

Stackable, Easy-Clean Sieve Boxes (SCAD + STL)

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VIEW IN BROWSER

updated 27. 10. 2026 | published 27. 10. 2026

Summary

I wanted large, coarse sieve boxes, so I made some.

Hobby & Makers > Other Ideas

Tags: sieve

I needed some coarse sieves to sort out a bunch of defective desiccant I'd received. I didn't find any models I liked, so I made one. Printed sieves tend to be even more prone to trapping particles than wire mesh sieves, so I had to get creative.

The holes are tapered to compensate for any elephant foot or surface roughness. This taper reduces the open area ratio, but it helps reduce clogging. It's still recommended to try to reduce the elephant's foot in your settings anyway.

As with any sieve, clogging will still happen. Included are printable punch plates that make it much easier to clean the meshes out. You can either use the full size punch plates for quick work, or you can print mini punch plates. The mini plates are cheaper and faster to print, but they're more tedious to use. They're still better than cleaning the sieve with a brush or pick.

Also included are a base box and a lid. I made both relatively heavy to suit the clamping load of a sieve shaker.

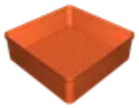
In general, neither the boxes nor punch plates are quick to render or print. On my ancient garbage hardware, the 200x200 2mm sieve renders in 43 minutes. This is why we don't attempt to approximate circles with anything more elaborate than hexagons.

The punch plates tend to be a torture test for stringing and retractions. You'll probably have to burn/scrub a bunch of stringing out of the prints.

The boxes have their size labeled on the sidewalls, though the ones I printed were blank. I don't know how legible the text will be.

Included are prerendered STLs for 120x120x40 mm, 160x160x45 mm, and 200x200x50 mm sieves and accessories for aperture sizes 2mm through 8mm in 0.5mm increments. If you want something else, you can render it easily enough.

Model files



webpreview.stl

Other files

sieves.zip

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