Flashforge Creator Pro 3D Printer User Guide

Contents

Preface

On the completion of this User Guide, I here, on behalf the Flashforge team, would like to avail myself of this opportunity to express my great gratitude to the all Flashforge engineers and the Flashforge 3D printer users for their unremitting efforts and sincere assistance.

The Flashforge Creator Pro User Guide is designed for the Creator Pro users to start their printing journey with Flashforge Creator Pro. Even if you are familiar with earlier Flashforge machines or 3D printing technology, we still recommend that you read through this guide, as there is lots of important information about the Creator Pro for you to get a better 3D experience.

For a better and more successful printing experience, you can refer to the following materials:

(1) Quick Start Guide

Users will find the Quick Start Guide together with the printer accessories. The Quick Start Guide will help you start your print journey as soon as possible.

(2) Official Flashforge Website: www.ff3dp.com

The official Flashforge website contains the up-to-date information concerning Flashforge software, firmware, device maintenance and so on. Uses are also able to get the contact information from there.

Introduction

Notes：

• Please read *Flashforge Creator Pro 3D Printer User Guide* carefully before use.

• The User Guide is written based on Windows 7 OS.

• The version of the Flashprint is 3.8.0.

• The version of the Firmware is 20160122.

• The device illustrations in the User Guide hall be those of Creator Pro.

The *Flashforge Creator Pro 3D Printer User Guide* contains the information needed for you to set up and use this device.

This User Guide including the following parts:

Safety Notice

! Notices: Read all the instructions in the manual and familiarize yourself with the Flashforge Creator Pro User Guide before set-up and use. Failure to comply with the warning and instructions may result in individual injury, fire, equipment damage or property damage.

PLEASE STRICTLY FOLLOW ALL THE SAFETY WARNINGS AND NOTICE BELOW ALL THE TIME.

• **Work Environment Safety**

① Keep your work place tidy.

② Do not operate Creator Pro in the presence of flammable liquids, gases or dust.

③ Store Creator Pro out of reach of children and untrained people.

• **Electrical Safety**

① Always use the Creator Pro with a properly grounded outlet. Do not modify Creator Pro plug.

② Do not use Creator Pro in damp or wet locations. Do not expose Creator Pro to burning sun.

③ Do not abuse the cord.

④ Avoid using the device during an electric storm.

⑤ In case of uncertain accident, please unplug the device if you do not use it for long.

•**Personal Safety**

① Do not touch the nozzle and build plate during printing.

② Do not touch the nozzle

③ Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.

④ Do not operate the device while you are tired or under the influence of drugs, alcohol or medication.

•**Cautions**

① Do not leave the device unattended for long.

② Do not make any modifications to the device.

③ To lower the build plate before loading/unloading filament. (The distance between the nozzle and build plate should be kept for at least 50mm)

④ Operate the device in a well-ventilated environment.

⑤ Do not touch the nozzle and build plate during operation.

⑥ Never use the device for illegal activities.

⑦ Never use the device to make any food storage vessels.

⑧ Never use the device to make any electrical appliance.

⑨ Never put the model into your mouth.

⑩ Do not remove the models with force.

• **Environment Requirements**

Temperature: RT 15-30℃

Moisture: 20%-50%

• **Filament Requirements**

Do not abuse the filament. Please make sure you use the Flashforge filament or the filament from the brands accepted by Flashforge.

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Chapter 1: 3D Printing Technology

1.1 Definition

3D printing is transforming three-dimensional models into physical objects that you can hold and touch. It is also called additive manufacturing because the 3D model is created by "adding" layers upon layers of material until the object is fully formed.

1.2 Technique

Fused Filament Fabrication(FFF) is the most common method of 3D printing. It is also the method that the Creator Pro uses. It works by melting plastic material called filament onto a print surface in high temperature. The filament solidifies after it cools down, which happens instantaneously after it is extruded from the nozzle. 3D objects are formed with the filament laying down multiple layers.

1.3 Process

3D printing involves three steps:

1.) Make or download a 3D model

2.) Slice and export the 3D model

3.) Build the 3D model

①**Make a 3D Model:** Currently, there are three ways of creating a 3D model.

 • **Designing From Scratch** You can use free CAD (computer-aided design) software such as AutoCAD, SolidWorks, Pro-E to design your very own 3D model.

 • **3D Scanners** An alternative method to creating a 3D model is to scan an object. 3D scanners work by digitizing a physical object, collecting its geometric data, and saving it to a file on your PC. There are also apps that can turn a mobile device into a 3D scanner.

• **From the Cloud** The most popular way of obtaining a 3D model is to download it from websites that allow users to upload 3D models that they designed.

E.g. www.ishare3d.com

② **Slice and Export the 3D Model:**

Slice software is the software that prepares 3D models for printing and turns them into instructions for the 3D printers. FlashPrint is the slicing software used for the FlashForge Creator Pro.

Using FlashPrint, you can prepare stl. files to be x3g files for printing. Then users can print files via SD card.

③ **Build the 3D Model:**

Once the output file has been transferred to your Creator Pro, it will start to turn the 3D model into a physical object by laying down layers of filament.

Chapter 2: Accessories

Along with your Creator Pro 3D printer, the box also contains the followings:

On the top of the PE foam sheet, you'll find:

- Filament guide tube*2
- Quick start*1
- Build tape*2
- Leveling card*1

Within the accessory PE foam

- Power cable *1
- USB cable*1
- Spool holder*2
- Dual extruder*1
- Tool bag(Allen Wrench/Leveling knob/Bolt)
- Extruder's accessory kit(Bolt/Turbofan baffle)
- 4G SD card *1

Under Creator Pro's build platform:

- ABS filament*1kg (2.2pounds),
- PLA filament*1kg (2.2pounds),
- Lid*1

Chapter 3: Unpacking

The Creator Pro was carefully packaged at FLASHFORGE manufacturing facility. Please follow the unpacking steps laid out below.

CAUTION

⚠️   Handle the package and its contents with extra care; do not use any unnecessary force.

⚠️   Do not remove the wrapping around the nozzle. It consists of a ceramic fiber fabric and heat resistant tape that helps to keep the nozzle at a constant temperature.

Place your Creator Pro on a clean and stable surface, open the carton and then take the foam sheet out. Within the PE foam sheet are lying **two filament guide tubes, one piece of build tape, one piece of Flashforge leveling card and one Quick Start Guide**.

Firmly grasp the two side handles of Flashforge Creator Pro. Lift it out of the box and place it on a stable surface. Then open and remove the transparent covering.

The Flashforge Creator Pro and its accessories shall be displayed in front of you. Take the dual extruder out and place it onto a clean ground.
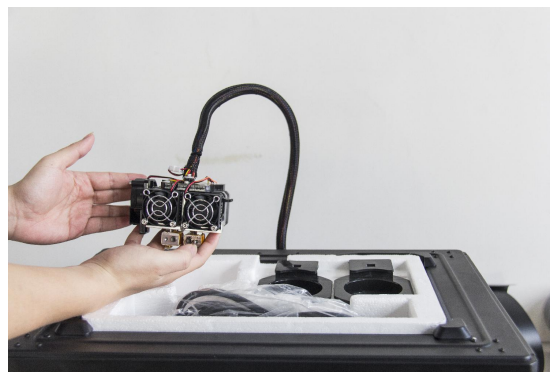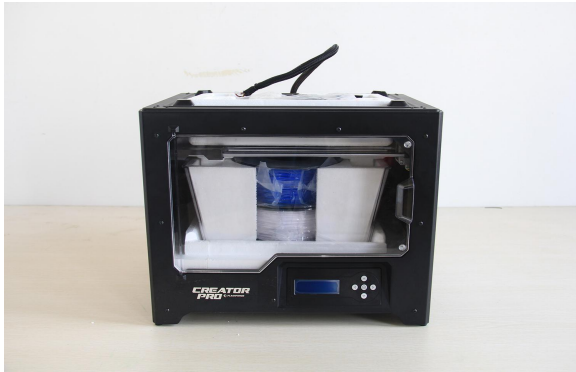
Take the accessory foam container out, within which are lying **a power cable, a USB cable, two spool holders, a bag of tools, a SD card, a bag of extruder accessories and turbofan baffle.**

Slide the X-axis rods to the very back. Take the transparent lid together with two rolls of filament out from the printer. Take the two rolls of filament(**PLA filament * 1, ABS filament * 1**) out from the enclosed lid.
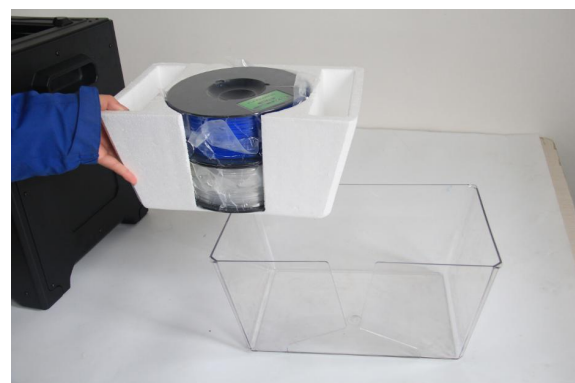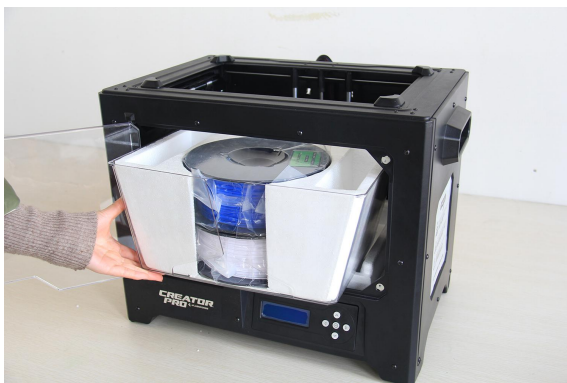

Elevate the build plate to its limit. Take the side protective foam sheets from the printer. Take the bottom protective foam from the printer.
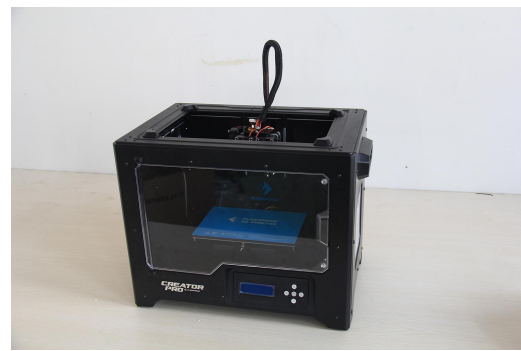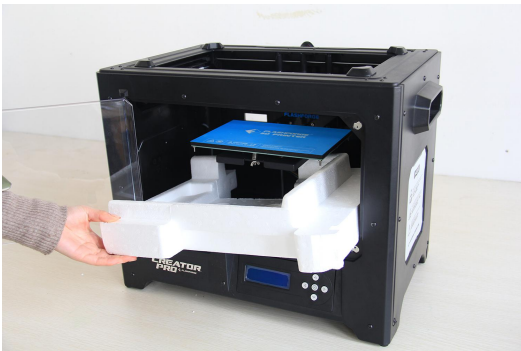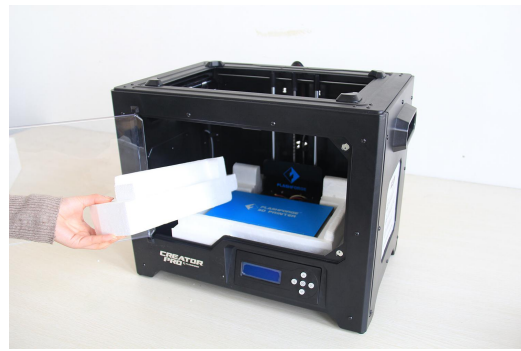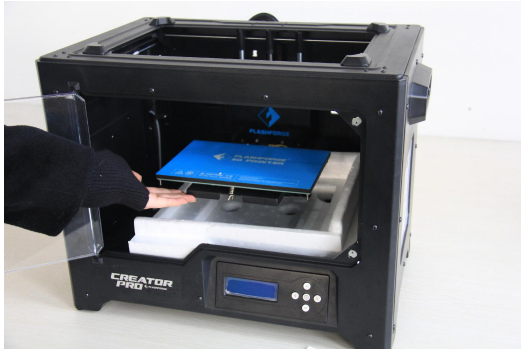
Congratulations! You've finished the unpacking process. (Tip: Save your Flashforge Creator Pro packaging for future transportation and storage.)

Chapter 4: Hardware Assembly

First, you need two M3*8 bolts from the extruder's accessories kit(including bolts and turbofan baffle), and the 2.5mm Allen Wrench. Lower the build plate as much as possible, hold the extruder by both sides, take it out of the accessory sleeve and position it on the extruder seat with the fan facing forward. Align the screw holes and fasten with the two short silver bolts.
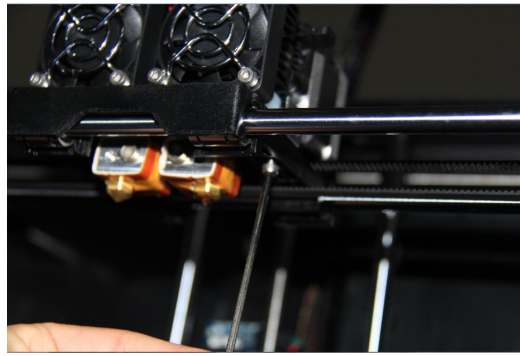

Unscrew the two turbofan bolts and take out the turbofan baffle to install.(Note: Beside the turbofan bolt hole locates a small hole. You need to insert the bump of turbofan baffle to this hole) Take out a M3 x 6 bolt and a 2.5mm Allen Wrench to secure the turbofan baffle onto the extruder. Finally, screw the two turbofan bolts.
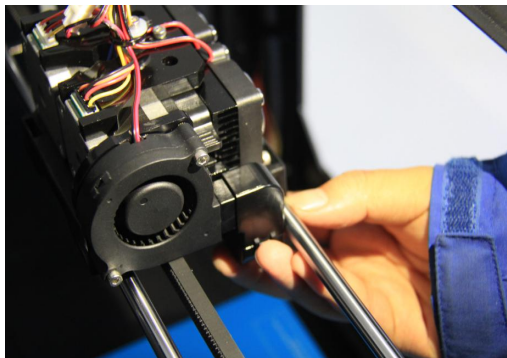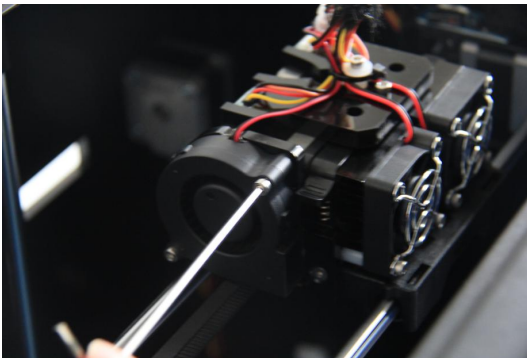

The next step goes to the installation of the spool holders. Install one on each side.

To install a spool holder, level it and insert the end into one of the openings. Turn down the spool holder to make the holder bottom cleave to the printer back.
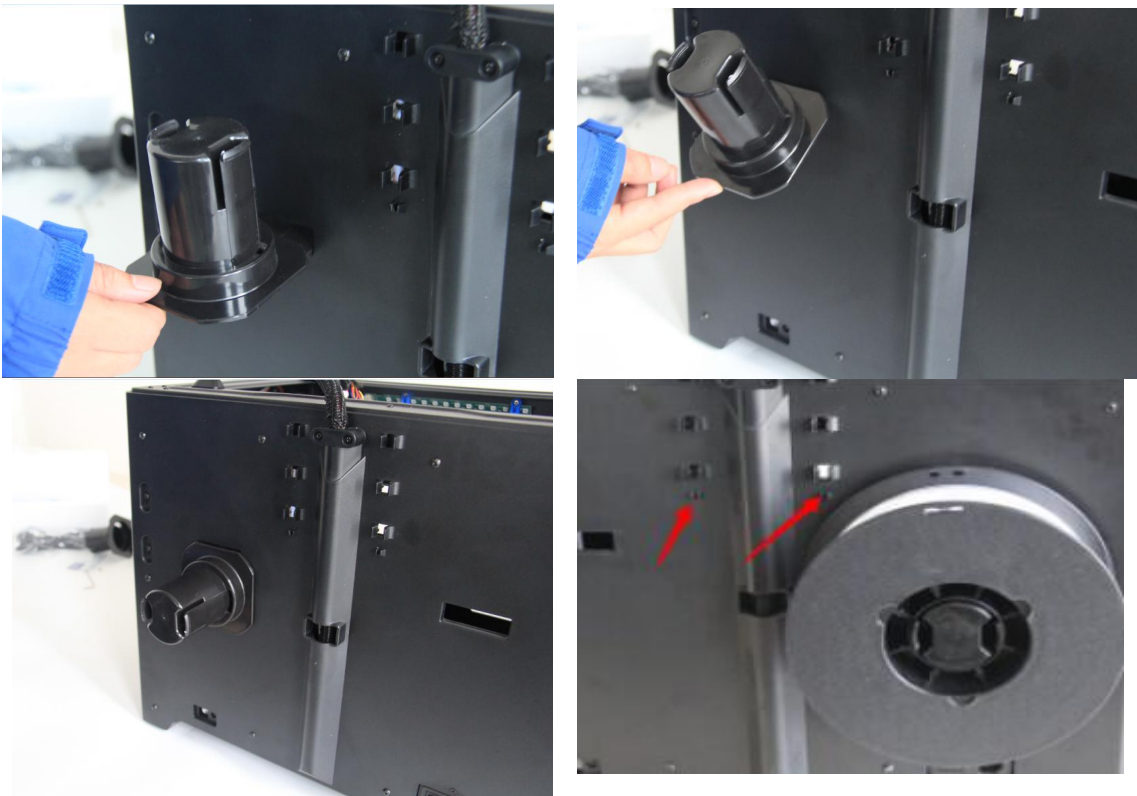
To lock the filament guide tube with R-shape buckles and insert another end to the filament intake. To avoid filament jams, always ensure that any filament spool you mount on the Creator pro feeds from the bottom of the spool toward the top. Filament mounted on the right spool holder when viewed from the back should always unspool clockwise and filament loaded onto the left spool holder should always unspool counterclockwise.
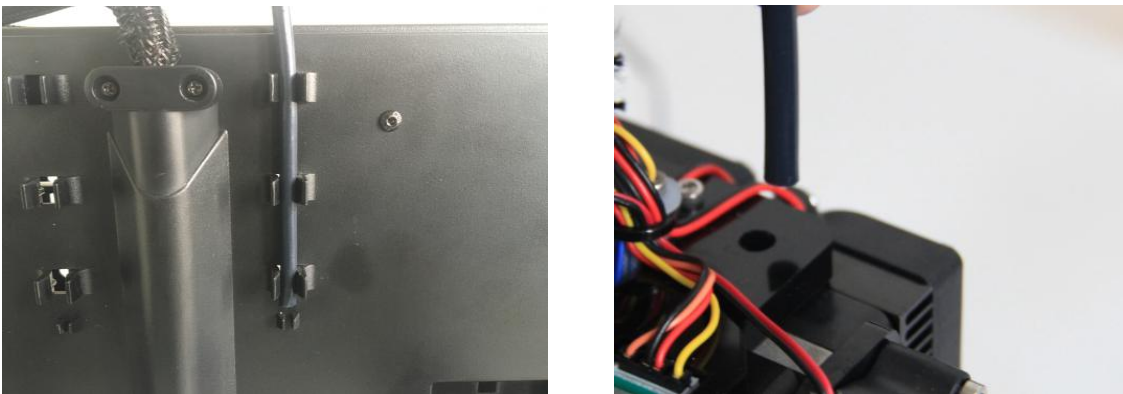
Congratulations! You've finished the hardware assembly process.

Chapter 5: About Software

5.1 Software Installation

5.1.1 Software Acquisition

Method 1: To get the installation package from the SD card in the toolkit.

Method 2: Open the link below to download the installation package:

http://www.ff3dp.com

Steps: Support---Downloads---Creator Pro FDM 3D Printer

5.1.2 Software Installation and Start-up

1. Decompress the zipped file or start the installation program, and then install the software according to the direction.

2. Start the software with the start menu shortcut or by clicking the software icon.(See 5-1)

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5.2 Exploring FlashPrint

Note：Before updating Firmware, you need to install a relevant drive (As for the details, please refer to 5.2.13.1 Update Firmware).

5. 2.1 Machine Type Selection

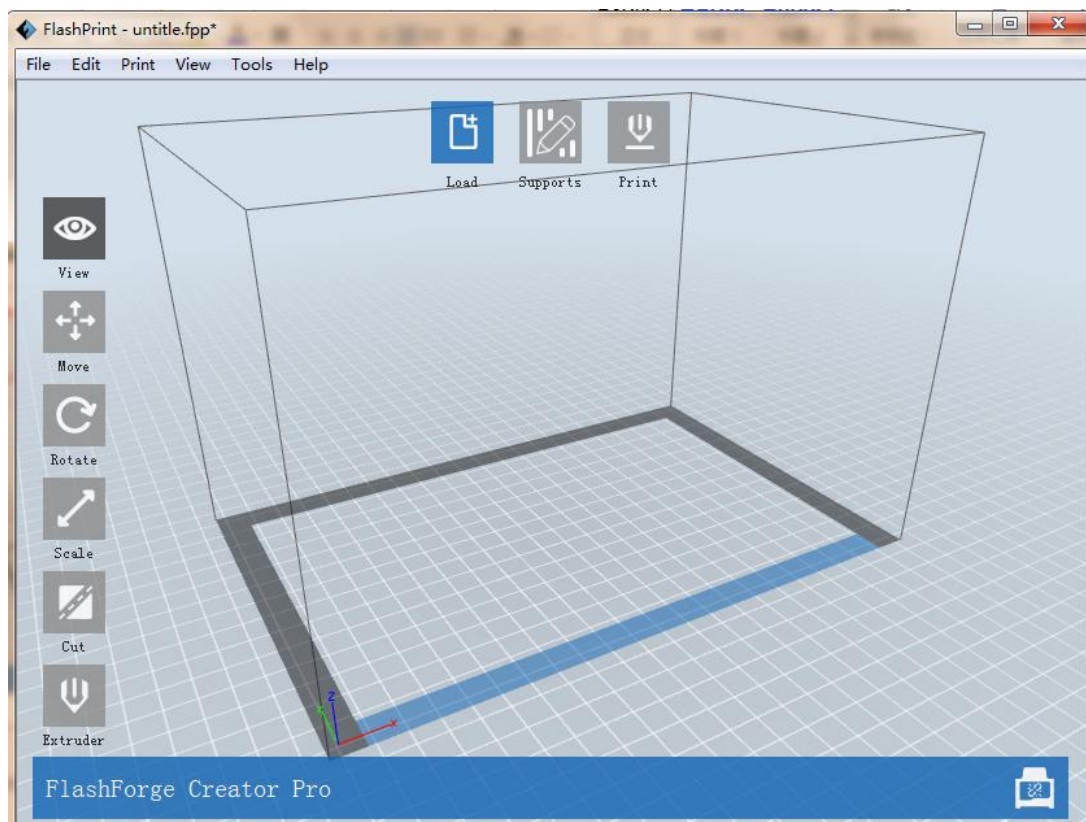! After starting FlashPrint, you need to select the target machine type first.

When you start FlashPrint, a dialog box will pop up. Just need to select Flashforge Creator Pro in the machine type list and click **[OK]**. You can also change the machine type via clicking **[Print]**--**[Machine type]**. Please see graphic 5-2:

5-2

5.2.2 Software Introduction

	Load one or multiple files.
	Enter the support edit mode
	Print it directly with your Creator Pro or export to your USB Stick
	View FlashPrint home screen from one of six viewing angles
	Move model around on xy-plane; shift+click to move along z axis
	Turn and rotate your model
	Scale the size of your object
	Cut model into several parts

5.1.3 Loading

You can load a model file or Gcode file into your Flashprint by the following six methods:

Method 1: Click the **Load** icon   on the main interface. Then select the object file.

Method 2: Select the file for loadin   ag the file to the main interface of the software.

Method 3: Click [File]--[Load File]. Then select the object file for loading.

Method 4: Click [File]--[Examples] to load the example files

Method 5: Click [File]--[Recent Files] to load the files opened recently.

Method 6: Select and drag the target file to the icon of Flashprint.

Note: .STL, .OBJ, and .FPP, ways to store 3D models, are supported by Flashprint for editing.

Generating Rilievo

Loading a png, jpg, jpeg, bmp picture file into the FlashPrint. And the following dialogue box(5-3) will pop up. The setting box includes settings for shape, mode, maximum thickness, base thickness, bottom thickness,width, height, top diameter and bottom diameter.

Shape: including plane, tube, canister and lamp.

Mode: including "darker is higher"and "lighter is higher".

Maximum thickness: Z value of the model

Base thickness: The minimum raft thickness and the default value is 0.5mm
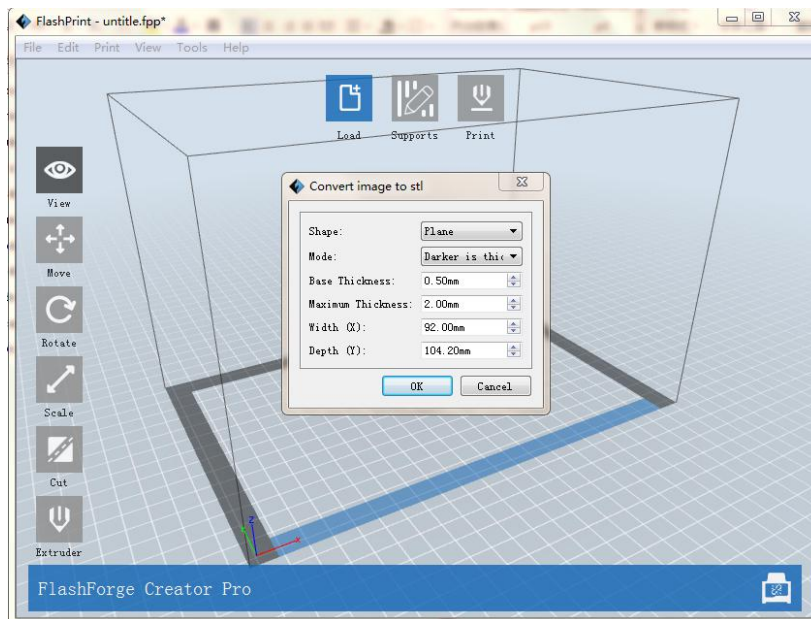
Width: X value of the model

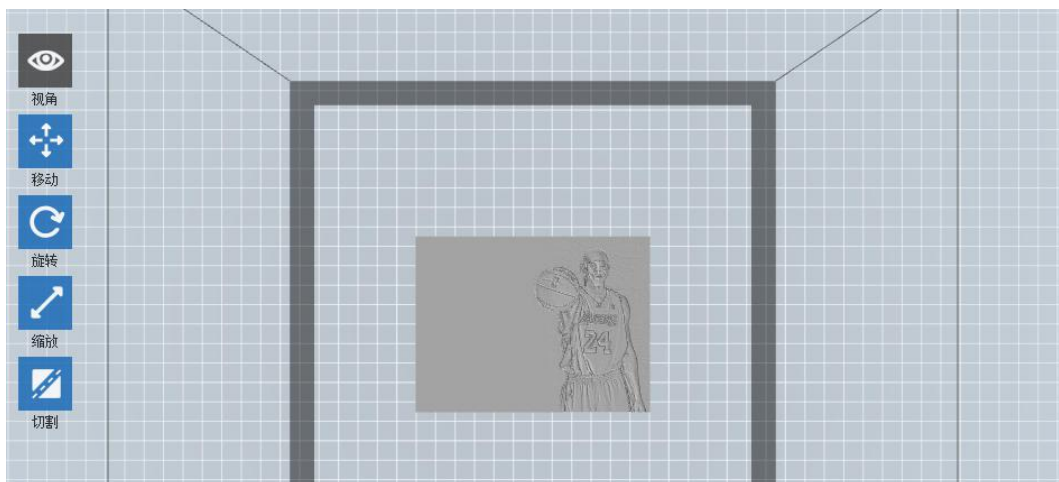Depth: Y value of the model

Bottom thickness: For tube, canister and lamp to set up bottom thickness

Top diameter: For tube, canister and lamp to set up the top diameter

Bottom diameter: For tube, canister and lamp to set up the bottom diameter

5-3

5.1.4 Views

①Changing views

Change model views by moving, rotating, scaling.

● **Drag**

Click the **[View]** icon and then you can move the object by the following three methods:

Method 1: Hold down the left mouse button and drag.

Method 2: Hold down the middle mouse button and drag.

Method 3: Hold down the **Shift** key, hold down the right mouse button and drag.

● **Rotate**

Click the **[View]** icon and then you can rotate the object by the following two methods:

Method 1. Hold down the right mouse button and drag.

Method 2. Hold down the **Shift** key, hold down the left mouse button and drag.

● **Scale**

Rotate the mouse wheel to enlarge or shrink the build plate.

②**Set View**

Allows users to view the object on the build plate. Six views are under the view menu, that is, home view, bottom view, top view, front view, back view, left view and right view.

Method 1: Click the the **[View]** button, there are six views in the drop- down list

Method 2: Click the the **[Look]** icon on the left, click it again and a submenu will appear with six views for selecting.

③**Reset View**

Allow users to reset views by the following two methods:

Method 1: Click the **[View]** menu and select **[Home View]**

Method 2: Click the **[View]** button on the left, click it again and you will see the viewing options, you can click **[Reset]**.

④**Show Model Outline**

Click **[View]**--**[Show Model Outline]**, it will highlight the yellow border of the object

⑤**Show Steep Overhang**

Click **[View]**--**[Show Steep Overhang]**. When the intersection angle between the model surface and horizontal line is within the overhang threshold value, the surface has steep overhang and it becomes red in the software. Overhang threshold value could be set as needed. The default value is 45 degree.

5.1.5 Move

Select the object and move the object by the following two methods:

Method 1: Click the **[Move]** icon on the left, hold down the left mouse button and drag to adjust the location of the model in XY direction. Hold down the **Shift** key, hold down the left mouse button and drag to adjust the location of the model in Z direction. The distance and the direction of the movement shall be displayed.

Method 2: Click the [Move] button on the left and then enter the distance value. Click [Reset] to reset distance values.

Note: Users shall click **[Center]** and **[On Platform]** after the location adjustment to ensure the model(s) be within the build area and on the build platform. If a specified position is needed, only to click **[On Platform].**

5.1.6 Rotate

Select the target object and rotate the object by the following two methods:

Method 1: Click the **[Rotate]** icon the left and three mutually perpendicular rings appear around the object Click one ring and rotate on the present axis, you will see the rotation angle and direction in the center of circle. In this way, you could make the model rotate on X/Y/Z axis.

Method 2: Click the **[Rotate]** icon on the left, and then enter into rotating angel values in X/Y/Z axes positioning. Click **[Reset]** to reset rotating angel values.

5.1.7 Scale

Select the target object and scale the object by the following two methods:

Method 1: Click the **[Scale]** icon on the left, hold down the left mouse button and scale the model. The corresponding values will display near the object..

Method 2: Click the **[Scale]** icon on the left and then enter into scale values in X/Y/Z axes positioning. Click the **[Maximum]** button to get largest size possible for building. Click **[Reset]** to reset the size of model.

Note: If the [Uniform Scaling] radio button is clicked, it will scale the model in equal proportion when changing **value** in any positioning of the model. Otherwise it will only change the value of the corresponding positioning.

5.1.8 Cut

Left-click on the model to select it and double-click on the **Cut icon** to set the cut plane. The direction and position are available for setting.

①Draw with Mouse
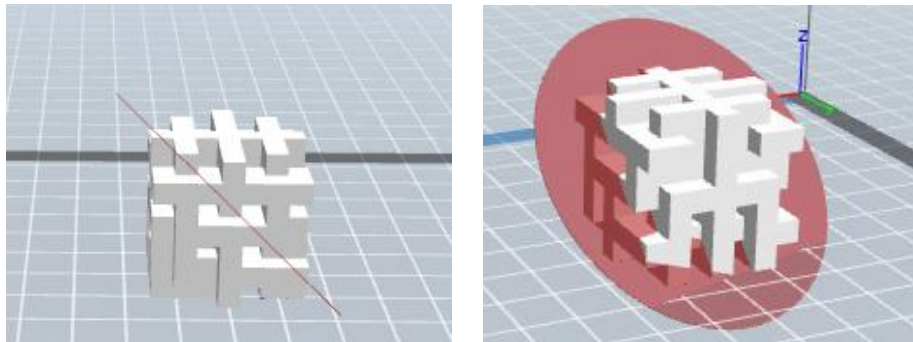
②X I

④Z Plane

5.1.9 Supports

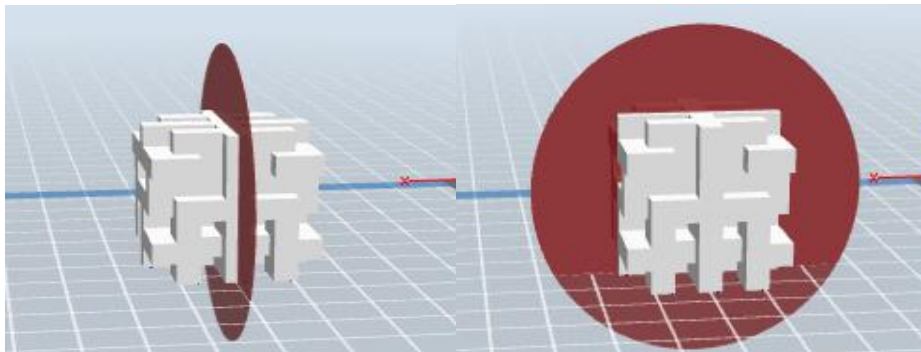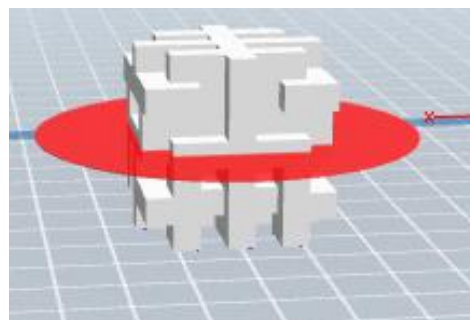After loading the model, click [Edit]--[Supports] or click the **Supports** icon directly, then you will enter the support edit mode(as shown in the picture below). Click [Back] to exit when you finish editing
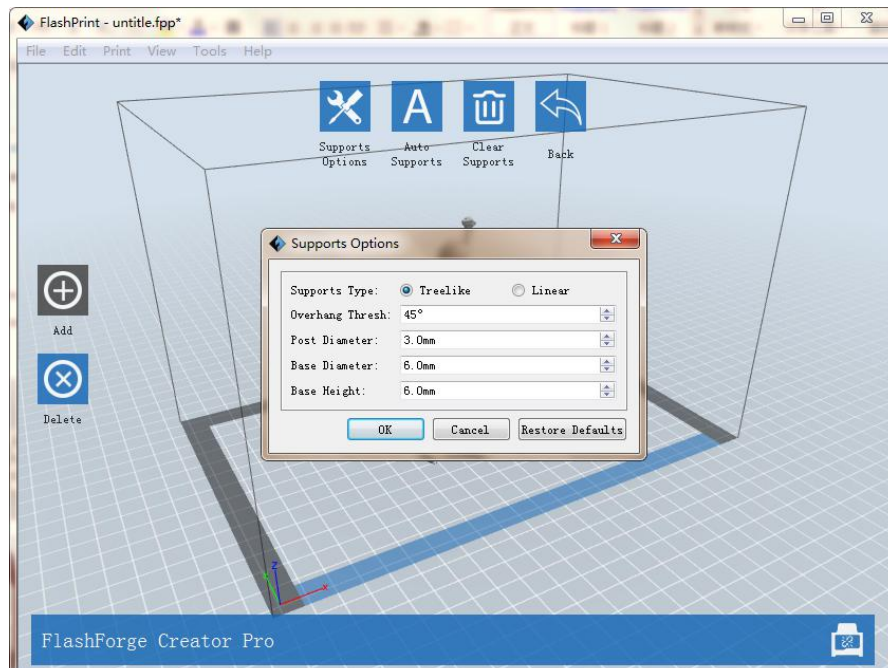
5-5

①**Support Options**

Click the Support Options, an option box will appear, supports options include "treelike"and "linear", when choose "treelike", click [OK], then the support generated will be treelike structure; when choose "linear", click [OK], then the support generated will be linear structure.

Threelike Supports: You can set up treelike specifications such as overhang thresh, post diameter, base diameter and base height.

Linear Supports: You can set up linear specifications such as overhang thresh and pillar size.

If the model already had support, when you choose one of the supports options,software will judge whether existing supports need to be deleted or not depend on the type of existing support, and will pop up the corresponding prompt to let you make the choice.
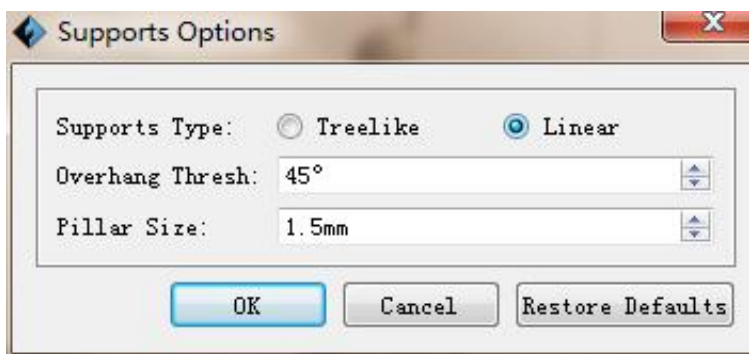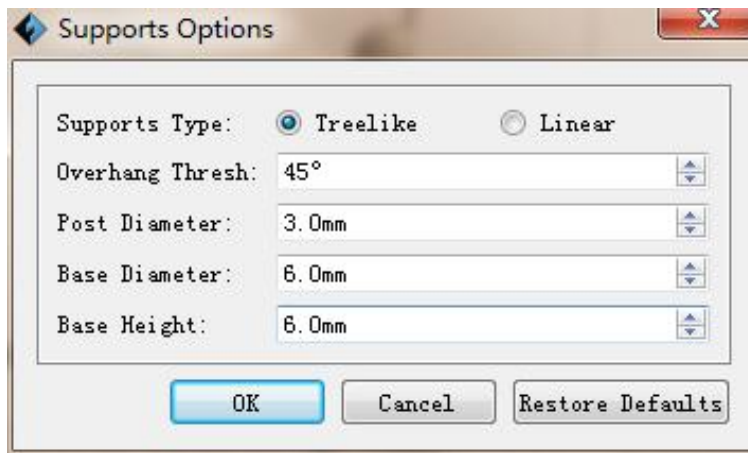
5-6

②**Auto Supports**

Click the **[Auto Supports]** button, the software will judge the position where supports are needed and generate corresponding treelike or linear supports. If the model already had support, the existing supports will be deleted and new supports will be generated.

③**Add Supports**

Supports will be added once clicking the [Add] button. Move the cursor to the position where needs supports, left-click to choose the starting point of supports, hold down the left mouse button and drag the mouse the supports preview will show up(if support surface doesn't need support or the support column angle is too large, will highlight the support review).Loosen the left mouse button, if support column doesn't meet with model, then support will be generated on origin and terminal point(the highlighted preview support won't generate support structure)

④ **Clear Supports**

Click [**Clear Supports**], all supports will be deleted. The operation can be repealed via clicking

[**Undo**] or pressing the shortcut key **Ctrl+Z**.

⑤**Delete Supports**

Supports will be deleted once clicking the [**Delete**] button. Move the cursor to the supports needed

deleting, current supports and its child node support will be highlighted, click the left mouse button

to delete these highlighted support.

5.1.10 Print
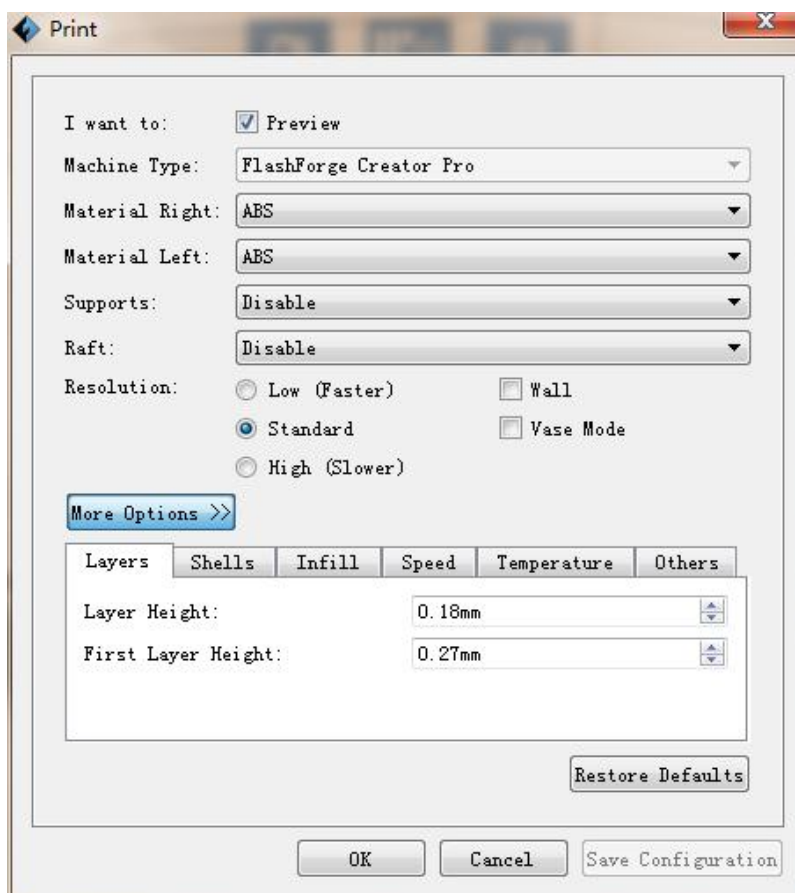
①**Preview:** Choose to enter preview interface or not

②**Print when slice done:** Print or not when slice done

③**Material type:** Choose according to the type of model

④**Supports:** When print with model contains part hanging in the air or top-heavy, support is necessary. Click **[supports]** to create support part for the printing.

⑤**Raft:** This function will help the model to stick well on the platform.

⑥**Wall:** During dual color printing, this function will help to clear the leaking filament of another extruder.

⑦**Vase Mode:** No capping for the model

⑧**Resolution：** You have three resolution solution(with default setting)to choose from, high resolution is corresponding with slow printing speed, opposite for the low resolution.For PLA printing, an extra solution "Hyper" is available.

⑨**More options:** Click **[More options]** to set for layer, shell, infill, speed and temperature. Different resolution solution is corresponding to different defaults, click **[Restore Defaults]** to back to default setting.

●**Layer**

a. Layer: Layer thickness of the printing model. With a small number, the surface of the model will be more smooth.

b. First Layer Height: This is the first layer of the model, which will affect the sticking performance between the model and platform. Maximize is 0.4mm, usually the default is ok.

c. Shell: Contains of the outside shell number, capping layer number (under vase pattern, top solid layer setting is invalid.)

● **Primeter Shells:** Maximize is 10

a. Top Solid Layer: Maximize is 10, minimum is 1.

b. Bottom Solid Layer: Maximize is 10, minimum is 1.

● **Infill**

a. Fill Density means fill rate.

b. Fill Pattern is the pattern of filling shape which effects printing duration.

c. Combine Infill: You can select the layers for combining according to the layer thickness. The combined thickness should not exceed 0.4mm. "Every N layers" is for all the infills while "Every N inner layers" is only for inner infills, which generally can save print time.
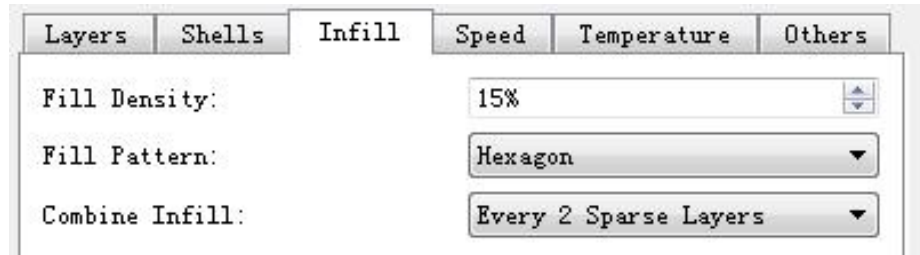
a. **Print Speed** is the moving speed of the extruder. Generally, the lower speed is, the better print you will get. For PLA printing, 80 is recommended.

b. Support Print Speed is needed to set when choosing Slic3r as the

slice engine which can control the moving speed of the extruder when printing the supports.

c. Travel Speed is to control the moving speed of the extruder under non-printing Status during work. for PLA printing, 100 is recommended.

Note: Modify parameters settings to get better prints as different models need different parameters.

● **Temperature**

Extruder Temperature: Recommended extruder temperature is 220℃.

Note: Different temperatures have subtle influences in prints. Please adjust the temperature according to the condition in order to get a good print.

● **Others**

Pause At Heights: Allows users to pre-set a height in which the print will suspend automatically. The function usually applied when you want to change the filament at a certain point.
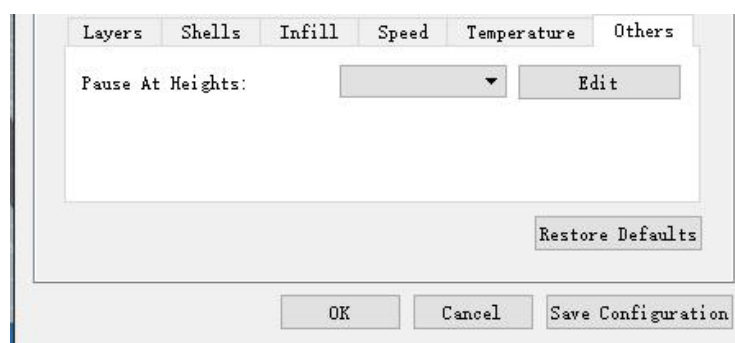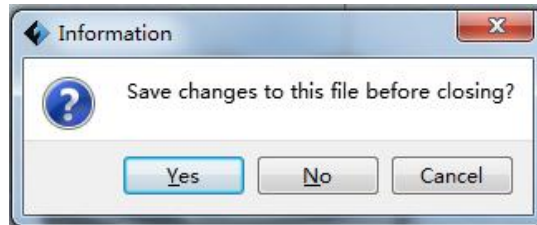

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5.1.11 File Menus

①**New Project**

Click [**File**]--[**New Project**] can build a blank project. If there is an unsaved modification on

previous project, then will inform you whether the modification needs to be saved or not. Click [Yes] will save the modification , click [No] will abandon it. If click [Cancel] or close tool tip, then will cancel the new project.

②Saving

After finishing the model edit and adjustment, there are two ways below to save all models in the scene.

Method 1:

Click [File]--[Save Project] in the menu bar, can save the file as a project file which suffix is ".fpp" in this type of file,all models in the scene (include support) are independent .after reloading the files, extruder configuration information and model position will be as same as the configuration during saving.

Method 2:

Click on [File]--[Save as...] to save the model as project file .fpp or .stl and .obj. For .stl and .boj, models are integrated as one(include support part). If load it again, only the position of the model was saved, not included the printing parameters.

③ **Preferences**

Click [File]--[Preferences], you can choose language and if needs detecting update when start
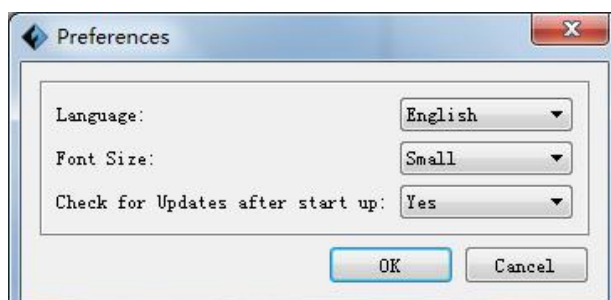
● **Language:** The software supports six languages, that is Chinese(simplified Chinese and traditional Chinese), English, French, Korean, Japanese and Russian.

● **Check for Update after start up:** It is used to set if needs to activate the online automatic update function, if choose yes, every time when you open software, it can online detect if there is new version software, once new version found, it will reminds uses to download and install new version firmware.

5.1.12 Edit Menus

①**Undo**

Allows users to undo the recent edits by the following two methods:

Method 1: Click [Edit]--[Undo].

Method 2: Press the shortcut Ctrl+Z.

② **Redo**

Allows users to redo the most recent edit you have undone to your model file by the following two methods

Method 1: Click [Edit]--[Redo]

Method 2: Press the shortcut Ctrl+Y.

③**Empty Undo-stack**

To clean up the recorded operating steps so as to release the memory.

④ **Select All**

By the following two methods, you could select all models in the scene. (When models are too small to be seen or out of viewing scope, please click [Center] and [Scale] buttons to adjust the model.)

Method 1: Click [Edit]--[Select All].

Method 2: Press the shortcut Ctrl+A.

⑤ **Duplicate**

Select the object and duplicate the object through the following two methods:

Method 1: Click [Edit]--[Duplicate]

Method 2: Press the shortcut Ctrl+V

⑥ **Delete**

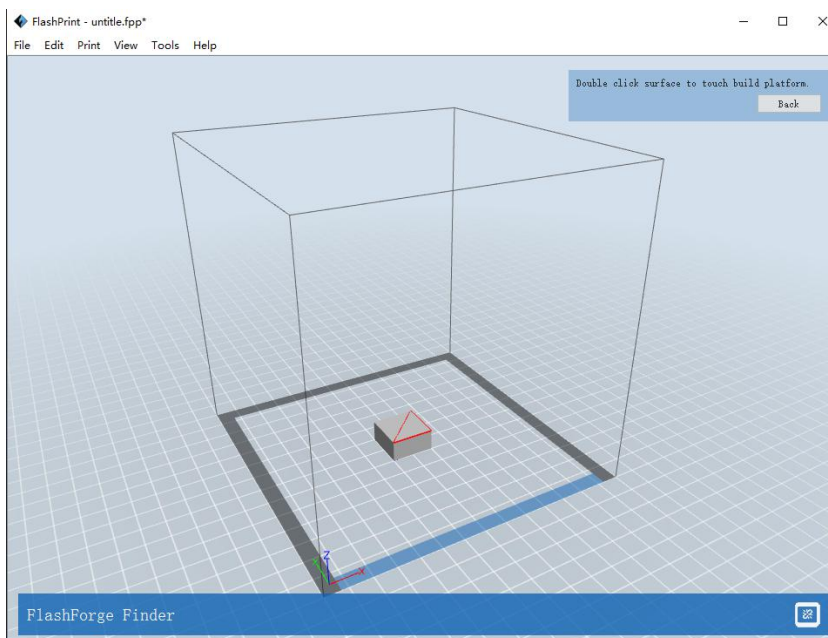Select the object and delete the object through the following two methods:

Method 1: Click [Edit]--[Delete]

Method 2: Press the shortcut Delete

⑦ **Surface to Platform**

After selecting the model, you can make the model surface to platform via the following operation.

Click [Edit]--[Surface to Platform] into surface to platform mode(As

shown in the picture)

⑧**Auto Layout All**

Click [Edit]--[Auto Layout All] after loading one or more than one models, all models will be

placed automatically as automatic placement rule.

5.1.13 Tool

5.1.13.1 Update Firmware

Before updating firmware, you need to find and depress "driver-creator-pro" in the SD card.

Click and install the relevant installation program.

Launch the Flashprint(Now you computer and Creator pro are connecting with each other), click [Tools] and [Update Firmware], then click [OK] and a dialog box will pop up. Click [Yes] to start firmware update.
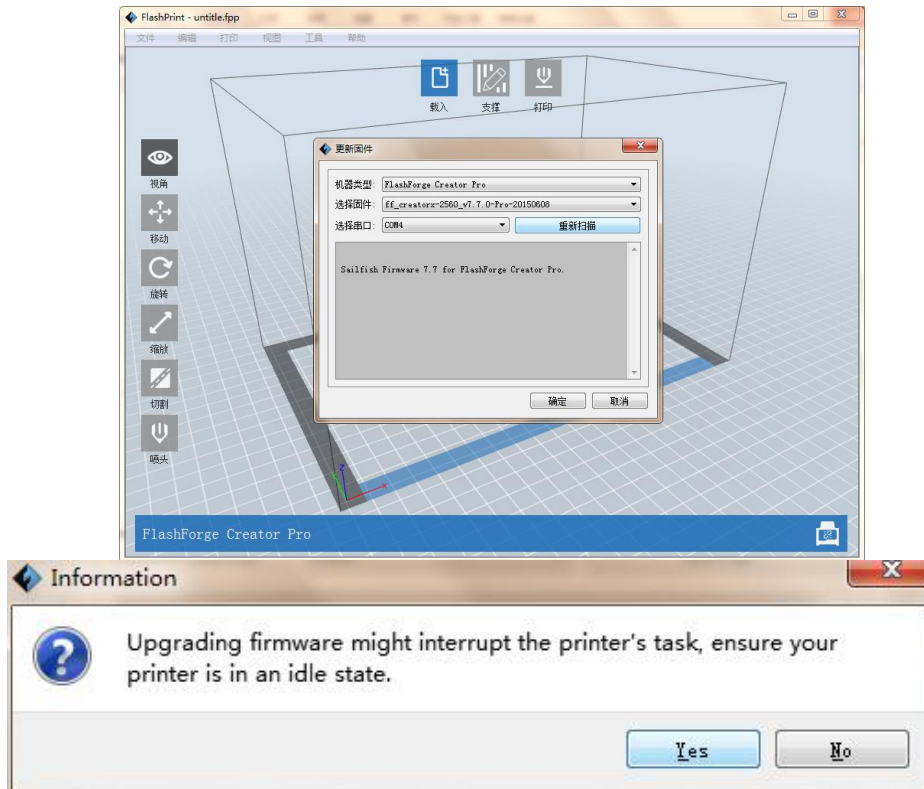
5.1.14 Help Menus

① **Help Contents**：Click **[Help]--[Help Contents]**, you can read the help contents.

② **Check for Updates**：Click **[Help]--[Check for Update]** to detect the available updates online.

③ **About FlashPrint**：Click **[Help]--[About Flashprint]**, the software information box will pop up. The contents include the current software version and copyright information.

Chapter 6: Basic Printing

This chapter will provide a step-by-step guide on turning a 3D model into a physical reality. Before proceeding, it is recommended that you go over prior chapters on loading/unloading filament, leveling the build platform, and the functions and capabilities of FlashPrint.
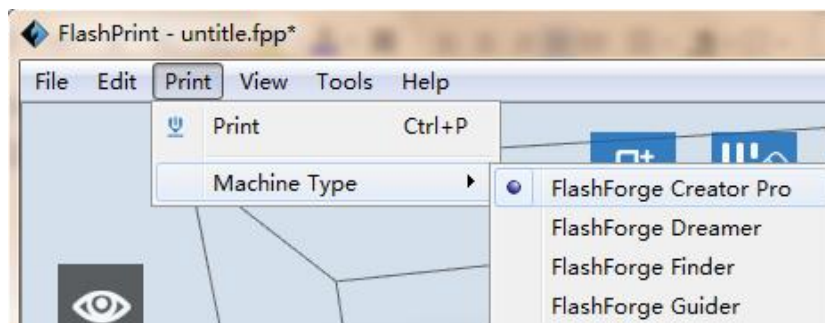
6.1 Generate a Gcode

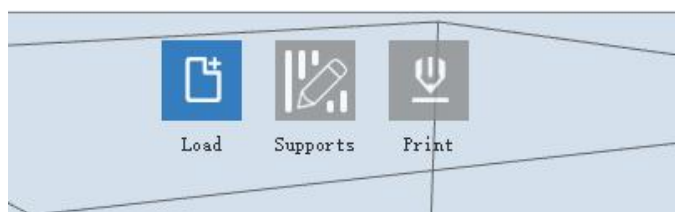(6-1)Double-click the icon of Flashprint to start the software.

6-1

(6-2)Click**[Print]--[Machine Type]** to select **Flashforge Creator Pro**

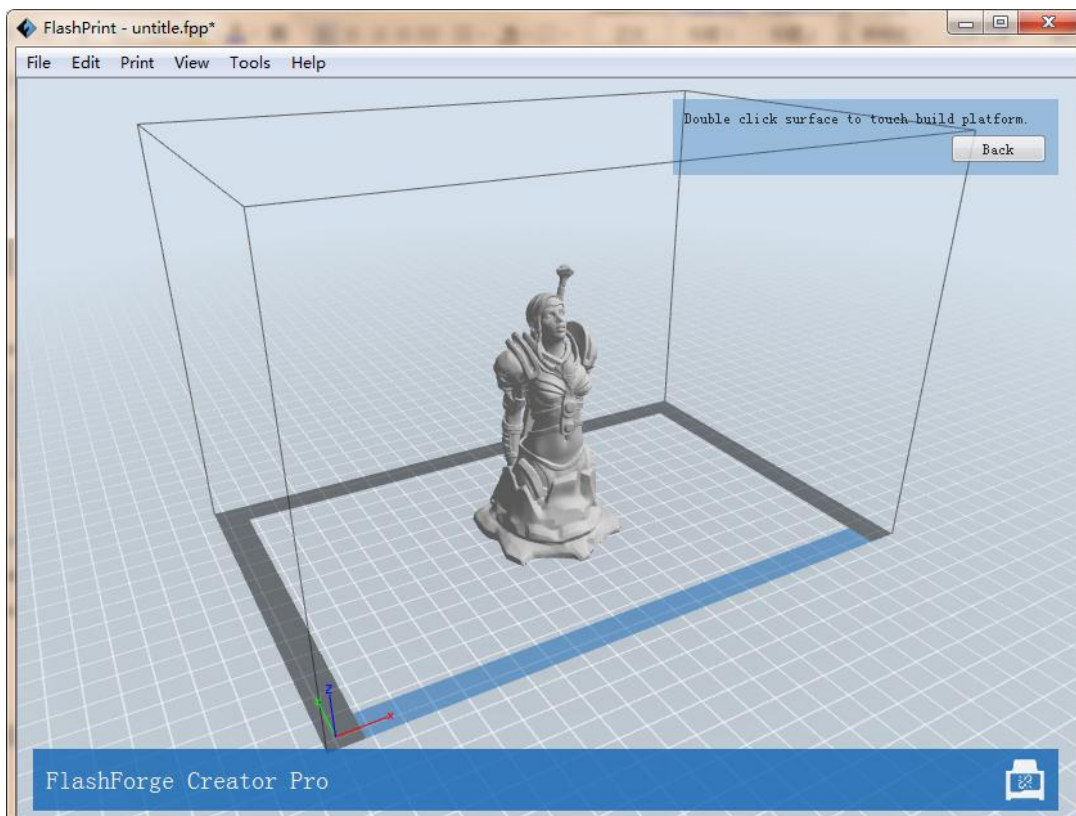

6-2

(6-3)Click the **[Load]** icon to load a .stl model file and the object will display on the build area.

6-3

（6-4）Click **[Edit]--[Surface to Platform]** to make your model perfectly positioned on the build area. Click **[Back]** and double-click the **Move** icon again, then click **[On the Platform] and [Center]** to ensure the model be on the platform.

6-4

Note：If you've place your model in a right place, you can skip the step above.

(6-5) Click the **Print** icon on the top, you should make some setups for your print job.
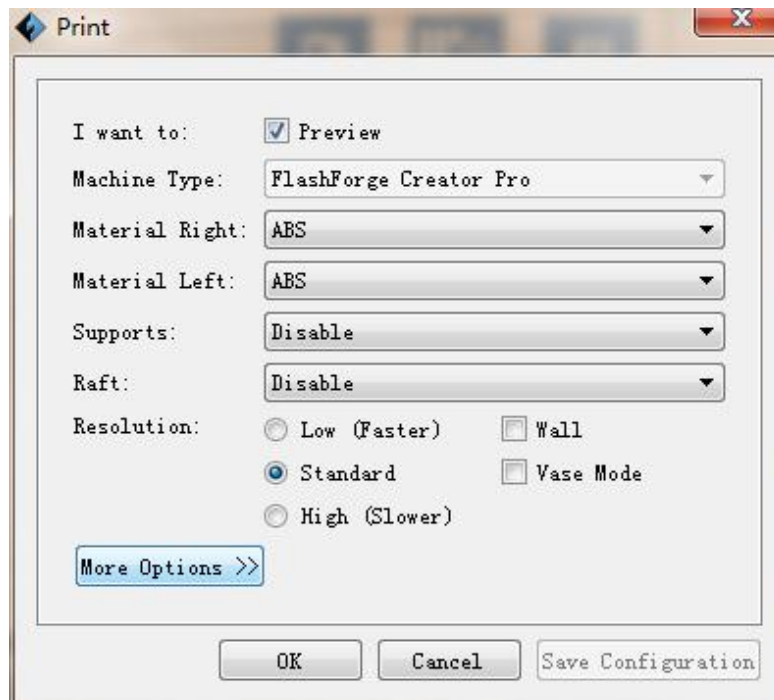
6-5

Preview: If you check the **[Preview]** box, you can preview your model after slicing is done.

**Machine Type:** Flashforge Creator Pro

Supports: If you print a model with supports, you should click the inverted triangle and select **[Enable]**.

Raft: You are suggested to select **[Enable]**.

Resolution: You are suggested to select **[Standard]**

More Options: You are suggested to keep them default.

Click **[OK]** to select the path to save the Gcode file. You can rename the file as you like and save it as a x3.g file, click **[Save]** to generate a Gcode file.
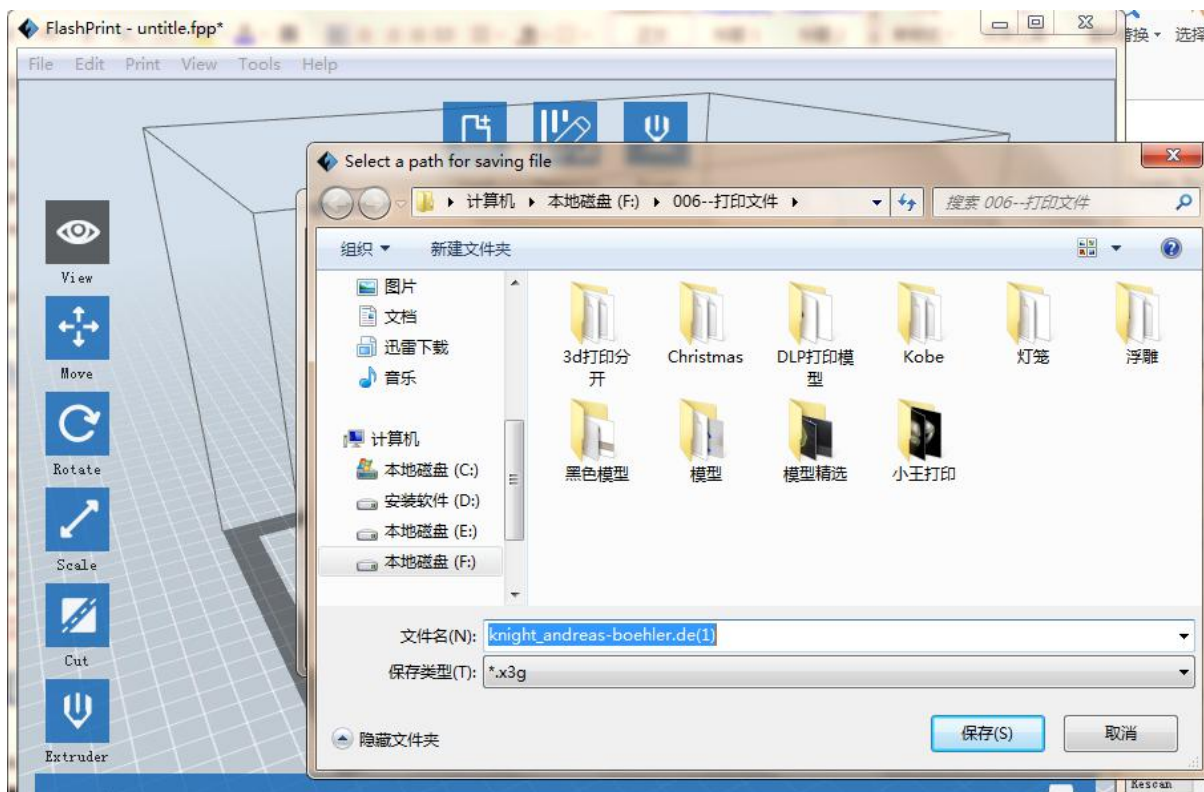
Next, we are going to print the model.

Before printing, users should

(1)   properly install the dual extruder.

(2)   properly install the filament guide tube

(3) properly mount the filament spool and feed the filament

To make the process of feeding or withdrawing the filament easy, please follow the next few steps carefully:

After inserting the filament into the filament intake, do not push it further until the extruder temperature reaches 200°C or higher. Once the machine reaches this point, you will feel the filament being pulled into the extruder head.

6.1 Installing Filament

First, remove the filament guide tube from the extruder.
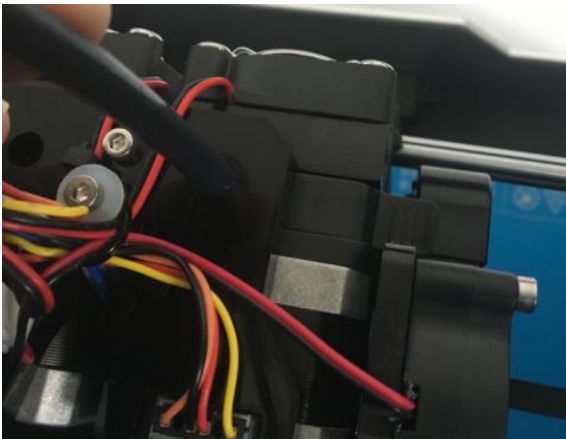
To avoid filament jams, always ensure that any filament spool you mount you mount on the Creator pro feeds from the bottom of the spool toward the top. Filament mounted on the right spool holder [When viewed from the back] should always unspool clockwise and filament loaded onto the left holder should always unspool counterclockwise.

Moreover, when you insert the filament into the filament intake, you should press down the **spring presser** first.
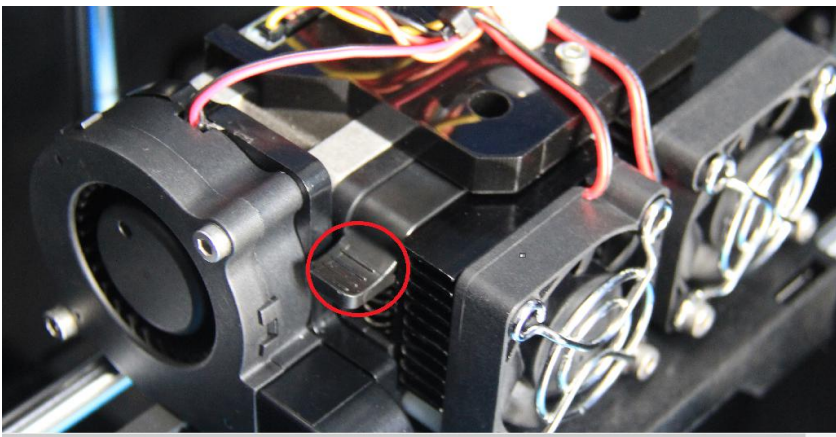
Note: The left extruder is suggested to print with PLA while the right extruder is suggested to print with ABS. Because the left extruder locates beside the turbofan baffle, which is more beneficial for cooling down the PLA models.
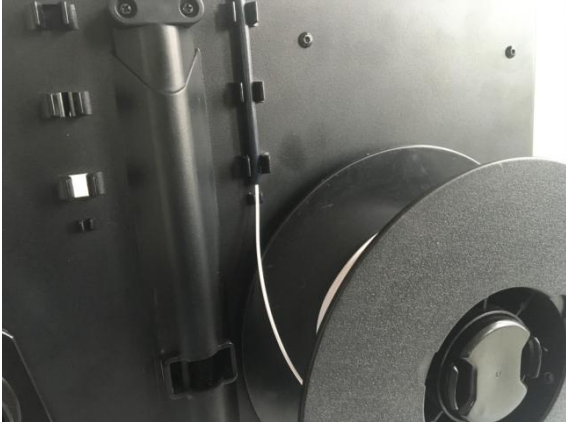
Feeding the Filament Using the LCD Screen

1. Turn on the Creator Pro; the display will indicate:

    ▶ Print from SD

      Preheat

      Utilities

2. Using the directional arrows to the right of the screen, press the page down key to scroll to the next page. The display will show:

    Monitor Mode

    Filament loading

    Preheat Setting

    General Settings

3. Select **Utilities**; press the OK key of the keypad. The display will show:

     Monitor Mode

    ▶ Filament loading

      Preheat Setting

4. Select **Filament loading**; press the **OK key** of the keypad. The display will show:

    ▶ Load Right

Unload Right

Load Left

Unload Left

5. Select the appropriate side of the extruder you wish to load(Left or Right for models with dual extruders). Press the **OK key** again on the keypad. The display will indicate: I'm heating up my extruder!" At this time, the temperature of the right nozzle is being heated up. When the temperature of the nozzle reaches its target temperature, pressing the **OK key** on the keypad, and the nozzle should start extruding material. If not, keep pressing the **OK key** unit it does.

Withdrawing the Filament Using LCD Screen

> **CAUTION**
>
> ⚠ If you just finished your printing or already extruded the filament and want to withdraw the filament, at this moment, the extruder is still over 200°C, first push the filament in a little further, and then directly pull it out.
>
> ⚠ If you want to change another color filament, first you need to withdraw filament and then load in. Please do as following shown to avoid filament jam.

1) Turn on the Creator Pro, the display will indicate:

      Build from SD

▶ Preheat

      Utilities

2) Using the directional arrows to the right of the screen, press **page down key** to scroll to the next page and select Preheat, Press **OK key** on the keypad, then you will see：

    ▶ Start Preheating

      Right Extruder   OFF

      Left Extruder   OFF

      Platform   OFF

3) Press **page down key** to select **Left Extruder (or Right Extruder)**, click **OK key**, you will see：

▶Start Preheating

Right Extruder	ON
Left Extruder	ON
Platform	OFF

4) Press **page up key** back to Start Preheat, and Press **OK key**, you will see:

Heating:

R Extruder: 033/230C

L Extruder: 033/230C

Platform: 024

This means the left extruder is heating up, when it reaches 220°C. First **push in** the filament **a little bit until you see filament come out of the nozzle**, then **pull it out quickly**. This will ensure you have withdrawn the filament inside the nozzle successfully.

(4) properly level the build plate.

Every printer will be leveled before shipped out, but we can't ensure that the platform won't move during delivery, so it will be better to level platform before you begin to print. We should tighten the three knobs under the build platform, then put one SD card within the 3D printer，there is a file named **PlateLeveling.x3g.**Put the SD card into the slot,choose **Print from SD ,**click **OK,**then choose **PlateLeveling.x3g**and click it, you will see the content below:**Find the 3 knobs under the build platform and tighten four or five turns. Nozzles are at the right height when you can just slide a sheet of paper between the nozzle and the plate. Grab a sheet of paper to assist us. Please wait. (**During the process, what you should do is only click **OK** continuously, the screen will go to next page.**)**

(1) Then the build plate and the nozzle start moving, once they suspend, you need to adjust the corresponding knob under the build plate individually. Use the leveling card or a thin piece of paper to check the distance between the build plate and the nozzles.

(2).As you adjust the knob, make sure the leveling card just slides between the nozzle and build plate. You should feel some friction on the card but still be able to easily pass the card between the nozzle and build plate.

(3) When you finish leveling the first point, you should repeat the steps above to finish leveling the rest three points.

How to Level the Build Plate

Three knobs lower and raise the build plate

·Tightening the knobs[turning them counterclockwise] moves the build plate away from the extruder nozzles.

·Loosening the knobs[turning them closkwise] moves the build plate away from the extruder nozzles.

·The distance between the extruder nozzles and the build plate should be about the thickness of the leveling card.

Note: To view a video of the build plate leveling process, please go to the FF Creator pro video page on: https://www.youtube.com/playlist?list=PLWfXP01hqgWsEfzZ5Z-sZzifa05iIZb0Q

Then, users should

1. Insert your SD card with target x3g file to your Creator Pro. .

2. Turn on the Creator Pro.

3. Select [Print from SD] on the LCD panel.

4. Select the file you want to print and press [OK].

5. And the printer will heat up the nozzle and the build plate automatically and start to print after the nozzle and the build plate reaches the aimed temperature.,

Chapter 7: Advanced Printing

When you get familiar with your Creator Pro, you will definitely want to accomplish some advanced prints. This chapter will take you to get to know the advanced printing skills.

7.1 Skills on Supports

Support structures enable the printing of models with steep overhangs and cantilevered sections. The Creator Pro 3D printer utilizes Fused Filament Fabrication (FFF) technology, which works on the additive manufacturing principle of heating and laying down material layer by layer to create an object. Many sophisticated 3D print designs require materials to be deposited on a layer where there was not a previous layer, or the designs have steep angles which might cause undesired drooping during the print. In these cases, support structures are needed to ensure objects integrity and print quality.

①Principle of 45 Degrees

Generally speaking, if the 3D model has an overhang of more than 45 degrees, you will need supports. This angle is determined by the material, layer height, extrusion width, and temperature. It is critical to adjust the support structures accordingly to ensure the best print result, especially for large 3D prints.The principle is raised by a stage designer and widely accepted among the 3D printing industry.

②Principle of Proportionality

As for the application of supports, the users are suggested to comply with the principle of proportionality. Even though the supports algorithm has been developing, adding supports intelligently cannot be realized at present. Therefore, users are always oriented in adding the supports. As we all know, excessive supports will definitely result in difficulty in supports removal, while limited supports cannot ensure the stability of the model. Since FashPrint has the function of manual modification, users can add proper supports to their models according to the daily experience and the academic principles.

●**Support Types**

**Linear Support Structure**：Suitable for models with large-area overhang(s).

Features：Full coverage of supports improves the model stability. But the supports on the surface are difficult to be removed and will definitely reduce the print quality.

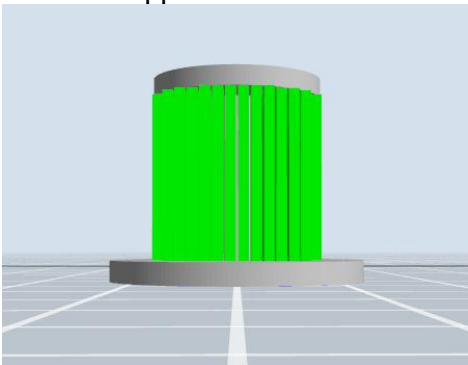**Treelike Support Structure**：Suitable for models with small area overhang(s).(You are suggested printing a raft)

Features：Treelike support structure is proprietary to Flashforge Corporation. And this structure can save support material and can be easily removed. However, compared with the linear support structure, it's of less stability. So you are suggested to manually add more supports after auto-generating treelike supports.

Auto-supports

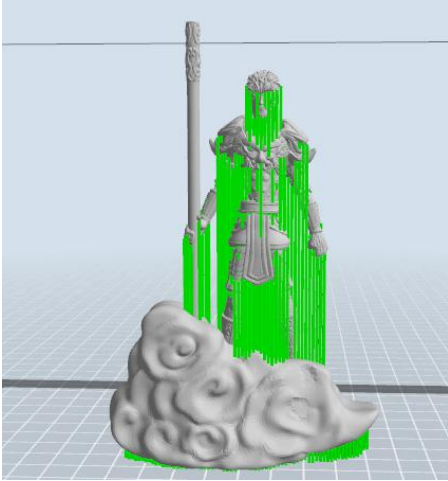## Eg：1) Model with Large-area Overhang
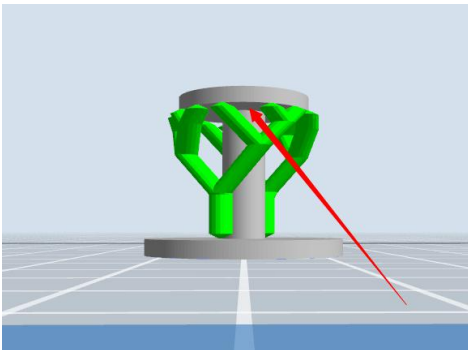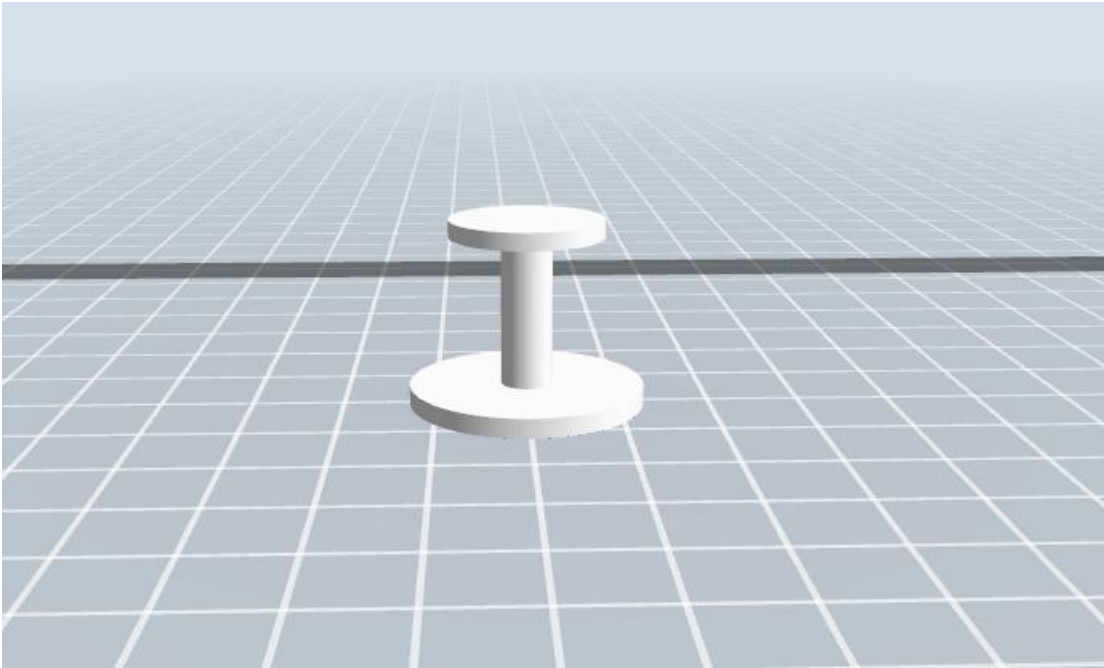
Treelike support structure×

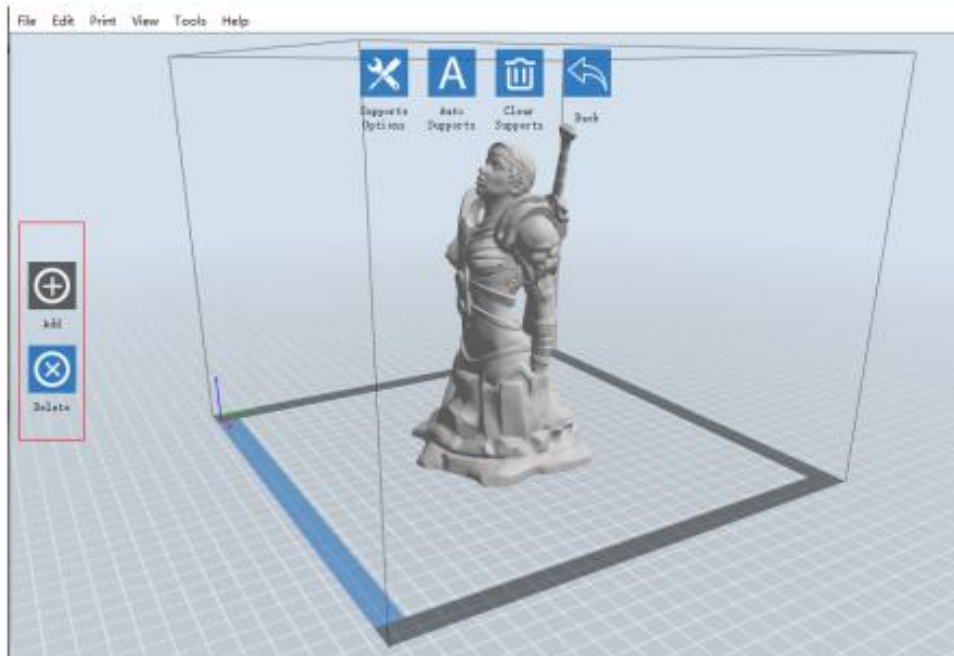Linear support structure√

2) Model with Small-area Overhang
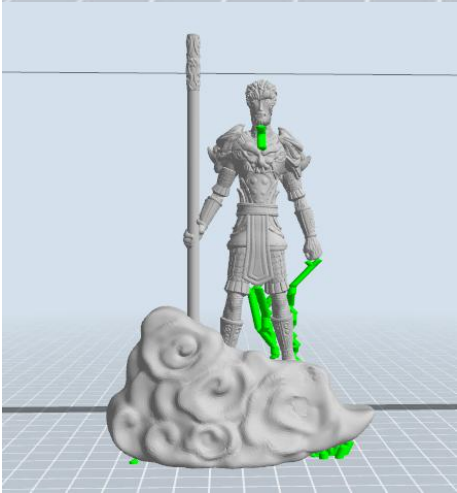
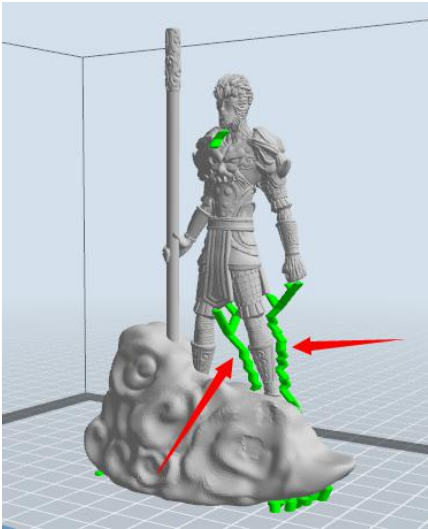Treelike support structure√
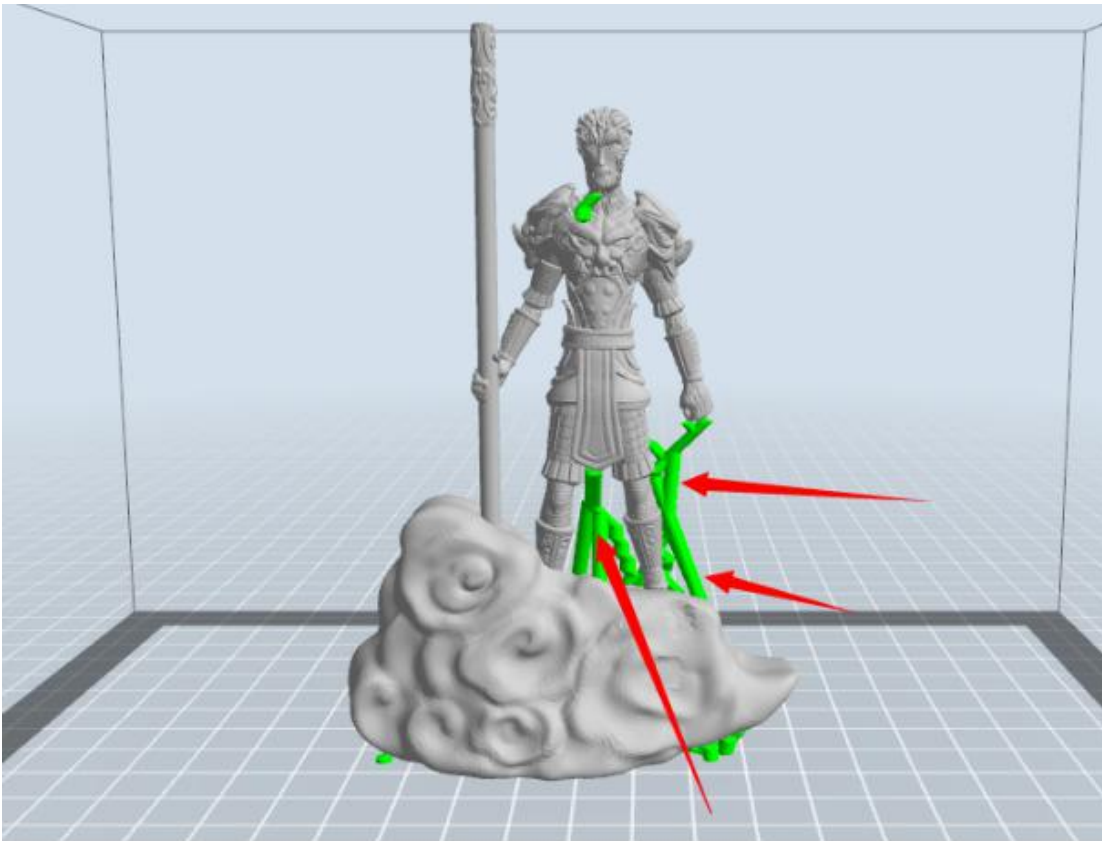
Linear support structure×

Manual Modification

For the experienced 3D printer users, the [Add] and [Delete] buttons are suggested using for manually adding or deleting supports.
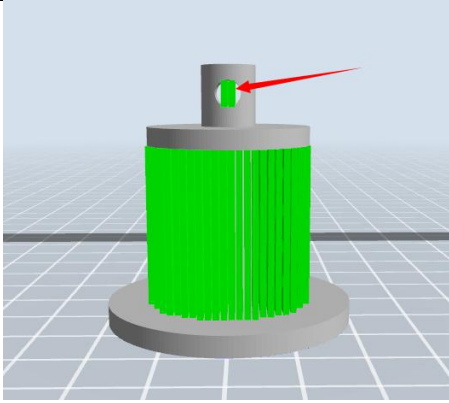
1）Manual Add

You can add the support structure manually to according to the actual shape of the model.

Left click [Add] on the left, and then click on the position when support structure is needed. Press down the left mouse button and drag to generate the support.

2）Manual Delete

Like the picture above, a hole inside the model doesn't need any supports.

Left click the [Delete] button and then left click the supports needed deleting. And the support will be deleted.

7.2 Control over Printing Quality

① Enhance the build plate adhesiveness

● Leveling the build plate

● Keeping the build plate smooth and tidy

● Using the build tape or glue

② Adjusting the printing speed

● Low (Fast) (Print Speed 100mm/s Travel Speed 120mm/s)

● Standard (Print Speed 80mm/s Travel Speed 100mm/s)

● **High** (Slow) (Print Speed 60mm/s Travel Speed 80mm/s)

● **Hyper** (Print Speed 40mm/s Travel Speed 60mm/s)

7.3 Skills of Model Placement

Not all the models are in the right positions after being loaded. Therefore, you need to place it in an appropriate position for better print quality. Such as the models below, you need to put one of the surfaces onto the platform.(Please refer to 5.1.12-⑦Surface to Platform)
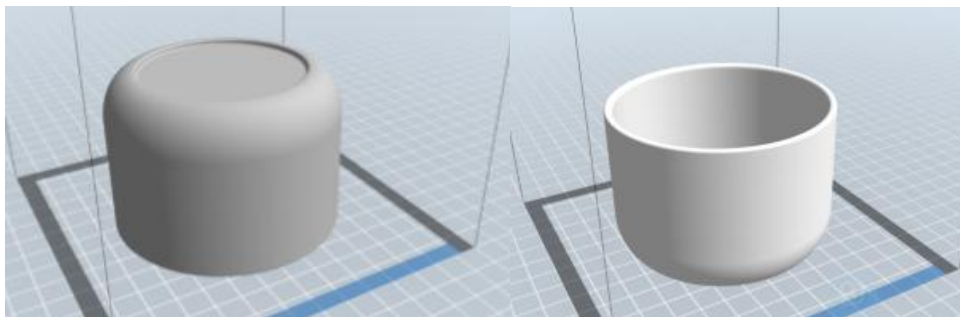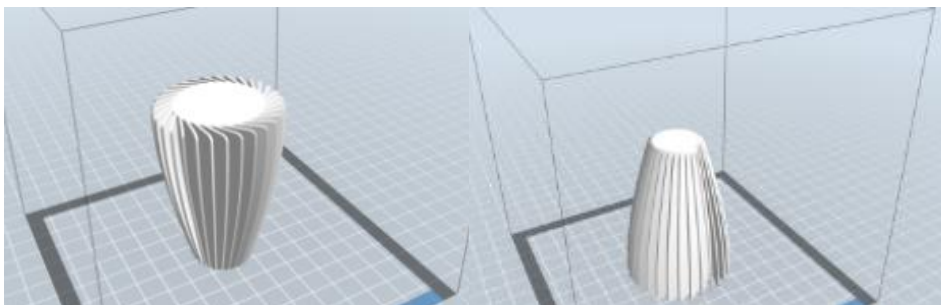
①
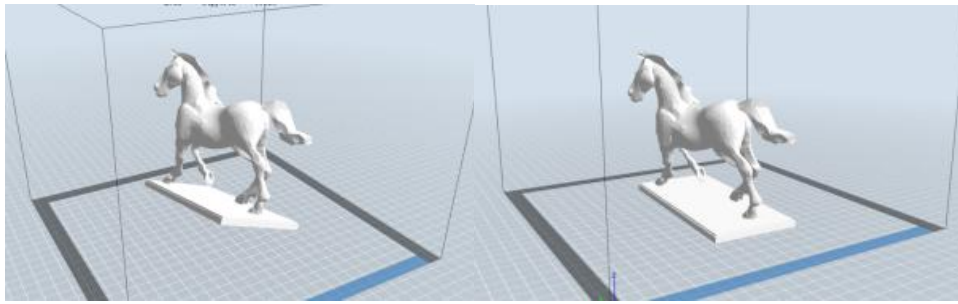
Improper   Proper

7-1

②

Improper   Proper

7-2

③

Improper   Proper

7-3

Further Reading：Cut Function

Left-click on the model to select it and double-click on the **Cut icon** to set the cut plane. The direction and position are available for setting.
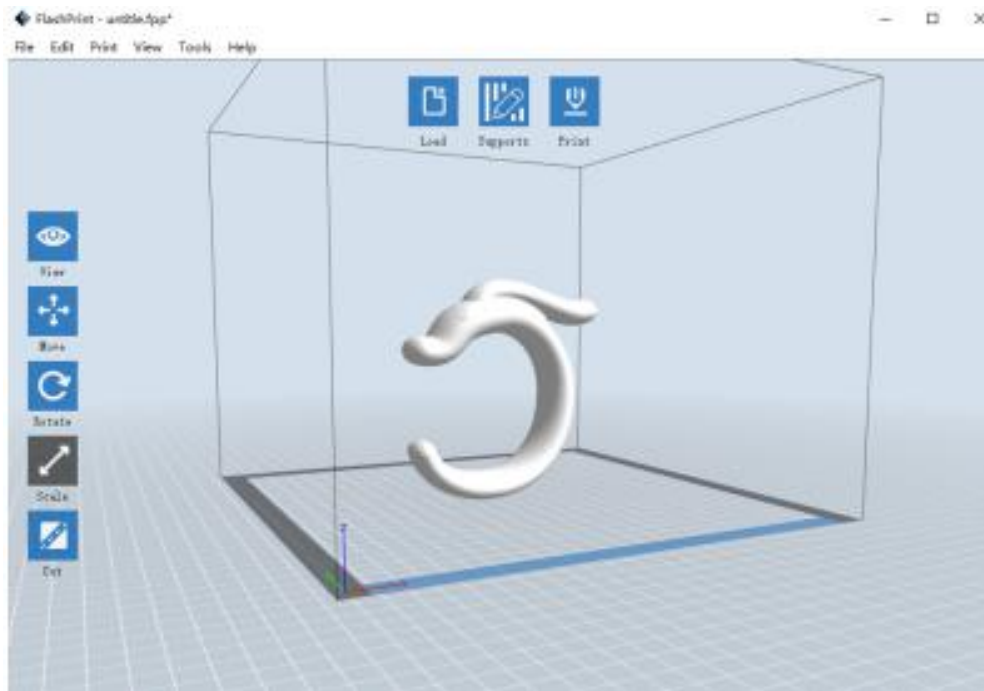
E.g：

As for a big model or an irregular model, you need to cut it into several parts so as to reduce the
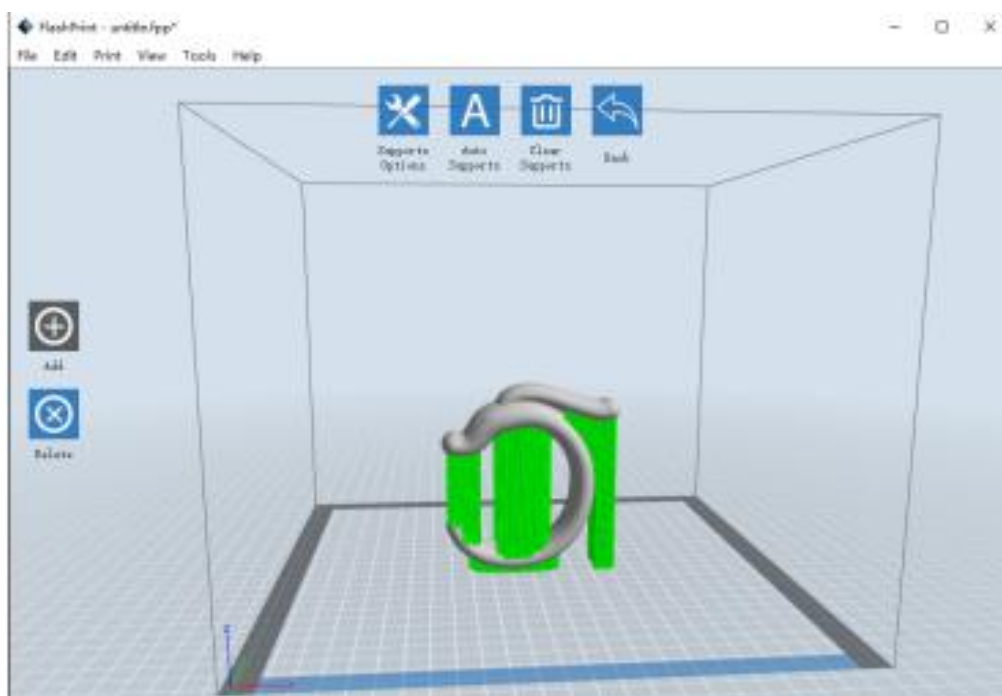
printing limitation and to better the print quality. Look at the model below:

Picture 7-4 is the preview of the model's original placement and Picture 7-5 is the preview of the model with support structure.
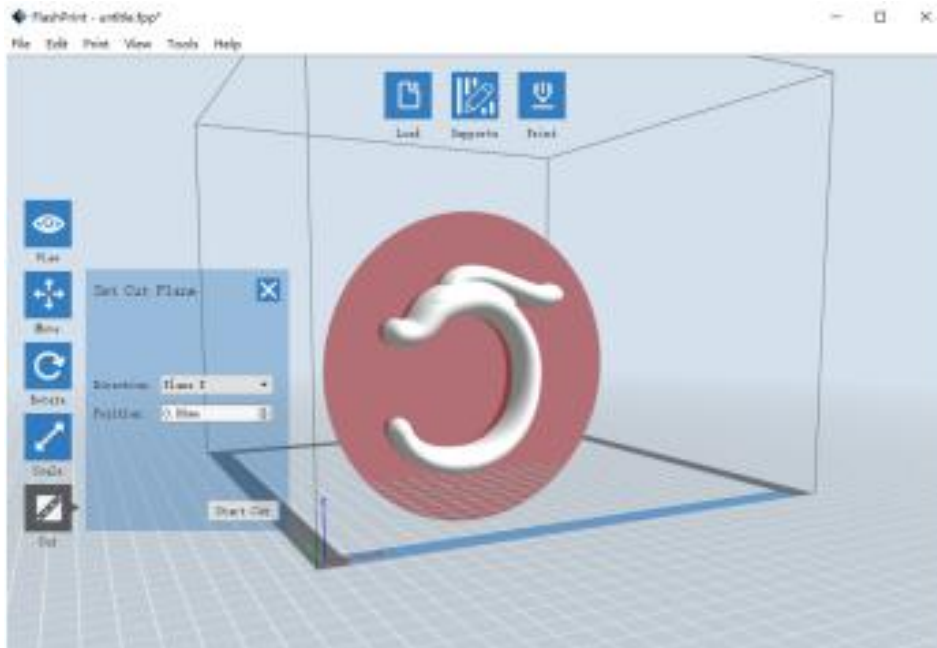

7-4

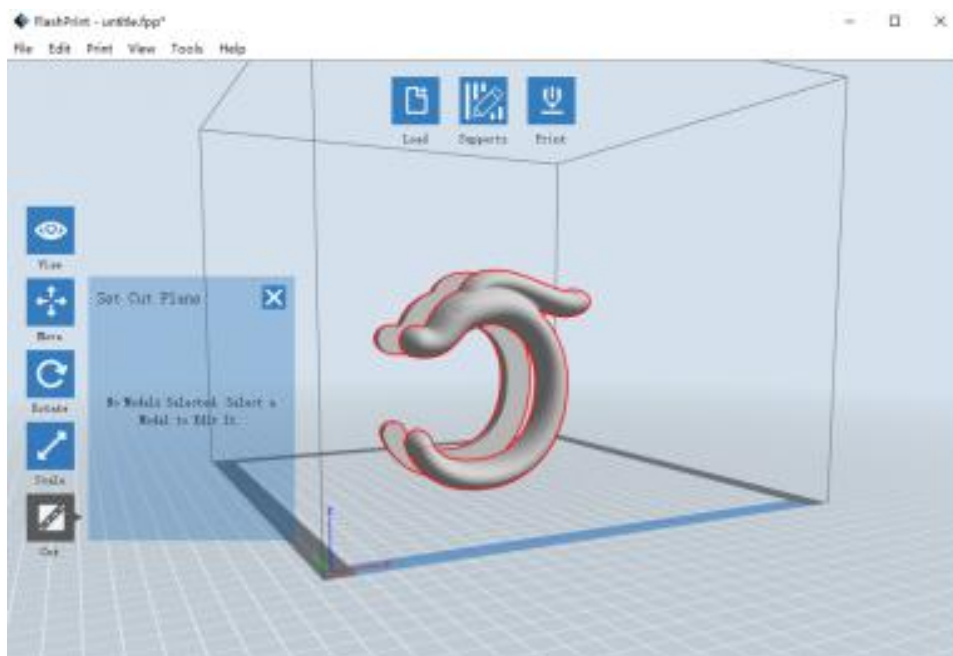(7-5) Model with support structur

7-5

(7-6) Looking at the Picture 7-5, we will definitely find that the complex supports will influence the smoothness of the model. By analyzing the model's feature, cutting from the Y plane will be suitable.
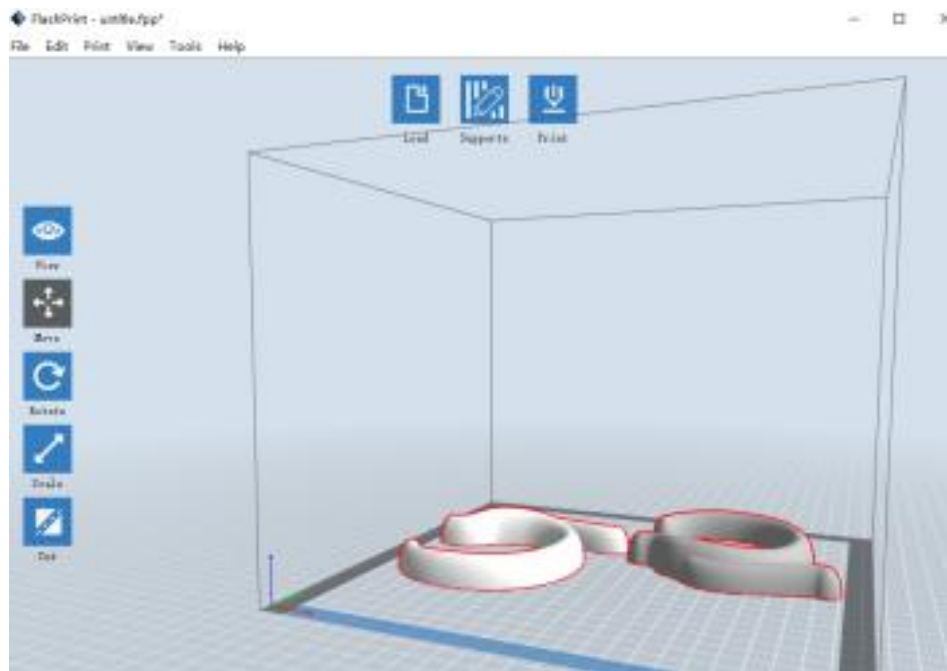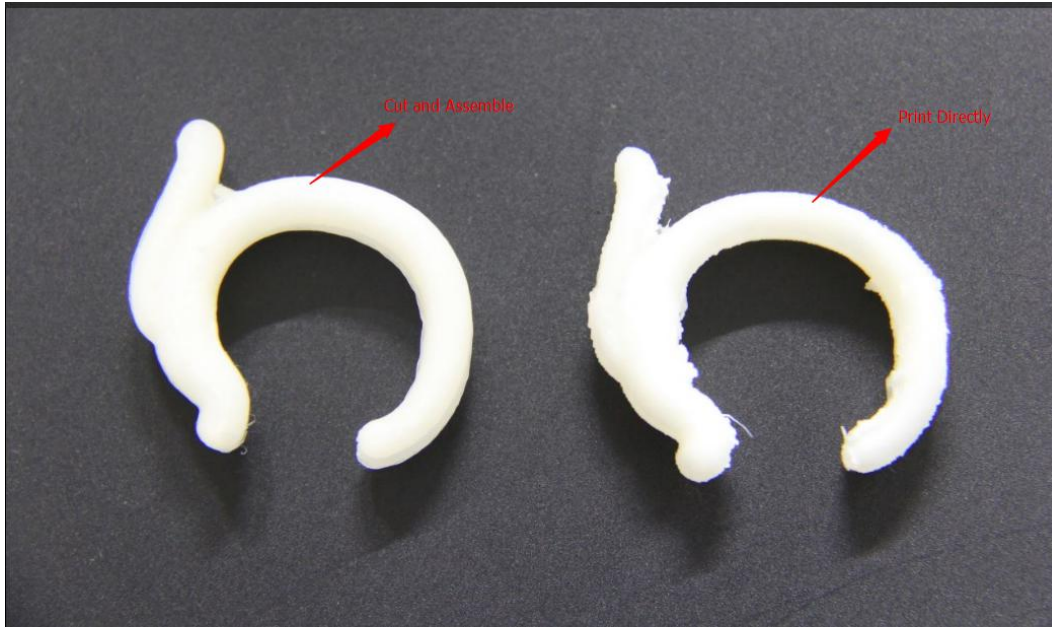

7-6

(7-7) The model preview after cutting.

7-7

(7-8) Click **[Edit]--[Surface to Platform]** to put the flat surfaces onto the platform.

7-8

Chapter 8: Other Information

8.1.Supports and Service

Flashforge team is on standby and ready to help you with any challenges you may have with your Guider. If the issues or questions are not covered in this User Guide, you can seek for solutions on our office website or contact us via telephone.

There are solutions and instructions to common issues that can be found in our knowledge base. Have a look first as most basic questions are answered there.

http://www.ff3dp.com

The FlashForge support team can be reached by e-mail or phone between the hours of 8:00 a.m. to 5:00 p.m. PST Monday through Saturday. In case you contact us during after-hours, your inquiry will be answered the following business day.

Tel：**86+579-82273989**

ADD：**No. 518, Xianyuan Road, Wucheng, Jinhua, Zhejiang**

*When contacting support, please have your serial number ready. The serial number

is a bar code on the back of your Creator pro."

8.2 References

Name	Creator Pro
Number of Extruder	Dual
Print Technology	FFF
Screen	LCD
Build Volume	230×150×155mm
Layer Resolution	0.1 - 0.2mm
Build Precision	±0.2mm
Positioning Precision	Z axis 0.0025mm; XY axis 0.011mm
Filament Diameter	1.75mm
Nozzle Diameter	0.4mm
Build Speed	24CC/hr
Software	Replicator G/Makerware
Support Formats	stl/obj/X3G
OS	Windows/Mac OS/Linux
Device Size	480*338*385mm
AC Input	100-240V, 50-60Hz, 300W
Connectivity	USB cable(Only for firmware update),SD card