Slicing and Software Operation

This guide will serve as a refrence for PreForm operation and proper slicing techniques.

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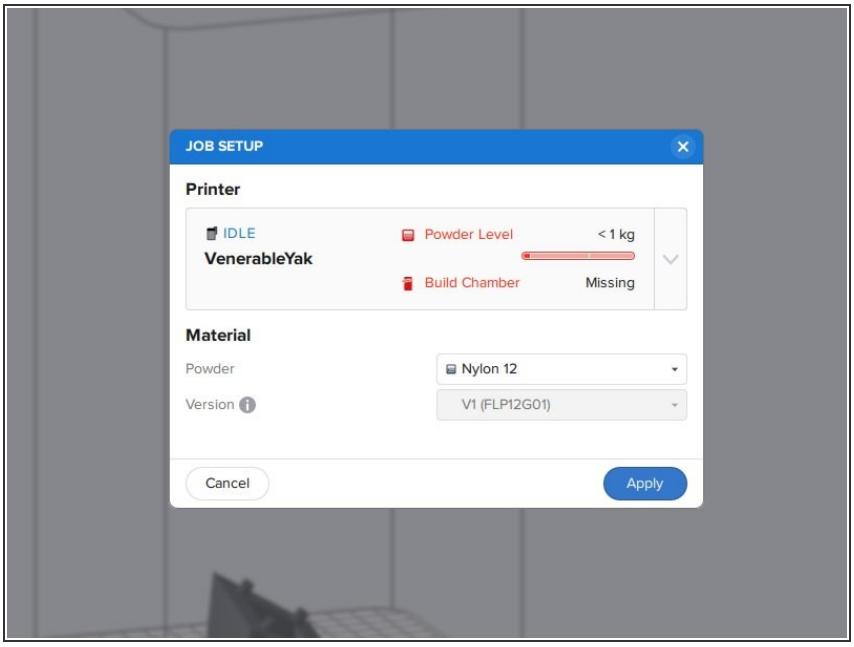
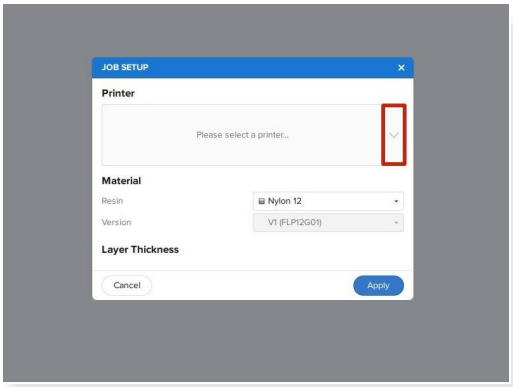
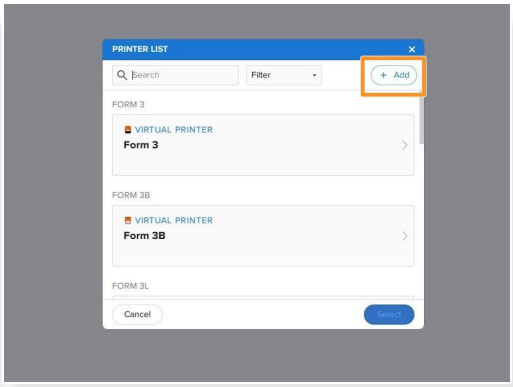
Step 1 — Connecting to the Printer

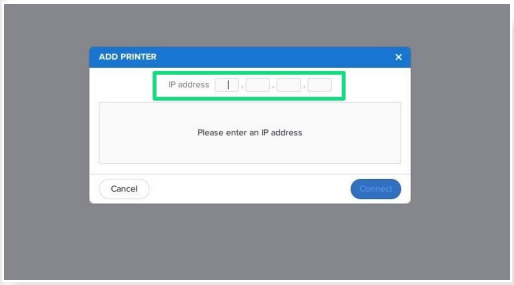


- Connect to RPL Wi-Fi
- Open PreForm.
- Under Printer, select **VenerableYak**
  - Select **apply**

Step 2 — Connecting to the Printer

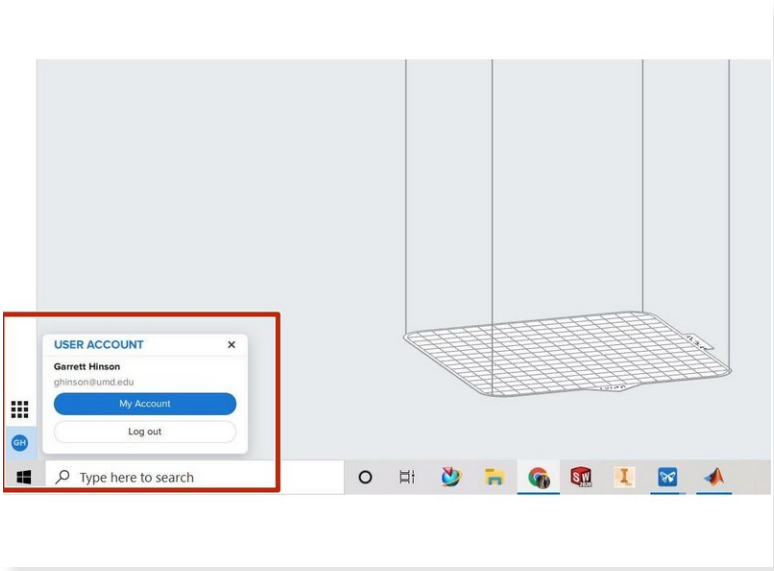


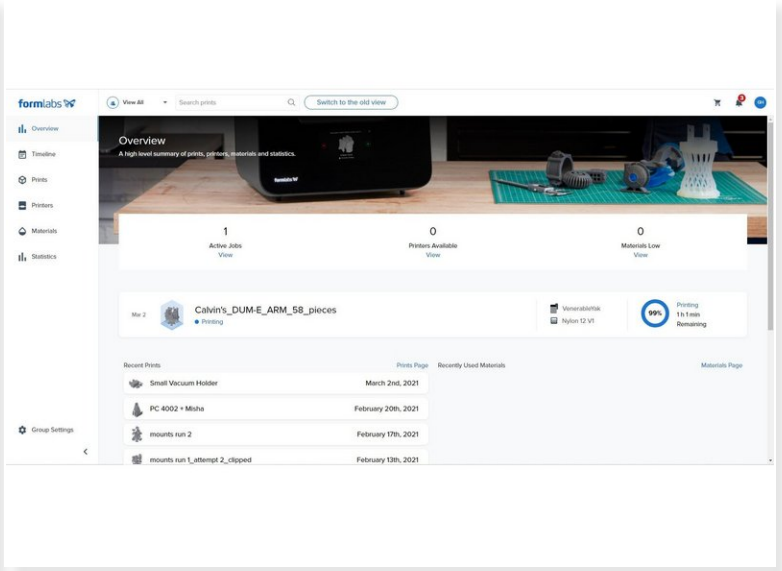




- If you cannot find the printer using the RPL Wi-Fi, you can connect to the printer directly via its IP address.
- Under "Job Setup" select the drop-down arrow.
- Select **"Add"**
- Enter printer IP Address
  - Reference "Formlabs Fuse 1 Menus" step 5.
- Select **"Connect".** Select **"OK"**
- Select **"Apply"**

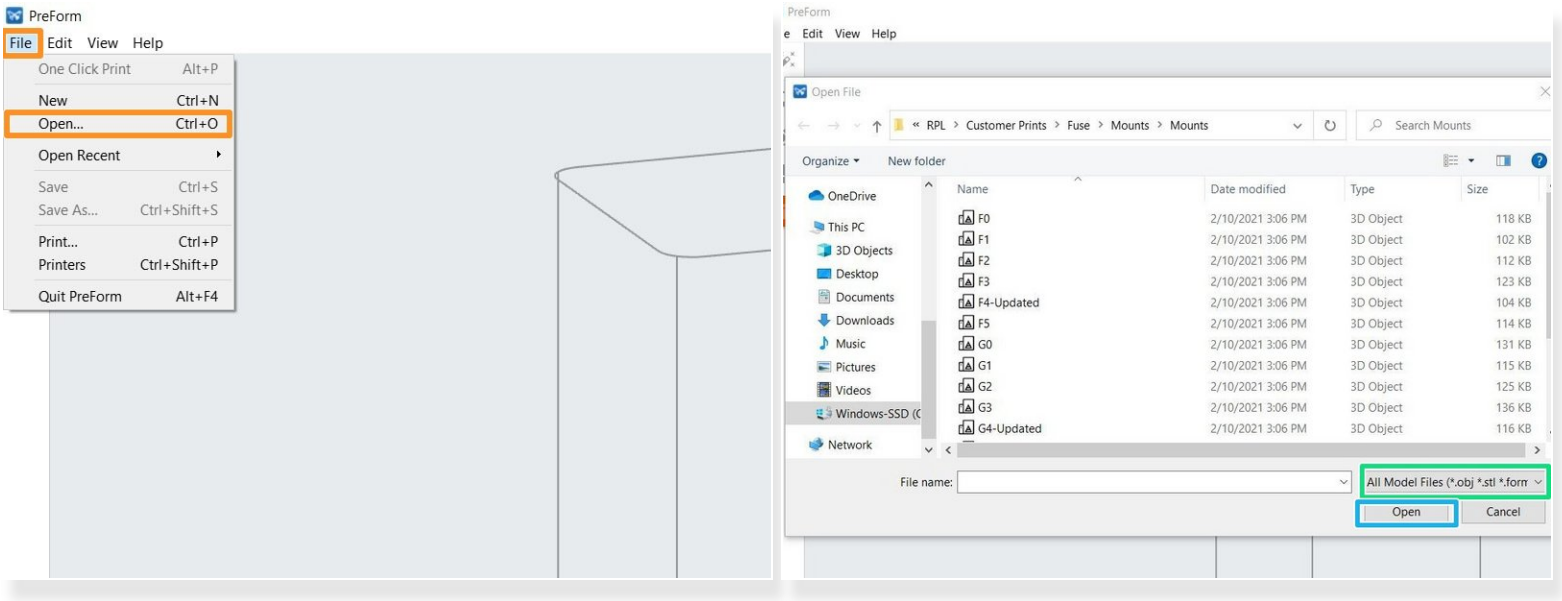
Step 3 — FormLabs Account and Dashboard





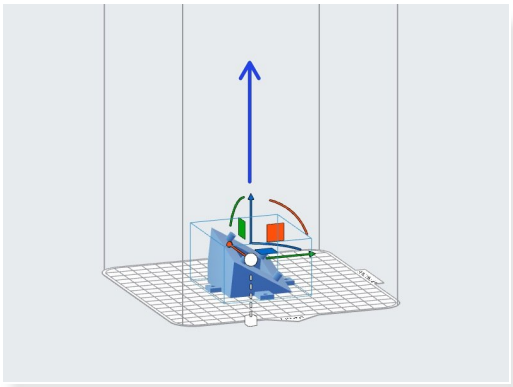
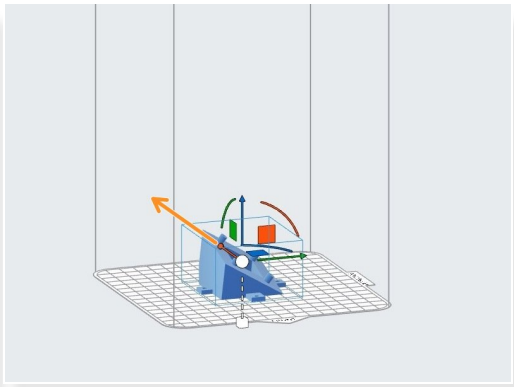
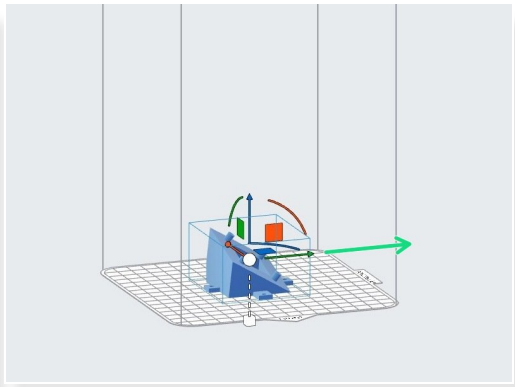
- Make sure you are signed into your FormLabs account in the bottom left.
- Clicking my account will bring you to the Formlabs Dashboard.
- The Dashboard allows you to track print progress and receive notifications from the printer.

Step 4 — Importing Files



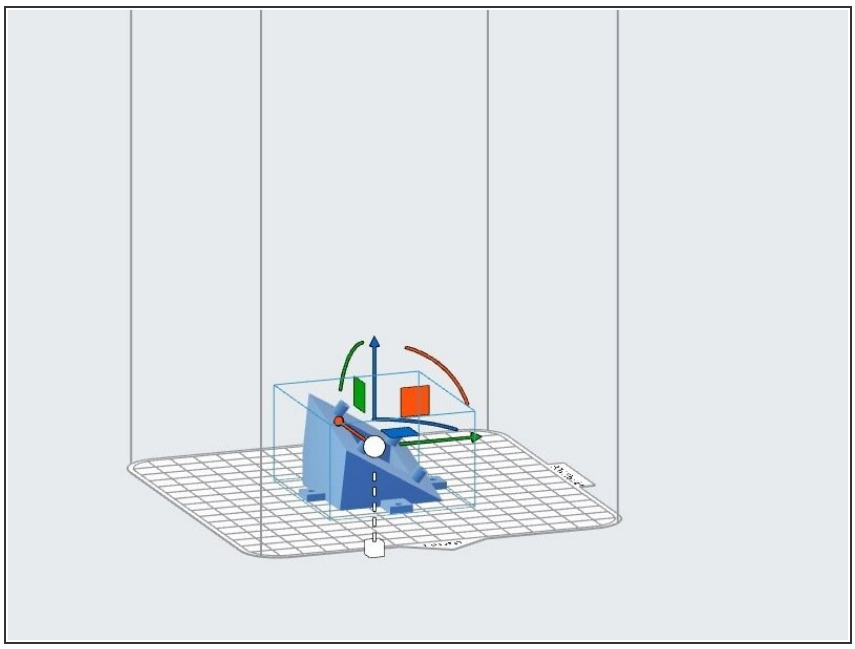
- Go to File (top left)
- Go to Open
- PreForm accepts three files types: **.obj, .stl, .form**
- Select all files and select Open

Step 5 — Translating Parts

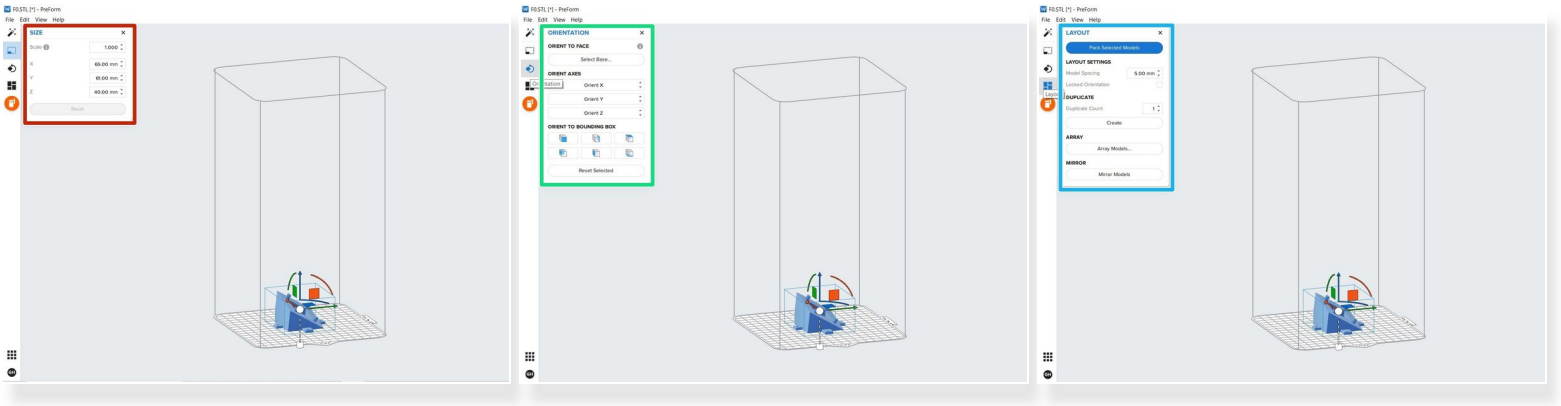
- To change the location of a part, it must be selected first. Once selected, it will be highlighted blue.
- Parts can be translated in 3 dimensions.
  - Blue arrow for Z direction
  - Orange arrow for Y direction
  - Green arrow for X direction

Step 6 — Rotating Parts



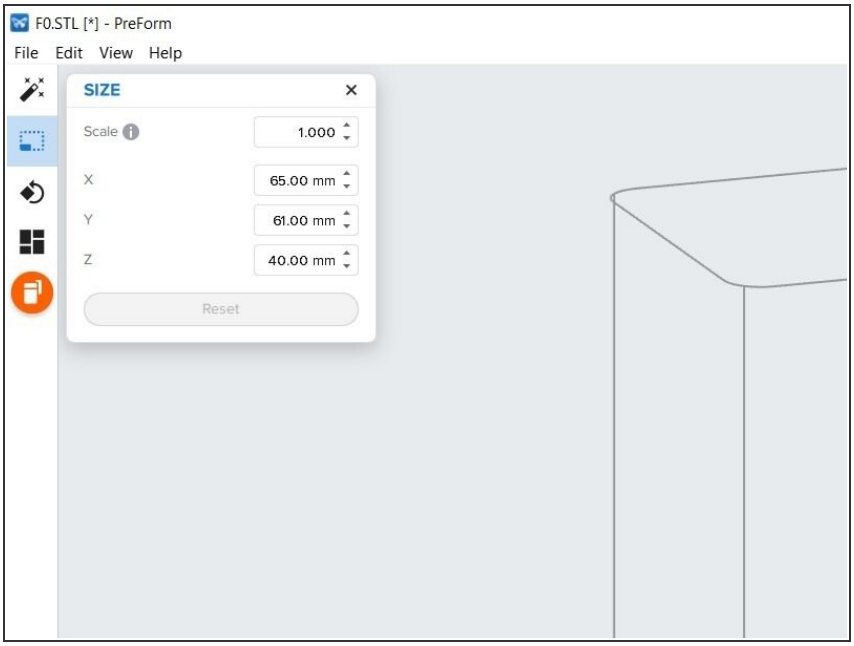
- Parts can also be rotated in 3 dimensions
  - Blue arc rotates about Z axis
  - Orange arc rotates about Y axis
  - Green arc rotates about X axis

Step 7 — Menus Tabs



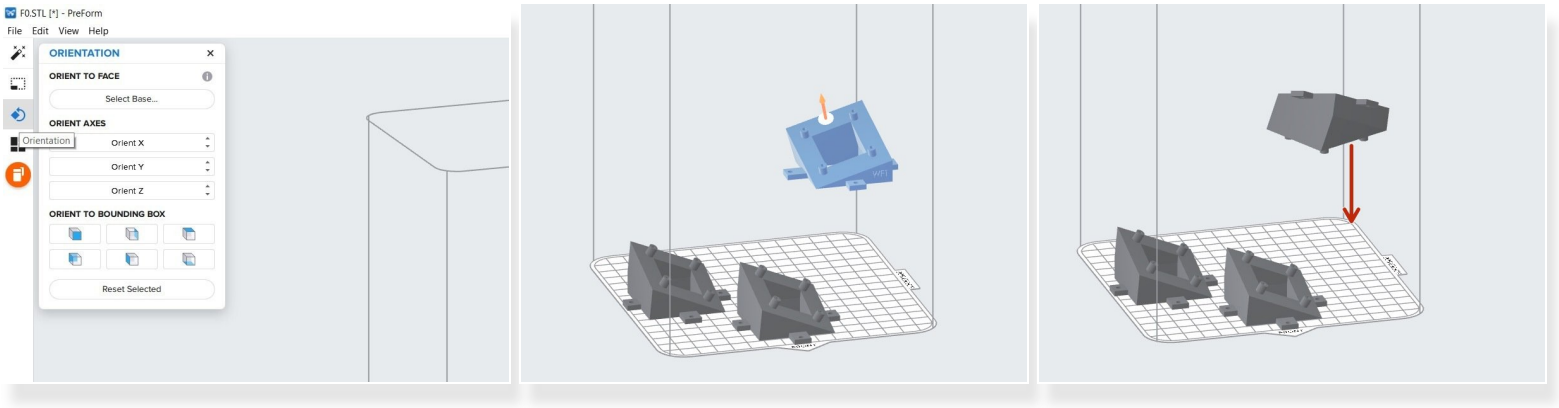
- On the left side of the screen you will find 5 options.
  - 1 click print
    - 1 Click Print is not utilized.
  - Size
  - Orientation
  - Layout
  - Start a print

Step 8 — Size



- Can be used to scale a part absolutely or relative to X, Y, or Z direction

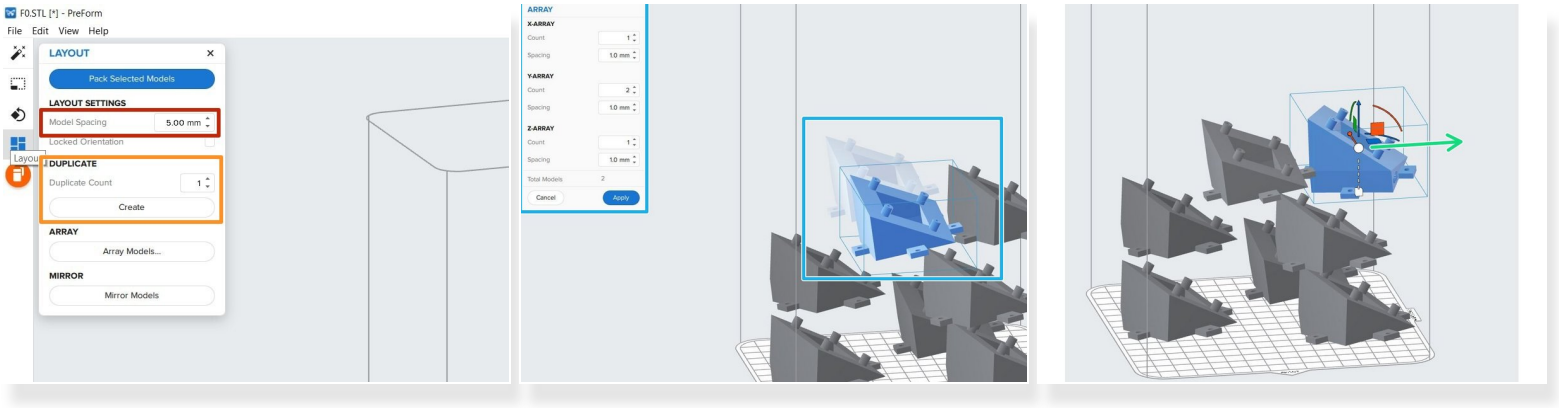
Step 9 — Orientation



- Allows you to select how the part will be oriented
- You can select a face of the part to snap downwards
  - Top face selected
  - Selected face now snapped downward
- You can change the orientation of each of the coordinate axes

TIP: Orient parts so that **finer details** lay in the **XY direction**. The laser is more accurate than layer height.

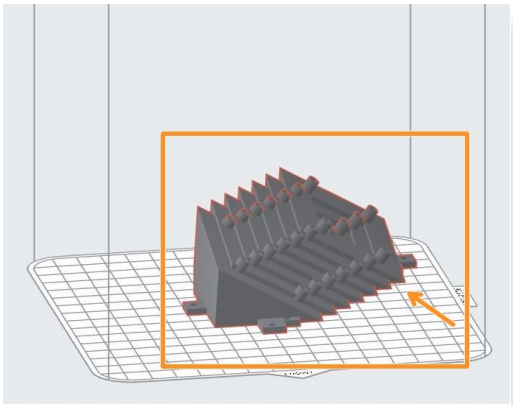
Step 10 — Layout

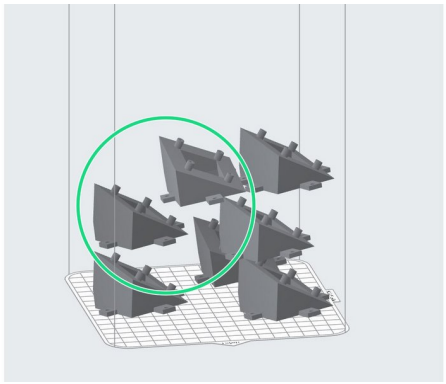


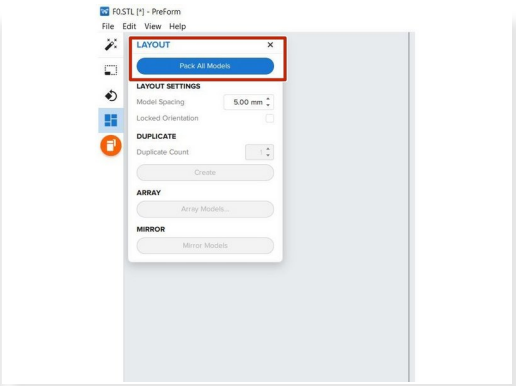
- Allows you to change model spacing
  - This is the amount of space between parts in the build chamber.

  ⓘ 5 mm is good, but should not drop below 3 mm.
- Duplicate
  - Will make a duplicate (copy) of a selected part for a selected quantity.
- Array/mirror models
  - Array models will create a linear arrary for a selected part
  - Mirror models will mirror a part across the x-axis

Step 11 — Packing Parts







- **Parts should be packed as low as possible.**
  - Bad packing.
  - Good packing. (After using packing feature)

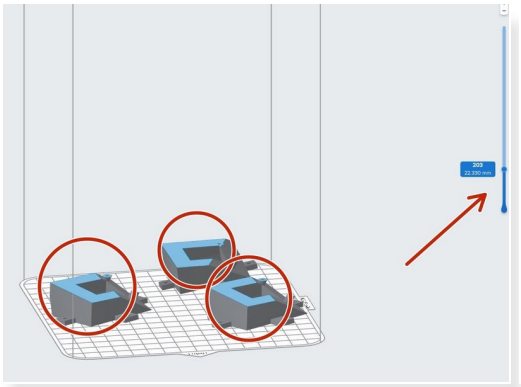
ⓘ The **higher** your parts are in the build chamber, the **longer** your print will take.

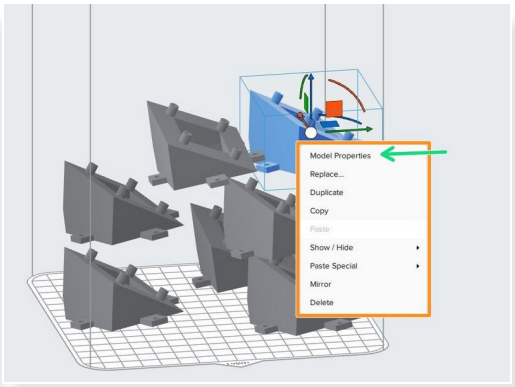
- Packing feature.

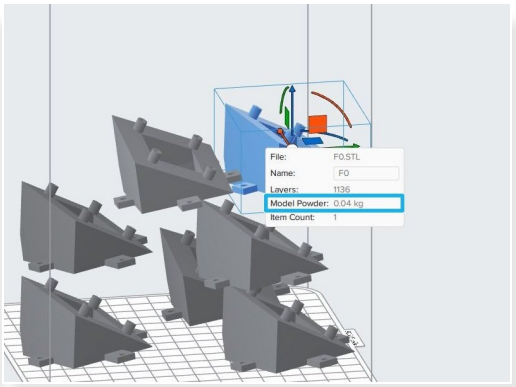
ⓘ When parts become highlighted in red, this means that they are **touching and overlapping.**

- The "**Pack Selected Models**" button will automatically pack all models in a way that is acceptable. However, this may require slightly more manipulation as it may not be the most efficient way to print. (The lower your parts, the better).

Step 12 — Additional Manipluation

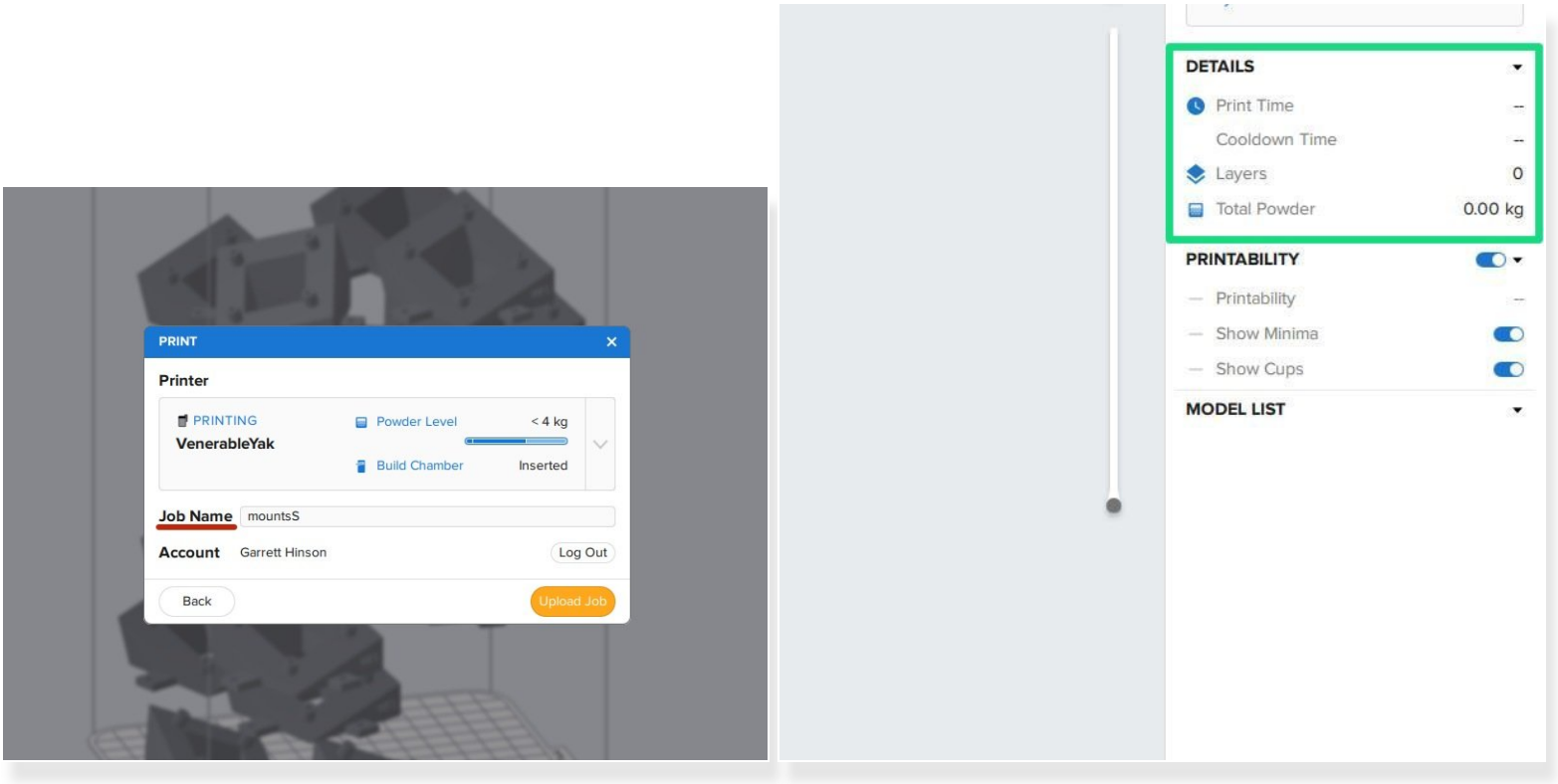






- Cross Sections
  - The slider on the right side of the screen allows you to see the individal layers. It displays layer number and current height in mm.
- Right-Clicking a part
  - Allows quick part manipulation such as **replace, duplicate, and copy.**
  - The **"Model Properties"** option can be used for quoting customers.
    - It will display the **amount of powder** that will be used for that **particular part.**

Step 13 — Start a Print



- Allows you to upload the current job to the printer.
  - Make sure to change the **Job Name** to **PC#XXXX CUSTOMER_NAME**.
  - Select **Upload Job**.
  - Select Upload Job. Take note of **"Total Powder, Print Time, and Cooldown Time"** on right side of screen.

    In order to calculate the print time, you must click on it.

    - If the **"Total Powder"** exceeds the current amount of powder in the Fuse, **add more**. *refer to Preparing the Fuse to Print Dozuki.