



## Pantograph for scaling up using 608 bearings



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### Summary

Simple mechanical device for scalling up/down of drawings/sketches. Now also fits Sharpies!

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For construction of this model you will need:

5x 608 bearings

4x M5x15+ screw + 4xM5 nut

3x M3x 10,15, 20 + 3xM3 nut

one M3 and one M6 spacer

How to construct conection between arms: <https://youtu.be/rPOF8rcytYY>

Since you pobably won't find the exactly same "pointer" as I used, I made the hole for it a bit bigger (1.4 mm) and it can be furthermore easily edited in files "vnitr rameno vedl" and "vnitr vlozka" (EDIT: there is now a special file for use of a piece of 1.75 fillament as a pointer).

The scaling up ratios can be found on one of the photos.

EDIT: Now also supports Sharpies! - use file rameno\_vedl\_Sharpie

**Print instructions Category: Machine Tools Print Settings**

**Printer Brand:** Creality

**Printer:** Ender 3

**Rafts:** No

**Supports:** Yes

**Resolution:** 0,2

**Infill:** 15

**Filament:** Prusament PLA Galaxy black

**Notes:**

Only file that needs supports is "rameno vedl".

## Model files



**vložka.3mf**



**all\_parts.3mf**



**rameno\_vedl.3mf**



**vnitr\_rameno\_vedl.3mf**



**vnitr\_vložka.3mf**



**rameno\_hlav.3mf**



**vnitr\_rameno\_hlav.3mf**



**podpera.3mf**



**vnitr\_vlozka\_175.3mf**

☐ fits 1.75 fillament as a pointer



**vnitr\_rameno\_vedl\_175.3mf**

☐ fits 1.75 fillament as a pointer



**rameno\_vedl\_sharpie.3mf**

☐ fits a Sharpie!

[Find source .stl files on Thingiverse.com](https://www.thingiverse.com)

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