

Rook 180-225 tuned | WIP

 RH3D[VIEW IN BROWSER](#)

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Summary

Rook 180 with 225 print area without extending?

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Know Rook 180?

I've seen couple of points on the original rook 180 that could have been modified to get even more of the printer but later I saw the video about updating and creating MK1 version so I decided to stop as there should be a lot of changes and my mods will make no sense then.

I decided to upload my models as they are (work in progress) where you can use some of the design already - read notes below.

PS - this is based on the turned version.

PS2 - this is not tested but the changes are not so significant that it should have any bad impact. I wanted to start printing but noticed upcoming changes so I decided to wait.

A. 225 BED IN 180 FRAME

1. Working - I changed the Y gantry and X carriage to get around 225 mm of travel across the X while no need to extend the frame.
 - this uses 330 mm rods - if you can only get 350 mm you can make the holes go through the Y gantries and leave the rods sticking out - the printer frame is 354 mm wide so they will not stick out of the printer if you have enclosure.
 - Y carriages are modified to leave more room for X carriage while still having the rods inserted deep enough to maintain rigidity.
 - X carriage is 45mm wide (original version is
2. Print area front to back isn't increased as it needed some more time (moving steppers, rods, belt tensioners) and at that moment I noticed that changes for MK1 are coming.
3. X carriage now uses two LM8LUU, is designed for E3D hotend style mount - use heatsink blower that attaches directly to the heatsink.
4. Part cooling was not finished - the radial fan is supposed to mount on the back of the X carriage.

B. Some minor changes to bottom frame only to print easier - mainly the slot holes for adjusting Z steppers.

C. I was also planning to make Single Z stepper mod (with belt gear reduction) to make the build even cheaper and as someone coming from bedslinger I am happy even without Z tilt. I am just not sure - are there any other major disadvantages this would bring? The only thing I can think of is speed/acceleration as one stepper with reduction is obviously not going to compete well against 3 steppers.

Thanks Rolohaun!

This remix is based on



GitHub - rolohaun/Rook-180



GitHub - WoodKnight58/Rook-180-Turned: Turned Joining Faces for less supports

Model files



rh3d_t_bottom_front_right_bottom_frame.stl



rh3d_t_bottom_front_left_bottom_frame.stl



rh3d_x_carriage_front.stl



rh3d_x_carriage_rear.stl



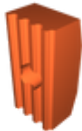
rh3d_toolhead_e3d_a.stl



rh3d_toolhead_e3d_b.stl



rh3d_x_carriage_belt_left.stl



rh3d_x_carriage_belt_right.stl



rh3d_y_carriage_left_a.stl



rh3d_y_left_carriage_clamp.stl



rh3d_y_carriage_right.stl



rh3d_y_right_carriage_clamp.stl

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