

Parametric Microscope Slide Box

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Summary

Fully parametric box to store any kind of slide / thin section.

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Fully parametric slide box, with a small spring to hold them in place. The lid is held on with a friction fit.

The model was created in fusion 360 where the parameters can be edited

To adapt to your slides/printer:

- Measure your slides dimensions and fill them in for slide_w, slide_h and slide_thickness
- Modify slide_gap to allow for better acessibility
- Choose the number of slides you want
- Print out a tolerance tester and change tolerance_tight to the smallest tolerance that barely moves, and tolerance_loose to a value where it moves freely
- box_height ajusts the position of the lid helping accessibility

Then print out the Fit tester component to calibrate your spring settings.

- spring_h - height of the flexible holder
- spring_w - width of the spring (adjusts stiffness)
- spring_extent - ratio of the spring position and the slide gap

(The default settings make for for an easy to remove slide that doesn't move when shaken)

The box in the pictures was printed with PLA

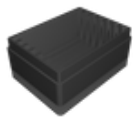
- 0.4 mm nozzle
- 0.28 mm layer height (smaller layer height could result in weaker spring)
- No brim/support

For better durability PETG would probably work better.

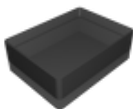
Feel free to give feedback.

Model files

slide-box.f3d



base.3mf



lid.3mf



fit-tester.3mf

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