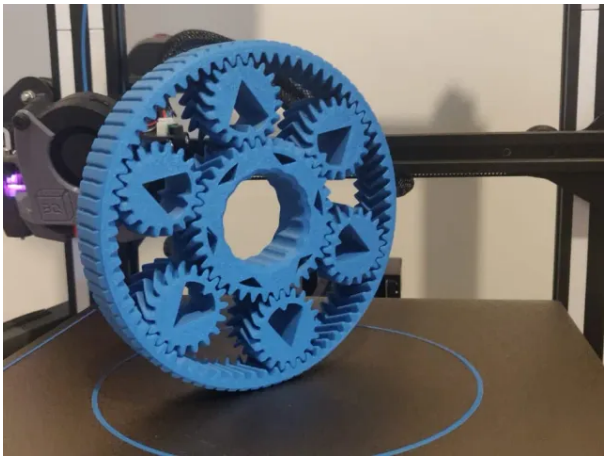


Planetary Gears Fidget - Print in Place

Shoshke

VIEW IN BROWSER

updated 13. 2. 2025 | published 13. 2. 2025

Summary

A Planetary gear fidget to keep your hands busy while thinking hard.

12.93 hrs	1 pcs	0.20 mm	0.40 mm	PLA	100 g	Prusa MK3/S/S+

Toys & Games > Other Toys & Games

Tags: fidget fidgettoy gears fidgetspinner planetarygear fidgethandspinner herringbone herringbonegears

This is a Herringbone Planetary gear fidget to keep your hands busy.

With a 3/1 reduction can also be used to demonstrate planetary gear reduction. (The ornate option is great for this demonstration)

The design incorporates herringbone gears for self-alignment and allows the model to be printed in place without coming apart.

Gear information:

Modulus: 1.5

Pressure Angle: 30

Teeth:

Ring Gear: 72

Planetary Gears: 18

Sun Gear: 36

Total reduction: 3/1

Important to note that the model MUST be printed in place as a group and the gears should not be printed separately as assembly can be very difficult to near impossible.

Printed at 0.2mm layers with a standard 0.4mm nozzle the model already incorporates tolerances to allow the vast majority of printers to print it easily without fusing any gears.

Additionally chamfers allow for easy printing even with a slight elephants foot without issues and gives a slick feel in your hands without sharp corners.

While I haven't managed to do so myself, theoretically there is a small danger of pinching your finger so keep away from small children. However thanks to the chamfers even if you somehow manage to pinch a finger there is no risk of damage or scratches.

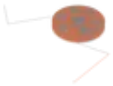
Hope you have fun

Model files

planetary-fidget.3mf

ornate-planetary-gear-fidget.3mf

Print files



planetary-gears-fidget_02mm_pla_mk3s_12h56m.gcode

PLA | 0.40 mm | 0.20 mm | 12.93 hrs | 100 g | Prusa MK3/S/S+

License

This work is licensed under a
Creative Commons (4.0 International License)

Attribution

✖ | Sharing without ATTRIBUTION
✔ | Remix Culture allowed
✔ | Commercial Use
✔ | Free Cultural Works
✔ | Meets Open Definition