



LACK Filament Storage Brackets - with hexagons!

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updated 16. 10. 2022 | published 16. 10. 2022

Summary

Do you hoard filament and love hexagons? this is the solution for you!

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These brackets were built with the purpose of storing the maximum amount of filament in the least space possible (the unused area to the side of my printer) while also bringing a little flair and color coordination to my LACK stack. Each pair of brackets span the full width of the table legs and has a cutout to allow 7 rolls of filament per row (about 19.5 in/500mm of storage). 6 rows can be added to a 3 high lack stack totaling 42 rolls of filament storage just on one side! go crazy and use the left and right sides of your stack for 84 rolls of filament, and if you want to pull it off the wall and make an island of filament you can use left/right/back for a mind-blowing 126 rolls of filament storage (not tested, your lack may cry with 126 Kgs added to it but my money is on it holding strong)

To build you will need

- -4x approx 1.5 in/40mm countersunk wood or drywall screws (I find coarse threads grip into the lack legs better and really any length that grips and doesn't go out the other side will work)
- -2x 1 in/25mm diameter 520mm/20.5 in long wood dowel (a 48 in wood dowel is perfect for this, will leave little waste)

Printing will require no special treatment, although a dialed in printer will help if printing the hexagon pattern since it is a large complex press fit. the bracket is extra beefy to not require any special material, mine are all PLA and have shown no issues carrying the weight for several months. Print the brackets with the outer side down, the hex pattern brackets should bridge just fine with no supports.

To assemble

1. measure and cut your dowel(s) to size, the exact length is forgiving but must be at least 10mm shorter than the width of your lack stand.
2. press the hexagon pattern into the left and right hex brackets, skip if using the no hex brackets (I used no hex for the back against the wall, hex for the front, they can be mixed and matched however you want). There is a slight chamfer to the bracket side of the hex pattern so it should friction fit nicely and require no glue. Using something large and flat like a vise and blocks helps make sure there are no high spots, or just flip it hex side down and stand on it like I did.
3. using 2x wood screws, attach one side of the brackets to the stand. Careful to not over-tighten and strip out the table.
4. using 2x wood dowels and 2x wood screws, first insert the dowels into both brackets, then level and screw the unattached bracket to your stand.
5. load with filament and rejoice!

Once I had a proven design, I loaded my 3 lack stand up with 5 rows (35 rolls of filament) on one side. A 6th bracket set totaling 42 rolls of filament could still be added to one side but I unfortunately ran out of rolls of filament before we got there. I did notice the hinge area sagging when I added a bracket to the top enclosure area, so if you need to add 1 row to the enclosure area print and attach the lack bracket to stiffen the top area. a second bracket at the top hinge area should provide the same stiffening if you want max filament storage.

Model files



hex_pattern.3mf



lack-strengthening-bracket.3mf



hexagon_bracket_left.3mf



hexagons_bracket_right.3mf



no_hexagons_bracket_left.3mf



no_hexagons_bracket_right.3mf

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