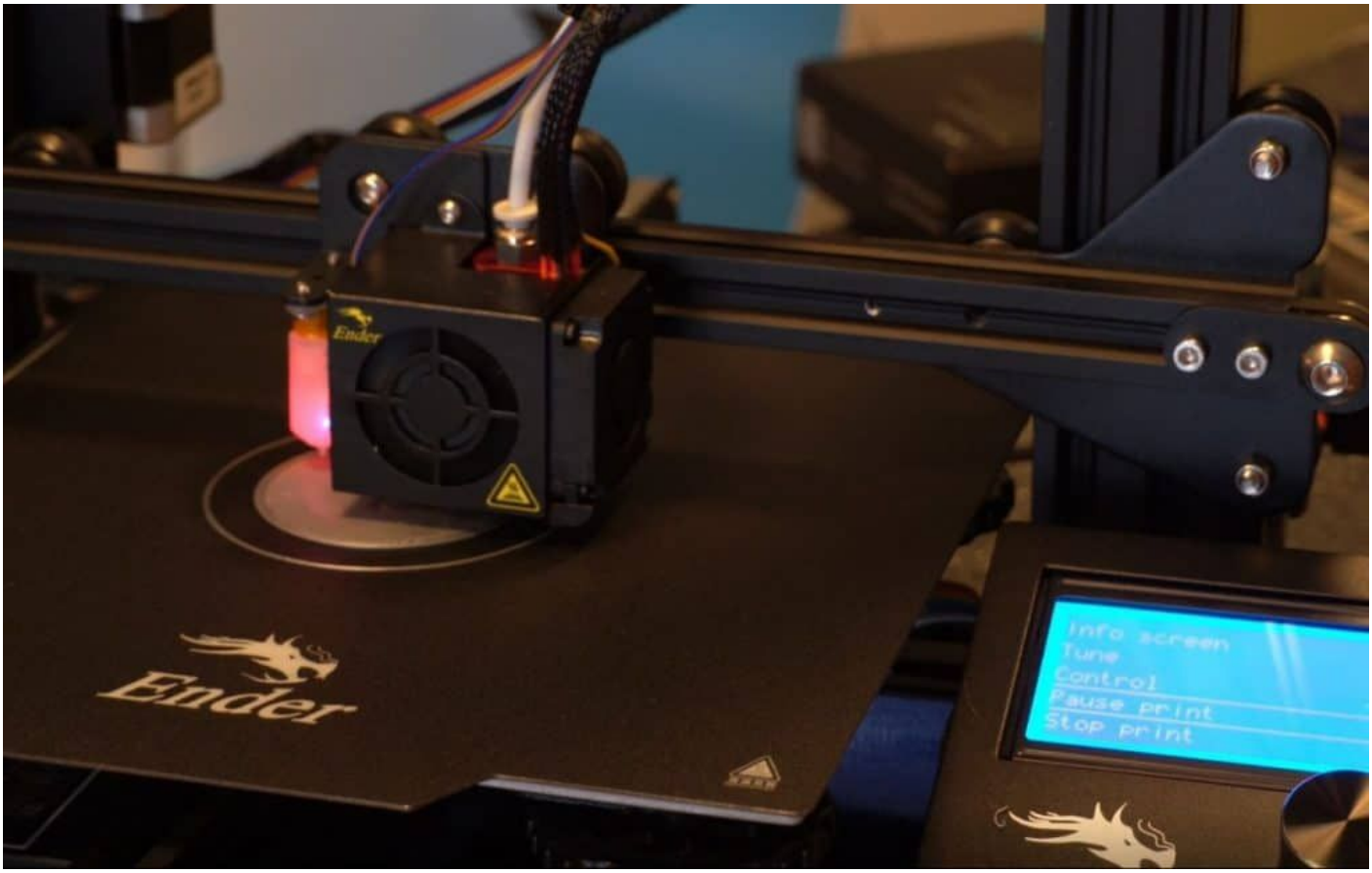
Why Are 3D Printers Getting So Cheap?

If you're a 3D printing enthusiast, you may have noticed the cost of 3D printers getting lower and lower. While this may be great for your hobby and for others to get into it, you may be wondering why and if the lower cost means lower quality.

3D printers are getting so cheap recently because manufacturers are using more low-cost materials, and hobbyist hardware startups are purchasing components in larger quantities. There's also a significant increase in the number of manufacturers, driving down the price due to competition.

The rest of this article explains why 3D printers are getting cheaper, if it's really more economical to buy a cheap 3D printer instead of a professional-grade one, and the cost of 3D printing materials. If you're looking into buying your first 3D printer for yourself or your company, keep reading.



Why 3D Printers Are Getting Cheaper

The reduction in the cost of 3D printers is mainly because the technology has been evolving. As the technology improves, printers go down in price, become easier to set up and operate, and are more reliable.

According to procurement research analyst Agiimaa Kruchkin, the costs of the raw materials used in 3D printers are also decreasing, which allows companies to sell the machines for less. There is also more competition in the 3D printer space than ever before, so many companies feel the pressure to offer a low-cost option to consumers.

For the first few years of 3D printing, printers were only manufactured by two companies: Stratasys Ltd. and 3D Systems, Inc. However, the world of 3D printing is drastically different now, with an estimated 100 suppliers in 2015.

Are Cheap 3D Printers Economical?

If you're a hobbyist, a cheap 3D printer may be perfect for you and your needs, and therefore the low cost is a bonus.

Cheap 3D printers aren't economical if you're serious about 3D printing and want to start a business, as they're more prone to breaking and requiring reprints. It may be worth investing in a higher-quality printer, though the initial cost is higher.

Here are some reasons why a higher-quality printer may be a better choice, despite the higher cost:

- **You'll get high-quality components**. Quality components will provide good quality printouts. While most cheap 3D printers are made with lower-quality materials and parts, professional 3D printers are made with the best equipment and components that'll last you a long time. You'll avoid the headache of printer failure if you go for the more expensive option.
- **Most professional 3D printer manufacturers also offer customer support.** If you buy a cheap 3D printer online and need help with it later, you may find it challenging to access the experts or information you need. However, purchasing some of the most professional-quality 3D printers guarantees that their group of experts can assist you in case of hardware malfunction.
- **You'll most likely spend less on repairs, maintenance, and repeating printouts.** With a lower quality printer comes more damage or breakage, so you'll have to pay to fix anything. Additionally, you may waste time and money on low-quality printouts.
- **A higher-quality printer means higher-quality printouts.** Dimensional accuracy in your 3D printouts is essential, especially if you're printing a prototype, a phone case, or something else that requires specific measurements. A more expensive, professional 3D printer ensures that you get the quality and consistency of printouts that you need.

For a professional-level 3D printer, I recommend the Dremel DigiLab 3D45 3D Printer (available on Amazon.com). This printer is award-winning and comes with a heated build plate, a 4.5-inch (11.43 cm) color screen, and wifi connectivity. Additionally, it comes ready to use right out of the box, so there's no complicated assembly required.

It may seem like a no-brainer at first to buy the cheapest 3D printer you can find if you're trying to save money, but I encourage you to consider all the factors before making any rash decisions.

If you're set on buying a cheap 3D printer, my favorite is the Voxelab Aquila 3D Printer (available on Amazon.com). This model isn't easily warped, and it's also quieter than other printers in its price range. Additionally, it comes partially assembled and with an easy-to-follow setup kit, so the assembly isn't too complicated.

Another option is the Ender 3 3D Printer (available on Amazon.com). This is one of the most popular inexpensive 3D printers, and it's easy to see why. This printer can continue printing even after a power outage or any sort of lapse, which will save you from having to do too many reprints. Additionally, the upgraded extruder technology reduces plugging risk and helps minimize noise.

How Much Do 3D Printing Materials Cost?

The cost of your 3D printing materials depends on how often you're printing and the sizes of the models you're making. PLA, ABS, and PETG filaments cost approximately $20-$25

per spool and are some of the most popular options due to their low cost.

Filaments

FDM printers use thermoplastic filaments, like the aforementioned PLA, ABS, and PETG filaments. These filaments are also pretty easy to print with, but they may be too weak for some applications.

I like the Amazon Basics 3D Printer Filament (available on Amazon.com) because it fits most common 3D printers and is easy to use. Furthermore, it doesn't require a heated bed, and it comes with a one-year warranty.

Other filaments, like wood, glow in the dark, and flexible filaments like TPU and TCU are also good options, but these materials are more expensive.

Even more costly are the high-quality filaments like fiber and PEEK filaments. These materials should only be used when you need your printout to be as strong as possible because of the high cost.

Polymer Resin

SLA printers use photopolymer resin as the base printing material, and these can range from standard entry-level resins to high-performance resins, with the cost varying with quality. The strategy behind 3D printing with photopolymer resin is based on curing the resin upon exposure to form thermosets.

I like the IFUN High Clear Resin 3D Printer (available on Amazon.com) for resin because it's suitable for most SLA printers, and the resin keeps the model from yellowing.

Nozzle

You'll also have to keep in mind nozzle maintenance and replacement. Nozzles are essential parts of 3D printers as they are responsible for holding the filaments in place and conducting

the heat energy required to melt and extrude them. Because of these functions, they need to be replaced every three to six months.

You can get the 0.4MM MK8 Ender 3 Nozzles (available on Amazon.com) for cheap. These nozzles come with 25 pieces, so you'll always have the size you need, and they make extremely precise cuts.

Related Articles

- Why Is 3D Printing Resin So Expensive?
- Is It Cheaper to 3D Print D&D Miniatures?
- 3D Printing Actual Costs with Examples
- Will 3d Printing Replace Injection Molding?
- Create a Temperature Tower Using Cura – The Easy Way

Conclusion

If you've been curious about 3D printing and want to give it a try, now is a great time to buy your first 3D printer because they've become so inexpensive. You can always determine

afterward if it's worth it for you to invest in a higher-quality and more expensive printer. Happy printing!

Make sure you check out our YouTube channel, and if you would like any additional details or have any questions, please leave a comment below or join us on Discord. If you liked this article and want to read others click here.

Rob

I'm Rob, the founder of 3dprintscape.com. I'm a Marine Corps vet with a master's degree in Information Systems and have been working in the technology field for over a decade. I started working with 3D printers because I was fascinated by the technology and wanted a hobby that my kids and I can enjoy together.

Leave a Reply

You must be logged in to post a comment.

Recent Posts

3D Printer Stepper Driver – Detailed Overview!

Without stepper drivers, the motors on your printer wouldn't rotate smoothly. 3D printer stepper motor drivers regulate the voltage supplied to the motor to move it fractions of a step instead...

Continue Reading

Cura Won't Open - Potential Causes and Fixes!

Cura is one of the most popular 3D printing slicers. But, many apps and programs can have a glitch from time to time and not open. In this article, I will explain step by step how to fix Cura so that...

Continue Reading

ABOUT ROB

I'm Rob, the founder of 3dprintscape.com. I'm a Marine Corps vet with a master's degree in Information Systems and have been working in the technology field for over a decade. I started working with 3D printers because I was fascinated by the technology and wanted a hobby that my kids and I can enjoy together.

IMPORTANT LEGAL INFORMATION

This site is owned and operated by 3D Printscape. 3D Printscape is a participant in the Amazon Services LLC Associates Program, an affiliate advertising program designed to provide a means for sites to earn advertising fees by advertising and linking to Amazon.com.

About Me Privacy Policy