

Needle Length Guide for Umikot

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Summary

Two guides to make cutting needles to size easy.

[Household](#) > [Kitchen](#)

This is a needle depth/size cut guide. Slide the needles in and cut (ideally using angled cutters to get flush with the edge)

Two guides are available, one for 55 and one for 65mm. Both have 5 slots which can all be loaded at once.

- Update V2.5 (03/Jan/24): Refined the cutout where the needle handles are held to reduce the 'walls' height which facilitates easier removal.
- Update V2.3 (13/Sept/23): Created a new model for the Umikot SHORT version. Guide has a handle cut out of 20mm and a tunnel of 25mm for a total needle length when cut of 45mm. Created a new variation of the 55mm guide to accept 20mm needle handles.
- Update V2.2 (27/Jul/23): Removed the removal cutout on the top side where the needles are slotted in to mitigate issues with needles sliding back. Also increased the exit hole diameter from 0.7mm to 1mm.
- Update - Removal Comb (22/Jul/23): To aid with needle removal when they have been cut to size a removal 'comb' has been created. Insert the comb underneath on the cutout holes and the needles will raise allowing them to be removed easier.

- Update V2.1 (08/Jul/23): Increased the top thickness by 0.5mm to mitigate print issues with the top layer.
- Update V2 (04/Jul/23): Created a new design that is like a 'tunnel' for the needle body instead of a narrow channel. This has the same tight tolerance on for the needle handle so it will not move around.
- Update V1.1 (03/Jul/23): Created a new model for the 55mm guide to ensure a snug fit and added cut outs on the bottom to facilitate removal. Needle handle cutout width went from 2mm to 1.45mm and length shortened from 31mm to 30mm.

Recommended to print using the lowest layer height your slicer/printer can offer.

Print solid and slow to ensure dimensional accuracy. Both models tested on a Bambu Lab X1 Carbon using 0.08mm layer height and eSun PLA+.

Please leave feedback if printed, this is my first ever 3d model so there is most likely things I have done wrong. Happy to implement feedback and learn!

This remix is based on



Umikot (58mm Version) - Planetary Gear Spirograph Espresso WDT Tool

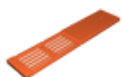
by redfoxdude

Model files

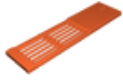


V2.5 - Recessed Handle Cutout & Easy Removal

2 files



umikot-65-needle-guide-tunnel-v23.stl

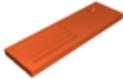


umikot-55-needle-guide-tunnel-v23.stl



Guide for SHORT Version

2 files



umikot-45-needle-guide-tunnel-short.stl



umikot-55-needle-guide-tunnel-short.stl



Removal Comb

1 file



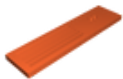
guide-removal-comb.stl

☐ Print slow with a low layer height



V2.2 - Larger Exit Holes and Better Needle Fit

2 files



umikot-55-needle-guide-tunnel-v22.stl



umikot-65-needle-guide-tunnel-v22.stl



V2.1 - Increase Top Thickness

2 files



umikot-55-needle-guide-tunnel-v21.stl

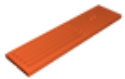


umikot-65-needle-guide-tunnel-v21.stl



V2 - Tight Tolerance with Tunnel

2 files



umikot-55-needle-guide-tunnel-v2.stl

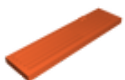


umikot-65-needle-guide-tunnel-v2.stl



V1.1 - Tight Tolerances

2 files



umikot-55-needle-guide-v11.stl

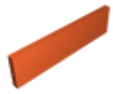


umikot-65-needle-guide-v11.stl



V1.0 - Loose Tolerances

2 files



umikot-55-needle-guide-v10.stl

☐ Print flat on base; not on long edge



umikot-65-needle-guide-v10.stl

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