



Filament Storage Rack System



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updated 25. 3. 2022 | published 25. 3. 2022

Summary

A simple but effective filament storage system - just print a few of these brackets and connect them using wooden dowels

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A simple but effective filament storage system, using a few minimalist brackets connected by wooden dowels (or PVC pipes) that serve as railings for filament spools. The dowels/pipes can double as holders for paper towel rolls, tape, cables, etc. You can also adapt sections of it to be a regular shelf by attaching a board on top of the dowels (I am considering making a simple clip adapter for that if anyone is interested)

The design is fully parametric, and the Fusion 360 files are attached.

Size/Dimensions & Parameters

These were made as a tight fit for 3/4in wooden dowels, but the design is parametric so you can change all dimensions (see parameters screenshot in photos). If you do not have Fusion 360, let me know what size connector you need and I will be happy to upload STLs for you. **I am not sure what are the common metric sizes for dowels and pipes, but if someone**

lets me know, I will upload those. To adjust the size of the connectors, simply edit the `dowel_thickness` parameter. I did not add a separate tolerance parameter, so add that to the value you enter.

Also, I sized these for storing my filament dry boxes, so you will have extra space if just storing filament rolls directly. If you want to reduce the overall size of the rolls you are storing, simply change the `roll_diameter` parameter.

There are several other parameters you can change such as screw size, etc.

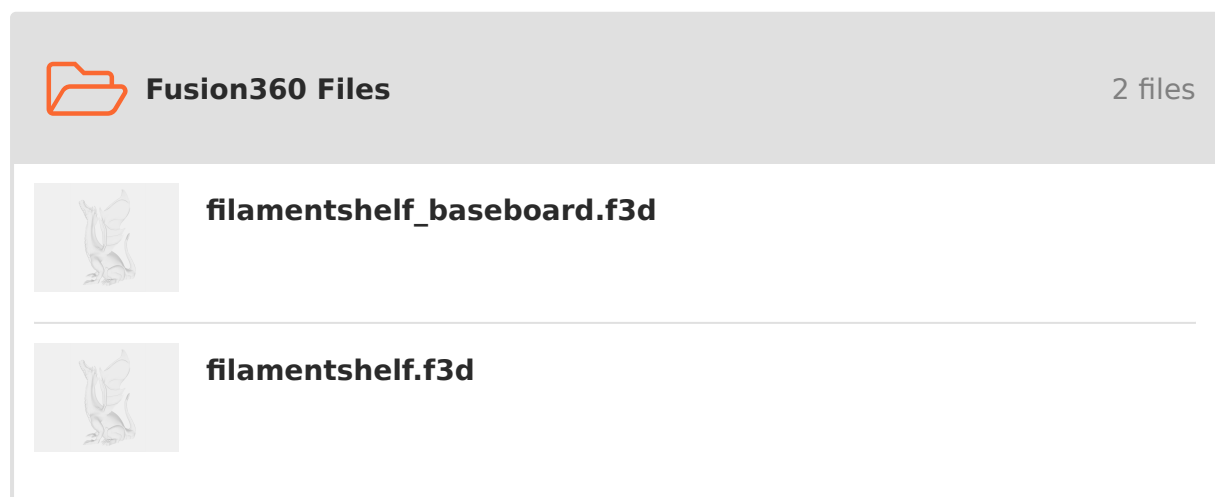
Print Settings

I printed mine in PETG (Prusament Carmine Red and Clear in the photos) but they don't seem to be taking so much stress, so I think good ol' PLA would be fine too. I did add several perimeters for strength - 5 in my case, but basically enough to join the perimeters around the connector to the outside perimeters of the whole bracket.

To get that cool infill look, I used 0 top or bottom layers and set infill to 20% honeycomb. If you want to print them like they are in the pictures, use the attached 3MF file.

BONUS FILE: I barely had enough vertical space to fit 3 rows of filament, and my bottom shelf had top go over the baseboard - so I made a separate model for that which is also attached here: `filament_shelf_baseboard.stl` and `FilamentShelf_baseboard.f3d`

Model files





filament_shelf_printsettings.3mf

☐ 3MF file with the perimeter/infill settings to print them as they are in my photos



filament_shelf.stl



filament_shelf_baseboard.stl

☐ Version for going over a baseboard - made for my specific need and size, YMMV. F3D is available

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