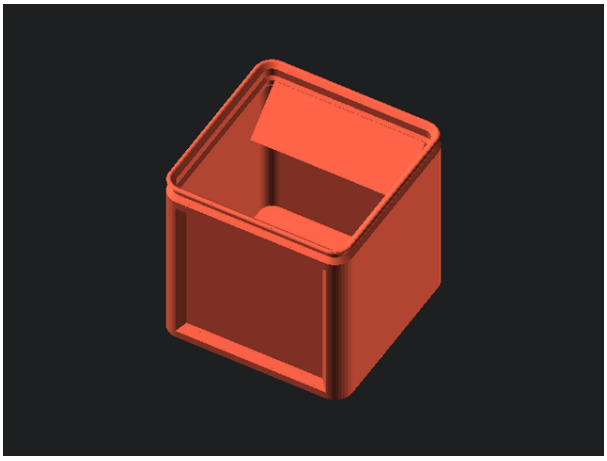

Spiral Vase Gridfinity in OpenSCAD

kennetek

VIEW IN BROWSER

updated 10. 12. 2022 | published 10. 12. 2022

Summary

Extension of my Gridfinity OpenSCAD rebuild to be compatible with vase mode.

1.63 hrs	2 pcs	0.35 mm	0.60 mm	PLA	47 g	Prusa MINI / MINI+

Hobby & Makers > Organizers

Tags: vase parametric organizer spiral bin openscad spiralvase spiralize gridfinity

Gridfinity by Zack Freedman is an open source design specification for printable organizers to optimize shop workflow. I felt that the provided Fusion models, while able to make many bins, were limited. They are not completely parametric and would often have rebuild errors. Thus, I developed a truly parametric version.

This is an extension of that version, which allows the files to be printed using vase mode. Vase mode is one continuous line of filament, which allows for blazing fast print times and lower filament consumption. A main

downside to other implementations of vase mode Gridfinity is that the bases mean only 1x1 bins are able to be made. I got around this by separating the bases from the bin. That means this is a multi-part print, so there is some assembly and superglue required, but hopefully the time and filament savings make up for it. (In fact, you don't have to print every single base, as some are unnecessary to support the bin, so you can save even more filament that way)

Instructions:

1. Edit the global parameters in the script or with the customizer. It is important to change the nozzle size and layer height so that it slices properly with your slicer.
2. Create a single base with the gridfinityBaseVase() command. You only need to do this once, and print as many copies as you need to fill the bottom of your bins. (highly recommend the “complete individual objects” setting in PrusaSlicer/SuperSlicer/Slic3r)
3. Create the bin component with the gridfinityVase().
4. Slice and print the files. Example STLs, PrusaSlicer projects, and GCODE are provided to illustrate how the output should appear.
5. Glue the bases to the bottom of the bins with superglue. The X-cuts will perfectly align the bases.

For up-to-date scripts and documentation, please visit the Github repository. The vase mode script is found inside the gridfinity-spiral-vase folder. I recommend cloning the whole repository (which includes the regular Gridfinity rebuilds) to maintain the correct file structure.

If you have any issues or feature requests, feel free to create an issue in the repository or contribute to the repository discussion forum.

Also, given how complicated the models are, I would love to see your successful slices and prints. I'm not sure if the vase mode alterations are fully compatible with all slicers, so seeing successful prints makes me happy.

This remix is based on

Gridfinity Rebuilt in OpenSCAD

by kennetek

Model files

gridfinity-spiral-vase.scad

generate the vase bin and base

gridfinity-rebuilt-utility.scad

base script, necessary to run vase script

gridfinity-constants.scad

06nozzle-035layer-base.stl

example base with my preferred printer settings

06nozzle-035layer-2x2x6-3div.stl

example bin with my preffered printed settings

06nozzle-035layer-base.3mf

example sliced base file with my preferred settings

06nozzle-035layer-2x2x6-3div.3mf

example sliced bin file with my preferred settings

Print files

06nozzle-035layer-2x2x6-3div_06n_035mm_pla_mini_1h9m .gcode

PLA 0.60 mm 0.35 mm 1.15 hrs 35 g Prusa MINI / MINI+

06nozzle-035layer-base_06n_035mm_pla_mini_29m.gcode

PLA 0.60 mm 0.35 mm 0.48 hrs 12 g Prusa MINI / MINI+

License

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

Attribution—Noncommercial—Share Alike

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