

Equipment Guide



MAKER DOMAIN
3D PRINTING

60 mins

Flashforge Dreamer

- Safely Operate 3D Printer
- Slice 3D Files with Flashprint 5
- Adjust 3D Printer settings

EQUIPMENT



3D Printer



Laptop



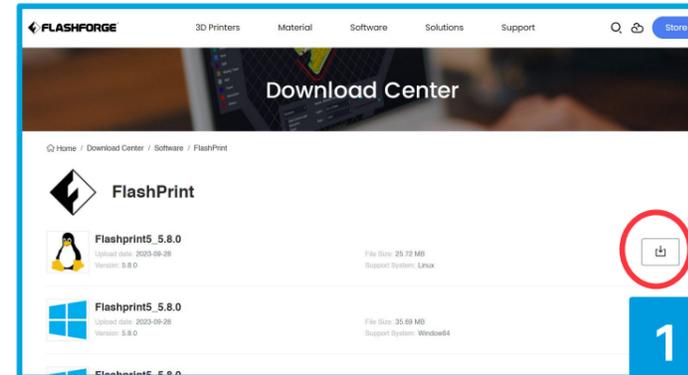
SD Card



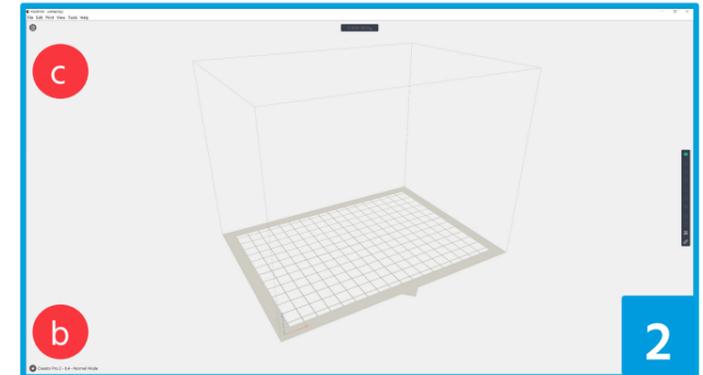
Flashprint

A Slicing Models with FlashPrint 5

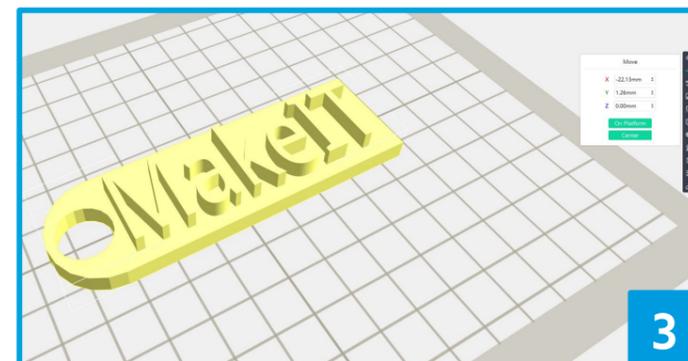
20
min



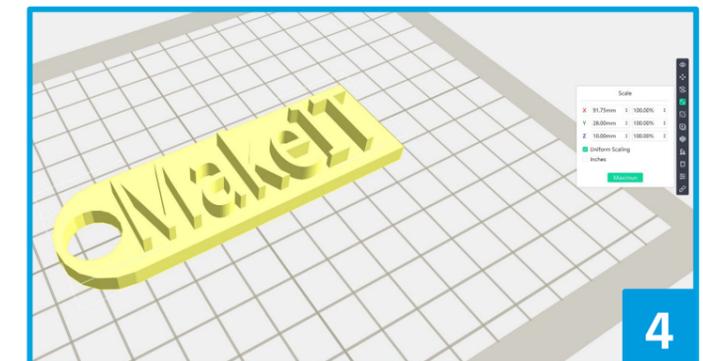
You will first need to install the FlashPrint slicer. Visit <https://www.flashforge.com/download-center/63>. Download the latest version of FlashPrint 5 compatible with your support system and install the software to your laptop.



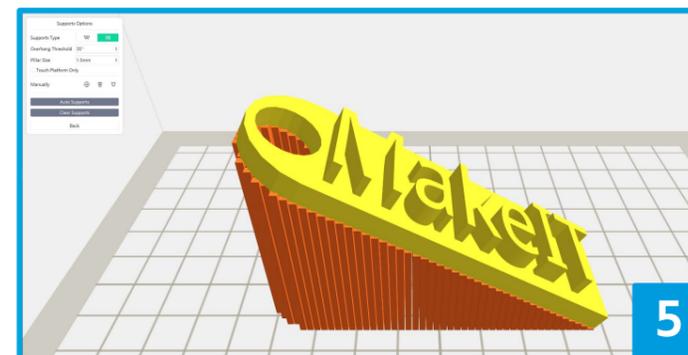
- Open up the FlashPrint 5 slicer on your laptop.
- Click the nozzle, navigate to "Machine Type", and select "Dreamer"
- To load your STL or OBJ file, you can either click on "Load" and select the 3D object that you will like to print.



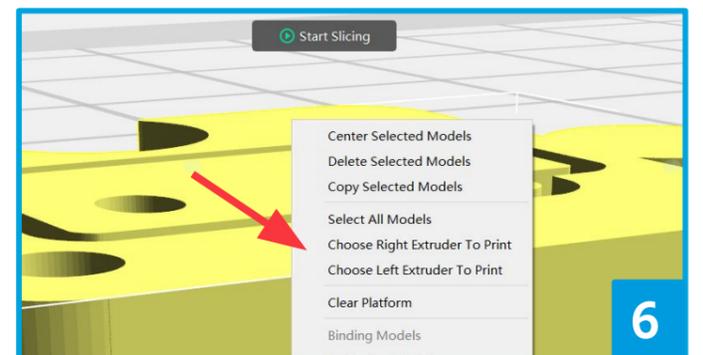
Click on the model and select "Move" followed by "On Platform" and "Centre". To maximise its chance at success, try having your largest, flattest surface on the print bed.



Should you find your object to be too big could select "Scale" and change the size of your object accordingly. Click on "Supports" to enter the support edit mode.



Click on "Auto Supports". Supports are required on if your model has overhanging (nothing below a part of your 3D print) parts.



Right-click on the model and select the correct extruder - default to 'Right'.

A list of FlashPrint 5's tools can be found below.

In addition to the changes mentioned earlier, you may also rotate your objects, cut objects into parts, duplicate objects, or automatically lay out multiple objects on the print bed.



View - Look at your 3D Objects from different angles



Move - Relocate your 3D Objects to utilize print bed



Rotate - Reorient your 3D Objects to print on flat surfaces



Scale - Resize your 3D Objects



Cut - Break up 3D Objects to 3D print smaller pieces



Duplicate - Make many copies of an object



Auto Layout All - Optimizes where your 3D Objects sit



Supports - Adds materials to help with overhangs



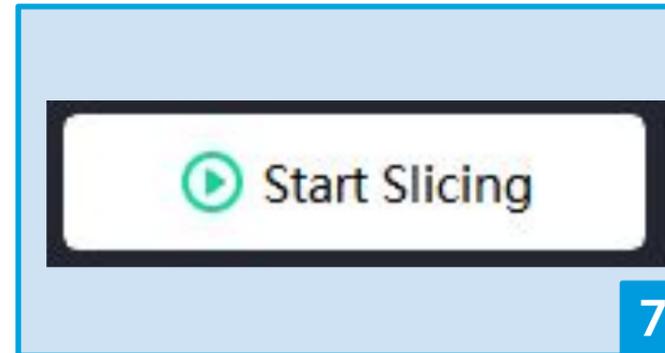
Wiping Tower - Adds tower for multicolour prints



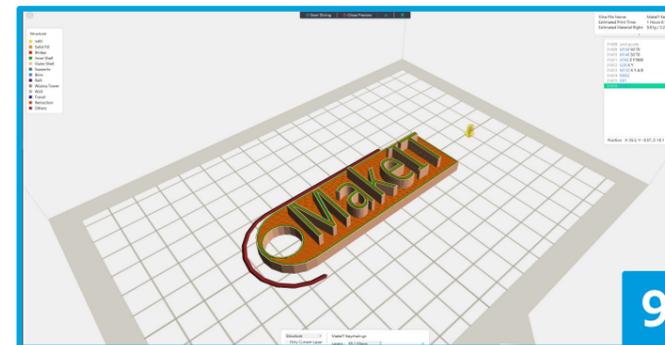
Multi-Machine Control - Not used at MakeIT



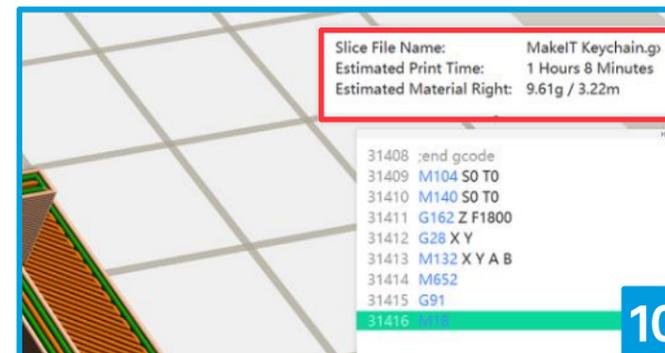
Connect Machine - Not used at MakeIT



Click on "Start Slicing" to proceed to the print settings.



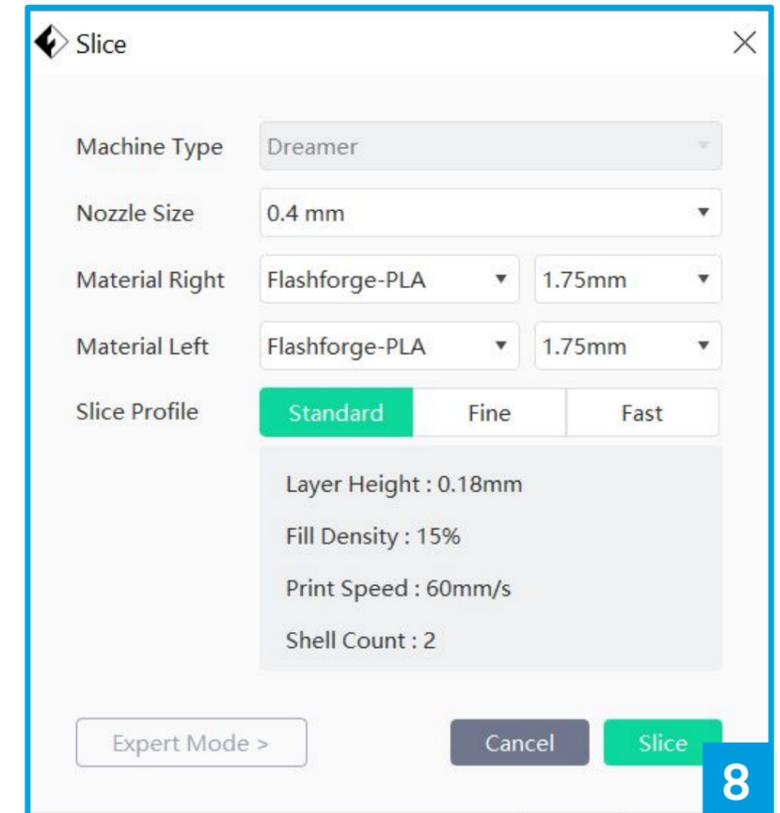
Click 'Slice'. FlashPrint 5 lets you preview your print and estimated time needed for your 3D print to be completed.



Make sure that the Estimated Print Time of your 3D print is well within your booked duration.

To shorten your print time, try the following:

- If you aren't concerned about size, reduce the scale of your 3D print
- If you aren't concerned about print quality, Change the Slice Profile from 'Standard' to 'Fast'
- If the print must be of the same size and quality, cut your 3D print and print in separate pieces. Assemble together after printing.



Ensure that print settings are set as shown above. Press 'Expert Mode' to bring up additional options.



Save the file in the .gx format into a SD Card.

!! WARNING: Do not place your hands inside the 3D Printer while it's in operation !!

B Setting up the Flashforge Dreamer

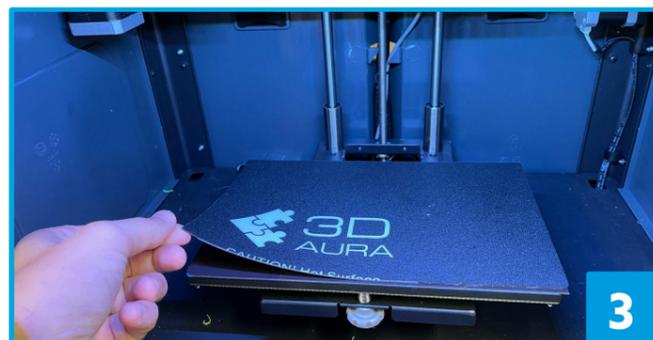
10
min



Perform a visual inspection of the Flashforge Dreamer before printing. The interior should be clean and clear of debris. Filament should be inserted through the printer into the right extruder. There should be a magnetic sheet placed on the print bed as the print surface. Once checked, you may turn on the printer and begin printing.



Turn on the Flashforge Dreamer 3D Printer. The switch can be found on the right side of the printer.



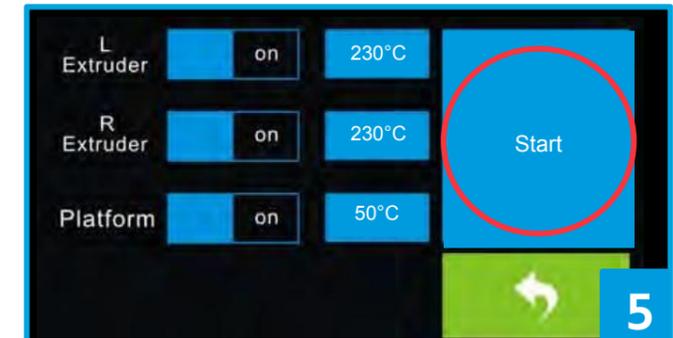
Verify that the magnetic sheet is on the print bed and in good condition.



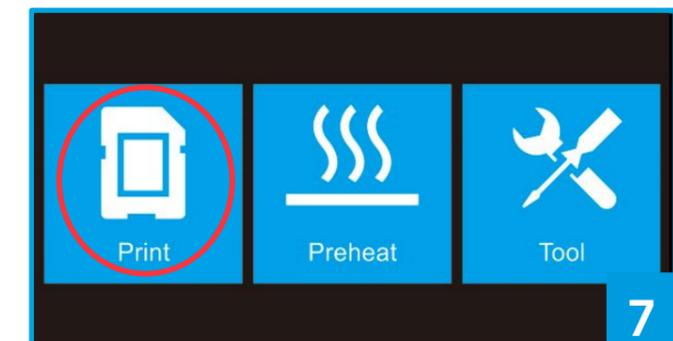
Before printing, the printer needs to be preheated. To preheat the printer, go to the LCD and tap on "Preheat".



Transfer your sliced .gx file to the printer by using an SD card, inserted at the right side of the printer.



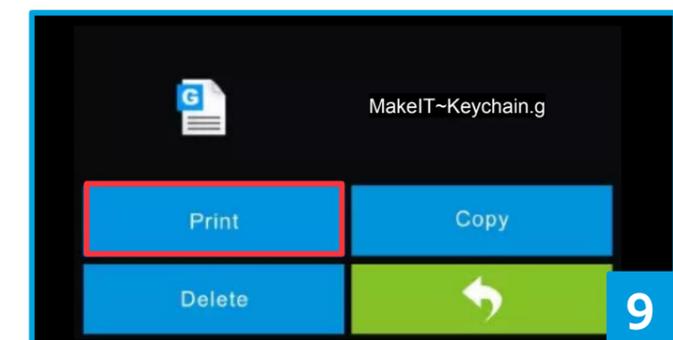
Tap on the "Start" button to start preheating the printer nozzle and print bed. The default temperature of the nozzle is 230°C. Printing will start once temperature is reached.



Navigate to the main menu, then press "Print".



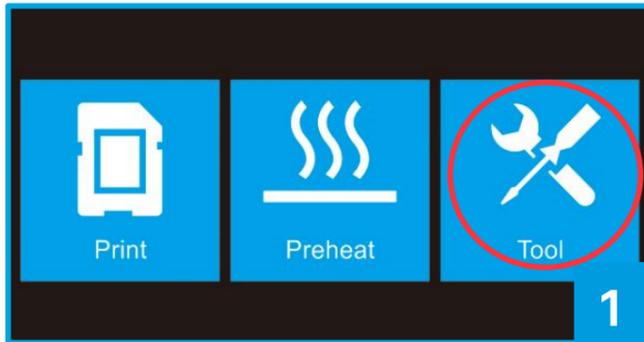
Click on the SD card icon to bring up your file.



Find your file from the list, then press it. It will bring you to the following menu. Press "Print" to begin your print job!

!! WARNING: Do not place your hands inside the 3D Printer while it's in operation !!

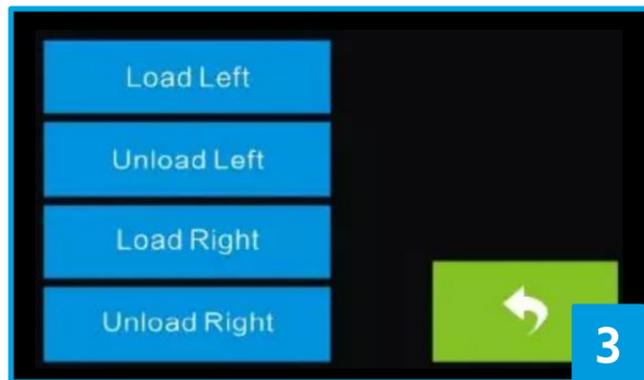
C Loading and unloading of filament 10 min



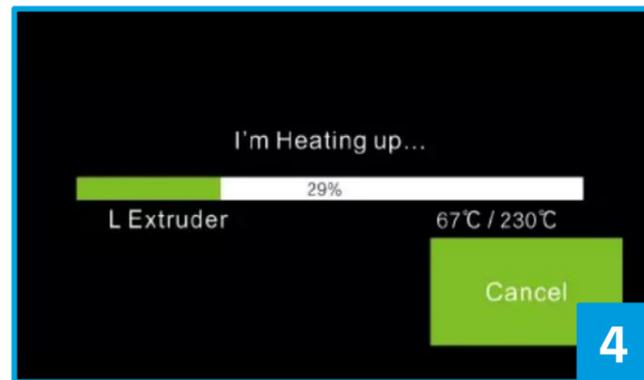
On the LCD, go to the main menu and tap on "Tools".



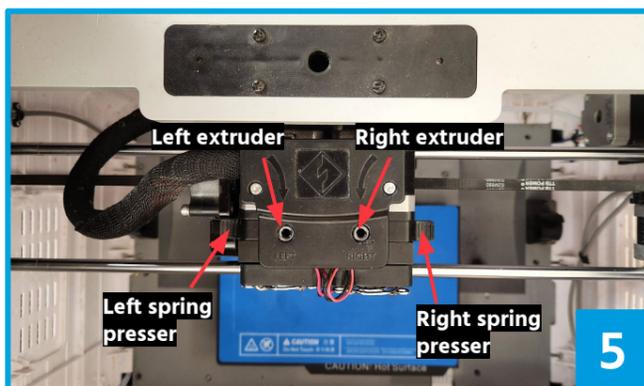
Tap on "Filament".



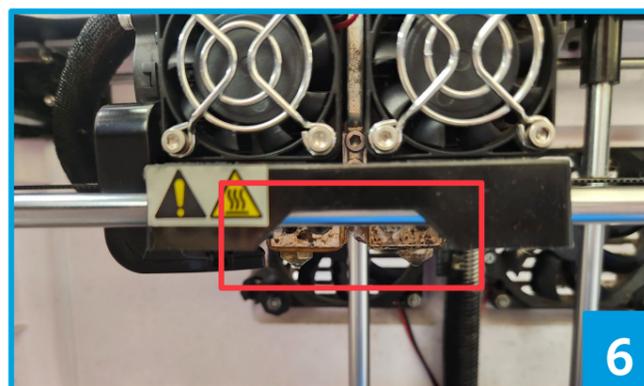
Tap on the relevant button to load/unload left/right extruder.



The printer will begin to heat up the extruder. It will take a few minutes for the temperature of the extruder to rise to optimal temperature.

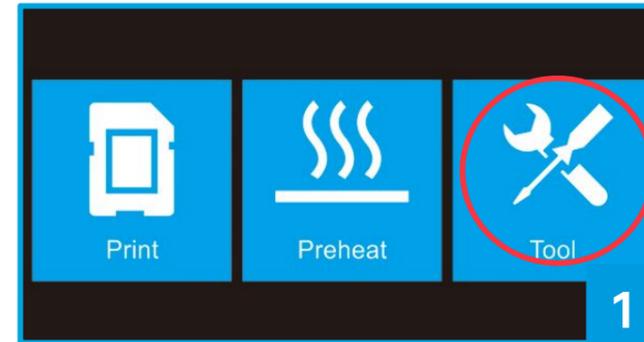


- Once optimal temperature is reached,
- For loading filament: gently feed the filament into the extruder at an upright angle.
 - For unloading filament: press the spring presser, press down the filament for 3 seconds before gently pulling the filament out. Tap "Done" on the LCD to finish unloading.



If loading filament, the extruder will flush out remnants of the old filament from the nozzle. Tap "Done" on LCD once the new filament starts to extrude from the nozzle.

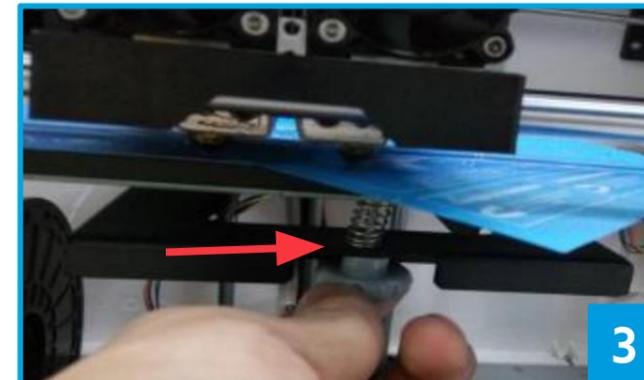
D Levelling building plate 10 min



On the LCD, go to the main menu and tap on "Tools".



Tap on "Level". The extruder and build plate will move to starting position.



Take the levelling card and slide it back and forth between the nozzle and the build plate. Slowly adjust the knob until the paper causes a slight friction. Tap "Next" when done.



Follow the onscreen wizard to move to its next position. Repeat step 3 and follow the directions on the LCD until the whole levelling process is completed. Tap "Finish" once done.

E Recommendations and Requirements for 3D Printing 10 min

1. DESIGN

Your 3D models should begin as .STL, .OBJ, or .3mf files. You can either create your own 3D models or search for your own on reputable websites such as Printables, Thingiverse.

2. SLICE

Only use Flashprint 5. Flashprint 5 makes .gx files, which only Flashforge printers can read. If you have used other slicers (e.g. Cura or PrusaSlicer), you'll need to slice files for the Flashforge Dreamer with Flashprint.

3. PRINT

Wait until the printer cools before removing your finished 3D print. Take the magnetic sheet off the print bed, then flex the plate gently to dislodge the print from the plate.

4. FINISH

3D Prints can be sanded and painted, but do take note that sanding and painting can take a significant amount of time. You will need to supply your own materials for this, and spray painting is not allowed inside the library.