



Crane Hook Carabiner



Buggi

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Summary

This is a very strong Carabiner designed in Freecad and inspired by the design of crane hooks

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Tags: [clip](#) [keyring](#) [freecad](#) [carabiner](#) [keyclip](#) [cranehook](#)

Update July 2nd, 2024: Adjusted the closing section and the fillet for better uniformity over all sizes.

This is an improved version of my old USB Keyclip.

As the original had a strength flaw @enjay reminded me on, I redesigned it to follow the design rules of crane hooks. A crane hook is designed as a cross-section with the same tension according to the bending moment. I tried to implement this in my new design to make the Key clip / Carabiner as strong as possible.

The whole design is parametric, you only need to type in the size in the "Size" field of the attached table in Freecad, and the magic reshapes the whole thing to size. The closing section gets bigger on smaller sizes to keep it printable. The thickness is also adjusted to the size.

Sizes from 20mm to 50mm are attached for your convenience.

This remix is based on



Key clip USB clip parametrizable improved version!

by Buggi



Keychain caribiner swan head clip

by enjay

Model files



crane_hook_clip-55mm.stl



crane_hook_clip-50mm.stl



crane_hook_clip-45mm.stl



crane_hook_clip-40mm.stl



crane_hook_clip-35mm.stl



crane_hook_clip-30mm.stl



crane_hook_clip-25mm.stl



crane_hook_clip-20mm.stl

crane_hook_clip.fcstd

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