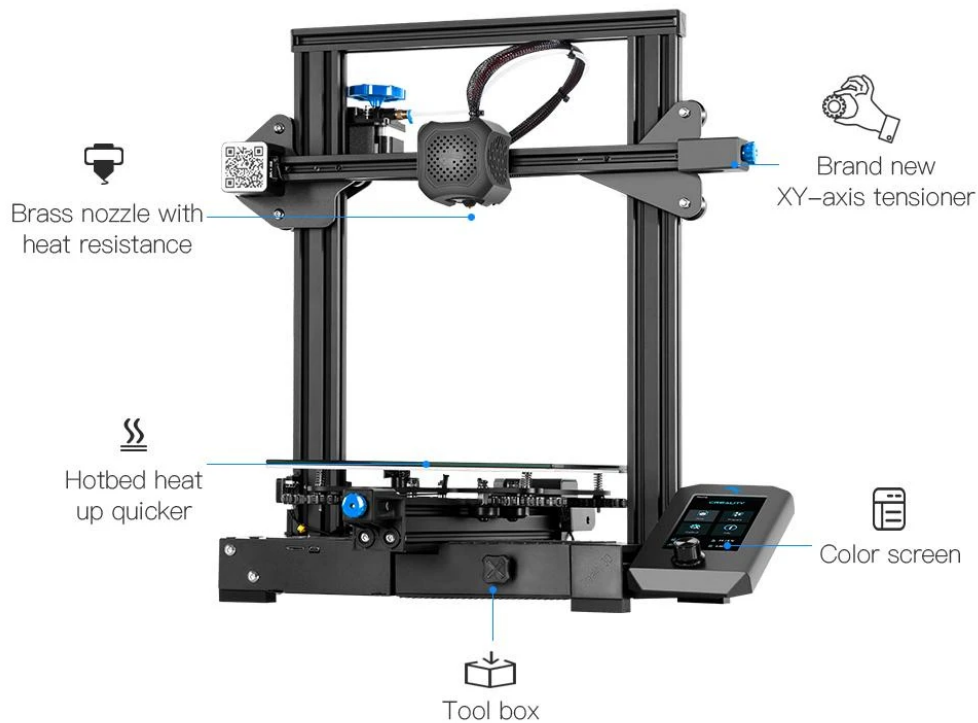
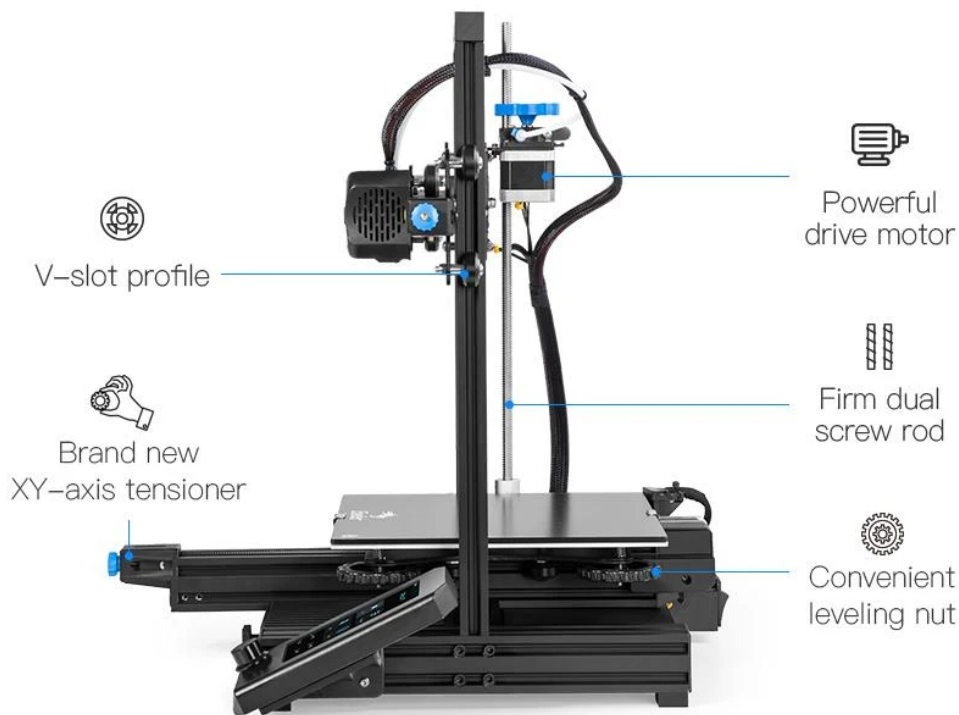


Ender 3 v2

Our Ender 3 v2 Printers

At MSL, we have 3 of these printers. Each one is connected to an OctoPrint Server. The links for these are: [Ender-001](#), [Ender-002](#), and [Ender-003](#)





Leveling the Bed

Leveling the bed is manual, and you will use the large black wheels under the corners of the bed. As a refresher from the 3D Printing class that I KNOW you took:

1. Use the display to select Prepare and then Auto home. This will take a second and the printer will home the X/Y/Z axis and then stop
2. Turn off the power on the back of the printer (the screen will not turn off, but you'll hear the fans stop)
3. Now take a regular piece of laser printer paper and check the distance to the head in several areas going around to all of them 2 or 3 times.
 - a. move to the front left corner (about an inch or so from both edges) and check it.
 - b. Looking down from above, the wheel turns
 - i. CLOCKWISE to make it tighter (Bed moves UP)
 - ii. COUNTER CLOCKWISE to make it looser (Bed moves DOWN)
 - c. get it so that it is firm, but not impossible to move the paper.
 - d. Move to the front right corner about an inch in again. Repeat
 - e. Back right. Repeat.
 - f. Back Left. Repeat.
 - g. Now go around again at least once.
4. You can now turn the printer back on.
5. On each printer there should be a file on the SD card called AA_Level_Test
 - a. To get to it, Select print from the menu and a list of files should come up.
 - b. It should be at the top...but...if not find it and click to select and print.
6. This will print three lines going around the bed of the printer and then five disks in each corner and the center.
 - a. As it starts to print the lines, look at them and you can adjust the wheels as it is going (carefully)
 - b. If it looks too thin, clear or non-existent, turn the wheel in that corner an 1/8 of a turn at a time COUNTER CLOCKWISE
 - c. If it looks too thick, rounded, or not sticking to the bed, turn the wheel in that corner, 1/8 of a turn at a time CLOCKWISE.
7. Once the lines are done it will print the three disks
 - a. Each of these is a single layer of material.
 - b. The disks should be smooth, few or no lines, opaque, and stuck to the bed.
 - c. If they are falling off, bed is too low.
 - d. If they are clear or translucent, the bed is too high.
 - e. Adjust and print again.

Printing your file

Slicing

If you have not Sliced your 3D Model yet, you will need to use Cura or another program to create the .gcode file needed for the printer. If you've taken the class run back through the handouts and refresh yourself on how to select a layer height, infill, support or not, bed adhesion, or not, and printing temperature (depends on your filament).

After you click Slice, you will save a gcode file to your USB Device, or a temporary file on the computer.

OctoPrint

Bring up the Octoprint page for your printer. It should have a display that says operational. For more information, go to [OctoPrint](#) on our wiki.

Now drag your gcode file to the left hand side of the OctoPrint web page. It will change color and say Upload Locally. Once it says that, you can release and drop your file there.

Give it a second and it will show up in the list. Click the PRINT icon and your file will start to print.

Before you leave

You are welcome to leave your print going unattended. Do these few things before you leave it.

1. **Write your print in the log book.** Include date, name, estimated print time, and printer. (Failure to do this will result in the 3D printing area getting less funds for new toys)
2. **Get a sticky note and put your name on it** and put it on the table in front of the printer you are using.
3. If you have an estimated time, or any instructions for the person removing your print, add that if you'd like.
4. Now make sure that your bottom layer looks good. You should have a layer that is adhering to the bed, no voids, not too thin.
5. OK, you're done. You can leave it going and come get it later when it's done.

More questions?

Post a question on the [#3dprinting](#) Slack Channel., Message the [3D Printing Steward](#), or call one of the people on the 3D Printing Stewards list.

More on the printers

Selection for yourself and why we chose what we did.

Creality3D has several printers in their line. They work themselves out like this:

[Ender 3](#) - two post printer with single Z, comes in a 3, 3 pro, and 3 v2 - [Amazon Discounts Here](#) Currently \$251.00

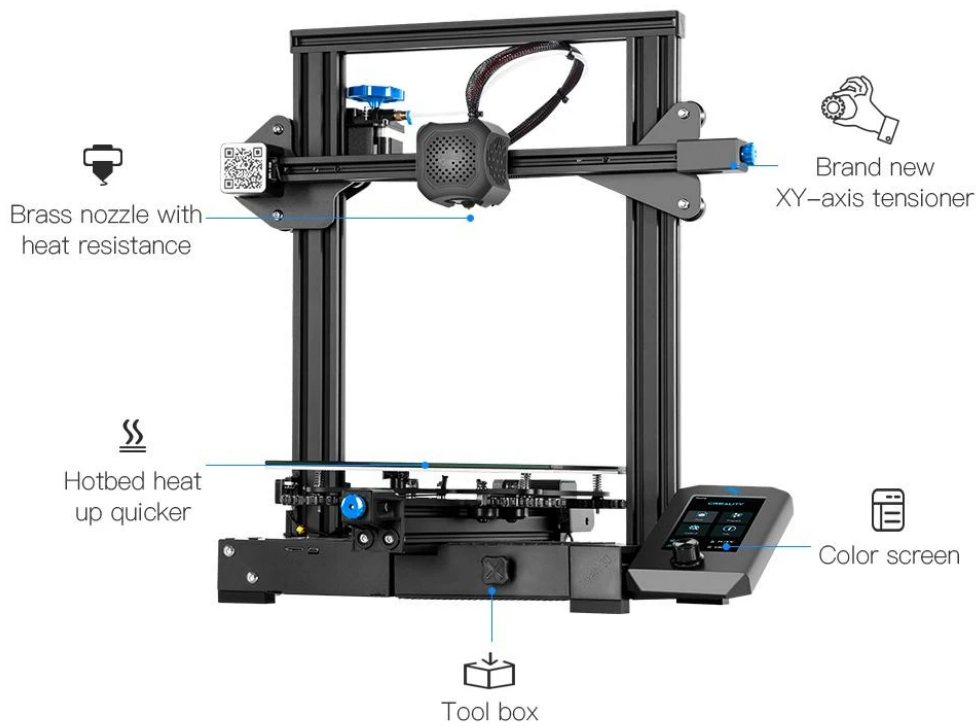
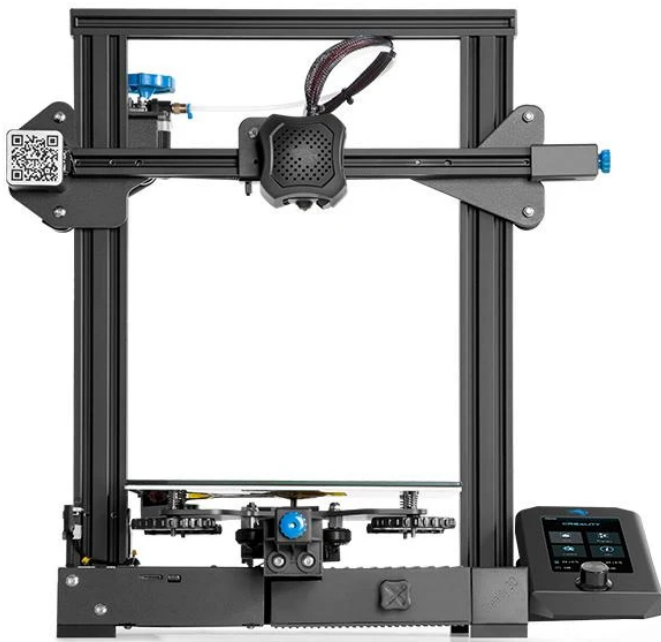
[Ender 5](#) - 4 post box style printer, better for stability on the xy axis, easy to enclose for ABS

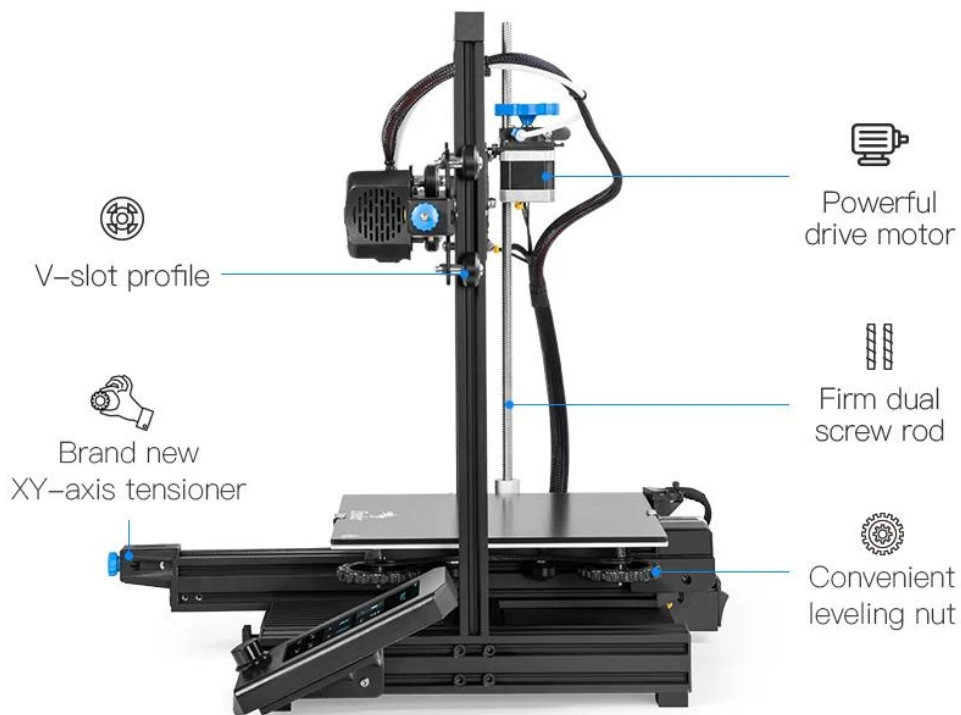
[CR-6 SE](#) - 2 post printer with auto leveling and a filament sensor. Here is an old [article comparing it to the Ender V2](#)

[CR10](#) - Large 300x300 or 400x400 or 500x500 !!!! build platform

On the Ender 3 line, the Ender 3 pro is a really nice printer, the v2 upgrades that with a silent board, Touch screen . This board is a REALLY nice.

Only do the Standard if that \$25 is a real budget killer. Otherwise start at the Pro and really try for the v2.





Ender 3 Edition	Std	Pro	v2
Rough Price	175	199	259
v-Profile pulleys	X	X	X
Heated Bed	X	X	X
Z-Axis Steppers	1	1	1
X-Axis tensioner knob			X
Meanwell Power Supply		X	X
Hidden Power Supply			X
Tool Drawer			X
Removable Magnetic Bed		X	
Borosilicate Glass Bed			X
Color Control Panel			X
4.27 Main Board			X
Silent Stepper drivers			

The V2 is at creality3d.com

See the whole line here: [Creality Ender 3 v2](#)