

## Thic Mantis Clamp



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### Summary

Re-incorporating features of the original Falcon Clamp taking some design queues from the Mantis Clamp

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This one is a bit bigger making it quite useful for other applications. As a phone holder or in the kitchen to drain a bottle of honey or sauce. Just a handy size.

One of the key elements of the original Falcon Clamp not preserved in the **Mantis Clamp** is a compound planetary gearbox featuring fused sun gears. Indeed the very thing was a contrived application of this concept.

There is some post-processing required to separate the ring gears with a sharp edge. Also check preview when slicing to ensure the 1-layer gaps which separate the rings are preserved.

Use a clearance gauge. I've used 0.5mm tolerances which are a bit looser than my usual 0.4mm. It should be tight to minimize gear slop but be able to crack apart cleanly. If you have trouble, lower temperature or extrusion

rate can help or negative horizontal expansion can widen up the gaps. You can always go BIG!

Once I got the gears moving, I was able to turn it in the close direction until it bound up. Then a few taps of the rubber mallet to help the outer jaws close. Then turn the gears a little more. Repeat. Use patience and proceed slowly. A dab of lube really helps (but also reduces holding force).

## This remix is based on



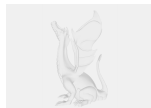
### Mantis Clamp Vise

by tmackay

## Model files



**mantis\_clamp\_thic.stl**



**mantis\_clamp\_thic.scad**

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