Customizable U-Hook

A Parametric 3D file
by Serge Payen, 2016

www.sergepayen.fr/en/parametric-u-hook

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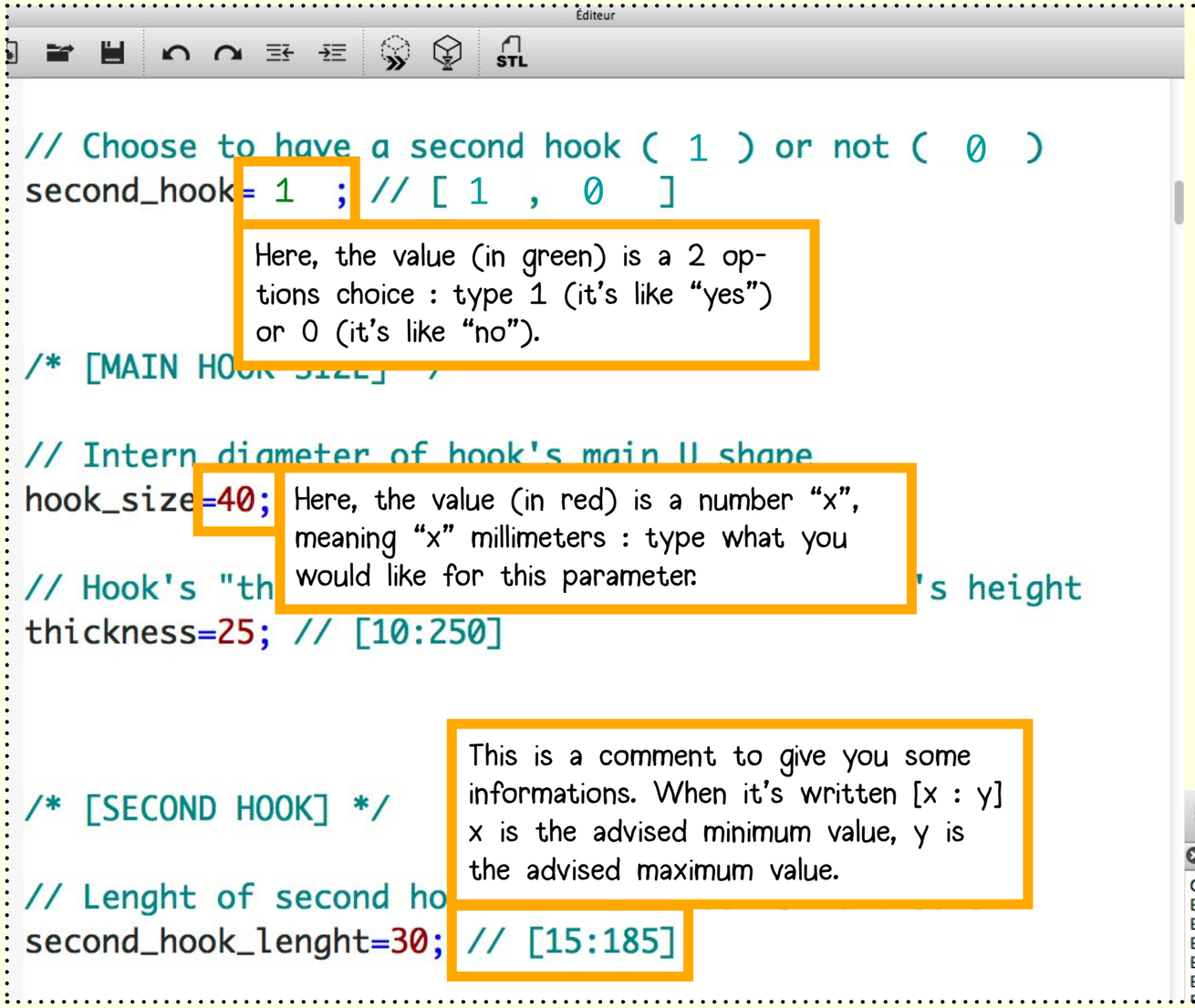
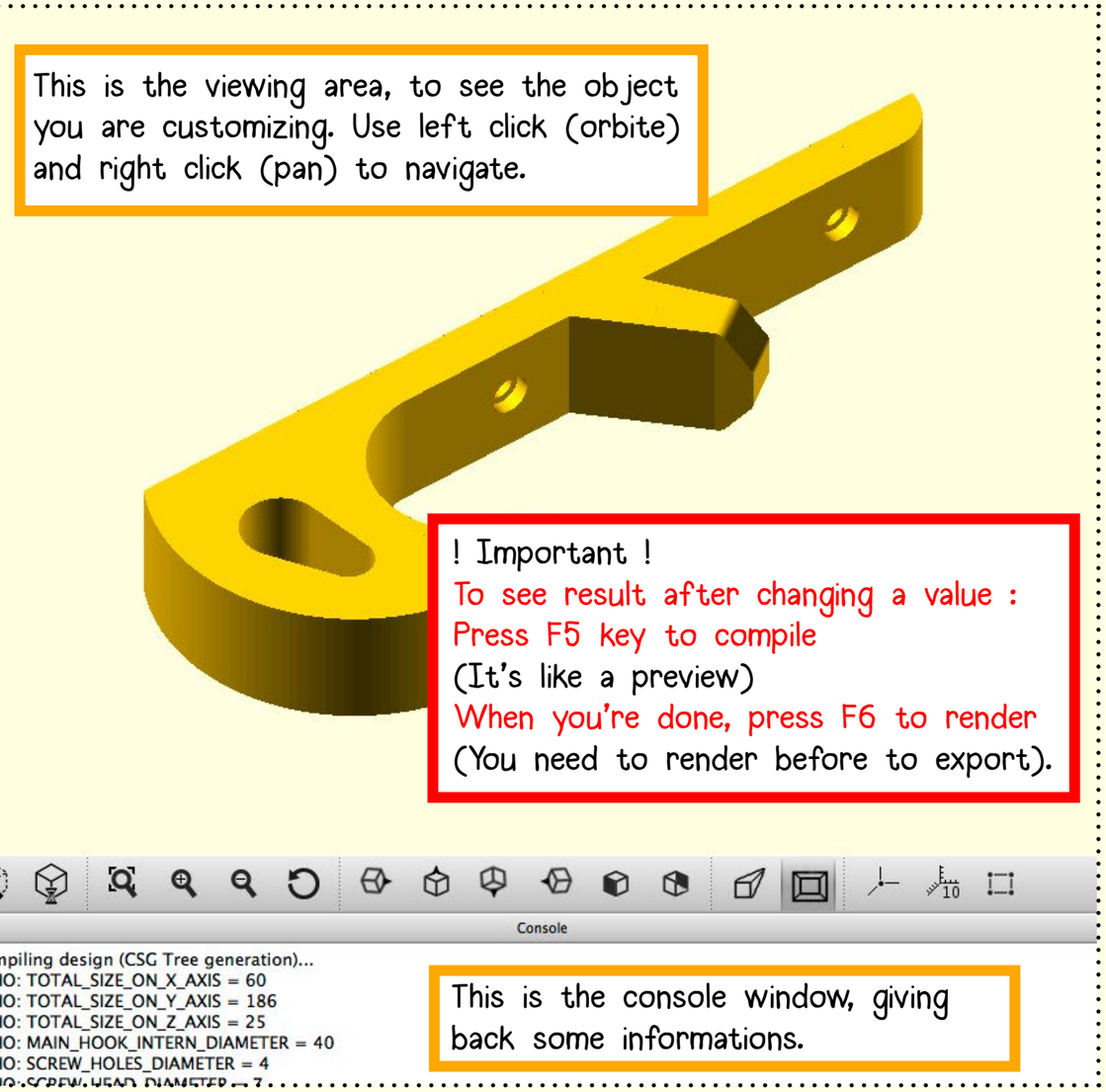
Customizable U-HOOK : How to use this file ?

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:





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".

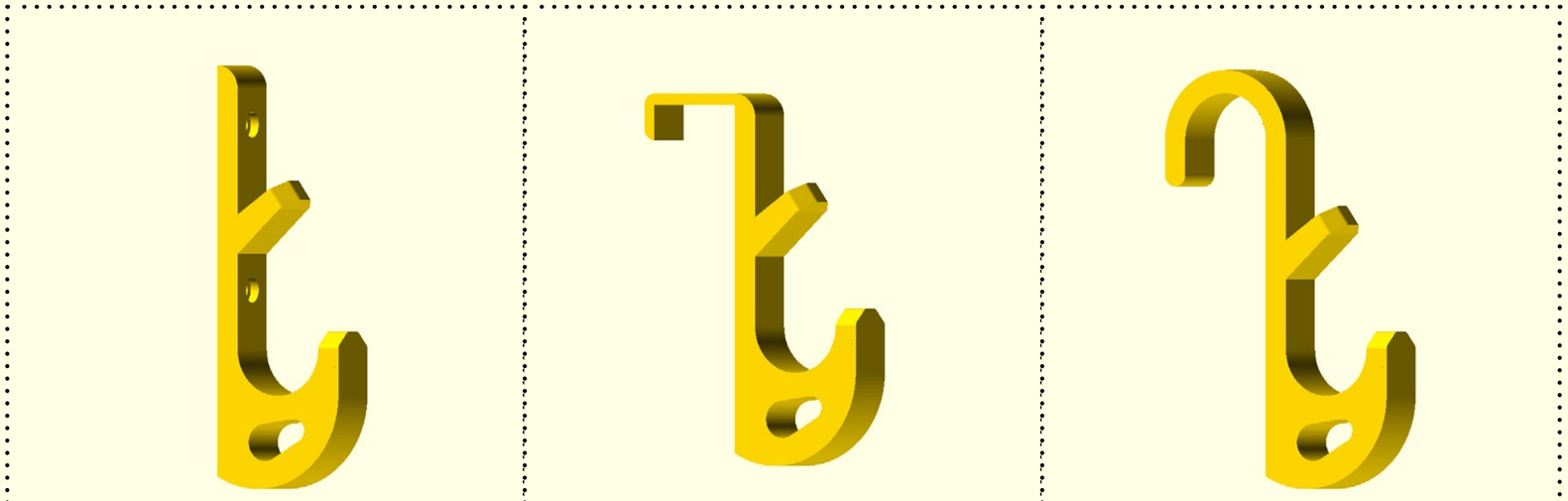
Customizable U-HOOK : Choose Shape

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”).

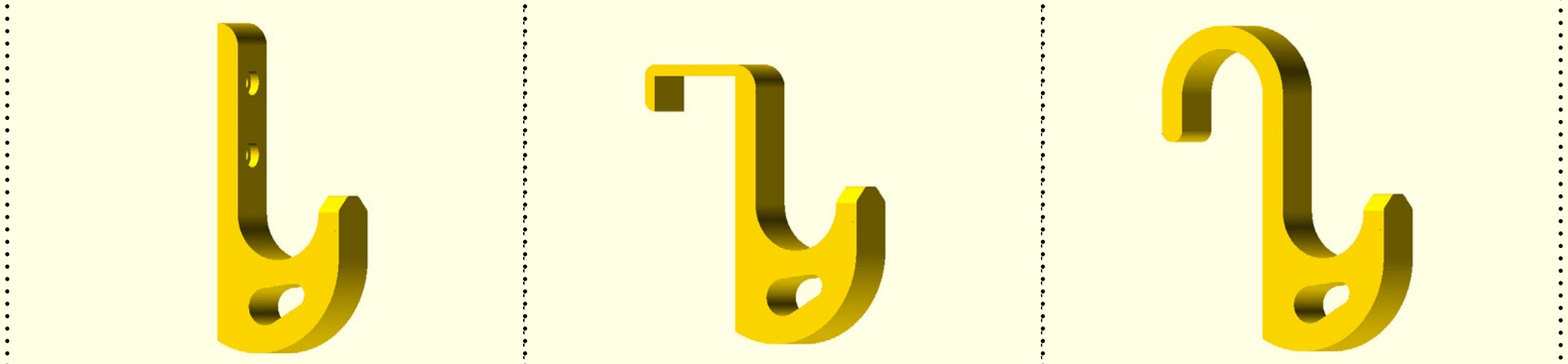
bracket = 1

bracket = 0 | bracket_round = 0 | bracket_round = 1

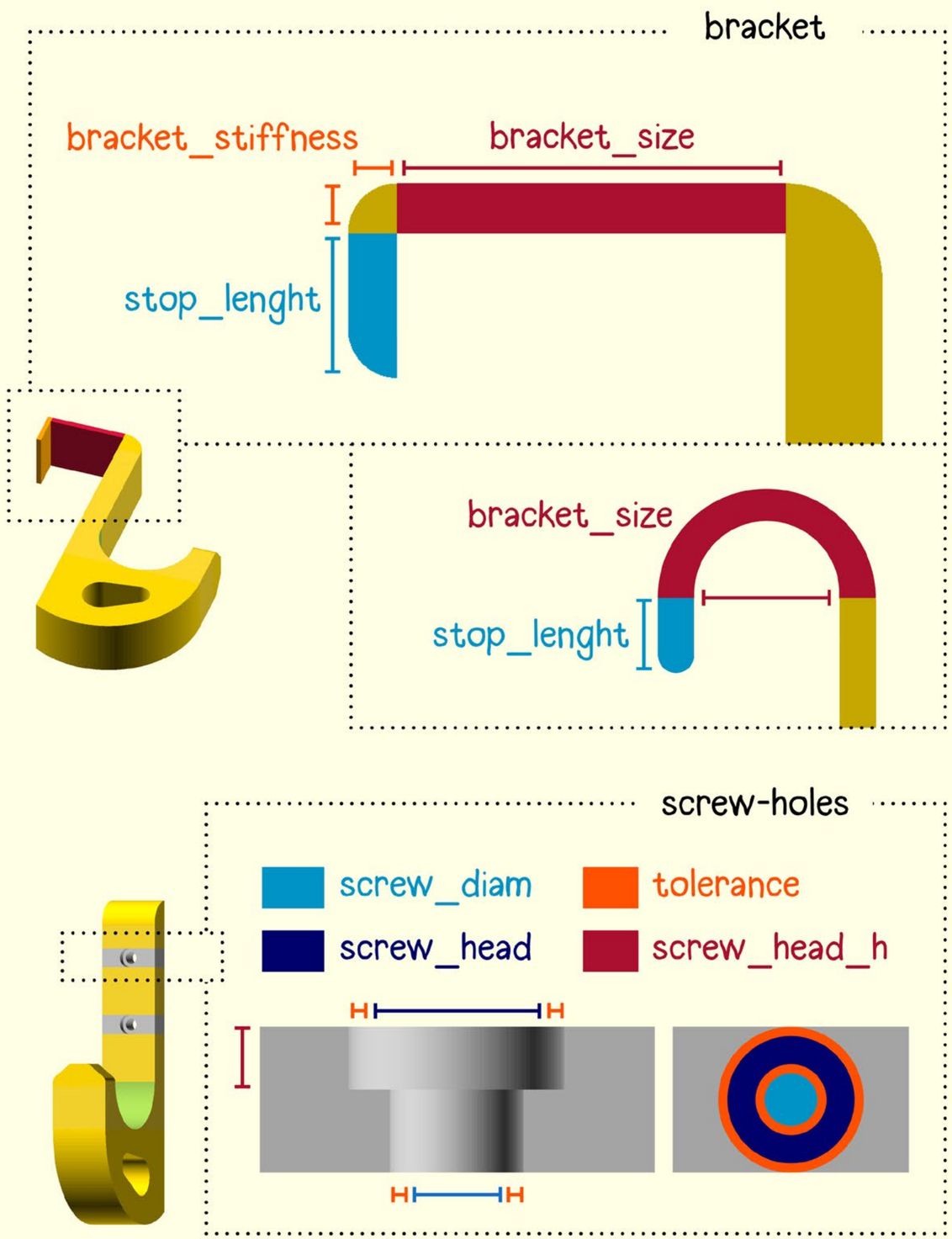
second_hook = 1

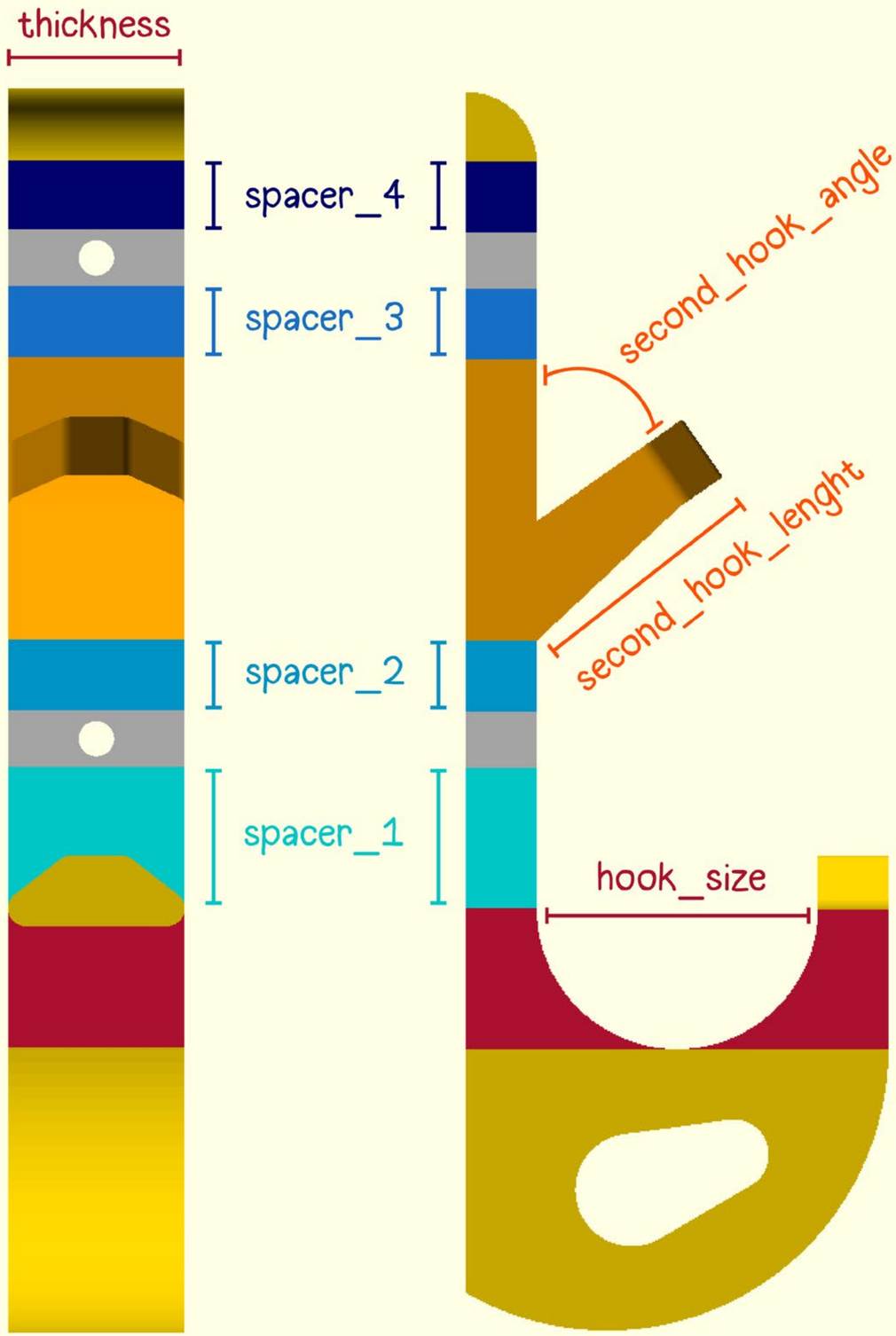


second_hook = 0



Customizable U-HOOK : Choose Size





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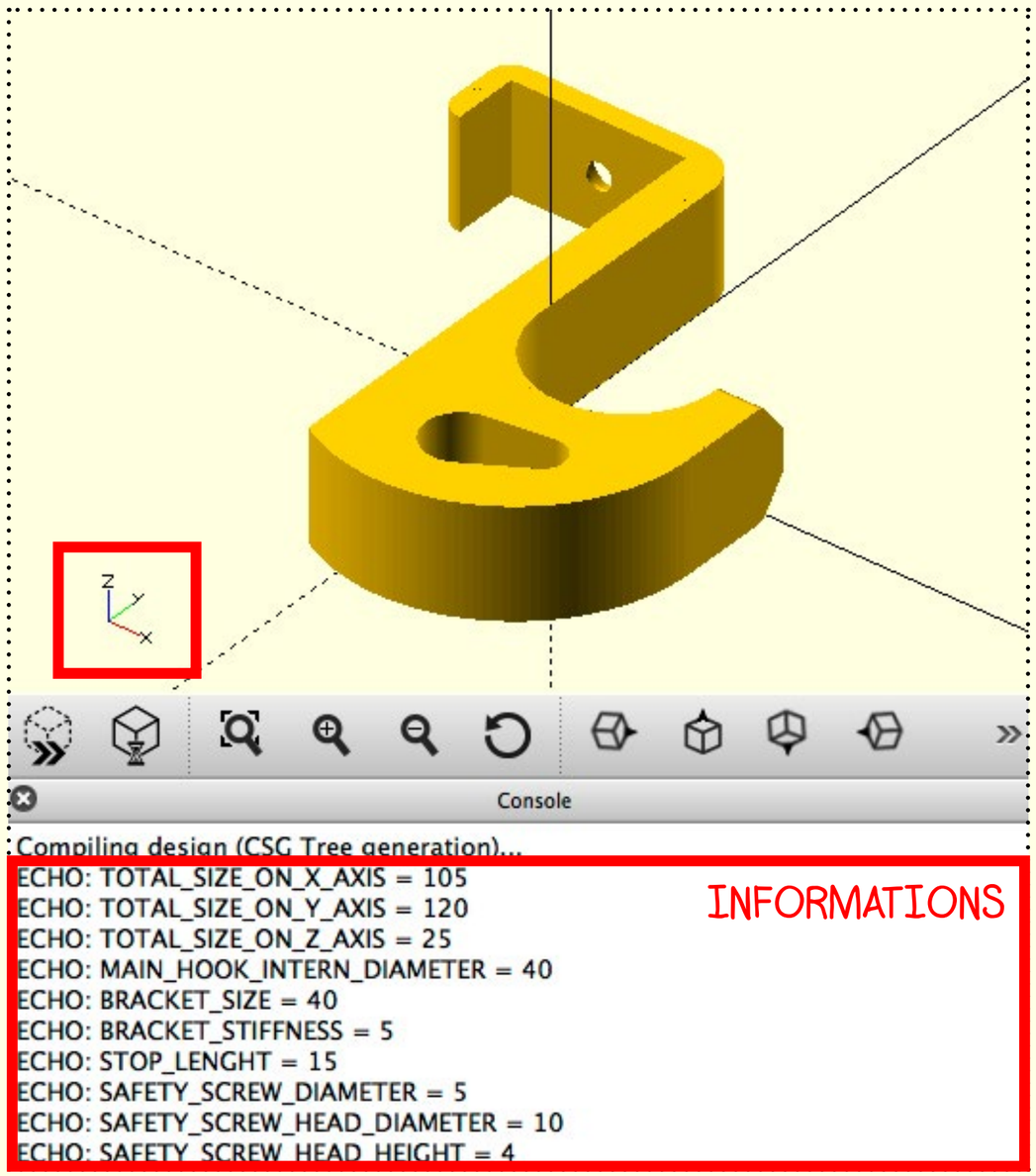
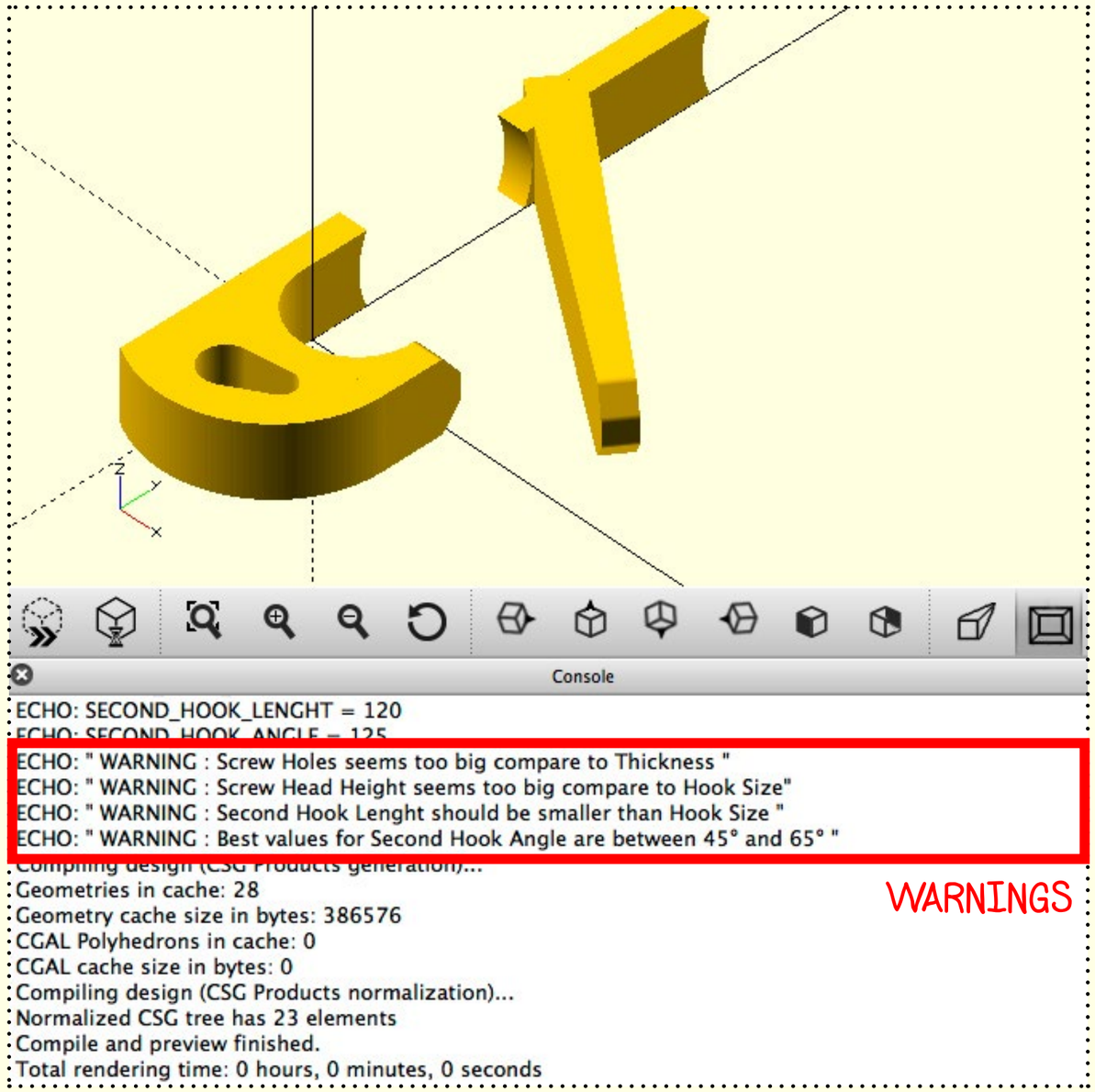
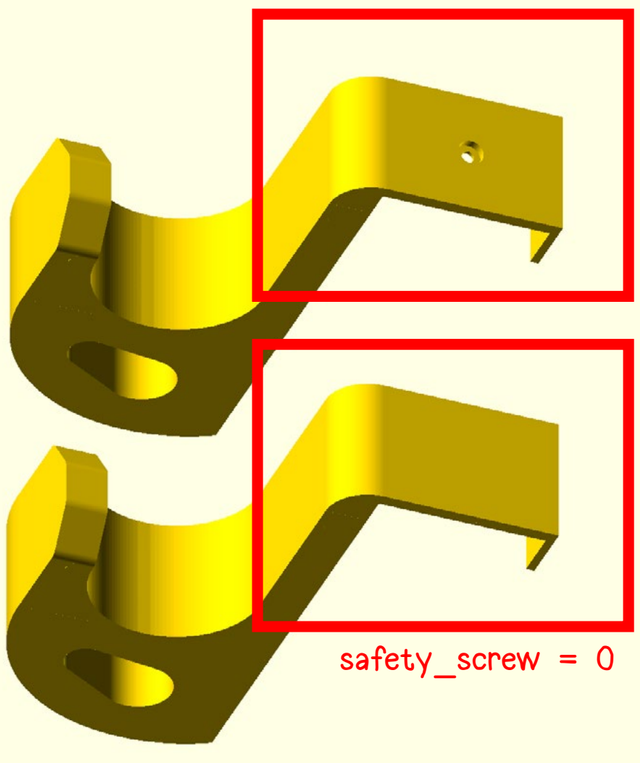
Customizable U-HOOK : Console window, informations & warnings

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.





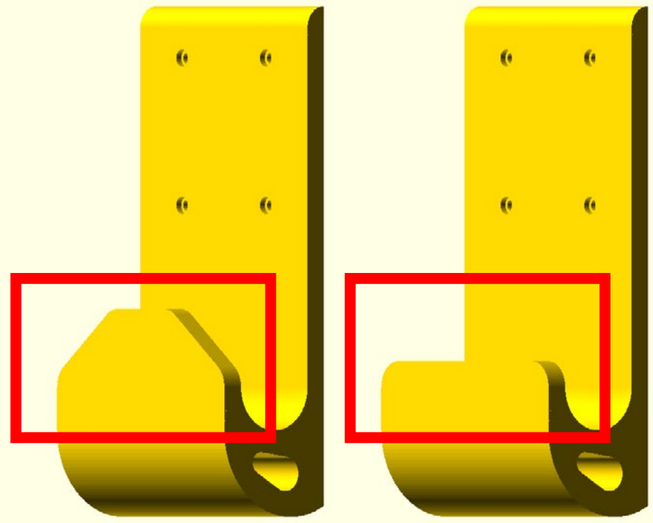
Customizable U-HOOK : Extra Settings

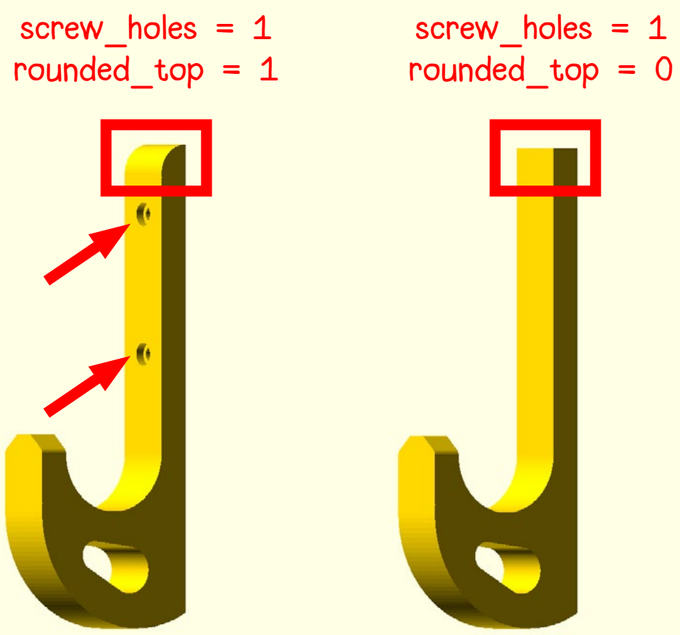


If you choosed the hook with rectangular “bracket”, it may be good to have a safety screw to lock hook into place.
If you need it, type “safety_screw=1” in “extra settings”.
It will use the screw parameters defined in “screw-holes” part.

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.





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.