



Rope Rap (like a TyRap, fast and strong)



Wim V

[VIEW IN BROWSER](#)

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Summary

The equivalent of a TyRap / ZipTie for rope! A fast way to make a strong hanging and/or tensioned line without knots.



1.02 hrs



3 pcs



0.20 mm
0.12 mm



0.40 mm
0.20 mm



PLA



9 g



Creality
CR-10 V2

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[tyrap](#)

The super simplicity of a Tyrap / Tie-Wrap / Zip-Tie translated to use with a rope.

Ever hung up a clothesline or something else hanging from a tree on vacation? Always that fiddling with tying the rope and untying it again at the end of the holiday? Not anymore! With this handy tool you can hang a tensioned line in seconds and remove it just as easily!

Rope too short? Attach two ends of a rope with the same ease!

To fasten, press the tension block against the rope using the lever. Pull the rope to tighten/tension. Detaching is even easier, just push the lever the other way to release and pull out the rope. Once tensioned the lever stays in place. The rope only comes loose when pushing the rope back or pushing the lever.

This model is designed for rope of 4-6mm in diameter. * see the smaller print for ropes 2.5-4!

Printed in both PLA and PETG with 0.4 nozzle - 0.2 layer - 15-30% infill.

It's a print in place pivot point, so you have to loosen it a bit by moving back and forth so that it turns smooth before using.

I've also added a basic hook, for hanging stuff. (Use less heavy loads than with a rope loop!)

The photo

To prove how strong the grip and construction of the Rope Rap is I hung up a hammock and lay down in it. With that, both ends had to endure about 60Kg, and with taking a seat in the hammock, probably even higher forces, but they bit into it firmly!

Disclaimer: Do not try this yourselves! I took multiple security measures to make sure everything was safe when doing this. The Rope Rap is by no means intended as climbing equipment! Make sure you use them safely!

I updated to V2 one day after publication. After some feedback, the design was optimized and thoroughly tested with different types of ropes from Ø4 to 6mm. See the added photos regarding the use, the tested ropes and the changes. Tested in both PLA and PETG.

Update 31-08:

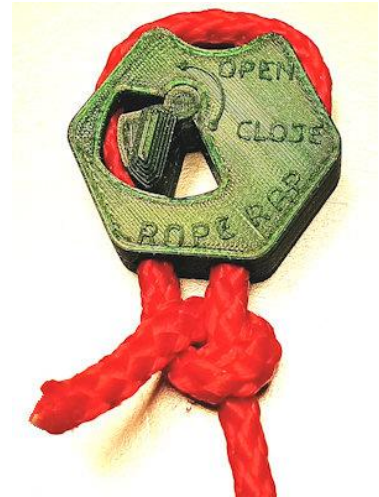
After a request for a smaller version I decided to downsize and printed at 66.66% with 0.2 nozzle / layer 0.12 (first 0.2) / perimeters 4 and infill 20%. It can now be used for smaller ropes of Ø2.5-Ø4mm! I have added the project file. I used failsafe values.

04-09: I have added an optimized STL for small printing with 0.2 nozzle. The gap is the same as with the base model (0.2). This prevents fusing of the pivot point. Model is already scaled at 66.66%. Use above mentioned settings.

Guidelines for safe use:

- Ensure you press the lever well enough when tensioning to let the teeth grip the rope well!
- Use a fail safe knot when **loaded to the max!**

(see photo, you don't have to pull it tight, in case of slipping it will lock itself and it is relative easy to loosen again)



Model files



rope-rap-v2.stl



hook.stl



rope-rap-v2-o25-4-optimized-for-02-nozzle.stl

☐ Optimized for small printing (gap = 0.2 - same as base model)

Print files



rope-rap-v2_1h1m_020mm_216c_pla_cr10v2.gcode

PLA 0.40 mm 0.20 mm 1.02 hrs 9 g



hook_16m_020mm_216c_pla_cr10v2.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 0.26 hrs ⚖️ 2 g



rope-rap-v2-02-012-666_1h26m_012mm_216c_pla_cr10v2.gcode

🌀 PLA 📏 0.20 mm 📏 0.12 mm ⌚ 1.43 hrs ⚖️ 3 g

📄 If the pivotpoint fuses together because the gap becomes to small, see the optimized STL!

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