



18mm snap-off utility knife

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Summary

A simple utility knife compatible with ubiquitous 18mm snap-off blades.

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A simple utility knife compatible with ubiquitous 18mm snap-off blades. As one would expect, the slider "clicks" every 0.5cm (blade snaps every 1cm) and can be fixed not to move.

The design comes in two versions: thin (4mm) and thick (6mm). I designed the thin one first, and decided that it's too thin, so I changed the design to be slightly thicker.

The main body of the knife has two parts that interlock together by slanted insets in adjacent walls.

The pin in the slider (that fits in the mounting hole of the blade) is separate, so that the model needs no supports when printing.

Print Settings

Layer height: 0.1mm (0.2mm should also work for 'thick' version)

Nozzle: I printed the 'thin' with 0.25mm nozzle, and then switched to 0.5mm with the 'thick' one, but any nozzle lesser or equal 0.5mm should do.

Filament: PET-G recommended.

'Thin' version feels rather flimsy with PET-G, so it might work with PLA as well. 'Thick' version might be too rigid for PLA. (ABS/ASA slider is likely to wear out with time.)

Assembling

To assemble the knife, one has to put blade on 'back' part, place the slider in the right place and put the 'front' part slightly shifted so that the parts align once they interlock.

There are two pins on the 'front' that snap in holes of the 'bottom' to secure the parts from getting loose.

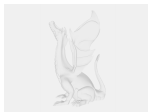
Model files



thick.stl



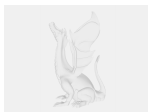
thick.scad



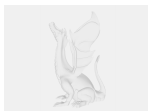
thick.dxf



thin.stl



thin.scad



thin.dxf

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