

Gridfinity Paint Rack Print & Fit Guide

Six sizes, one grid. Open a drawer and every color is facing you.

[Six Sizes](#)[No Supports](#)[Gridfinity Native](#)

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You know the sound. You open the drawer and half your Apple Barrel bottles make a break for it, rolling into each other, labels down. This rack drops into a standard Gridfinity base grid and gives every bottle a slot of its own, tipped up so you read the label instead of the cap.

1 · Pick your size

Six sizes ship, one slot to six. Each holder is **2 Gridfinity squares deep** and **1 square wide per bottle**, so a 6-slot rack fills a 2×6 footprint. Widths below are measured off the STLs and step by exactly one 42 mm Gridfinity unit each time.

Size	Footprint	Overall size
1 slot	1 × 2 squares	41.5 × 83.5 × 48.4 mm
2 slots	2 × 2 squares	83.5 × 83.5 × 48.4 mm
3 slots	3 × 2 squares	125.5 × 83.5 × 48.4 mm
4 slots	4 × 2 squares	167.5 × 83.5 × 48.4 mm
5 slots	5 × 2 squares	209.5 × 83.5 × 48.4 mm
6 slots	6 × 2 squares	251.5 × 83.5 × 48.4 mm

The half-millimeter shortfall on each axis (42N – 0.5) is the standard Gridfinity clearance, so racks sit side by side without fighting each other.

2 • What is in the download

File	What it is
<code>makerx-gridfinity-apple-barrel-paint.3mf</code>	Start here. Six plates, one per size, oriented with the tested profile already loaded.
<code>makerx-gridfinity-N-apple-barrel-paint.stl</code>	The six sizes as loose STLs, for your own slicer or your own arrangement.

3 • Slice it

- 1 Open the 3MF in Creality Print, or any slicer that imports 3MF project files.
- 2 When it asks whether to load the project's print settings, **say yes** — that is the whole point of the 3MF.
- 3 **Choose your plate.** Plates 1 through 6 are the six sizes. Slice the one you want rather than scaling a different size to fit.

4 • What each size costs

Size	Print time	Filament	Cost
1 slot	2 h 41 m	21.58 g	\$0.32
2 slots	3 h 13 m	39.39 g	\$0.59
3 slots	4 h 02 m	57.59 g	\$0.86
4 slots	4 h 58 m	75.82 g	\$1.14
5 slots	5 h 57 m	93.58 g	\$1.40
6 slots	7 h 00 m	111.76 g	\$1.68

About **18 g a slot** once you are past the first one. Two 3-slot racks cost the same filament as one 6-slot rack and print in a little over half the time each — worth knowing if you would rather not tie the printer up for seven hours.

5 • The profile baked into the 3MF

Quality		Material, supports & adhesion	
Layer height	0.10 mm	Supports	None — switched off
Nozzle	0.4 mm	Brim	Auto, 5 mm, 0.5 mm gap
Walls	2 loops	Filament	PLA · PETG works too
Top / bottom	5 / 3 layers	Nozzle / bed	220 °C / 60 °C
Infill	10 % gyroid		

6 • Off the plate

★ The brim has a 0.5 mm gap, and that is why it comes off cleanly

The profile sets a 5 mm auto brim with a **0.5 mm object gap**, so the brim is held on by a thin bridge rather than fused to the wall. It lifts away in one ring with a fingernail and leaves no scar along the base — which matters here, because the base is the Gridfinity interface and anything left on it stops the rack seating in the grid.

- 1 Let the plate cool, then flex it and lift the rack off.
- 2 Peel the brim away in one piece and check the underside.
- 3 **Run a finger over the base profile.** The stepped Gridfinity foot has to be clean to drop into a base grid. Any brim witness, and it will sit proud.
- 4 Drop it into your grid. It should fall in under its own weight — no pressing.

7 • Loading it

- **Bottles go in nose-up.** Each slot is scalloped so the bottle leans back on the wall behind it and the label faces you as you look into the drawer.
- **Sized around Apple Barrel 2 oz.** Any craft paint of a similar diameter and height drops straight in. If you are not sure about your brand, leave a comment on the model listing with the name and I will tell you.
- **Mix sizes to fill the drawer.** The whole reason six sizes exist is that drawers are rarely a multiple of six. A 6 and a 4 fill a 10-wide run exactly; a 6, a 5 and a 1 do the same.

8 • Planning a drawer

Work in squares, not millimetres. Measure the drawer, divide by 42 mm, and round down — that is how many squares wide it is. Each rack is 2 squares deep, so a drawer 8 squares wide and 4 deep takes two rows of racks totaling 8 slots each: sixteen bottles, facing you.

You still need a base grid under it

This is a Gridfinity *bin*, not a complete system. It drops into any standard base grid — there are many free ones, and any of them will do. Without a grid it works perfectly well as a free-standing rack on a shelf; it just will not lock down.

Where precision meets the printer

Thanks for printing these. If your paint drawer stopped being an archaeological dig, that is exactly what they were designed to do.

For years my design world existed entirely behind a screen. As a mechanical engineer I spent countless hours building complex CAD models, but there was always a missing link — the ability to hold an idea in my hands. That changed in January 2026, when I went headfirst into 3D printing. The moment that first layer stuck to the bed, the gap between concept and reality vanished.

Coming from a background where precision is everything, tolerances aren't suggestions to me — they are a religion. Gridfinity is a good test of that: the whole standard rests on a 42 mm pitch and a base profile that has to drop in cleanly every time, on any printer, from anyone's files. Every size here was modeled from scratch in SolidWorks against that standard, printed, and loaded with my own paints.

Three principles behind every print

01

Functional Engineering

High-utility, real-world solutions rather than purely decorative models. If it doesn't solve a practical problem, it doesn't leave the workstation.

02

Rigorous Tolerances

Designed in professional CAD with mechanical intent — press-fits that click and assemblies that work straight off the build plate. No sanding, no filing, no guesswork.

03

Bridging the Gap

Industrial structural integrity at maker speed. Proving a desktop printer can produce parts worthy of real engineering applications is what drives every release.

The workshop

Mechanical engineering degree · SolidWorks precision modeling · two Creality Hi printers · Virginia Beach, Virginia · every design free to download.

A note on sharing

I'm thrilled when people use and share these designs. I just ask that you respect the license shown on the model listing and give the required credit, so I can keep contributing to the collective workshop.

IF THESE EARNED THEIR SPOT

A **Like** or a **Favorite** on the model page takes a second and genuinely helps. A **Boost** helps more than either — it is what puts a design in front of makers who would never otherwise come across it. And if you **Follow** me, new models and updates land in your feed as they are released. However you choose to support it, thank you — it is what keeps everything here free to download.

Got a paint bottle these slots don't suit? Leave a comment on the model with the brand and the size. That is where the next version starts.

Fill the drawer once. — MakerX Designs · makerxdesigns.com · © 2026