



Spiral Vase Rose



lytta

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Summary

A rose designed to print in spiral vase mode.



3.26 hrs



1 pcs



0.20 mm



0.40 mm



PLA



23 g



Creality
Ender 3

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Happy Valentines Day! I wanted to try my hand at a somewhat more complex vase mode design, so I made this rose.

Looking for another flower to print? Want to support me as a designer? For May 2024 I made a pen stand that looks like a bearded iris, and I'm selling it for \$5 USD.

2023's vase mode flower design (free, CC BY): [Spiral Vase Calla Lily](#)

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3/7/22: I wanted to see if I could design a relatively sturdy stem that prints in vase mode, so I did: **A Stem in Vase Mode**. Another stem option for the small version of the rose.

Update 2/23: **There's another stem remixed to have thorns**, now, by **Olafejs!**

Update 2/16: The response to this design has been amazing and overwhelming! I can't reply to every shared make, but I look at all of them and I love them.

+ More stem options: **TheSheDM** combined this with the stem from **3DPrintNovesia's Super Realistic Rose** and I think they look great together!

+ **I've uploaded a container/just-the-outside-of-this version of the model**

+ There are some lovely examples in the makes of this printed in PETG, ABS, and PVB if you're thinking about other materials

To print:

- PLA
- Spiral vase mode
- Tested at 0.2mm height and 0.4mm nozzle width, but other sizes may work if you want to try them.
- You can resize at will, but I'm providing three sizes for convenience: the full size is about 83mm high; medium is 70mm; and small is 50mm tall (and closer to scale for a real life rose.)
- The model is more negative space at the bottom than not; I also am including a version designed to print a bottom, which will work as long you're slicing it to have 1mm of bottom layers (e.g. 5 layers at 0.2mm). These versions will not work as well if you resize them.

New to vase mode or still learning?

- Spiral vase mode takes the outside wall of a solid, continuous model and calculates a continuous single spiraling path to print to the top. (Usually this is after a few standard solid layers at the bottom - PLA is very flexible when thin, and this gives it more stability.)
- In Prusa slicer, this is the "Spiral vase" option you can check off in Print Settings > Layers and Perimeters. It will automatically change several of your settings to be compatible with the mode.
- In Cura slicer: Special Modes > Spiralize Outer Contour
- To get a good vase mode print, you'll want to refine a couple more settings. You want to print slow and steady, and at a lower extrusion rate than normal printing. IMO you should test this for each filament, as well as for different layer heights, to determine a temperature,

extrusion %, and speed (if the speed hasn't been slowed down automatically) to get a nice, clean vase mode print with that filament. Too much extrusion will get you tiny bumps around your print; too little can make it too fragile and prone to cracking between layers.

- If you're still getting bumps: especially if you're on a more basic machine like an Ender 3, it may be a matter of computing and RAM, and your printer having tiny moments where it pauses. Fixes include using a faster microSD, being hardwired to the printer if you usually use OctoPrint, or upgrading your firmware (this is what worked for me) with options including arc calculation (marlin 2.0 and on), disallowing the printer from writing to the SD card, and turning off the power failure recovery mode. (The latter is very useful but may cause those little pauses with a big file.)

Misc.

- Filaments in photos: Atomic Filament Rose Gold Metallic Translucent PLA, Printed Solid Jessie Blue Ice PLA, Polyalchemy Nightshade Elixir PLA.
- The pink rose in the photos is the full size version; the blue is the 7cm, and the purple is the 5cm.
- I looked up photos of chocolate and soap roses for shape inspiration.
- This one was a back and forth between OnShape (for math-friendly CAD) and Blender.

Model files



vaserose_7cm.stl



vaserose_7cm_withbottom.stl



vaserose_fullsize.stl



vaserose_fullsize_withbottom.stl



vaserose_5cm.stl



vaserose_5cm_withbottom.stl

Print files



7cmrose_3hr15min.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 3.26 hrs ⚖️ 23 g 🖨️ Creality Ender 3

📄 205 end, 65 bed, 90% extrusion, 215 C first layer, used with jessie blue ice pla

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