



Bike Storage - pulley lift (updated)



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VIEW IN BROWSER

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Summary

easily lift your bike to the ceiling for storage to save floor space in the garage! Update - turned the strap 90 degrees



19.33 hrs



3 pcs



0.20 mm



0.40 mm



PET



234 g



Prusa
MK3/S/S+

[Sports & Outdoor](#) > [Outdoor Sports](#)

Tags: [storage](#) [bike](#) [mountainbike](#) [lift](#)

UPDATE: for the lower pulley, I turned the strap 90 degrees so that the rope does not twist. I also uploaded the 3 print file g codes that will print all the parts necessary in PETG.

I wanted to have a few of these Pulley lifts as I have way to many bikes in the garage.

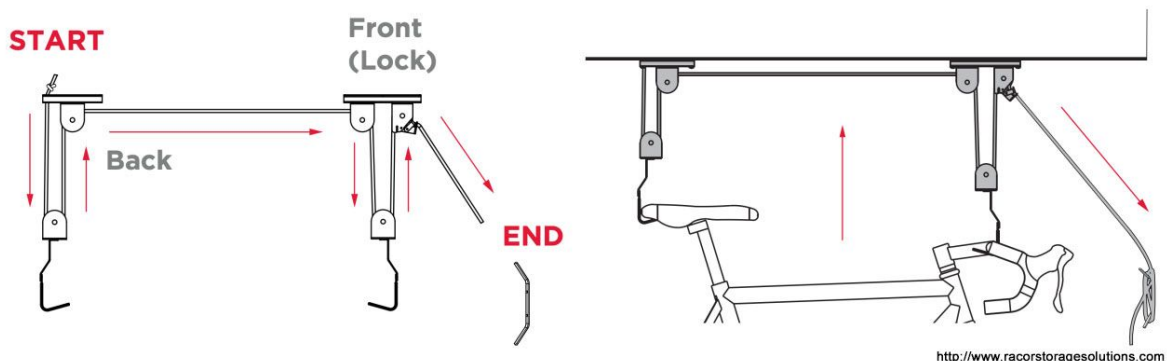
****Disclaimer**** The cost to buy all of the materials (PETG included) is about \$20 USD. You can buy a 2 pack of these lifts on Amazon for \$32! So not necessarily cost effective, but I love to build stuff, so no regrets =)

BOM:

- about 250g of PETG (PLA is probably fine, but my garage gets hot. PLA+ would do fine even at garage temps)
- 608 bearings (5) - generic rollerblade or skateboard bearings. I got a 20 pack on amazon for \$7
- M8x40mm bolts (5) - about \$5
- M8 nut (5) - nylon lock nut is probably best
- velcro strap (2) - I bought a 2 pack at REI for \$3. Honestly a lot of things could work. I chose not to use hooks as my race bike does not have a good place to hook under the seat and I don't want it falling
- Rope 1/4" - you can buy a ton of this for like \$5. 20 feet of rope is enough for me

Assembly:

- Print 5 pulleys (10 total parts since they are in halves). They all fit on the print bed. Push a bearing in and then press the two halves together. They fit together pretty tight, but I decided to add a little glue anyway so that the rope does not potentially split the two halves apart which would bind the system up.
- Print 3 of the Upper Pulley bodies (3 of "pulley body 1" AND 3 of "pulley body 2". so 6 parts total). This can also be done on one print bed. Place the pulley between the two halves before snapping them together, no glue needed this time. Slide the bolt through and tighten the nut so that it makes contact with the body but there is no need to make it tight which would bind the pulley
- Print 2 of the lower pulley bodies (4 parts total. 2 of each half like above) Same assembly as above.
- Look at the image below for how to set up the whole system. for the upper pulleys, I used a single 2x4 to assemble on the ground and then screwed that to the joists in the ceiling.



Model files



upper-pulley-body-1.stl

☐ Print 3 of these



upper-pulley-body-2.stl

☐ Print 3 of these



pulley-half-2.stl

☐ Print 5 of these



pulley-half-1.stl

☐ Print 5 of these



lower-pulley-1-v3.stl

☐ print 2 of these



lower-pulley-2-v3.stl

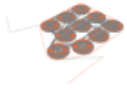
☐ print 2 of these

Print files



3-upper-pulleys_02mm_petg_mk3s_7h51m.gcode

 PET  0.40 mm  0.20 mm  7.85 hrs  96 g  Prusa MK3/S/S+



5-pulleys_02mm_petg_mk3s_6h4m.gcode

 PET  0.40 mm  0.20 mm  6.06 hrs  70 g  Prusa MK3/S/S+



2-lower-pulley_02mm_petg_mk3s_5h25m.gcode

PET 0.40 mm 0.20 mm 5.42 hrs 68 g Prusa MK3/S/S+

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