

Customizable U-Hook

A Parametric 3D file
by Serge Payen, 2016





Customizable U-HOOK : How to use this file ?

Solution 1 : Open it with OpenScad software (it's free and open-source - <http://www.openscad.org/downloads.html>)

Allmost everything happen in the "editor" (left column).
Scroll it down to the "SETTINGS" chapter.

The screenshot shows the OpenScad software interface. On the left is the code editor, and on the right is the 3D viewer showing a yellow U-hook model. The code editor contains the following code:

```
// Choose to have a second hook ( 1 ) or not ( 0 )
second_hook= 1 ; // [ 1 , 0 ]

/* [MAIN HOOK SIZE] */

// Intern diameter of hook's main U shape
hook_size=40;

// Hook's "thickness"
thickness=25; // [10:250]

/* [SECOND HOOK] */

// Lenght of second hook
second_hook_lenght=30; // [15:185]
```

Annotations in the image:

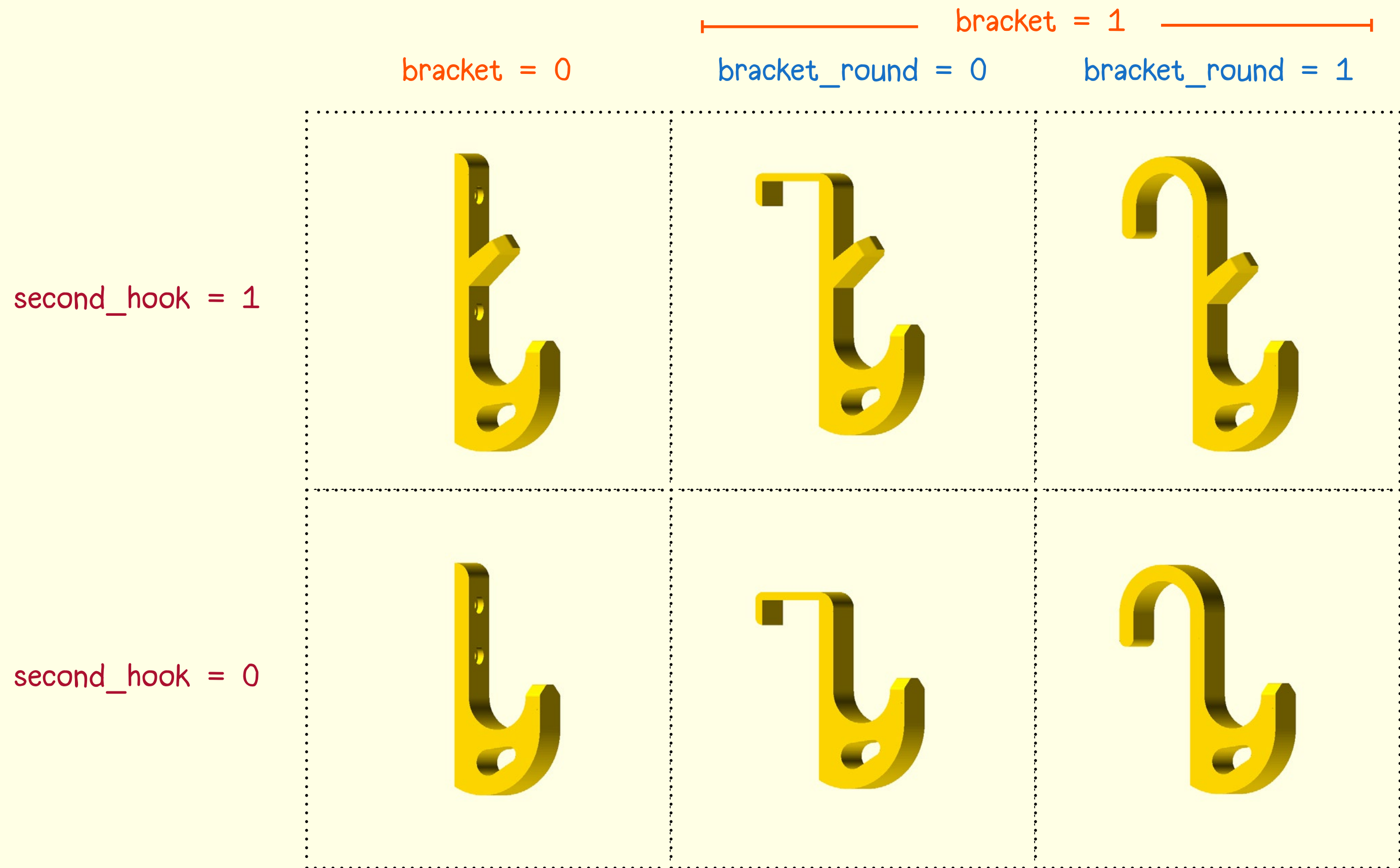
- Code Editor:**
 - second_hook= 1 ;**: Here, the value (in green) is a 2 options choice : type 1 (it's like "yes") or 0 (it's like "no").
 - hook_size=40;**: Here, the value (in red) is a number "x", meaning "x" millimeters : type what you would like for this parameter.
 - thickness=25;**: Here, the value (in red) is a number "x", meaning "x" millimeters : type what you would like for this parameter.
 - second_hook_lenght=30;**: Here, the value (in red) is a number "x", meaning "x" millimeters : type what you would like for this parameter.
- 3D Viewer:**
 - This is the viewing area, to see the object you are customizing. Use left click (orbite) and right click (pan) to navigate.**
 - ! Important !**
 - To see result after changing a value : Press F5 key to compile (It's like a preview)
 - When you're done, press F6 to render (You need to render before to export).
- Console:**
 - This is the console window, giving back some informations.**

Finally, at your screen's top, go to File / Export / Export as STL => choose a filename and click "Export"
Then send this STL file to your 3D printer !

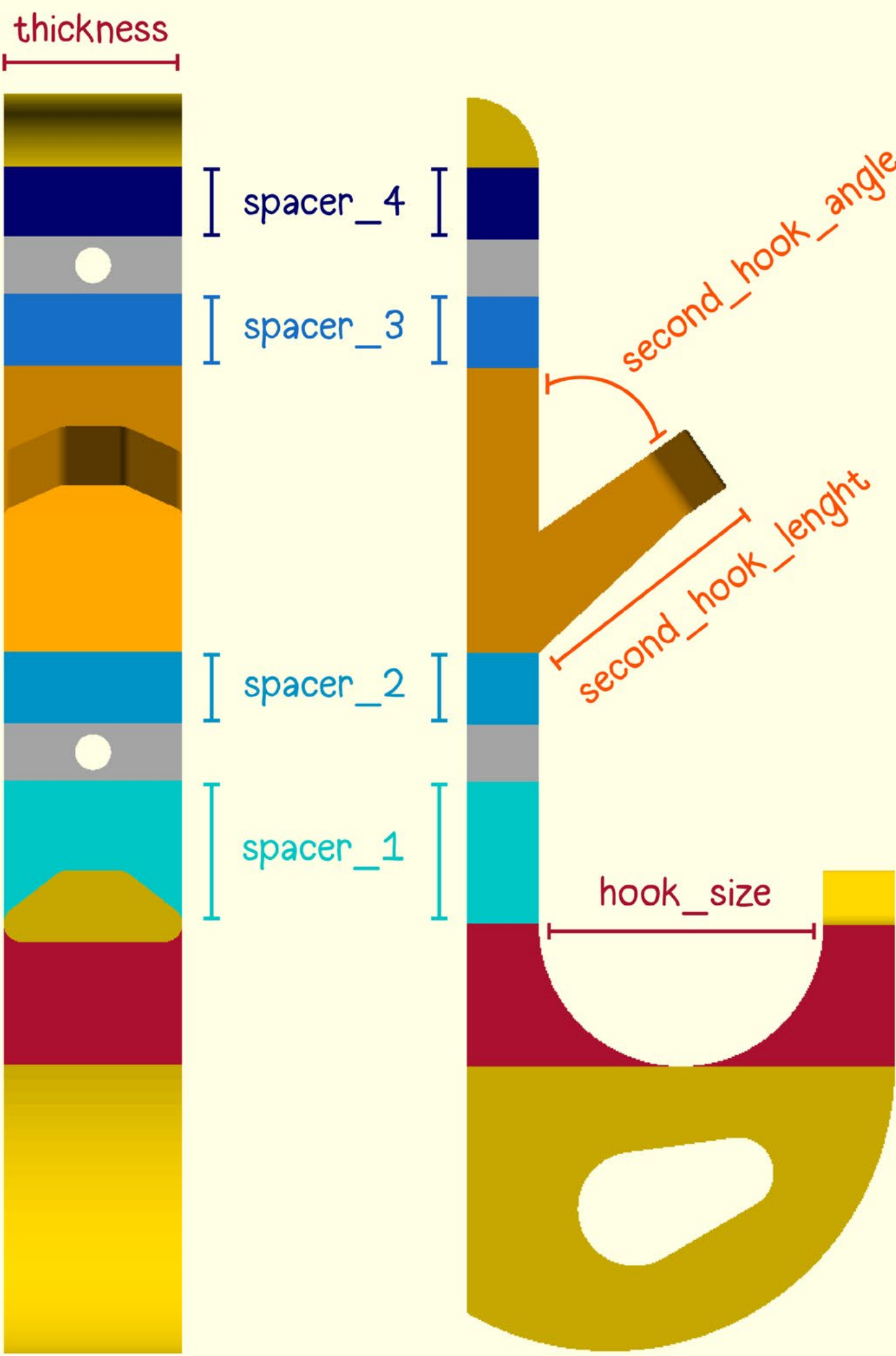
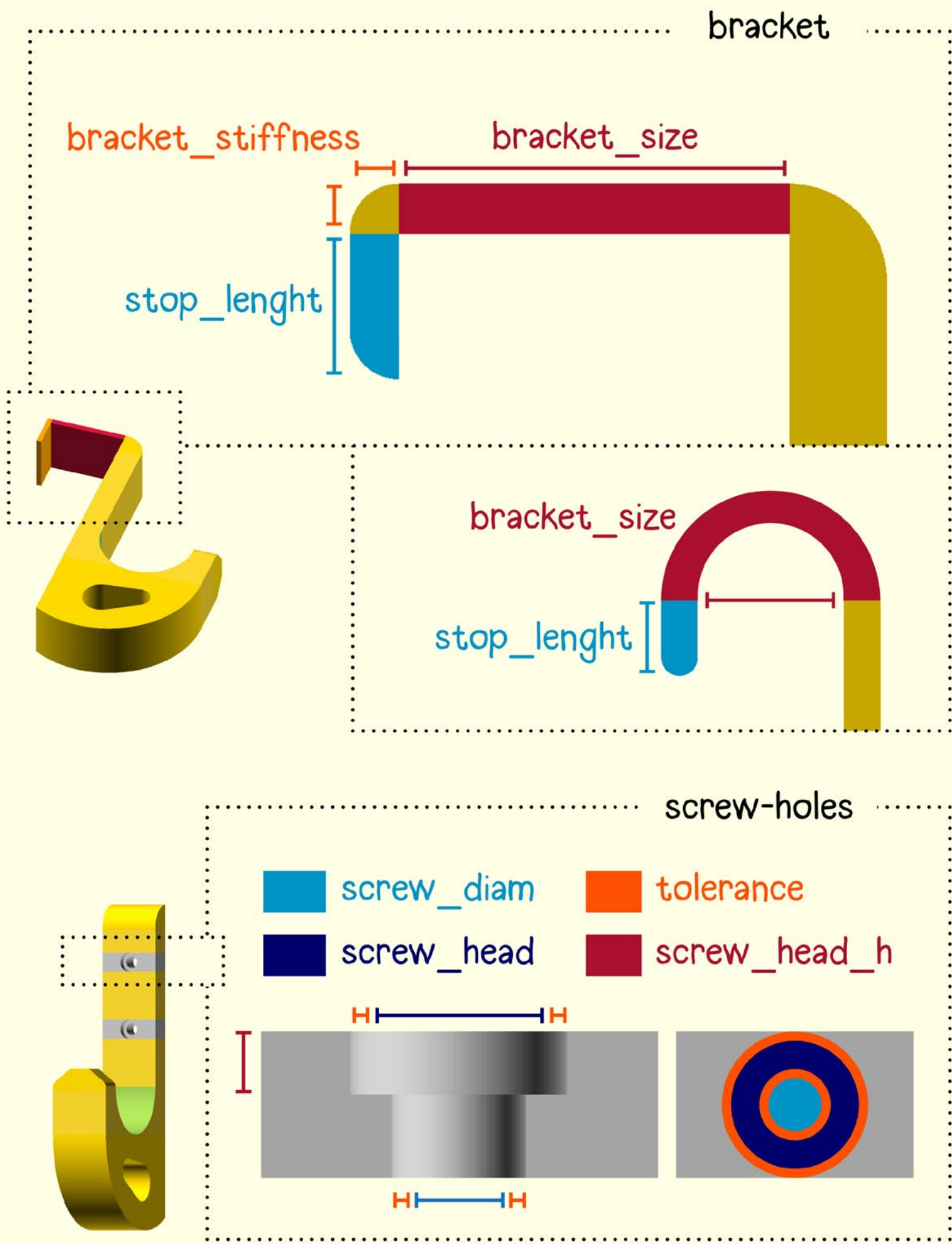
Solution 2 : If you're a Thingiverse user (and have a Thingiverse account), you can use the "Customizer".
Go to object's page and click on the fat button "Open in Customizer".

Customizable U-HOOK : Choose Shape

Choose global shape with parameters « bracket », « bracket_round » and « second_hook ».
Each can take the value « 1 » (same as “YES”) or « 0 » (same as “NO”).



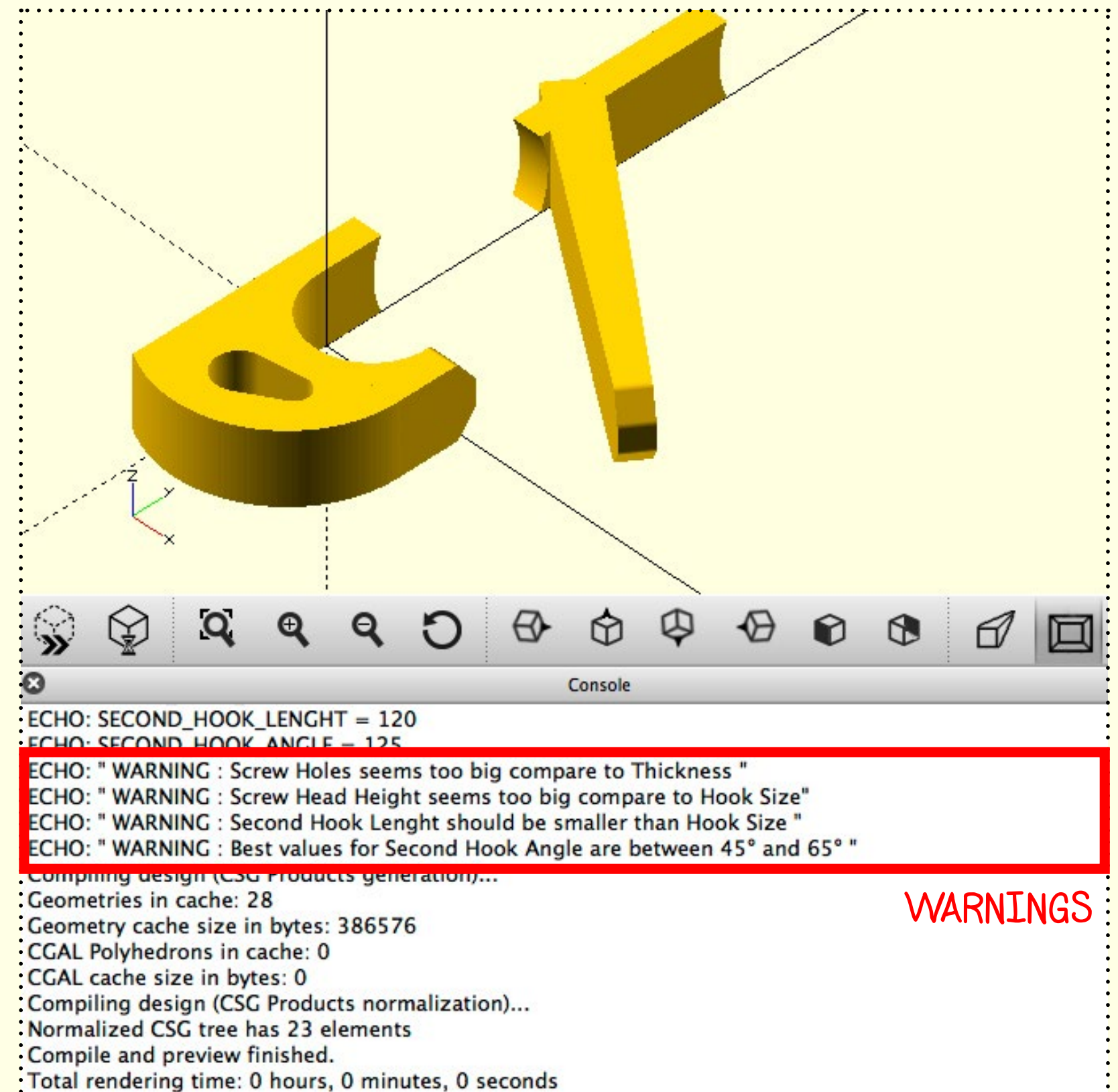
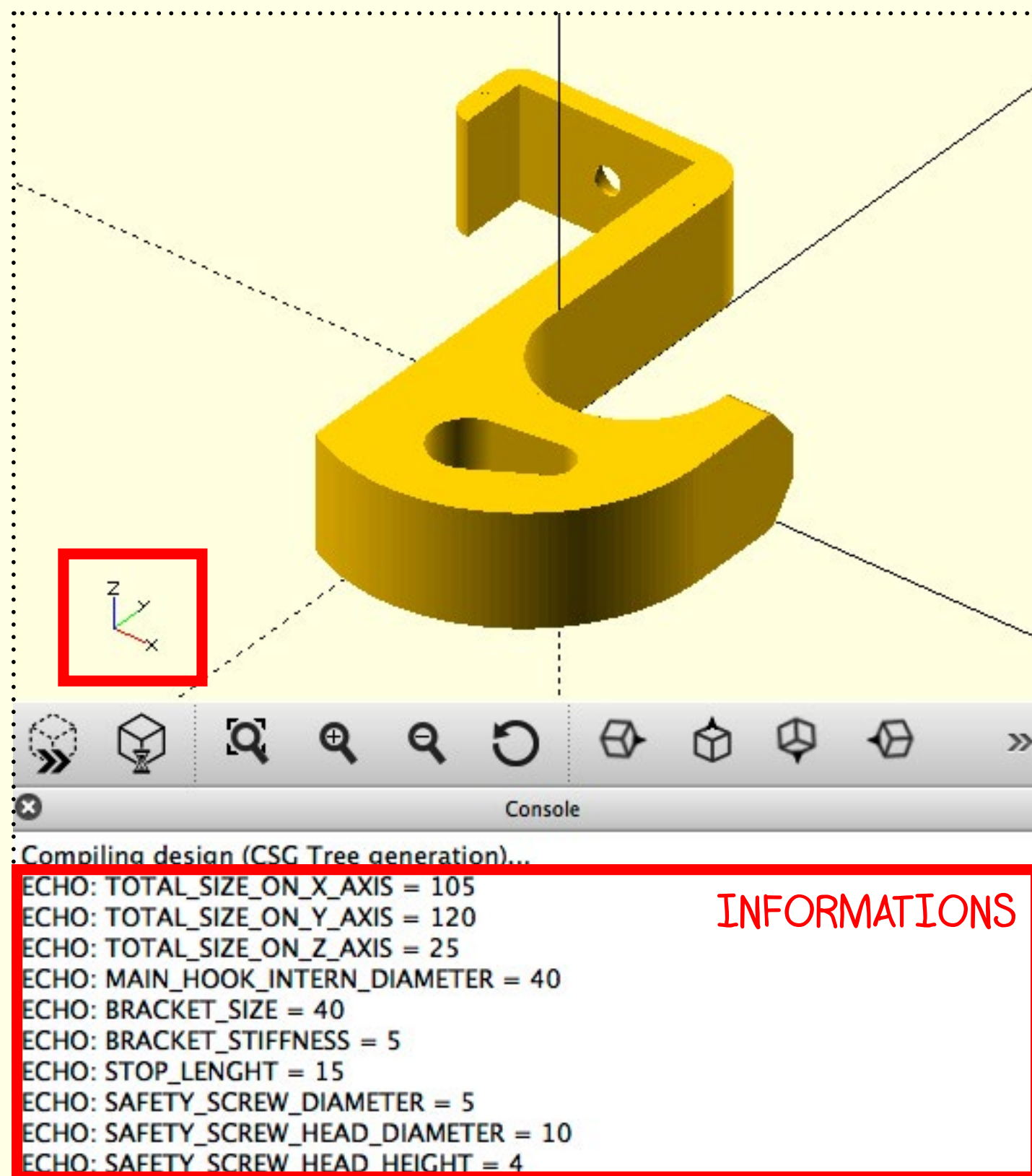
Customizable U-HOOK : Choose Size



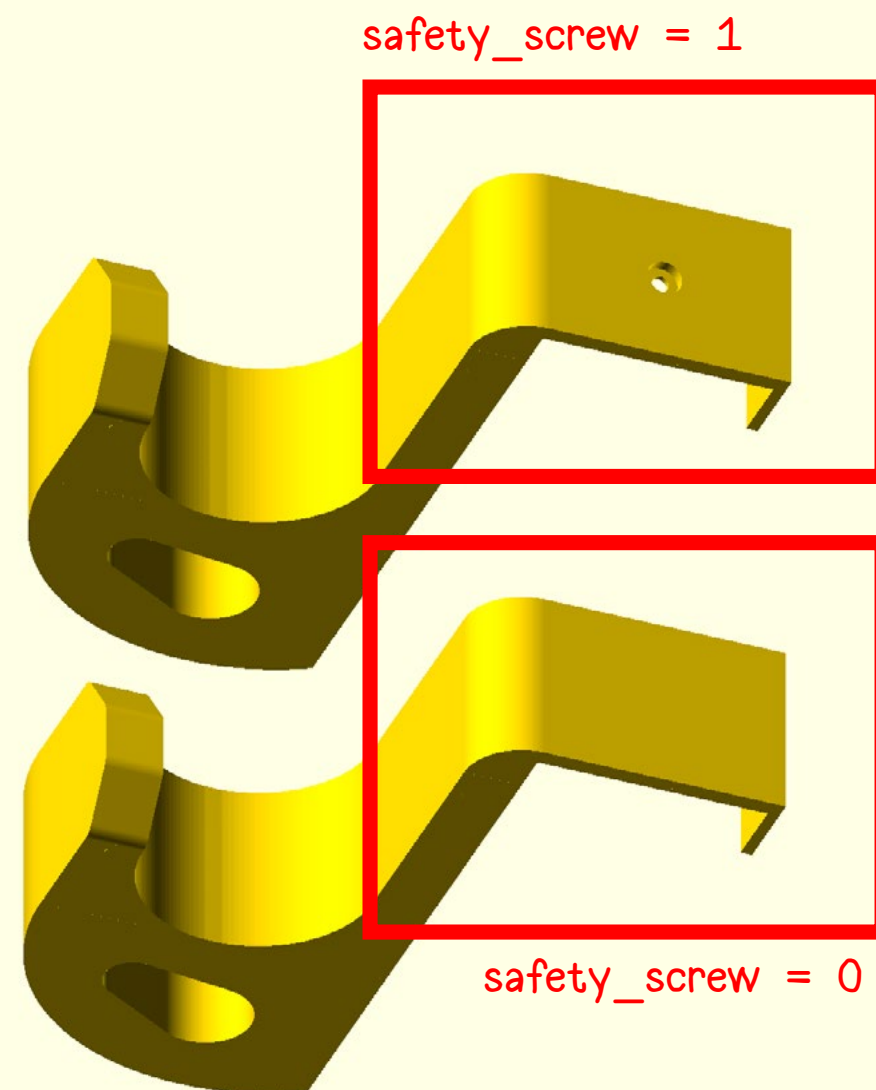
Customizable U-HOOK : Console window, informations & warnings

After each compilation (F5 Key), you will find many informations about global size and each element specific size inside the console window (text area below viewing area).

If some values are illogic, or could degrade hook's efficiency, there will be also warnings and advises about values you should adjust.



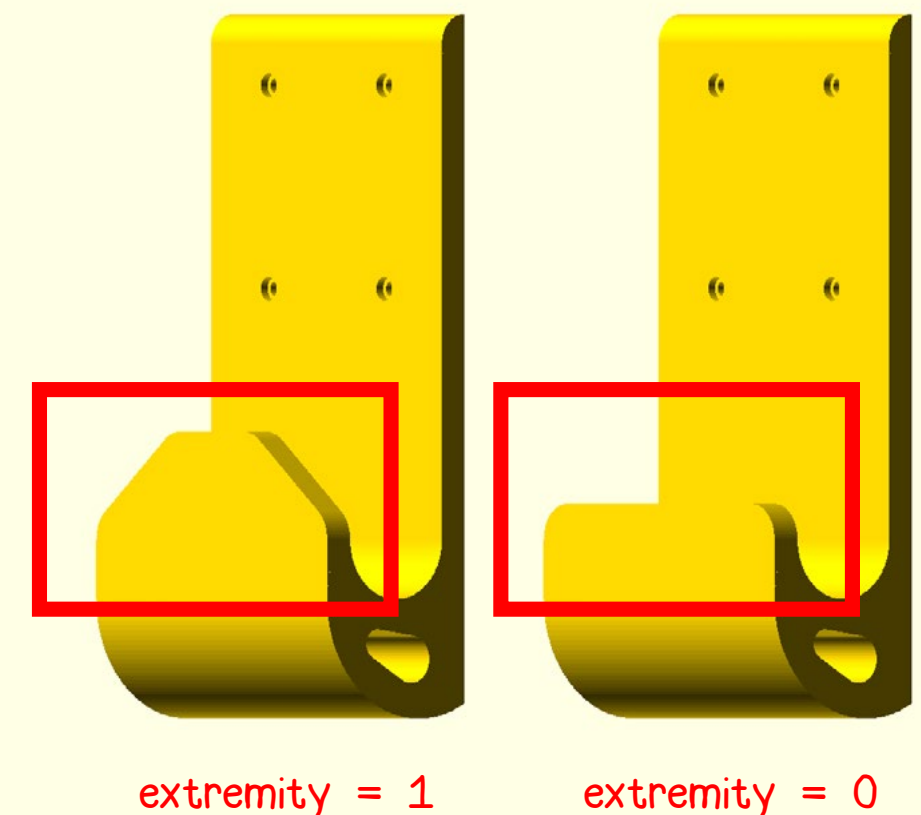
Customizable U-HOOK : Extra Settings



If you choosed the hook with rectangular “bracket”, it may be good to have a safety screw to lock hook into place.
If you need it, type “safety_screw=1” in “extra settings”.
It will use the screw parameters defined in “screw-holes” part.

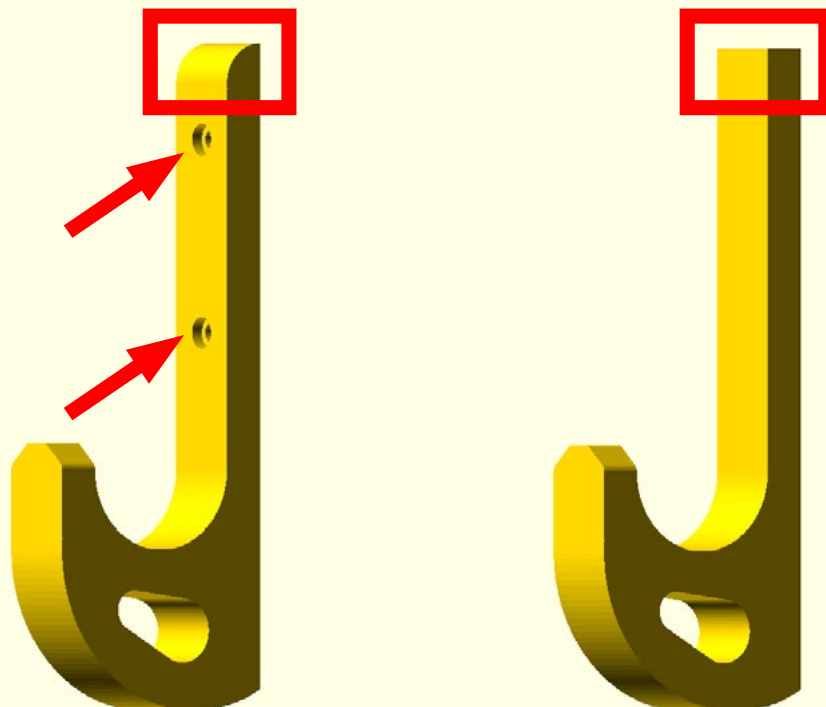
If you input a big “thickness” value,
the file will generate 4 screw-holes,
so you can make a VERY fat hook.

To remove the triangle extremity,
input “extremity=0” in extra settings.



screw_holes = 1
rounded_top = 1

screw_holes = 1
rounded_top = 0



But maybe you want to mash-up a hook with another 3D object.
For better integration you may need the hook’s shape with no screw-holes,
and maybe a flat top :
Input “screw_holes=0” and/or “rounded_top=0” in extra settings.