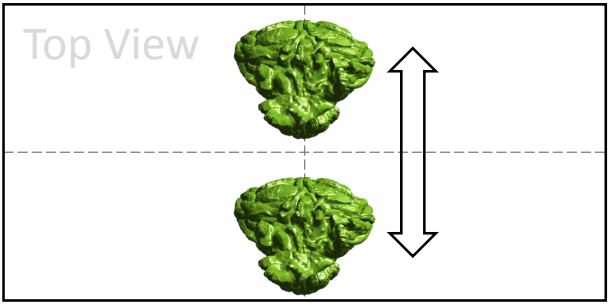
You can freely move the printout left, right, front and back, up and down.



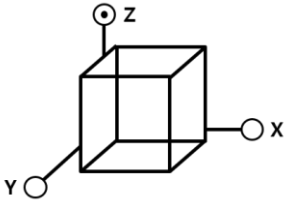


- Move to X axis
  (left and right)



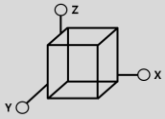


- Move to Y axis
  (front and back)



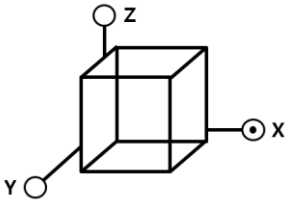
- Move to Z-axis
  (up and down)

Rotate Manu

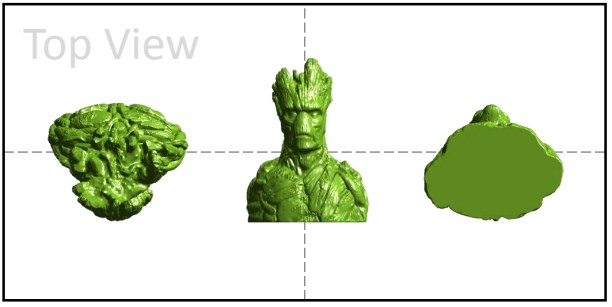


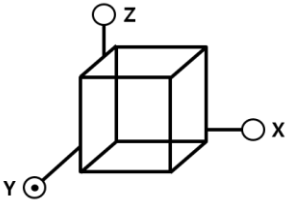
The output can be freely rotated at various angles.

ex) Rotate 90 degrees

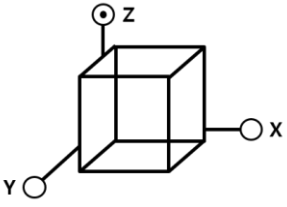


- X-axis rotation

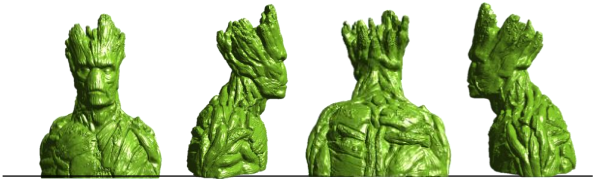




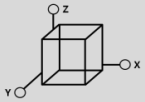
- Y-axis rotation



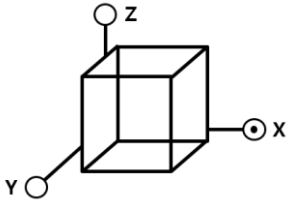
- Z-axis rotation

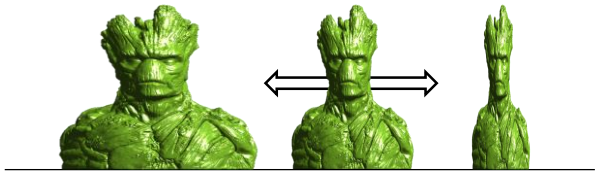


Scale Manu

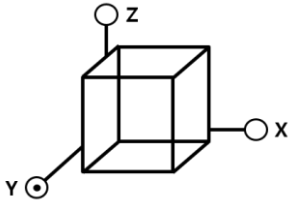


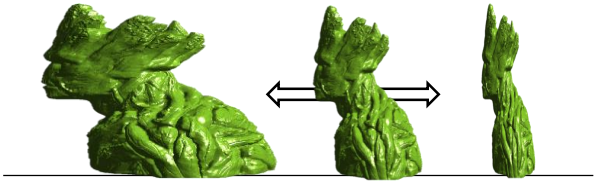
Output can be adjusted to various sizes.



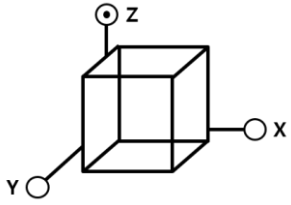


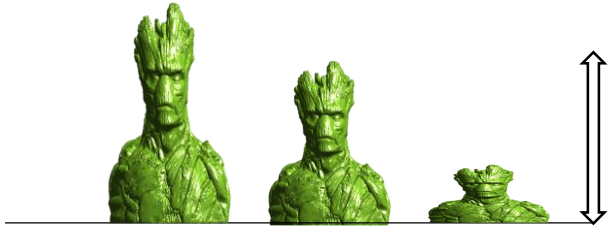
- Resize X axis: You can narrow or widen to the left or right.



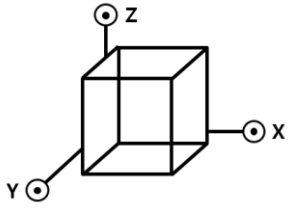


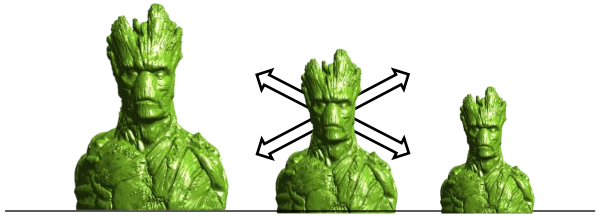
- Resize Y axis: You can narrow or widen in the forward and backward direction.





- Adjust Z scale: Narrow or widen up or down





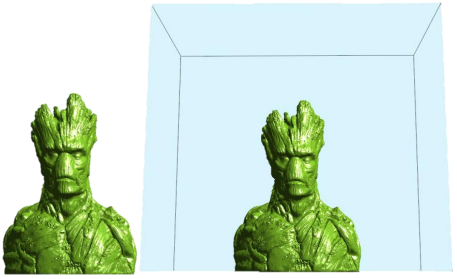
- Full size adjustment: can be narrowed or widened in all directions

Etc. Tool

Ancillary work tools include border marks, build marks, forward alignment, and translucent effects.

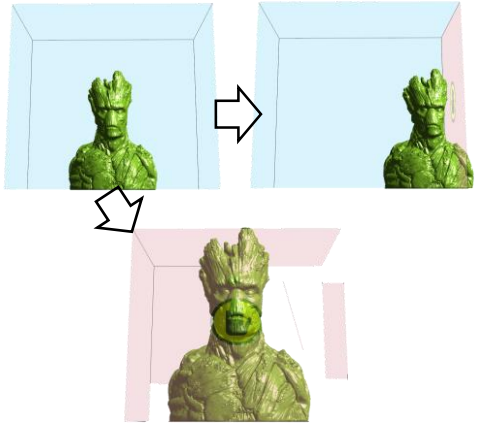
Translucent effect

Ability to view printout



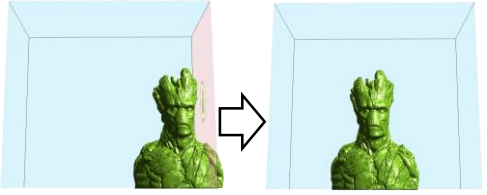
Show Build

Ability to display the entire build



Border mark

The boundary of the part that is displayed in red when the output size is changed or the build is exceeded due to movement



Forward Sort

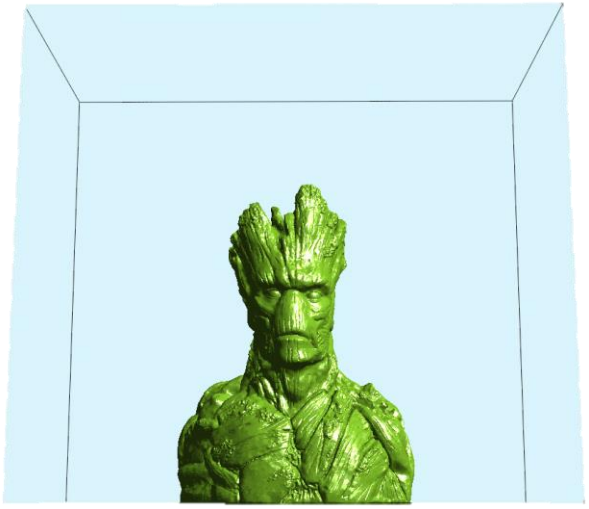
Function to rearrange forward again

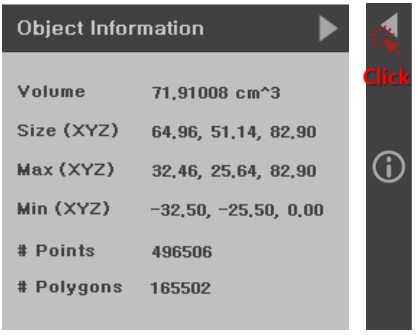
Open & Close Work Tool

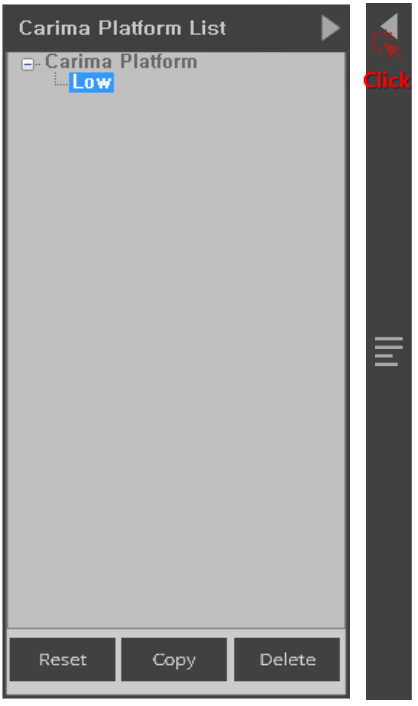
Open and close all work tools

C Object Information

You can check the information about the printout, application tools such as supporters, etc.







III Preparing & Printing

Before printing, you must preparing the DM250 state that can output.

Now we will explain the procedure from the first opening to the output of the DM250.

Check List

01 **Printing Preparation**

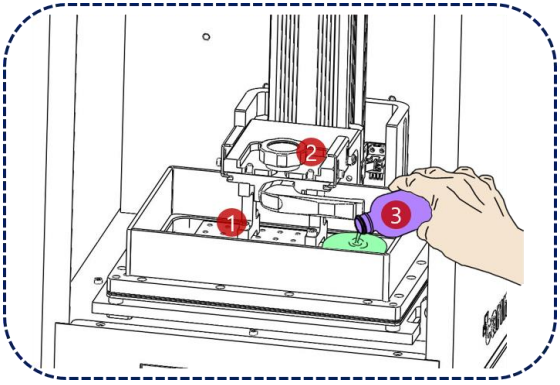
02 **LCD Panel Using Method**

03 **Start Printing**

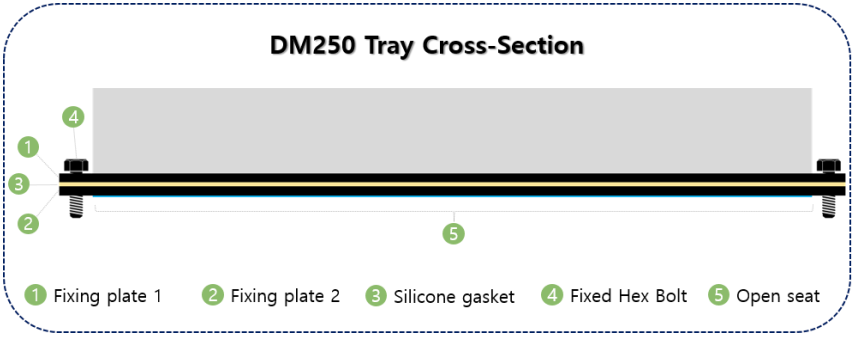
II Preparing & Printing

01. Printing Preparation

To start output to the DM250, you must first set the material. For material setting, there are tray preparation, resin swelling, plate.



1. Fit the separated formative plate into the formative top.
2. Fixing the plate and place with the fixing pin.
3. Prepare the printing by pouring resin into the tray.



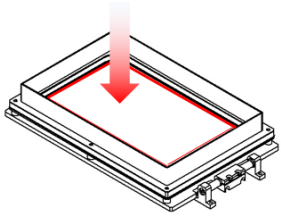
If you scratch the sheet of ⑤ with a sharp blade or cutter knife, be careful not only to tear it but also to contaminate the engine room with resin.

All you really need to know

Information on the use of resin

When using a resin, please use all means wearing nitrile gloves. When replenishing resin, please charge it before possible output. Inevitably, when replenishing the resin during printing, press the "Pause" button and slowly insert the resin after the operation is completely stopped. Charging the resin during printing can cause bubbles and adversely affect the printout.

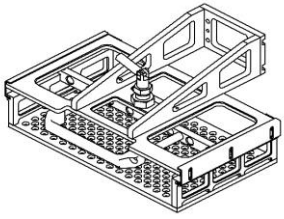
Information about using the tray



As you print, the surface of the sheet is punctured, torn, and loosened. In this case, since the resin seeps out and can not be used, replace it with a new tray.

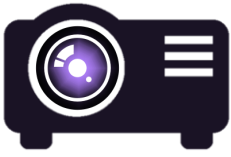
If the user accidentally prints or hardened debris hurt the surface of the sheet, these symptoms will appear in a short time.

Information on formative plate maintain



You can clean the modeling plate by scratching the molding plate with wax or wiping it with a wet tissue. If you want to use another resin for output, please wipe the resin before you clean it.

Information about using the tray



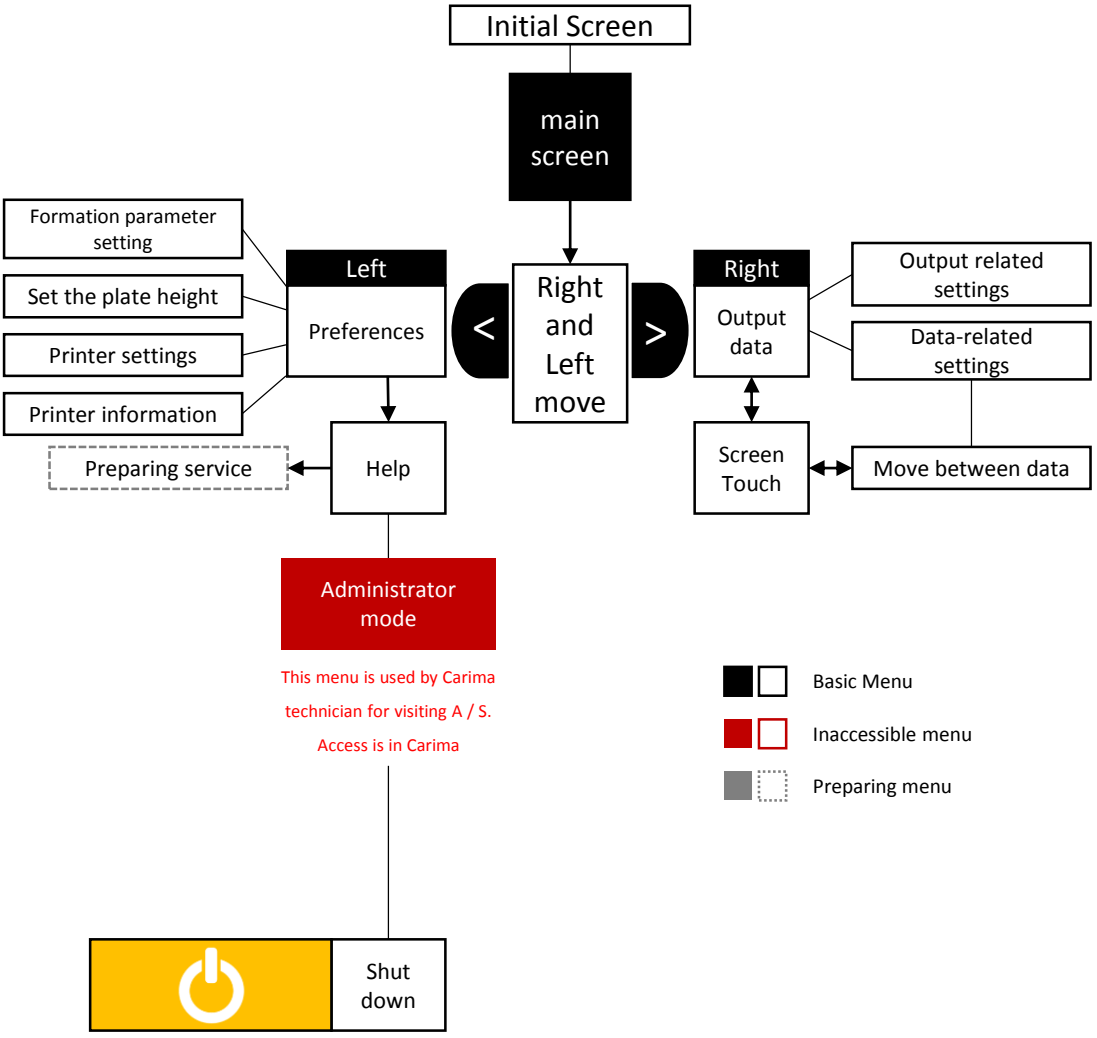
The life span of the optical engine lamp is 20,000 hours, and the lamp brightness may be lowered when used over the life span.

If the lamp usage time exceeds 20,000 hours, you can improve the output quality by replacing the lamp.

02. LCD Panel Using Method

On the LCD panel, you can make most of the settings required for printing.

LCD Panel Tree



HOME

A. Initial Screen

When the printer is turned on, the loading screen appears.

Make your ideas come true with Carima's 3D printer!

B. Main Home Screen

(a) Preferences

(b) Output and data-related settings

ⓐ Environment Set

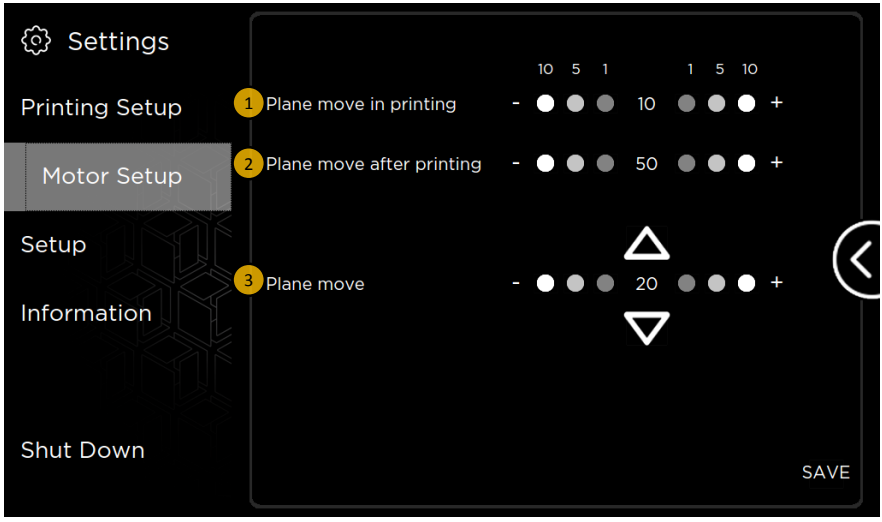
- Formation parameter setting

The shape parameter setting menu allows you to fine-tune the light of the engine being examined for output.

1. The basic exposure time means the time to shoot the output image from the optical engine at the time of molding
2. The initial exposure time means the exposure time for attaching the output to the molding plate during molding
3. The initial exposure layer means the number of layers to which the initial exposure time is to be applied
4. The divided exposure time means the time for dividing the exposure time

ⓐ Environment Set

- Set the plate height

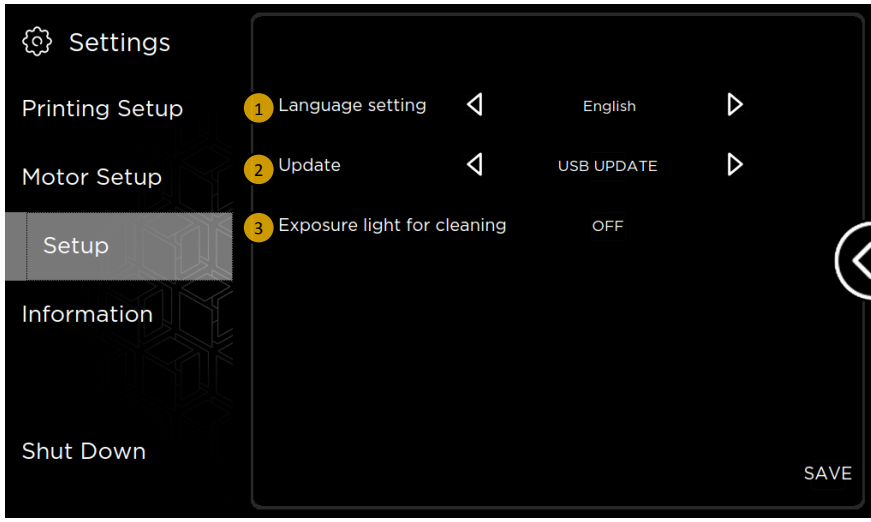


The height of the plate can be set to the amount of movement of the plate after printing, after printing, or during normal operation.

1. During molding, the movement amount of the plastic plate can be set during the printing.
2. After molding, the amount of movement of the molding plate can be set after the output.
3. The movement amount of the plate can be set when the tray separation, the cleaning of the molding surface, and generally the movement of the plastic plate are required.

ⓐ Environment Set

- 프린터 설정



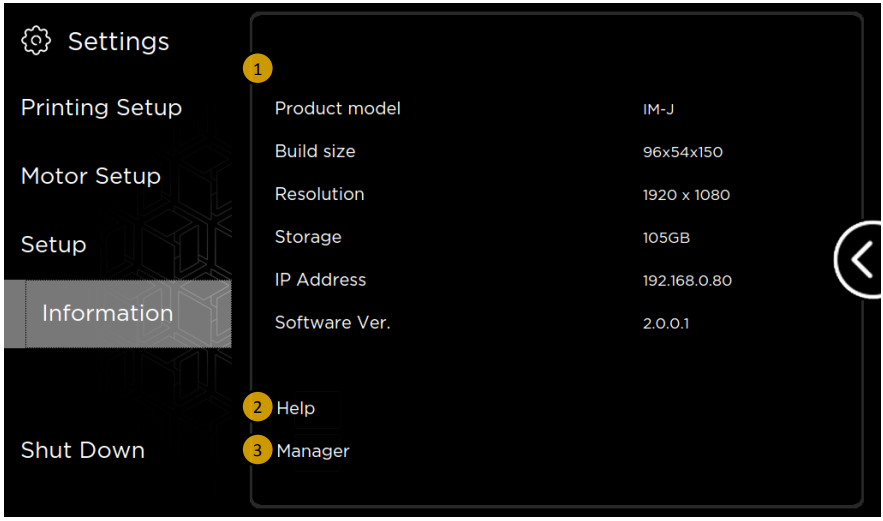
The printer settings are for use with LCD Embedded.
You can set the language settings, embedded update settings, cleaning the plastic surface(sheet) of the tray, and so on.

1. Language setting: You can set the language such as Korean, English, Japanese.
(See p.36 Additional Information)

2. Update: There is a way to update via Embedded update via USB and to update (online update) by accessing Carima's update server.
Currently "Online Update" is in preparation for service (see p.36 Additional Information)

3. Cleaning the mold surface: When the mold surface is cleaned by the menu that is used when there is residue or residue on the sheet due to the output failure, OFF turns on and UV light is irradiated for 2 ~ 3 seconds.
After the light is illuminated, the menu changes to OFF again.
(See p.36 Additional Information)

- Printer information



The printer information includes the model name, build size, resolution, storage space, IP address, and software version for the printer you are using.

1. You can check information such as product name, build size, resolution, storage space, IP address, and software version.

2. Tip: You can find information that will help you with your output.
   We are currently in the process of preparing the service.

3. Administrator mode: Administrator mode is used by Carima technician during business trip A / S. Customers can not use it, but if you have any questions, please contact Carima Customer Service (82-2-3283-8877).

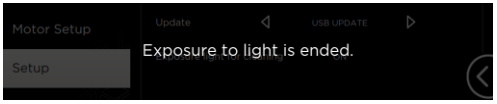
LCD Panel Usage

ⓐ Environment Set

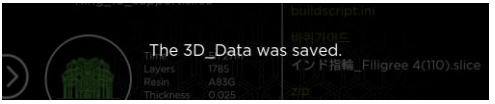
- Printer shutdown

Press the Exit button to exit the printer.

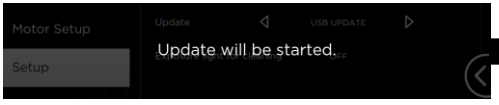
Additional Information



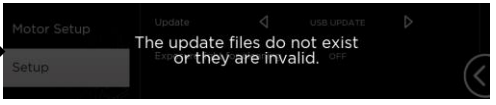
- This message will appear when cleaning the molding surface.



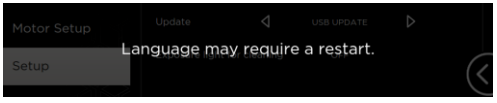
- Pressing the save button at the bottom right of the molding surface height setting will display a message like this.



- 프린터 설정에서 USB업데이트를 진행하면 이와 같은 메세지가 나타납니다.



- If you do not have an update file when you perform USB update from the printer settings, this message will appear.



- LCD임베디드 언어를 설정하면 이와 같은 메세지가 나타납니다.

- The above picture shows the administrator mode screen.
- This menu is not available to customers.

03. Outputting

On the LCD panel, you can make all the settings required to output to the DM250.

LCD Panel Usage

ⓑ Output and data-related settings

- Data List

When you press the directional key located in the middle right of the main menu, the data list of this output appears.

If the data is not modeled when you click on the data, this message appears.

1 Data storage message

2 Data delete message

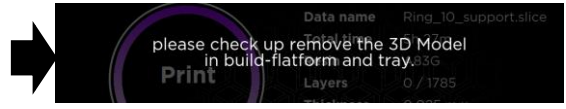
If you press the data again in the right data list,
1 the data saving icon and 2 data delete icon will appear.

ⓑ Output and data-related settings

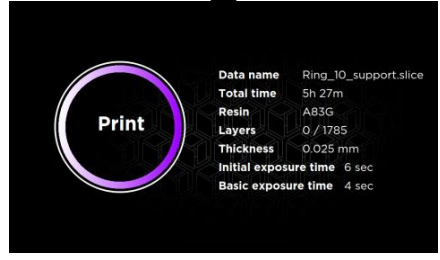
- Printing

If you click the data you want to print on the right data list, brief information of the printout appears on the left. When you press the circle here, the output starts.

The data to be output is read.



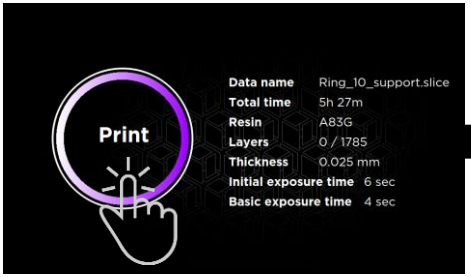
Just before the printout, a message will be displayed to remind you that the sculpture is attached to the molding plate.



Printing starts.

ⓑ Output and data-related settings

- During printing, setting



If you press the circle "Print" during printing, the setting menu will appear as shown on the right.

① Pause

- Pause the print job in progress.
- Press again to start printing.

② Preview

- You can stop the print job and preview the progressed output.

③ Auto shutdown

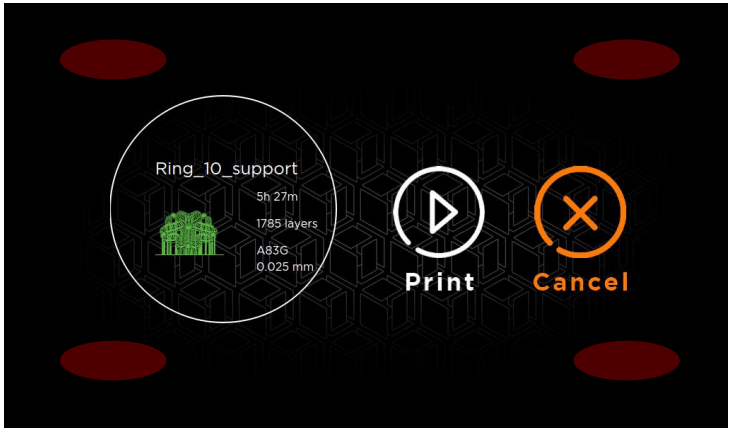
- The print job is completed and the printer is automatically shut down.

④ Stop and terminate printing

- Stop the print job in progress and terminate the output.

ⓑ Output and data-related settings

After canceling the output, Main Screen: From this screen, Data can be loaded and output.



- In the Output Shortcut Menu, you will be taken directly to the screen of the corresponding output so that you can print out the previous output.
- If you want to print another output, press the blank screen (red part) in addition to the circle menu to move to other data.

IV Check Output

When printing is finished, the printout must be removed from the printer.

Be sure to read the information to remove the printouts and improve the output quality.

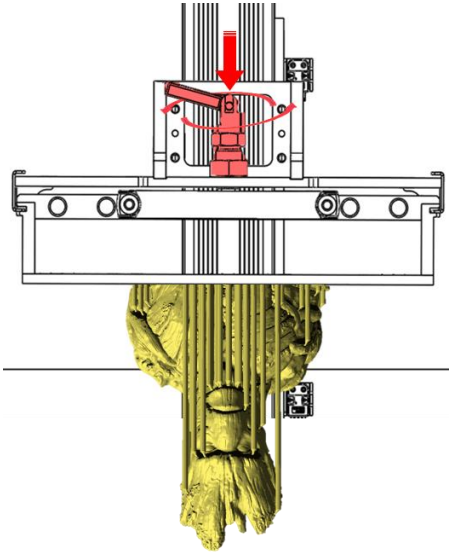
Check List

01 **Output Demount**

02 **After Processing Output**

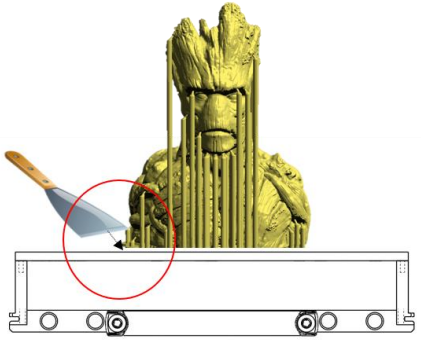
01. Output Demount

When the output is complete, you should remove the printout from the mastering plate. Wear nitrile gloves and remove the printouts.



When the output is completed, the formative plate with the output is automatically raised.

In this state, turn the fixing pin to remove the formative plate.



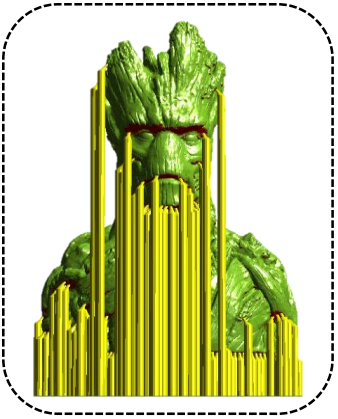
Put the formative plate upside down to remove the printout. Detach the output and using a cutter such as a knife or scraper.

※ Caution

Please be careful when using cutter knife or hera.

02. After Output Processing

If the printout is removed from the formative plate, manual work such as cleaning, supporter removal, and curing is required. You should still wear nitrile gloves.



1

Cleaning the resin left
in the output with alcohol

2

Using an air compressor to remove alcohol
(If there is no compressor, cool air is dried naturally)

3

If there is a supporter on the printout,
remove the supporter using a nipper, etc.

4

Using a sandpaper to polish and remove
supporter marks on the output

5

Curing with UV curing machine
after alcohol cleaning

1 Removing supporters

The supporter can be output with the supporter 1 or 2 type according to the method set in the slicing program before output, and both supporter 1 and 2 type can be set and output.

When the output is complete, remove the supporter by hand from the printout removed from the plate.

After curing without removing the supporter, you can remove it using the nipper on the base component when removing the supporter.

If the supporter remains on the cut of the supporter in the printout, you can use a sandpaper to polish the surface by polishing.

Tip!

Density	Usage	Purchase recommended Sandpaper Type
60-120	For removing rough and rough surfaces (Metal, high-strength plastic such as FRP, cement)	Cloth
180-280	Frequently used sandpaper, abrasive polishing of various materials	Cloth
320-600	Uses of ordinary sandpaper, peeling paint slightly	Cloth / Paper
800-2000	Less frequently used sandpaper, precious metal, polished, painted surface Lightly polished	Paper
Sandpaper always starts from a low room, finishes with a high room, and does not have to go through all the sandpaper types one time.		

2 Washing

When the output is completed, the resin remains on the printout, and the remaining resin can be cleaned with ethanol. The higher the ethanol(92%) concentration, the better the wash.

ethanol (92%) can clean the remaining resin in the output. It is easier to clean if you put the ethanol (92%) into the sprayer and so on.

Fine parts of the printout can be removed with a thin brush or toothbrush.

After the ethanol (92%) is cleaned, dry it with an air compressor so that the ethanol (92%) is completely dried.

Air Compressor is not sold in Carima.

Curing

What is "Curing"?

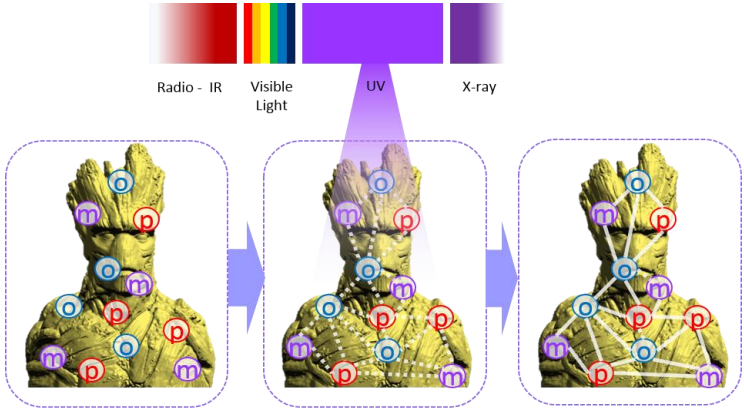
Hardness of things or body

Making materials harder by processing or heat-treating materials

ⓜ monomer : Polymers that attract other molecules to form bonds

ⓞ oligomer : Polymers in which the units are polymerized to about 2-20

ⓟ photo-initiator : A substance added to the UV resin to absorb energy from the ultraviolet lamp to start the polymerization reaction



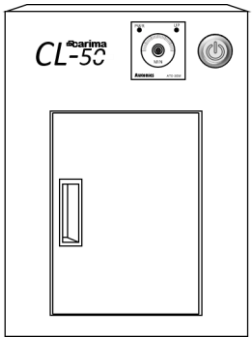
Immediately after output
: Molecular structure not fixed

Curing
: Chemical reaction

After curing
: Bonding and stiffness

Caution

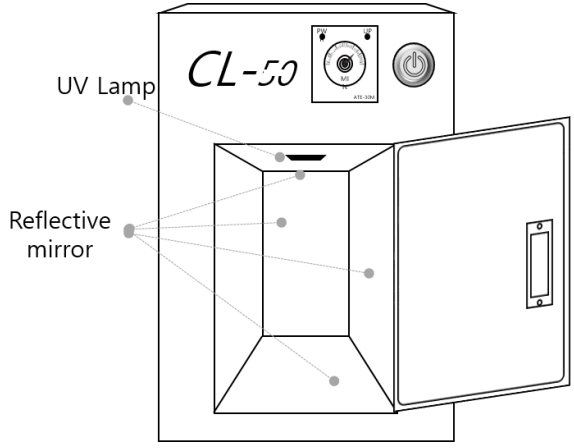
- When using a UV curing unit, do not look directly at the UV, but use sunglasses or goggles that can be blocked.



Product Specification

Model Name	CL-50
Lamp	UV Curing Lamp(50W 1EA)
System	Lamp-side Forced Air Cooling
Power	50/60Hz AC 85~265V
Size(mm)	250(W) – 270(D) – 383.6(H)
Made in	Korea

CL-50 Internal Structure



Caution

- Please note that if the curing is done for a long time, it may affect the output(UV curing machine: 2-3 minutes curing / UV LED: curing for 30 minutes or more).
- It is possible to reduce the deformation of the printout by performing the work frequently with less time than hardening time.

V Maintenance

It is important to keep the DM250 in good condition for a long time without problems.

Now you will be informed about printer management, supplies management, frequently asked questions and A/S.

Check List

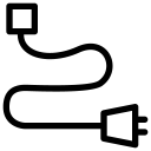
01 **Printer Maintain**

02 **Other Maintain**

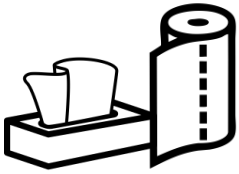
03 **FAQ**

01. Printer Maintain

It is important to keep the printer well in order to use it for a long time. In this regard, I will tell you how to clean and manage your printer.



If you do not use the printer for a long period of time, remove the power cable from the printer and store the printer in a shady place.



If the resin falls or flows into the printer, wipe it with ethanol (92%) on the towels (tissues, kitchen towels, etc.).

If dust has accumulated on the engine lens, wipe it with a lens cleaning agent on the microfiber towel. When you wipe the lens, wipe the lens gently as you circle.

Damage to the engine lens can adversely affect print quality.
When cleaning, please handle it carefully.

02. Other Maintain

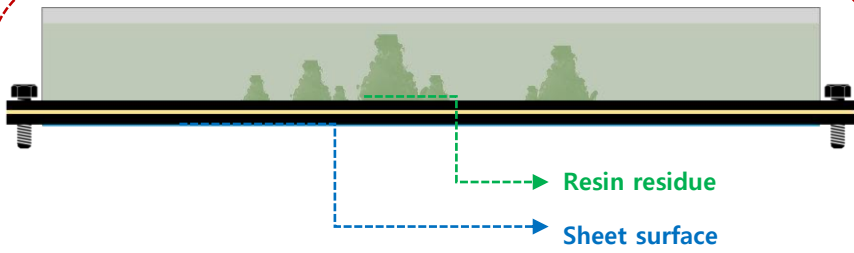
Consumables related to the printer include trays, resin, and basic components.

1 Tray(Vat) Management

Consumables related to the printer include trays, resin, and basic components. If you want to remove the resin that you used earlier and use other resin, completely remove the resin from the existing tray with the syringe included in the base component.

Then use the trays to clean the remaining resin with ethanol (92%)-impregnated towels.

When using various resins, it is recommended to use individual trays for each resin in CARIMA CO., LTD. Resins are not well wiped by nature, or mixed with other resins, which can adversely affect print quality.



If there is residue on the tray,

- You can remove debris with your hands with nitrile gloves.
- When removing the residue using the hera, be careful not to damage the tray sheet surface (it is not recommended to use hera directly on the sheet).

2 Resin Management

Resins are vulnerable to sunlight or a variety of light. Always keep it in a shady place where it can not be used for a long time.

When the tray with the resin is pulled out from the printer and stored, it is possible to store it by using a product (foil, etc.) that can block the light.

Never mix with other resin.

Resin is a chemical component. Please wear goggles and sunglasses and a mask when you use it because the resin may splash and enter your eyes or cause a chemical odor that makes your respiratory system worse.

3 Resin Discard

Type of Waste	
Household chemicals such as used soaps, detergents, etc.	
Solid wastes that have been output	
Toilet paper and paper with no chemicals	
Waste water	If there is a purification device in the building, it may be disposed of in a drainage port, but if there is no purification device, it should be entrusted to the waste disposal company.
Output waste	If it corresponds to general waste, it is treated as general waste without being entrusted to the waste disposal company.
harmfulness waste (Liquid)	Must be entrusted to waste disposal company.

03. FAQ

We would like to inform you about the contents of the most inquiries while using the 3D printer of Carima Co., Ltd.

Q **The engine does not turn on.**

A Turn off the power, turn down the switch at the back, and then turn it on again. If the power does not turn on after that, please contact Carima.

Q **How much resin does it fill?**

A Resin should be poured in small increments as needed.
Fill only one third of the tray at the beginning.

Q **The output is blank.**

A Check if the engine light is on and set the exposure time again. If you still can not print after this, please contact us.

Q **If the output falls during output, how do I?**

A First stop the operation and turn off the engine, take out the tray and filter the debris. At this time, the resin on the molding plate may fall on the engine.

Q **What is the life span of the resin?**

A After opening the resin, up to 6 months is the period of use.
The resin may become hardened when exposed to light, so please keep it out of the reach of light.

Q

When I do not use the equipment, how do I manage it?

A

Unused equipment should first be emptied of resin in the tray, and the tray should be lightly rinsed with ethanol (92%). The equipment must be unplugged and stored away from the environment (rain, wind, sunlight).

Q

How do I clean the tray?

A

If there is any resin in the tray, check whether there is any residue. If there is any, remove the clean resin separately through the funnel and the sieve net. Wipe the resin inside the tray lightly with tissue paper and ethanol (92%). Make sure that the resin and ethanol (92%) do not get into the tray gap.

Q

I inserted a slicing file and it says that the resolution is different.

A

If the resolution of the device is not correct, it will not be output. Be sure to check the resolution and build size of the device in "config" before slicing.

Q

What's the difference between "crv" and "stl" files?

A

The crv file is the default extension file of the carima slicer. Supporter and model are separately recognized and stored so that they can be modified at any time when the supporter work is completed and saved.

In the case of the stl file, supporters are bundled into a single chunk like the model and can not be modified when saved.

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

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Seoul Head Office

82-2-3663-8877

A / S Wired Inquiries: Mon-Fri (5 days a week) 09: 00-18: 00

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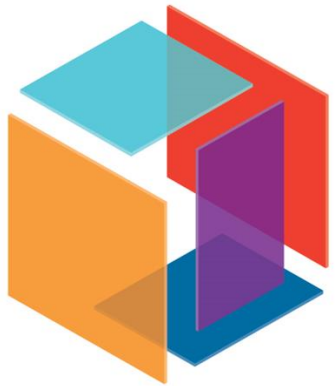
Http://www.carima.com/

For products, consumables, A / S, and other

inquiries, please contact Carima Co., Ltd.



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DM250 Manual(English) v 1.6 l 2017. 02. 03.

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www.carima.com l carima@carima.co.kr

Product Warranty Certificate

◎ Distributor

Where to buy	Carima Head Office	Service center	
Product Name		Serial Number	
Date of purchase		Warranty	

Carima Co., Ltd. guarantees this product in accordance with the consumer damage compensation regulations. We guarantee free repair within the warranty period for performance and function problems that occurred under normal use within the warranty period.

◎ Warranty contents

1. If the product manufactured by Carima Co., Ltd. breaks down due to functional problem, defective problem, environmental damage during delivery, we will compensate for free repair or replacement.
2. Even if the product is covered by the warranty period, it can not be repaired under the following conditions.
   - Malfunction due to careless handling.
   - The user disassembles the product, not the technician.
   - Malfunction caused by user modifying the product.
   - In case of repairs using parts and accessories other than the parts and accessories provided by the head office.

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※ Carima Coating Co., Ltd. guarantees the contents of this warranty.