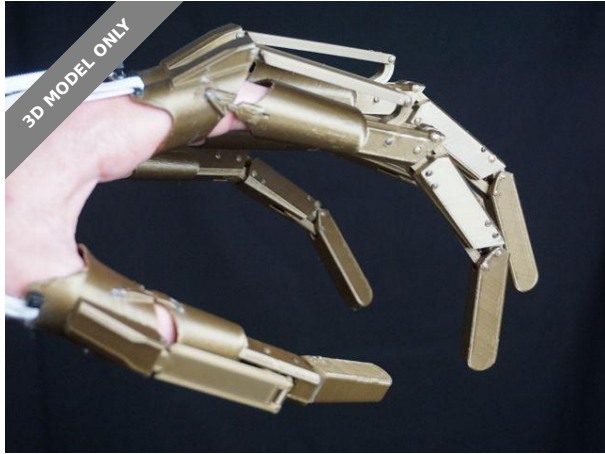




Articulated Finger Extensions

D Dragonator

[VIEW IN BROWSER](#)

updated 30. 1. 2024 | published 30. 1. 2024

Summary

Articulated finger extensions are a mechanism used to extend fingers, including movements.

[Costumes & Accessories](#) > [Cosplay & Costumes in general](#)

Tags: [articulated](#) [finger](#) [extensions](#)

Articulated finger extensions are a mechanism used to extend fingers, including movements. The mechanism consists of several joints joined by gears and linkages to copy the movement of a single finger joint to all other joints.

The mechanism is an open take on the Articulated Finger Extensions by Gary Fey. The design was optimized for supportless 3D printing and customizability.

A demonstration video: <https://youtu.be/BwDDJUcgHCQ>

A full list of instructions: <https://www.instructables.com/3D-Printed-Articulated-Finger-Extensions/>

The dimensions you need for a single finger are:

"Base thickness": The thickness of the base of the finger

"Base Width": The width of the base of the finger

"Base length": The length to the first joint + around 2mm
"Joint thickness": The thickness of the first joint
"Joint width": The width of the first joint
"tip thickness": The thickness of the tip (around the nail)
"Tip width": The width of the tip (around the base of the nail)
"Tip length": The length from the first joint to the tip + around 2mm

Since each finger is based on the same file, the dimensions will be included in the filename. All given dimensions are in millimeters in the filename, in the order of the list above, so the filename will be constructed:

AFE-Finger-T#1-W#2-L#3-T#4-W#5-T#6-W#7-L#8.STL

or

AFE-Thumb-T#1-W#2-L#3-T#4-W#5-T#6-W#7-L#8.STL

My index finger for instance is: AFE-Finger-T22-W21-L31-T21-W21-T15-W17-L55

New dimensions can be created upon request.

The first hinge requires fishing line or another type of flexible wire as a hinge. This hinge is fixed in place using CA glue. Activator can be used to instantly set the CA glue.

All other hinges use 1.75mm filament. Pins are created that are 1-2mm wider on each side of the part. A lighter can be used to melt the excess of the pins, and push them into a sort of rivet.

All holes should have a minimal amount of clearance with the filament hinge to for smooth motion

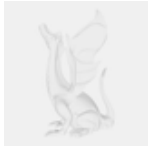
Print instructions

Each STL file consists of all the parts required for a single finger

The design is support free. No supports of any kind are needed. The design has overhangs of up to 45 degrees. The parts should be printed on a printer with good cooling. Layer height of 0.2mm was tested, but lower layer height should improve the overhang quality.

Parts are tall and narrow. Proper bed adhesion is a must. Print on gluestick if possible.

This remix is based on



None

Model files



afe-thumb-t215-w19-l23-t18-w16-t15-w135-l32.stl



afe-finger-t24-w25-l34-t24-w25-t20-w22-l59.stl



afe-thumb-t215-w24-l255-t18-w20-t15-w17-l36.stl



afe-thumb-t24-w30-l30-t20-w25-t17-w21-l415.stl



afe-thumb-t26-w28-l34-t20-w23-t14-w20-l41.stl



afe-finger-t22-w20-l37-t22-w22-t15-w17-l59.stl



afe-finger-t22-w21-l31-t21-w21-t15-w17-l55.stl



afe-finger-t25-w26-l38-t25-w26-t20-w22-l67.stl



afe-finger-t18-w19-l265-t18-w19-t14-w16-l465.stl



afe-thumb-t25-w29-l275-t21-w24-t175-w20-l385.stl



afe-thumb-t30-w395-l32-t25-w33-t21-w275-l445.stl



afe-finger-t19-w18-l26-t18-w18-t13-w15-l48.stl



afe-finger-t18-w20-l295-t18-w20-t14-w16-l515.stl



afe-finger-t21-w20-l29-t205-w21-t15-w17-l55.stl



afe-finger-t21-w23-l34-t21-w23-t17-w19-l59.stl



afe-finger-t21-w22-l30-t21-w22-t17-w19-l53.stl

License

This work is licensed under a
Creative Commons (4.0 International License)



Attribution-ShareAlike

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✓ | Commercial Use
- ✓ | Free Cultural Works
- ✓ | Meets Open Definition