



Spacer / Stand-off / Foot / Leg - for self-tapping screws - FreeCAD Parametric



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[VIEW IN BROWSER](#)

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Summary

► Versatile components with many uses. ► Fasten with low-cost self-tapping woodscrews you probably already have.

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Tags: [parametric](#) [leg](#) [spacer](#) [foot](#) [standoff](#) [freecad](#)
[column](#) [selftapping](#)

Notes

- See the diagram image for explanation of parameters.
- Chamfer and Plinth (flange) features are added to one or both ends using the Nc and Np parameters respectively.
- To edit parameters in FreeCAD look for the spreadsheet inside the model tree.
- **Some combinations of parameters won't work.** I've put in limits which mean that one or more parameters may be unfulfilled if they'd

clash. Nevertheless it's possible for the geometry to break : Look out for red exclamation marks in the model tree.

Also a sudden large change in a parameter might cause the sketch geometry to fail. Try changing it in smaller steps if this happens, or change the parameters in a different sequence.

■ Note that on FreeCAD, if the model fails to build then the 3D image will still show the previous 'good' geometry.

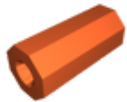
Parametric modelling on FreeCAD

I was pleasantly surprised that parametric modelling on FreeCAD works quite well. While not having the power of a full Excel spreadsheet (as SolidWorks), the common maths functions one might need are possible, and it all feels correspondingly less heavy. Referencing the parameters into dimensions is a bit more clunky, but there's an autocomplete which makes things easier.

Model files



selftap_spacer_20231125.fcstd



selftap-spacer_dc22_dt35_ds100_f68_nf8_l150_nc0_np0... .stl



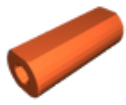
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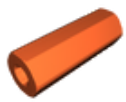
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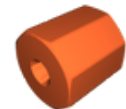
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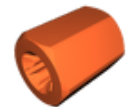
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selftap-spacer_dc22_dt35_ds105_f98_nf8_l100_nc2_wc0... .stl



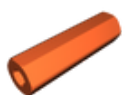
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selftap-spacer_dc26_dt45_ds87_f78_nf6_l100_nc2_wc05... .stl



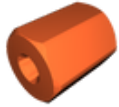
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selftap-spacer_dc22_dt35_ds80_nf0_l300_nc0_np2_dp11... .stl

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