



Fidget Gear Ring



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Summary

A print-in-place herringbone planetary gear fidget ring (some sizes) - a great small fidget toy.

[Toys & Games](#) > [Other Toys & Games](#)

Tags: [ring](#) [fidget](#) [gear](#)

This is probably my best fidget toy! I printed dozens of them because people wanted them.

Edit: Meanwhile I have a bunch of different [fidget gear ring](#) designs.

EDIT: I reuploaded these as 3mf with **parts for easy coloring**; changing color of only parts 3 and 4 requires only 4 color swaps, allowing manual filament swaps or reducing waste for pooping single nozzle filament changers. Parts: 1: sun gear — 2: planet gears inner part — 3: planet top 2 layers — 4: planet bottom 2 layers — 5 ring gear.

I also added a **turn tool** and matching turn tool slots inside the ring, which makes it easier to break it loose, and to break it in with a power tool.

And I added a set with a **slightly wider tolerance** for those who have difficulties breaking the rings free or run smoothly.

It's a small, but satisfying fidget toy. You'll probably not want to wear it all the day due to its size, but it's unobtrusive enough so you can still do a lot of things while wearing it. But while wearing it, you have a fidget thing

right at hand for some quick fidgeting. (I'm wearing one as I type, and fidgeting with it when I'm thinking about what to type next.)

Also the little planet gears look like plus signs - for some positive influence :) and they look quite a bit mesmerizing when moving in perfect unison.

I uploaded 5 sizes, 14mm, 16mm, 18mm, 20mm and 22mm. If you need another size, ask in the comments and there's a good chance I'll make that.

Printing:

- 0.4mm nozzle (or lower?),
- random seam placement,
- I use 0.17mm layer height.
- Tolerances are tight; requires a well tuned printer.

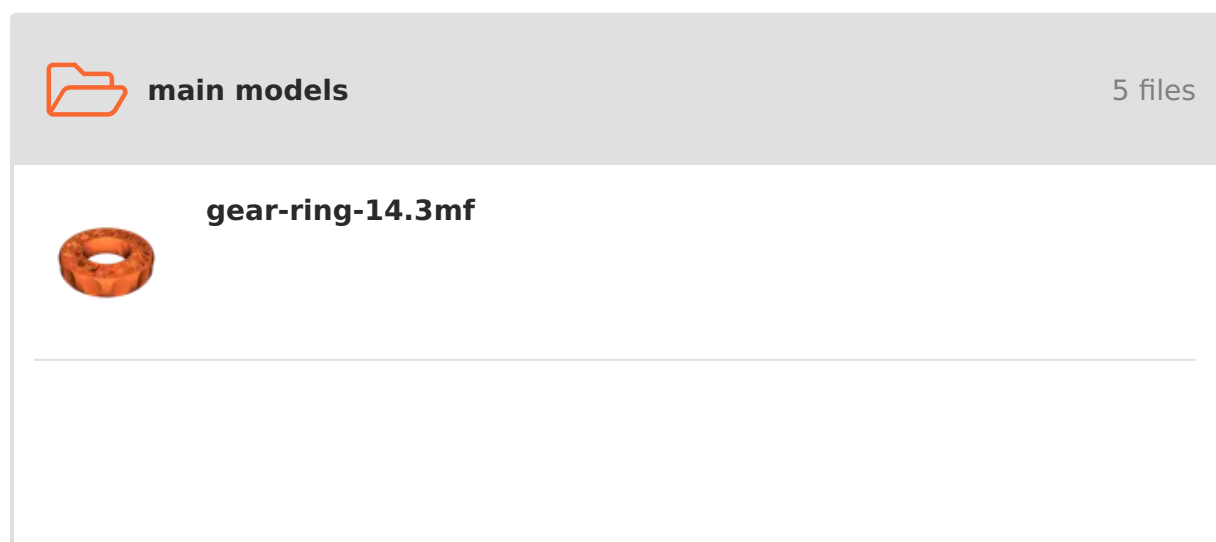
You might need to use a bit of force to break the gear loose at first, but after a bit of breaking in it is supposed to run quite smoothly.

If you can't get it free, try:

- a different filament, some work better than others. Silk seems to be prone to fuse.
- reducing the extrusion multiplier (flow ratio) a bit
- or use a slightly negative value for XY size compensation (PrusaSlicer), e.g. -0.02mm (Orca: contour -0.02, hole +0.02).

Happy fidgeting!

Model files





gear-ring-16.3mf



gear-ring-18.3mf



gear-ring-20.3mf



gear-ring-22.3mf



slightly wider tolerance

5 files



gear-ring-14w.3mf



gear-ring-16w.3mf



gear-ring-18w.3mf



gear-ring-20w.3mf



gear-ring-22w.3mf



old

6 files



ring-of-gears-14mm.stl



ring-of-gears-16mm.stl



ring-of-gears-18mm.stl



ring-of-gears-20mm.stl



ring-of-gears-22mm.stl

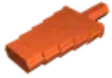


ring-of-gears-26mm.3mf

☐ custom request



gear-ring-turn-tool-14-16-18-20.3mf



gear-ring-turn-tool-14-16-18-20-22.3mf

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