



## Embroidery/cross-stitch display hoops



motig

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updated 22. 5. 2024 | published 22. 5. 2024

## Summary

Easy, cheap, fully printable (no hardware) hoops for hanging cross-stitch or embroidery art, available in multiple sizes

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These hoops were designed to display embroidery and cross-stitch art, mainly by hanging it via the built-in hole at the top, so you can re-use your quality hoops for ongoing projects and not have to purchase a lot of them. You can also color-match the hoops to your art - great for gifting or selling your works!

Once closed using the clip, they are tight enough to prevent the fabric from wrinkling, but IMO not tight enough to work on - although it can be done in a pinch - a good quality screw-tightened hoop set is better for that.

**They are fully printable with no supports, no hardware required,** and usually no after-print cleanup either. I print them on an unmodified Creality Ender 3 S1 using eSun PLA+ with the following settings:

- 0.3mm layer height, 0.4mm line width with a 0.4mm nozzle

- 2x walls, 3x top/bottom layer, 15% cubic infill (10-20% cubic or gyroid seems to be a fine range - don't go too high on infill to keep the outer ring flexible)
- 60mm/s print speed (what my Ender 3 can do reliably)
- No supports, no bed adhesion
- 210-220 c nozzle temp and 60 c bed temp

The sizes mentioned in the 3mf file names are the **outer diameter (OD) of the inner ring** - which represents the diameter of visible fabric and thus, equal the maximum diameter of your work. I've included sizes from 60mm to 180mm in 20mm increments. Some sizes can be nested to print multiple hoops at once for a slight gain in efficiency.

Update May 23rd, 2024: I've added two additional sizes, 200mm and 220mm. For these sizes, I've increased the ring width from 3mm to 4mm to make it more rigid and better support the larger size. Please note that these sizes may not fit the print bed of some home printers like the Ender 3.

## Model files

hoop-with-clip-60mm.3mf



hoop-with-clip-80mm.3mf



hoop-with-clip-100mm.3mf



hoop-with-clip-120mm.3mf



hoop-with-clip-140mm.3mf





**hoop-with-clip-160mm.3mf**



**hoop-with-clip-180mm.3mf**



**hoop-with-clip-200mm.3mf**

☐ May not fit some printer beds!



**hoop-with-clip-220mm.3mf**

☐ May not fit some printer beds!

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