

Frequently Asked Questions

MakerBot® Smart Extruder+

What is a MakerBot Smart Extruder+?

The MakerBot Smart Extruder+ is the swappable part of your MakerBot Replicator® 3D Printer that melts, deposits, and fuses filament in precise layers to create 3D printed objects.

What makes it smart?

A system of sensors keeps you connected to the MakerBot Ecosystem, meaning you stay informed of your 3D print's status wherever you are.

- The positioning sensor assists with automatic build plate leveling for the MakerBot Replicator Mini and assisted build plate leveling for the MakerBot Replicator and MakerBot Replicator Z18. A level build platform is essential for the 3D printing process and the positioning sensor helps to take the fuss out of leveling.
- The filament detection sensor ensures filament is present in the extruder at all times. If filament runs out, your print is paused and a notification is sent to MakerBot Desktop and MakerBot Mobile to prompt you to load more filament before resuming the print.

Constant communication between these sensors and the MakerBot Ecosystem minimizes your downtime and keeps the guesswork out of your printing workflow.

How is the MakerBot Smart Extruder+ different than the MakerBot Smart Extruder?

The MakerBot Smart Extruder+ is engineered and extensively tested for better performance. Improved components within the Smart Extruder+ reduce clogging to extend the life of your extruder. The enhanced sensor system improves detection while improved alignment between your extruder and carriage ensure proper connection. These enhancements make the Smart Extruder+ easier to use and ensure greater print success over longer periods of time.

How is the Smart Extruder+ different from the extruder on other desktop 3D printers?

Most desktop 3D printers include a non-swappable extruder without sensors or connectivity to the 3D printer's corresponding software. This requires the user to be more actively involved in monitoring their 3D printer. The design of the Smart Extruder+ makes 3D printing more accessible with an easy-to-use design that doesn't require a toolbox.

I have more than one MakerBot Replicator 3D Printer. Will the same Extruder+ work for all of them?

There are two versions: one that's compatible with the MakerBot Replicator Z18 3D Printer and another that's compatible with both the MakerBot Replicator Mini Compact 3D Printer and the MakerBot Replicator Desktop 3D Printer. To ensure optimal functionality, select the extruder that is compatible with your MakerBot Replicator 3D Printer.

What do I need to use the Smart Extruder+?

In order to take advantage of all that the Smart Extruder+ has to offer, you must upgrade MakerBot Desktop to version 3.9 and your MakerBot Firmware to version 1.9.

What materials work with the Smart Extruder+?

The Smart Extruder+ is optimized for use with MakerBot PLA Filament only. Using materials other than MakerBot PLA Filament will void your limited warranty.



Where can I find Smart Extruder+ instructions and troubleshooting tips?

For instructions on installing your Smart Extruder+, loading and unloading filament, or tips on taking care of your Smart Extruder+ (like how to unclog your Smart Extruder+) and more, visit our helpful Support webpage at www.makerbot.com/support and select your MakerBot 3D printer for printer specific tips.

How long will my MakerBot Smart Extruder+ last?

The rate of wear on the Smart Extruder+ is dependent on how you use it and the settings it's configured for over time. In our extensive testing, the Smart Extruder+ lasts for over 700 hours of printing with MakerBot PLA filament. This timeframe is the equivalent of the following:

- 2,310 meters of filament
- 7 large spools of MakerBot PLA filament
- 1.44 miles of filament

If continuous production and minimal downtime is a priority, we recommend you keep at least one spare Smart Extruder+ on hand so that you can easily swap it into place when you need it. See our video for tips on correctly using and extending the lifespan of your Smart Extruder+.

What are the signs of Smart Extruder+ wear?

After 700 hours you may notice more frequent clogs in your Smart Extruder+ and under-extrusion of filament. Under-extrusion can show up as gaps, cracks and "skips" in your 3D print. You may also hear a repetitive clicking noise coming from your Smart Extruder+. If you run into any of these issues, it may be time to replace your extruder. Be sure to check out our Knowledge Base or reach out to support for further assistance.

How can I extend the life of my extruder?

Here are a few of the best ways to prevent issues with your Smart Extruder+ and extend its lifespan: Properly complete cool down, follow loading and unloading procedures, make sure your build plate is correctly leveled, and use MakerBot PLA filament. For more Smart Extruder+ tips, visit www.makerbot.com/smartextruder. For tips on using your extruder with your MakerBot Replicator 3D printer, visit our Knowledge Base.

When does the warranty period begin?

The warranty period for your Smart Extruder+ begins from the date of delivery. The Smart Extruder+ is covered on a non-recurring 6-month basis.

Can I get my Smart Extruder+ repaired?

MakerBot does not offer a Smart Extruder+ repair service at this time. However, if your Smart Extruder+ is within the limited warranty period from date of delivery and is having issues, please contact MakerBot Support to see if you are eligible to receive a replacement Smart Extruder+ for free.

Will future extruder designs be supported by my MakerBot 3D printer?

Our latest generation of MakerBot Replicator 3D Printers were designed with the ability to swap in new, compatible extruders. Those include the MakerBot Replicator Desktop 3D Printer, MakerBot Replicator Mini Compact 3D Printer, and the MakerBot Replicator Z18 3D Printer. At MakerBot we continuously strive to improve our products and what are customers are able to do with them.

