



Magnetic Levitating Dice Tower



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Summary

Dice tower with levitating baffle boards.

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I have one of these levitating magnetic ring toys on my shelf for quite a while and this was the inspiration for this tower.

The tower is made of individual levels with magnets that hold each other at a distance. The rails keep everything in place, while base and top tie the whole tower together.

Needed magnets

6mm diameter and 3mm thickness, the good ones and 60 of them.

Print instructions and magnet placement

Top and base get printed with the magnet holes on top. As the magnets are not close to the buildplate I like to glue them in later, rather than

having them stuck to one of the hotend screws and crashing the print. The segments are thin enough to add the magnets during the print.

Place all the magnets in the same direction. This is **especially important** for the segments as you need to flip every second segments during assembly. You can see in the picture the black and white segments, all printed in the same orientation with the same magnet orientation. Then during assembly, one of the colors is flipped to keep the levels floating and also maintain a usable staircasing for the rolling path. 10 segments fit nicely within the range of the rails. You can have the rolling path be left or right turning.

For the rails, I recommend printing the top and base and one of the rails to check how tight the fit is. If adjustment is needed, use xy compensation in your slicer and print a nice fitting rail. Glue can also be helpful.

On the pictures you can see a **prototype**, I made the base higher and a bit of bridging or supports are needed on the opening.

Disclaimer: The dice in the pictures are my own creation, if you're interested in that, check out my [Instagram](#) profile and contact me there. Same for print on demand. I don't have a shop and do commissions and print on demand as my time allows.

Model files



magtower_segment.stl



magtower_base.stl



magtower_top.stl



magtower_rail.stl

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