



Fidget Gear Ring - Diamond Knurling



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Summary

A variant of a print-in-place herringbone fidget gear ring with diamond knurling

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This is a variant of my best fidget toy with diamond knurling, for those who like some more aggressive texture. Also see [my other fidget rings](#) (including a bracelet).

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:

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

Multicolor:

- If you have a Bambu-style multicolor setup, try adding one or two rings and set them to “flush into object” to convert purge poop into some strange colored bonus rings - see image. Also reduce the flush volumes, I used 99 mm³, but next time I'll reduce that further.

Happy fidgeting!

Model files



ring-of-gears-diamond-14mm.stl



ring-of-gears-diamond-16mm.stl



ring-of-gears-diamond-18mm.stl



ring-of-gears-diamond-20mm.stl



ring-of-gears-diamond-22mm.stl

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