



Foldable and stackable Crate



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Summary

A simple 5 piece crate that snaps into place It can be stacked in both positions, open or folded

[Household](#) > [Home Decor](#)

Tags: [crate](#) [foldable](#) [box](#) [crates](#) [collapsible](#) [stackable](#)
[boxes](#) [snapfit](#)

I designed this crate to store objects around my house. The 4 sides are snapped in place during assembly. When fully open, the 4 sides snap into each other to keep the crate sturdy, and it can easily be folded for storage.

The dimensions are 15x10cm but it can easily be scaled up if needed, the snap fit should work with scaled versions. The height is 8cm when fully open and only 12mm in the folded position.

The mechanism was specifically designed to be 3d printed in a particular orientation, to be as durable as possible, especially if the crate is opened and folded multiple times.

Printing and Assembly

Parts : Print 1x Bottom, 2x Short_side and 2x Long_side

Printing profile : I printed all 5 pieces using the standard PrusaSlicer profile with 10% infill.

Orientation : The STL files already have the right orientation.

Supports : No support needed

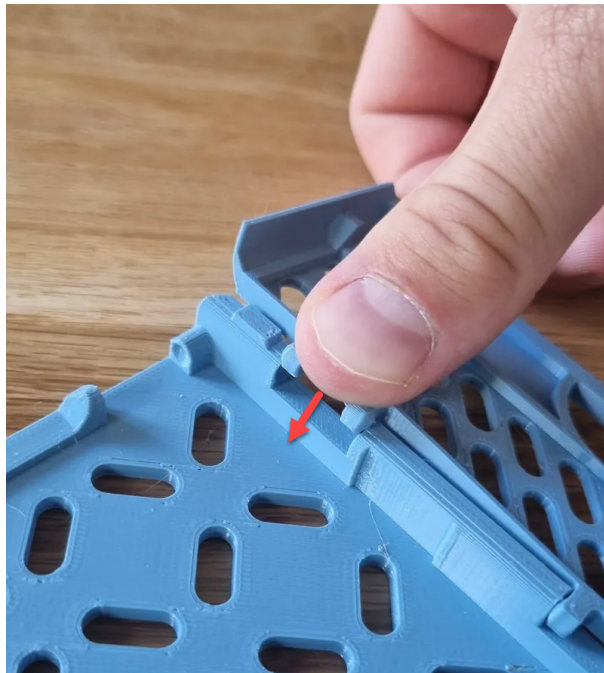
Material : I used PETG for durability but PLA is fine as well

Printing time : Around 7h30 for all 5 pieces at 0.2mm per layer on my MK3S

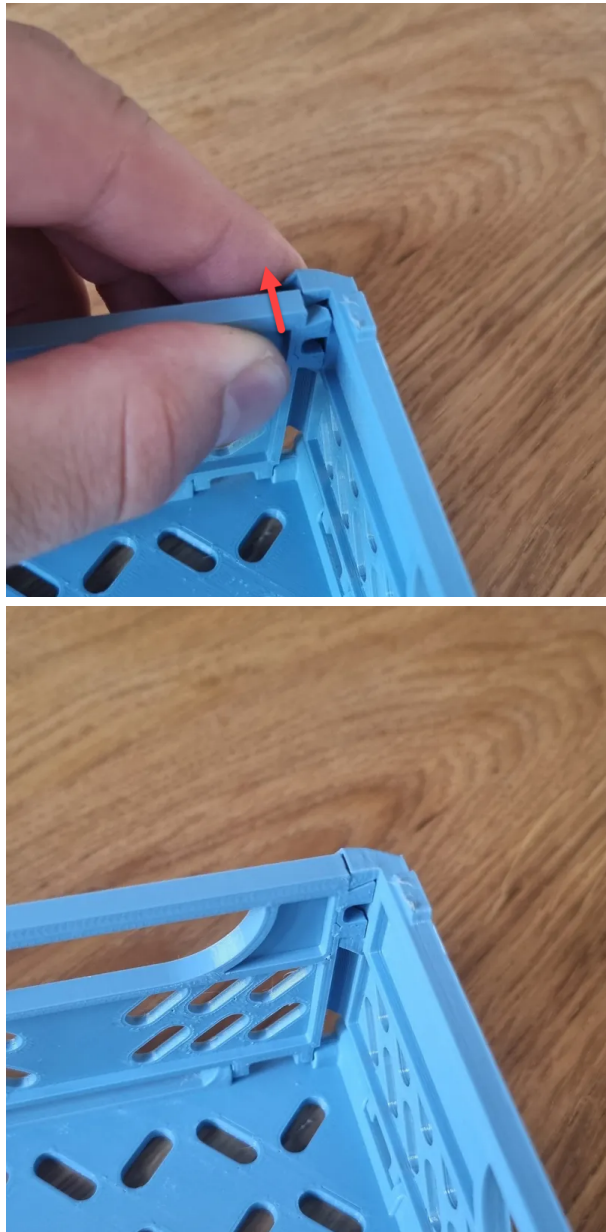
Assembly :

On every side, the face that was directly onto the print bed should be facing outside.

The sides are snapped into place on their pivot point. It is a tight fit but it is important for the crate to then stay in one piece. You must press quite hard, if it's too hard you can sand the pivot a bit.



To open the crate, first open the 2 long sides, then open the 2 short sides and snap them into the longer sides.



Model files



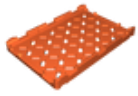
short_side.stl

📄 x2



long_side.stl

📄 x2



bottom.stl

📄 x1

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