

A little Blender script to rescale and export object in multiple sizes.

Did you ever need to scale your object in multiple dimensions and export it to an external format, like .stl ?

There is many cases where it is useful:

- To provide XS, S, M, L, XL (...) versions of the objet.
- When making rings. You may model a size 6 ring and want to scale it to sizes 1 to 16...
- When making a reduced model. You may want to make several scales available: 1:12, 1:24, 1:48, train standards OH, G, N...
- ...

If you need it, you will find a few useful Blender scripts in this article.

Blender is an Open Source 3D suite that you can [download for free](#). It supports scripting in Python language. Well... It is the first time I write a script. [Sambler](#) and [JCNouveau](#) kindly helped me to settle this.

// Case 1: resize an object using a predetermined set of scale factors

Let's say that you modeled a table scale 1 and that you want to provide 1:12, 1:24, 1:48 reduced models.

- Download the blender file with the script [here](#)
- Copy it to the directory where you want to save your exports
- Modify the scales array to fit 1/12, 1/24, 1/48
- File > Import to add your model to the scene
- Select your model (right clic)
- Clic on "run script" on the down left
- That's it, 3 new scaled .stl files were created in your directory

// Case 2: resize an object to a predetermined set of target dimensions

Let's say that you made a 12mm width object and that you want to scale it to 16, 20, 24mm.

Of course, you could make a cross-multiplication. But it is way more comfortable to let the machine doing the calculus.

- Download the blender file with the script [here](#)
- Copy it to the directory where you want to save your exports
- Modify the target dimensions to S=12, M=16, L=20, XL=24
- Replace the original size by "S"
- File > Import to add your model to the scene
- Select your model (right clic)
- Clic on "run script" on the down left
- That's it, 4 new scaled .stl files were created in your directory

// Case 3: generate all ring sizes from one ring

Let's say you modeled a ring in Size 7. You want to generate all other sizes by scaling this ring.

Nb : If you encounter too thin or too thick walls problems, consider using generating half the sizes from scale 2 and half the scales from scale 7 i.e.

The script is exactly the same as the previous one. Plus, it has all the US ring size already implemented with inner diameters. Download it [here](#). Follow the same process and change the model_size parameter to 7.

I hope It can help. Feel free to modify or distribute it.