

FilaBilly Filament Rack



Greenhat

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Summary

Turn an IKEA Billy Bookcase into a filament rack with 1/2" EMT and 3D-printed parts. Holds ~88 1gk spools!

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[filamentrack](#)

In search of an efficient filament storage solution with limited space, I discovered the potential of the IKEA Billy Bookcase. This guide outlines how to transform it into a filament holder using readily available materials and straightforward assembly steps.

Materials:

1. **IKEA BILLY Bookcase**
2. **1/2" Electric Metallic Tube (EMT)** cut to 29 3/8" (746mm) for the metal dowels (4 x 10-foot pieces)
3. **#6 x 3/4" Pan Head Sheet Metal Screw** (x32) for attaching brackets to the bookcase
4. **#8 x 5/8" Pan Head Self-Tapping Screw** (x4) for securing EMT Dowel into the holder

Assembly Steps:

1. Cut 16 pieces of EMT at 29 3/8" (746mm), obtaining four pieces from a single 10-foot EMT.
2. Print the following components (No Supports, .30mm Draft):
 - 2x BottomHolder
 - 14x OtherHolders
 - 1x SpacerTemplate
3. Begin assembly:
 1. Place BottomHolder at the very bottom.
 2. Position the SpacerTemplate on top to center it.
 3. Secure the BottomHolder in place using 2 #6x3/4 screws.
Alternatively, use super glue for simplicity (BottomHolders only).
 4. With the SpacerTemplate still in place, add an OtherHolder on top and secure it with #6x3/4 screws. Do not glue.
 5. Repeat this process, moving upward and using the SpacerTemplate until all OtherHolders are in place.



4. For the middle shelf, use #8 x 5/8" self-tapping screws to attach the holder to the tube, enhancing the overall rigidity of the bookcase. Refer to notes for an alternative using the Ikea middle shelf. Screw through the Holder and the metal Tube.
5. Repeat steps 3-4 on the other side of the bookcase.

Notes:

- Consider using the middle shelf during assembly. The BottomHolder can be placed on the shelf, potentially allowing for the same number of racks. While not tested, measurements suggest it should work.

Future Possibilities:

- Explore adding doors to the setup to protect filament from moisture.

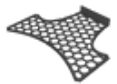
Model files



otherholders.3mf



bottomholder.3mf



spacertemplate.3mf

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