

Instructions Builder



Builder

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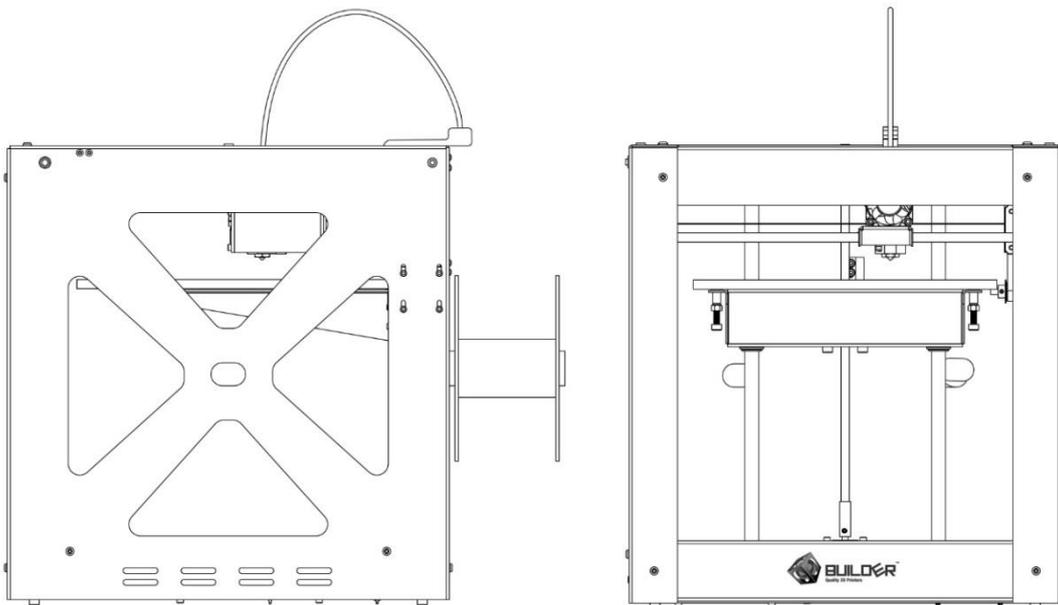
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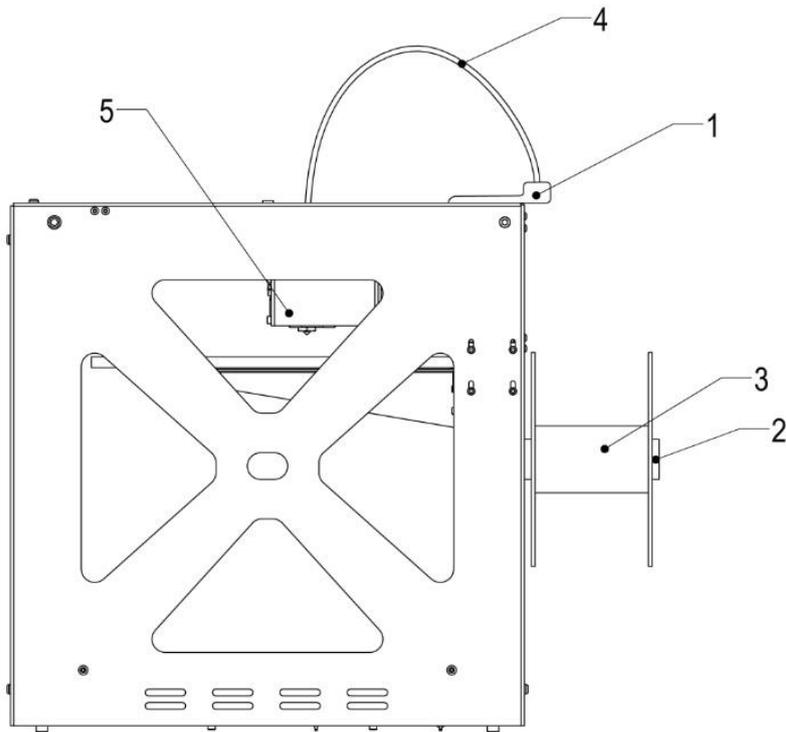
1. SPECIFICATIONS

- Measurements Builder: 385x370x400 mm (Length x with x height)
- Material casing: Powdercoated steel
- Color Casing: Red/Black/Bronze
- Printtableau: removable
- Printmaterial: PLA 1.75 mm
- Standaard resolution: 0,15 mm
- Capacity: 120 watt
- Builder extruder single extruder head automatic PLA Feed
- Transportweight: 17 kg
- Packaging: Cardbord
- software: opensource



2. OVERVIEW BUILDER

1. Wire-feed clip
2. Filament axle
3. Filament
4. Tube
5. Mobile extruder





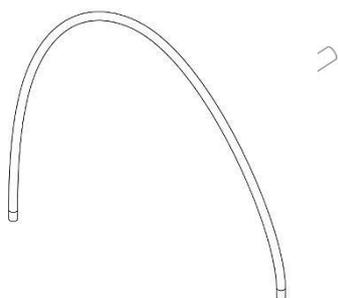
3 ITEMS THAT COME WITH THE BUILDER:

Items mentioned below come with the builder.

Order Filament with your printer! The printer does not come equipped with filament!

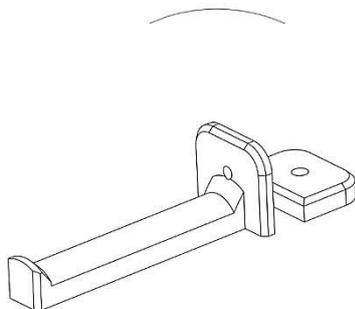
Multiple colors of filament are available online in our webshop : www.3dprinter4u.nl/webshop/

1x USB A / USB A



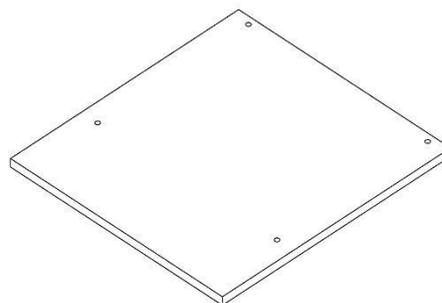
1x PTFE tube

1x Power cable



1x Filament hanger

1x Clip



1x Printtblau

4. UNPACKING THE BUILDER

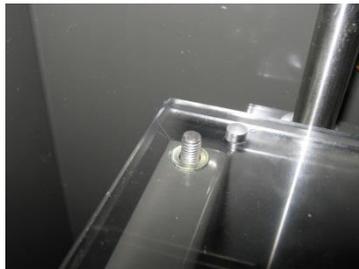
1. Place the box on a flat service. Open the box and remove the protective material.



2. Lift the Builder from the box. Grab The Builder by the frame and place it on a steady surface.



3. Remove the foil from the print-tableau. Place the Tableau in the machine fitting the corners on the screws in every corner. Make sure to press down making sure the tableau is all the way down on the screws



4. Remove the tie raps which hold the extruder.



5. Mount the Filament-arm on the side on one of three sides. Then place the clip on the top edge of the machine..



6. Remove the plastic from the filament and place the role on the Filament arm. Now feed the filament thru the clip and tubeing.



7. Feed the filament thru the tubing until it reaches the extruder. Open the lid of the extruder by squeezing the spring-screws. Feed the filament all the way into the extruder. Close the lid and make sure the spring-screws return in the correct position.



8. Make sure the switch on the Builder is turned off. Now Plugin the builder.
9. Do not connect the usb cable before downloading and installing the drivers.

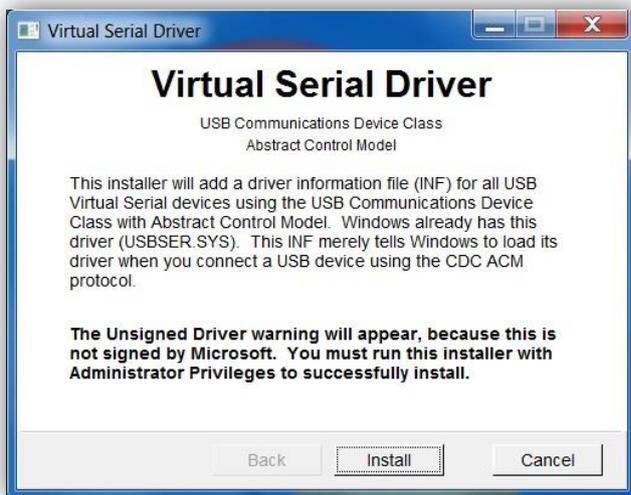
5. INSTALLING DRIVERS

Users should install the drivers before installing printersoftware.

Find the drivers you need on www.3dprinter4u.nl/installatie/

Click on “install”. In some cases security warnings popup!

Install drivers in spite of the popups



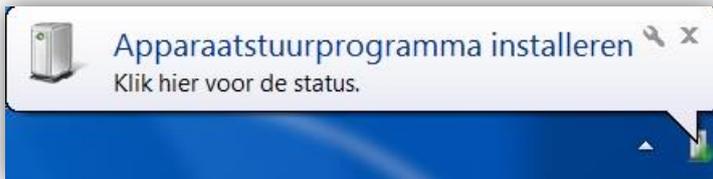
Once drivers are finished installing click “done”.





Once drivers are installed connect the USB cable connecting the Builder to your computer.

Your computer will connect to the machine and proposes to install the drivers. Click on this tab to install the drivers.



Once the configuration is completed the popup below will appear.





5.1 INSTALLING DRIVERS ON WINDOWS 8

1. Windows Key + R
2. Enter shutdown.exe /r /o /f /t 00
3. Click the "OK" button
4. System will restart to a "Choose an option" screen
5. Select "Troubleshoot" from "Choose an option" screen
6. Select "Advanced options" from "Troubleshoot" screen
7. Select "Windows Startup Settings" from "Advanced options" screen
8. Click "Restart" button
9. System will restart to "Advanced Boot Options" screen
10. Select "Disable Driver Signature Enforcement"
11. Once the system starts, install the Arduino drivers as you would on Windows 7

Steps to install driver after Driver Signature Enforcement has been disabled:

1. Right click the Unknown Device in Device Manager
2. Select Update Driver Software
3. Select Browse my computer for software
4. Click Browse button
5. Select the Drivers folder under the location of your Arduino software installation. (Do not select the FTDI folder inside the Drivers folder)
6. Click OK
7. Click Next

6. SOFTWARE

To start printing users will need software.

The builder can be controlled using Open-source software such as CURA, PRONTERFACE and REPETIER

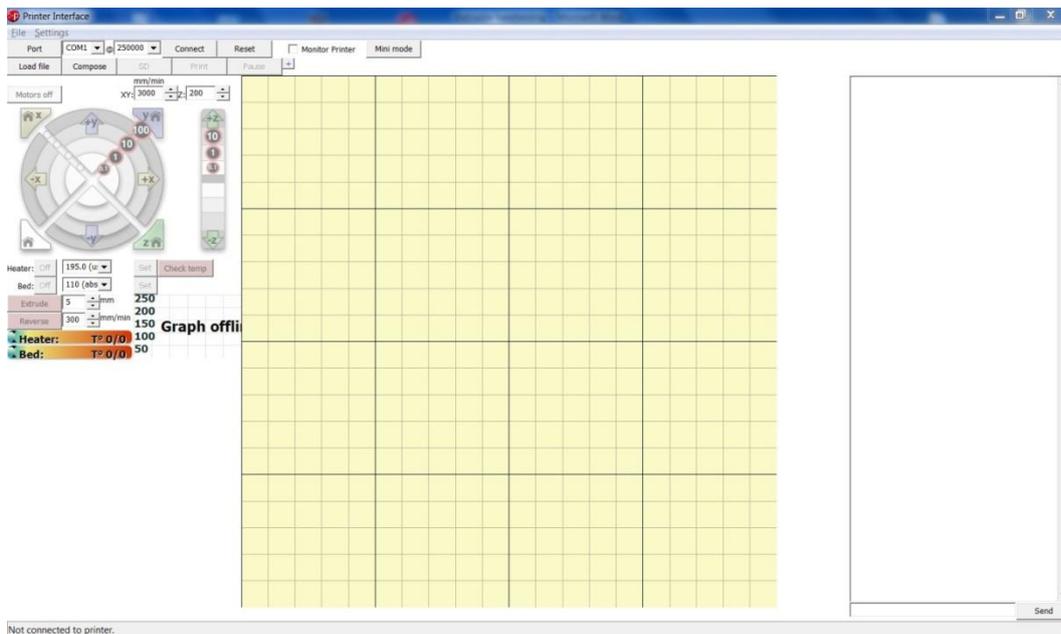
We Added PRONTERFACE to our manual because it is considered the "most basic" printer software. Please feel free to experiment with all other possible software.

All can be downloaded for free.

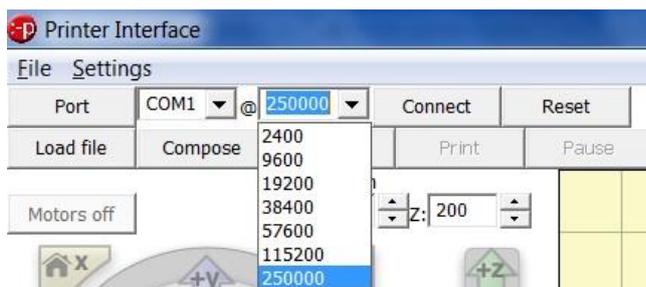


6.1 PRONTERFACE

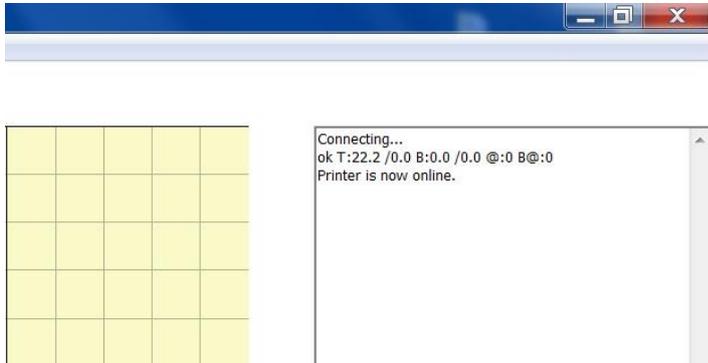
Image below shows the interface.



To connect the Builder with your computer make sure you know which COMPORT it is connected to. Usually Pronterface selects the corresponding COMPORT automatic. U can check this by selecting the bitrate 250000 and clicking “connect”.



The Status-area will inform you whether or not the printer is currently online.



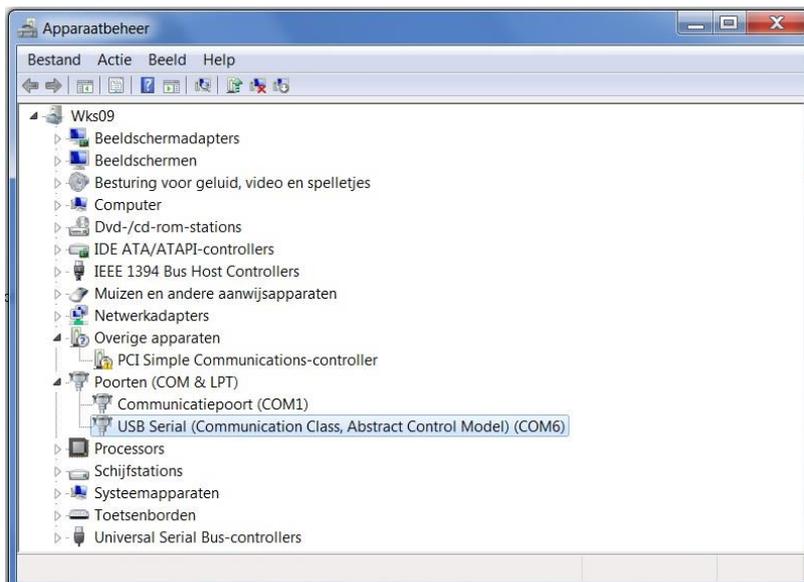
Troubleshooting connection:

Stuck in “connecting” mode?

Select a different COMport.

Find out which COMport u should use

- Browse to tools / configuration
- Machines / device - management
- Ports
 - Check which port “USB Serial (Communication Class, Abstract Control Model) (COM.....)”



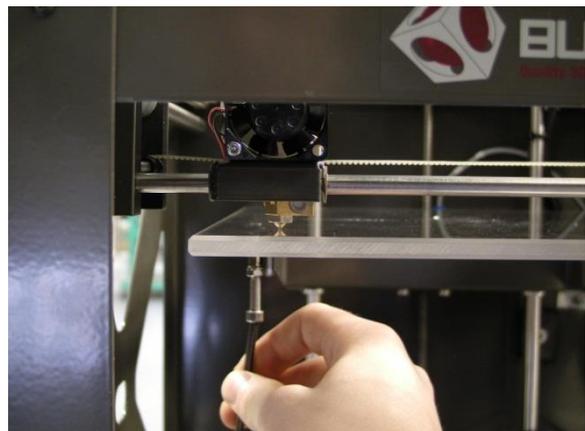
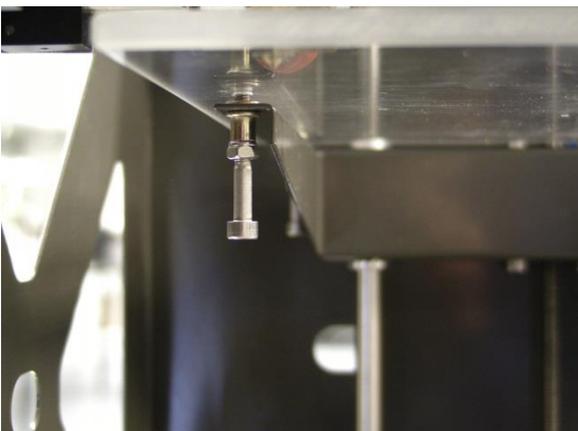
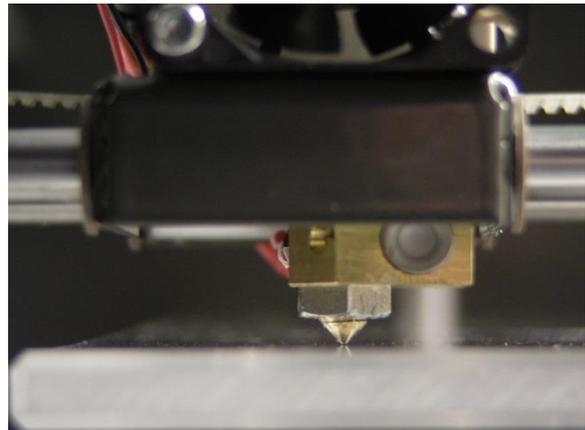
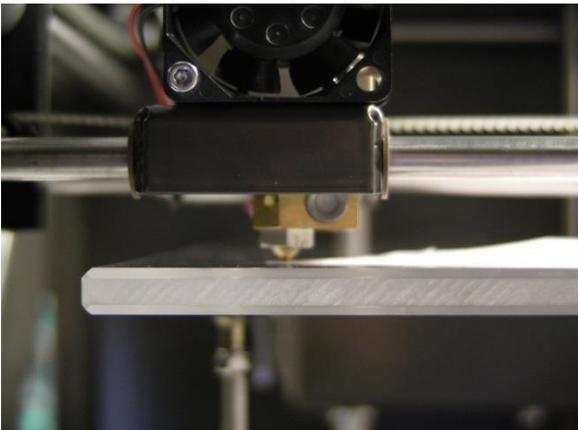
Make sure the Port matches the one selected in Pronterface.

7. CHECK BED HEIGHT

The height of the bed is vital for printing accurate 3d objects. The Bed is adjusted before the Builder is shipped out. During transport the bed height might be affected.

Always check the bed height before starting to print an object!

1. Make sure that the bed fits over the screws in the corner. Do this while the extruder is cold
2. Add a layer of Tape to the bed. Tape should be replaced every 5-10 prints to ensure good adhesion.
3. Check the Bed height by sending the extruder to all four corners. At every corner the space between the extruder and bed should be 0.2MM. A good reference is fitting a piece of paper in between. The piece of paper should barely fit but should NOT get stuck in between.
4. If needed adjust the bed, and repeat step 3. Until the required 0.2MM had been reached.
5. **Tip:** most software offers the option of printing a “calibration-square”.





8. MAINTENANCE

Oil the moving parts of the builder. After oiling the parts will have to move some time to distribute the oil evenly. When distributed the oil will make sure the parts move smoothly.

The extruder needs maintenance as well. Due to feeding the wire thru some dust may build up under the lid. Remove this dust in order to prevent the filament feed to get stuck.

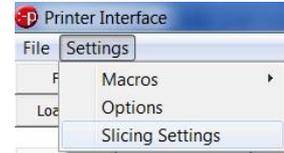
Tiny pieces of filament residue may get stuck to the extruder.

!!WARNING!!

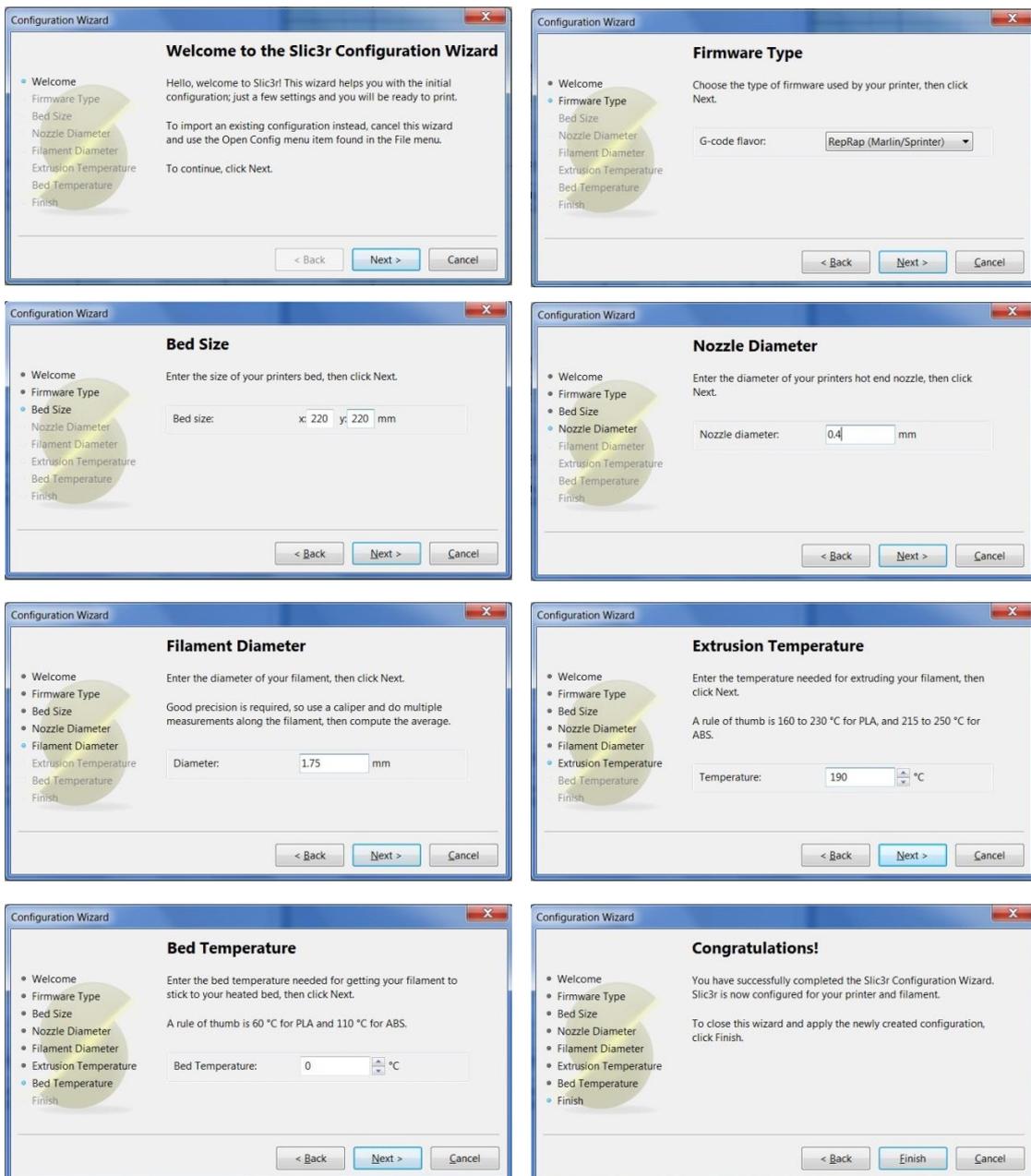
Make sure the extruder has cooled down before attempting to clean it!

9. MAKING YOUR FIRST PRINT WITH PRONTERFACE

The first step before printing a model is to convert a STL-file to a G-code. This is done by a small program known as a “slicer”. U can start up a slicer from the Pronterface menu -> select “settings” -> “Slicing settings”.*



*When selected the Configuration wizard should startup. If this doesn't happen select “help”-> Configurations wizard en follow instructions

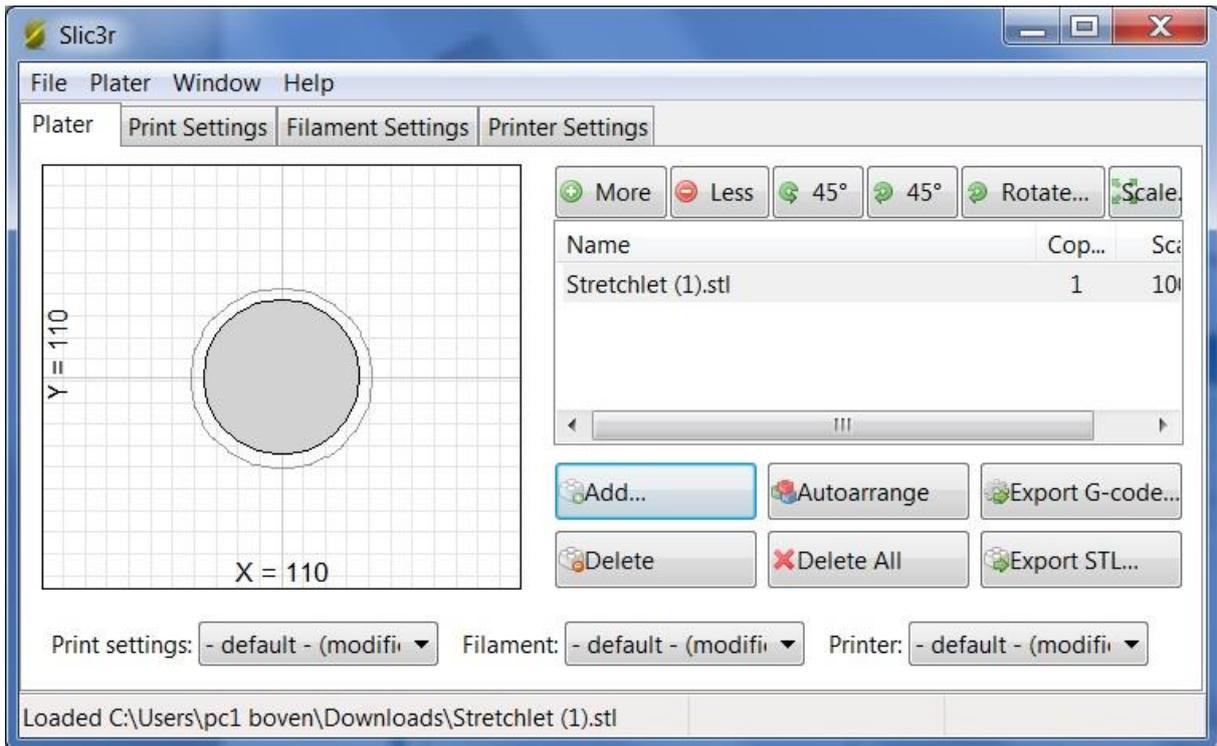


The Configuration Wizard consists of the following steps:

- Welcome to the Slic3r Configuration Wizard:** Introduction and instructions to click Next.
- Firmware Type:** Select G-code flavor (e.g., RepRap (Marlin/Sprinter)).
- Bed Size:** Enter printer bed dimensions (x: 220, y: 220 mm).
- Nozzle Diameter:** Enter hot end nozzle diameter (0.4 mm).
- Filament Diameter:** Enter filament diameter (1.75 mm).
- Extrusion Temperature:** Enter temperature (190 °C). Includes a rule of thumb: 160 to 230 °C for PLA, 215 to 250 °C for ABS.
- Bed Temperature:** Enter bed temperature (0 °C). Includes a rule of thumb: 60 °C for PLA, 110 °C for ABS.
- Congratulations!** Wizard completed successfully. Click Finish to apply settings.



After completing the wizard you can load up your STL file in order to create a GCODE. Once the code is generated select "export G-code".



Load the Gcode in Pronterface and click "Print"

For tons of shared designs check out www.thingiverse.com or www.turbosquid.com

