



Knob for Rorary Encoders or Potentiometers



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Summary

Fully parameterized OpenSCAD model for rotary knobs



7.55 hrs



4 pcs



0.05 mm



52 ml



Prusa SL1

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Tags: [knob](#) [sl1](#) [frontpanel](#) [rotary](#) [rotaryencoder](#)
[potentiometerknob](#) [potentiometer](#)

The usual situation ... the maker's solution ...

Weekend, shops are closed, ordering takes too long This time I needed a knob for a potentiometer in a front panel. Compartment for knobs didn't contain any 4mm axis knobs ... so let's make it.

I want to share my result with you.

I created the knob in OpenSCAD and used variables for most dimensions. So it mainly is fully customizable.

What are the features?

- variable axis diameter
- variable knob diameter

- variable knob height
- variable chamfering for the front face
- variable fluting for better grip (number and depth of notches)
- M3 grub screw with standard M3 nut (also parametrized)
- variable resess for potentiometer / encoder mounting

I predefined 4 examples to grasp the concept.

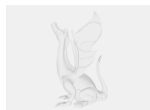
I am not a perfect OpenSCAD programmer, so the parameters need to make sense and there are no checks for the values. So you can make the nut bigger than the knob :) ... but I think you can reach your ideas nevertheless.

I created some print files for the SL1. Each Prusa Slicer or print file contains two versions of the knob, one with supports and one with face down without supports. I also increased the exposure time since in my prints I includes some mica powder in the resin ... Nevertheless it should print fine with regular resin as well, but you might be able to print faster when changing the settings in the 3mf file.

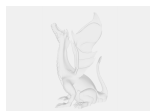
The knob without supports also prints fine, but the surface is much smoother on the one with support structures ... and since the support is on the unseen bottom only I prefer this one for my next prints :) ...

Have fun ...

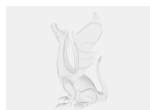
Model files



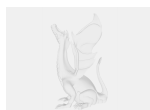
rotary_knob_4mm_axix_v1.scad



rotary_knob_4mm_axix_v2.scad



rotary_knob_6mm_axix_v1.scad



rotary_knob_6mm_axix_v2.scad



rotary_knob_4mm_axix_v1.3mf



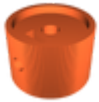
rotary_knob_4mm_axix_v2.3mf



rotary_knob_6mm_axix_v2.3mf



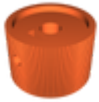
rotary_knob_6mm_axix_v1.3mf



rotary_knob_4mm_axix_v1.stl



rotary_knob_4mm_axix_v2.stl



rotary_knob_6mm_axix_v1.stl



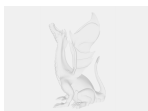
rotary_knob_6mm_axix_v2.stl

Print files



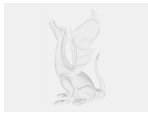
rotary_knob_4mm_axix_v1_10ml_1h46m.sl1

🕒 1.76 hrs 🌀 9 ml ≡ 0.05 mm 💡 42s/10s 📄 Prusa SL1



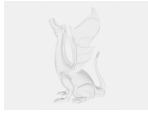
rotary_knob_6mm_axix_v1_20ml_2h01m.sl1

🕒 2.01 hrs 🌀 17 ml ≡ 0.05 mm 💡 45s/10s 📄 Prusa SL1



rotary_knob_6mm_axix_v2_20ml_2h01m.sl1

🕒 2.01 hrs 🌀 17 ml ≡ 0.05 mm 💡 45s/10s 📄 Prusa SL1



rotary_knob_4mm_axix_v2_10ml_1h46m.sl1

🕒 1.77 hrs 🌀 9 ml ≡ 0.05 mm 💡 45s/10s 📄 Prusa SL1

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