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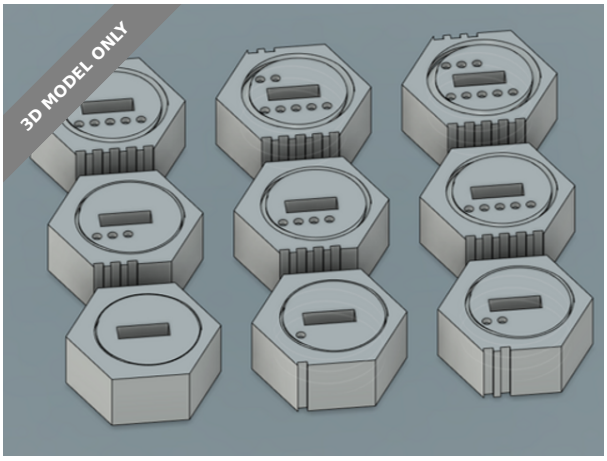

ISO Metric Threads w/ Adjustable Tolerances in Fusion360

ReplicantFX

VIEW IN BROWSER

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Summary

Threads that work are a bear to print, especially when you use Fusion 360 and only have the ISO standard metric sizes...

3D Printers > Test Models

Tags: 360 fusion thread modeling

Threads that work are a bear to print, especially when you use Fusion 360 and only have the ISO standard metric sizes to work with and no ability to customize. Usually we resort to threading our model and then scaling it or some equally imprecise hack.

You can however make your own thread profiles if you know where and how to do it.

I've documented the process at:
http://replicantfx.com/custom-threads-with-fusion-360/

At the above link you will also find the xml files I used with thread tolerances ranging from 0.1mm to 1.0mm in 0.1mm steps and the Excel spreadsheet with macro I used to make them.

I also took the time to create 9 test nuts and bolts. These are attached as an stl and a f3d file. These use Metric M14-2 threads and have tolerances ranging from 0.0 (Standard) to 0.8mm in 0.1mm steps (Each is marked with the corresponding number of dots/cutouts, 1 for 0.1mm - 8 for 0.8mm). I printed this set of nuts and bolts to test what tolerance I needed to use with my Ender 3. Using PETG I found 0.5mm to be perfect. 0.4mm also worked but because of zits and other stringing I still have to dial in it was not as smooth.

Good luck and please consider buying me a coffee if this saves you a lot of time.

Model files

thread-test.stl

tolerance-check.f3d

Find source .stl files on Thingiverse.com

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