3IDEA Creality Ender 5 Plus 3D Printer with BL Touch, Glass Plate and Touch Color Screen, Large Build Volume 350 * 350 * 400mm

Ender 5 Plus parameter

Printing Method	FDM
Print Dimensions	350*350*400mm
Display	4.3 inch
Print Accuracy	±0.1mm

Nozzle diameter	Standard 0.4mm
Nozzle Quantity	1
Nozzle temperature	≤260℃
Hot Bed Temperatur	≤110℃
Working modes	online or TF cards are printed ofline
File formats	STL、 Odj、 and Slicing
Software	cura、 Repeti-Host、 Simplify 3D
Power parameters	Input:100-240V AC;Output:DC 24V 21A;Max25A
Printing Materials	PLA、 ABS、 Soft Glue、 Wooden、 Copper Containing、 Gradient, etc.

Consumables Diame	1.75mm
Net Weight	18.2KG
Machine Size	632*666*619mm
Gross weight	23.8KG
Package size	730*740*310mm

Creality Ender 5 Plus advantages

- 【Cube Frame 3D Printer】Very solid cube frame. Box Design with Overhead Gantry.
- 【Ultra Large Printing Format】350X350X400mm. Meet more of your printing requirements. Your idea should not be confined. Achieve better print results and a larger print model at a time.
- 【Auto Bed Leveling Pre-Installed】With BL Touch as configured. You just plug them in and start printing!it can precisely measure the tilt of the Bed surface, offers the automatic compensation for the Z-axis for unevenness of the platform plate, easy to solve the printing failure caused by the unevenness of the platform and provide reliable operation with all build surfaces.
- 【Dual Z-Axis】Stable Z-axis Lead screw drive smoothly and steady. The movement of the build plate will be more stable.

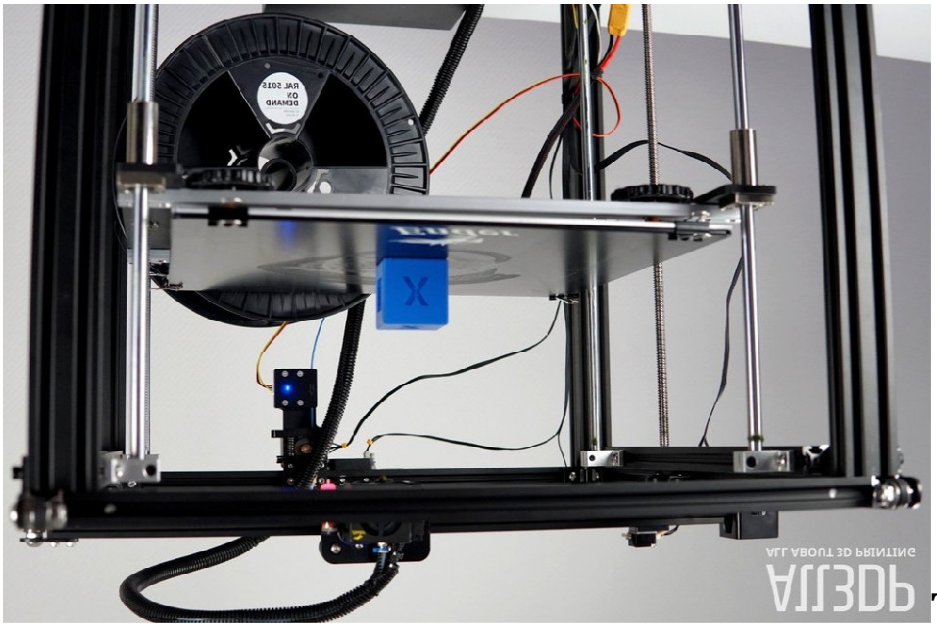
It's Much Bigger

Well, pretty obvious, isn't it? While the build volume of the smaller Ender 5 (220 x 220 x 300 mm) is enough for most prints, it is always

convenient to have extra space for bigger tasks. The Ender 5 Plus offers precisely that. Its glass bed boasts an area of 350 x 350 mm, while the Z-axis stretches to 400 mm. That‘s bigger than the print volume on a Creality’s CR-10S, which sat at 300 x 300 x 400 mm.

The outside measurements are 632 x 666 x 619 mm, so be prepared to free up some space in your workshop. Thankfully, no components are stored outside of the printer itself; the filament spool and the power supply sit within the frame.

More Stability (and Noise) for the Z-Axis



The printing bed of the Ender 5 is mounted on 4 rods and 2 lead screws (Source: All3DP)

The Ender 5 sub-series of printers use a Gantry design, with the print head arranged at the top of the printer. While printing, the bed lowers itself through the Z-axis.

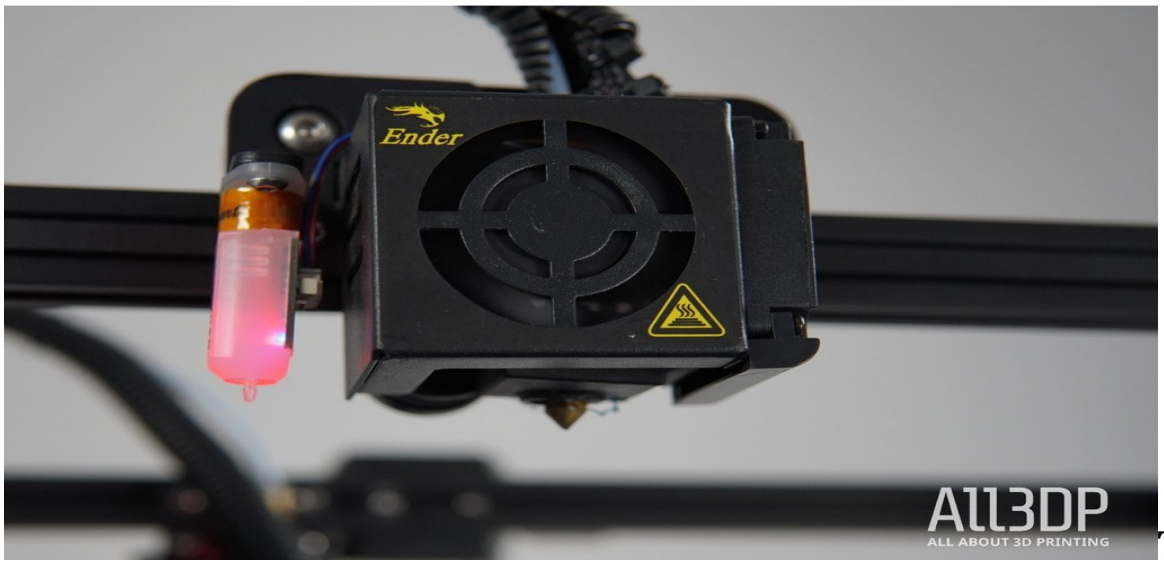
Each axis has a dedicated stepper motor. The Y-axis' motor drives both belts at the same time. This results in an overall smoother movement and fewer layer shifts. The Z-axes are mounted in the middle of the bed with large 8-mm-rods stabilizing each side – in theory, quite a clever way of getting smooth motions while keeping the stability.

In our test model, we found that these guide rods weren't lubricated, resulting in an unpleasant grinding and squeaking noise. After applying some lube, things got a little better, but the printer wasn't exactly quiet.

One of the biggest drawbacks of tall fused filament fabrication (FFF) printers is Z-wobble, resulting in visible layer lines. This printing failure mostly occurs when the Z-axis rods aren't perfectly straight or incorrectly mounted.

Creality tries to solve the problem by not only throwing in a second rod but four. In addition to the two lead screws appended to the Z-axis stepper motors (one on each side), four smooth rods – one for each corner of the bed – function as guides for the bed's travel. This should mean you get more coherent layers, even in taller prints.

Bed Leveling Probe Woes



The probe is mounted to the left side of the extruder. This makes it problematic to measure the right outer edges of the print bed. (Source: All3DP)

Auto-leveling is pretty uncommon on stock Ender printers. For the Ender 5 Plus, Creality threw in an Antclabs' contact-triggered BLTouch proximity sensor (check out our BLTouch sensors guide here.) It is supposed to assist you in the bed-leveling process: The probe physically measures the bed; the Marlin-firmware then is capable of compensating for uneven spots.

Yet, leveling the bed turned out to be quite problematic. As the probe is mounted seven centimeters left of the extruder, measuring just physically doesn't work. The placement of the probe makes it impossible to measure the entire bed, so roughly two-thirds of the plate is being measured, while the rest can't be accessed. A firmware upgrade promised to deliver a solution but didn't address the problem.

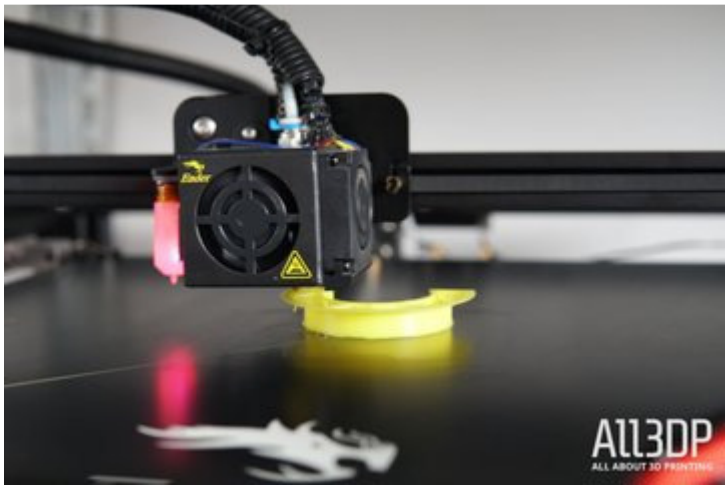
That being said, Creality is known to iterate the machines very fast, so you might see the probe mounted in a different position soon.

And as an alternative, you still can level the bed by hand (which we did for this 10-hour review.)

Additional Notes

- Filament sensor and power failure resume are commonplace now, making a welcome return in the Ender 5 Plus.
- The Ender 5 Plus features a V2.2 Creality mainboard, not cutting edge and a little restrictive if you wish to upgrade things later, but a capable board that also works well for the Ender 3 and Ender 3 Pro.
- The machine came pre-built and was up and running in an hour.

Benchmarking



To get a good first impression for our Creality Ender 5 Plus review, we printed the two most popular torture tests on a new, freshly unboxed and unaltered machine, using PLA filament and averaged slicer settings for the ranges specified for the material.

Benchmarking Object 1: Benchy

Although the model itself was dimensionally accurate, layer lines were clearly visible. (Source: All3DP)

We used white eSun PLA+ filament. For preparing the needed G-code, we used the slicing software Creality included on the provided SD card. Unfortunately, with no printer profile provided for the software, we had to modify the original Ender 5's profile and adjust to the proper dimensions of the Ender 5 Plus – something Creality should fix as soon as possible. We set the hot end temperature to 215 °C, and the bed to 60 °C.

It took us one attempt to 3D print a Benchy.

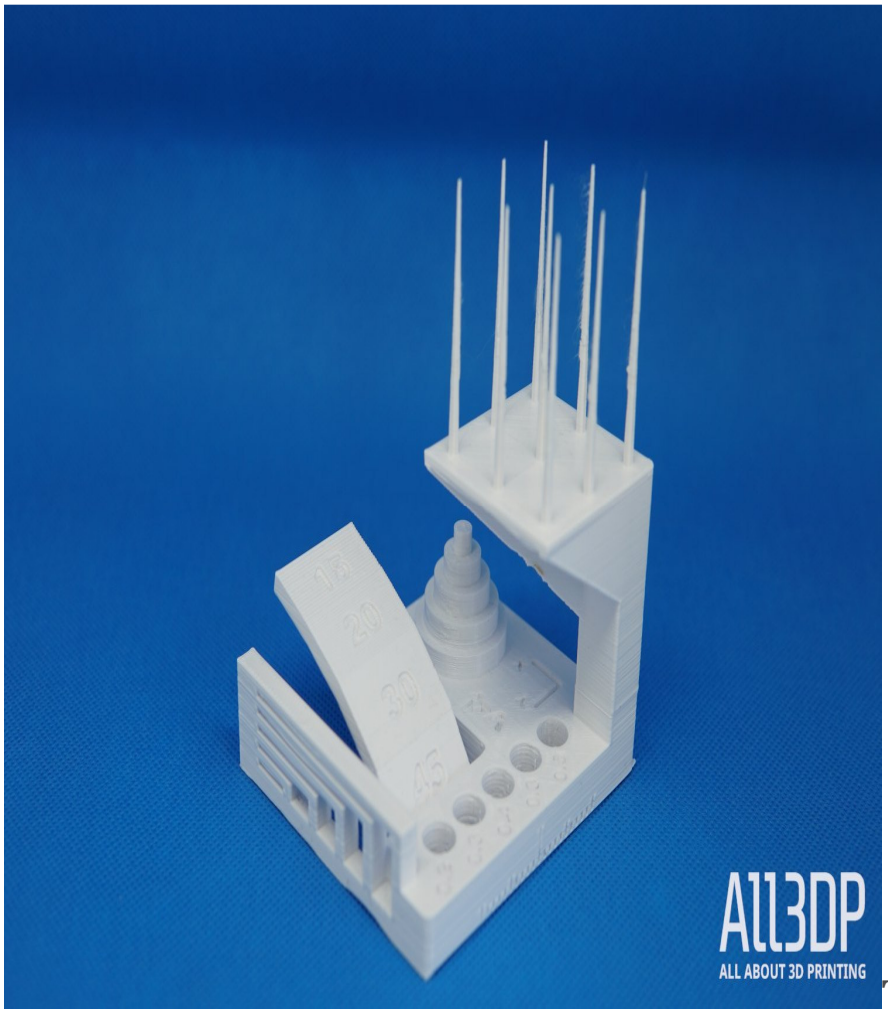
Besides the inconsistent layers, the Benchy turned out good (Source: All3DP)

We measured the physical dimensions of the print. The Creality Ender 5 Plus achieved a perfect **15 out of 15 points**. Yet but we found several problems at the visual inspection.

- **Surfaces**: As you can see in the image above, the obvious problem we found were the layers. They layer lines were off in the Z-Dimension, indicating either mechanical friction of the Z-axis or the belts (which were tight, though). Also, we encountered minor extrusion errors, mainly some zits and blobs, which typically can be corrected in the 3D slicing problems.
- **Details**: When it came to printing details, the Ender 5 Plus did well. Even the Benchy's plaque, which is notoriously difficult to print clearly, is visible. Also, the chimney was printed round and well.

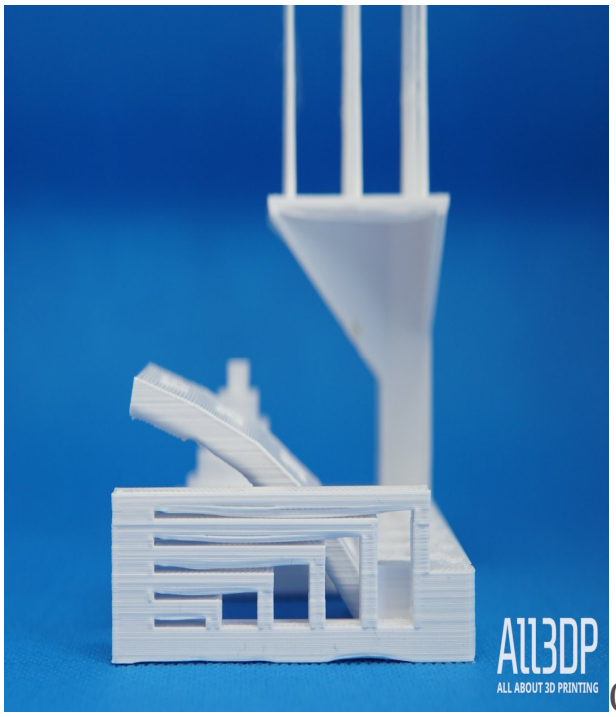
- **Overall consistency**: The general consistency of the print was fine, with no under- or over-extrusion to be found. The Benchy's hawsepipe and bridge windows were also consistent.

Benchmarking Object 2: Kickstarter Autodesk Test



This print is one of the highest-scoring Kickstarter-Test we ever printed (Source: All3DP)

The Autodesk Kickstarter test model looks at an FDM printer's precision. We used the same white eSun PLA+ filament and the same temperature settings (215 / 60.)



One of the few flaws on this Test is the failed top bridge (image: All3DP)

With a score of **27 of 30 points**, the Creality Ender 5 Plus did exceptionally well. Measuring aside, while inspecting the printer test visually, we found several problems:

- **Surfaces**: Our test print warped on the first layers. Overall, the surfaces turned out to be a little crude and wavy.
- **Details**: Positive: The spikes turned out very well, with nearly no stringing. Negative: The negative lettering was hard to read.
- **Consistency**: The overall consistency impression was only mediocre, mostly because of the layer lines and uneven surfaces, especially on the overhangs.