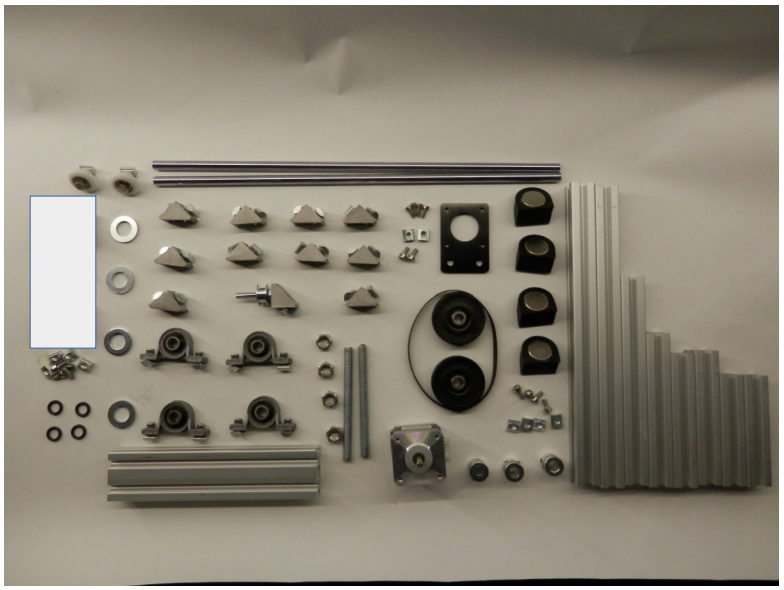
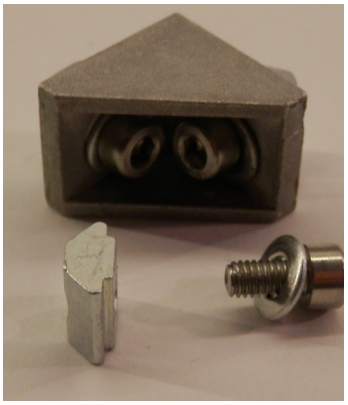
Instructions the xsrobotics Laser Air Assist Kit

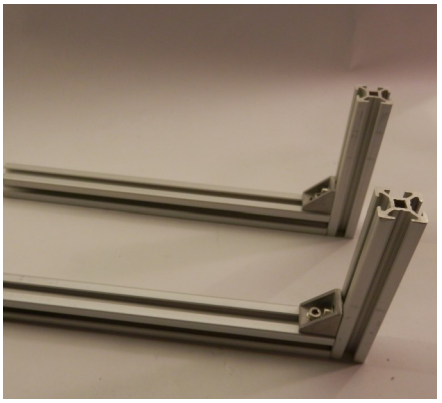
Thank you for ordering the Rotary Axis Kit. On the following pages you will see how to assemble the kit and what you should pay attention to. Begin by making sure all parts have arrived in the package.



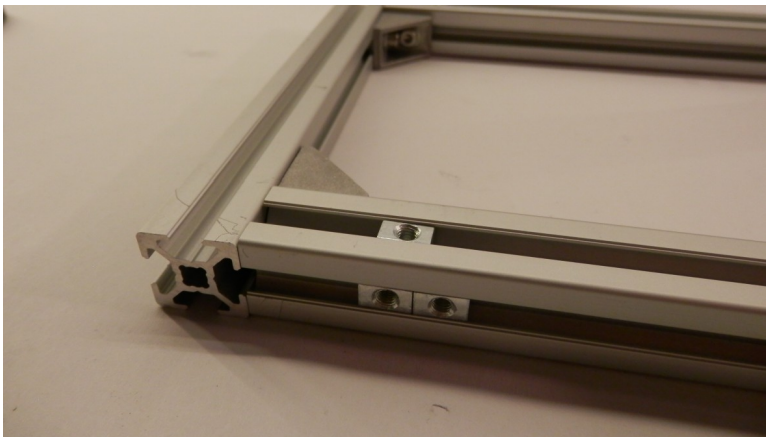
At the beginning I refer again to the safety and liability information: When you are installing the Kit unplug the laser cutter. We are not liable for any damages to persons or things.

1. Mount the 25cm 2020 to the 10.5cm 2020 profile.

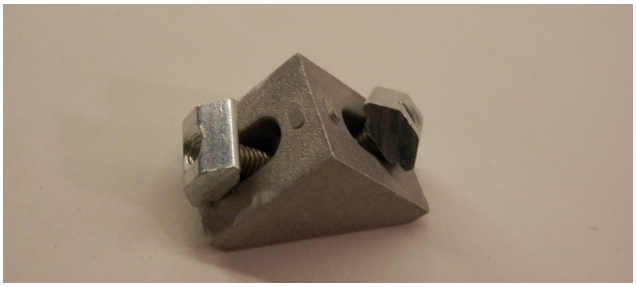


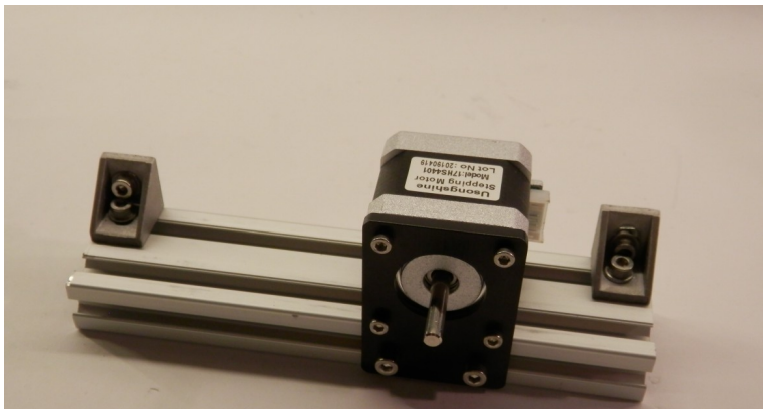


2. Connect the ends of the two 25cm pieces with a 17cm 2020 profile. Don't forget to insert some T-Nut blocks on both sides beforehand like in the picture.

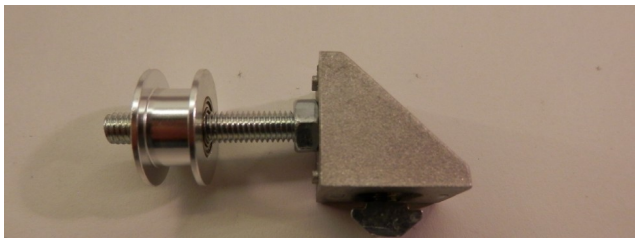


3. Mount the motor and two corner brackets to the 2040 aluminium.
Use some sandpaper or a file to trim down the small taps on the corner brackets

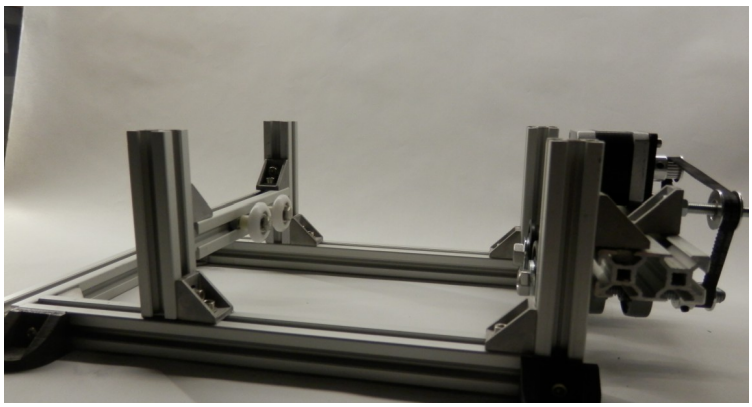




4. Assemble the belt tensioner and mount it to the 2040 like in the next picture(don't forget to remove the small tap on the corner bracket)



5. Mount the 2040 aluminium to the frame. Continue with mounting the two 8.5cm 2020 pieces on the long rail. In the two 8.5cm rail are connected with the last piece of aluminium.



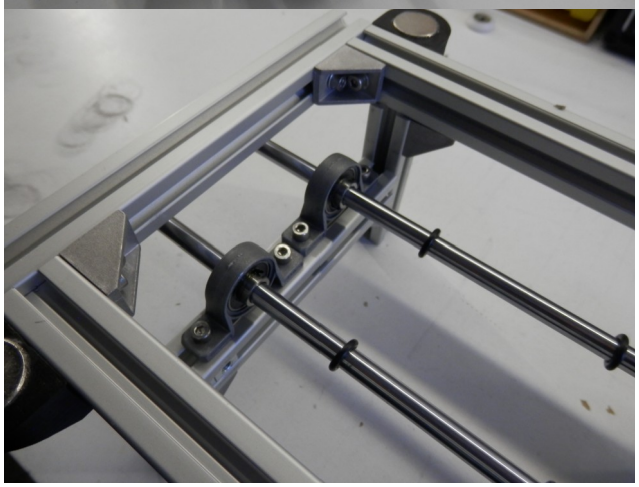
6. Mount the 4 magnet feet with the 4 T Nuts we inserted before.

Now you have to decide if you want to assemble it in configuration 1 or 2, you can always switch between them later easily.

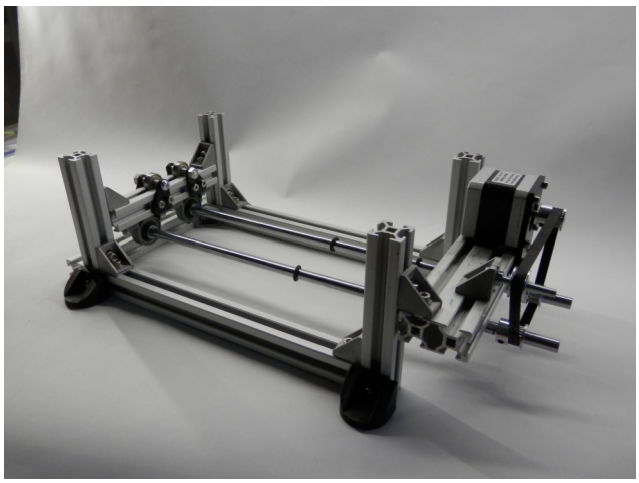
Configuration 1 stainless steel rods (recommended)

7. Assemble the two bearing blocks on the 2040. insert the steel rods and mount two pulleys on them (tighten them later)

8. Mount the other two baring blocks on the other side. Make sure you put the O-Rings on the rod beforehand.

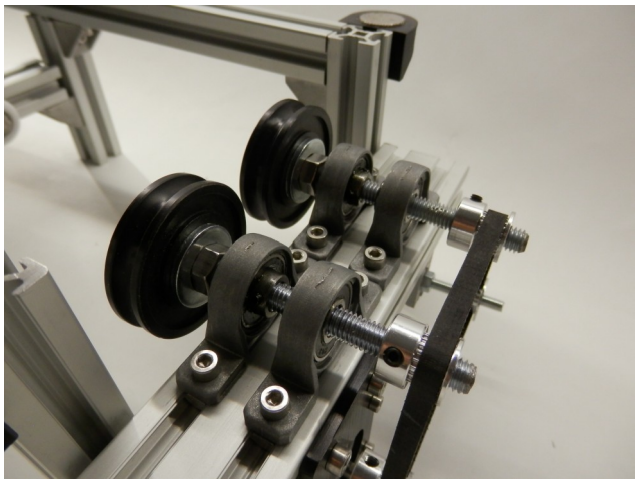


9. Insert the belt and tighten everting up. Make sure everything is square and perpendicular.

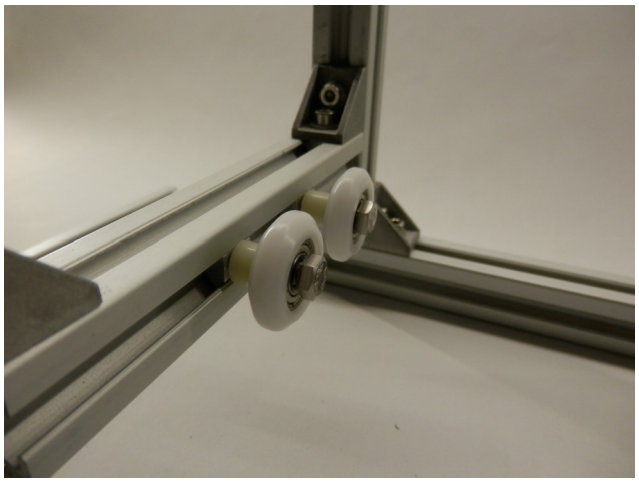


Configuration 2 rollers (advanced)

10. Mount all 4 bearing blocks in the 2040. Insert the treaded rods and mount the 2 geared pulleys. Mount the two rollers with 4 washers
(M8 washer, big washer, wheel, big washer, M8 washer)
make sure to tighten them up with the two M8 nuts.

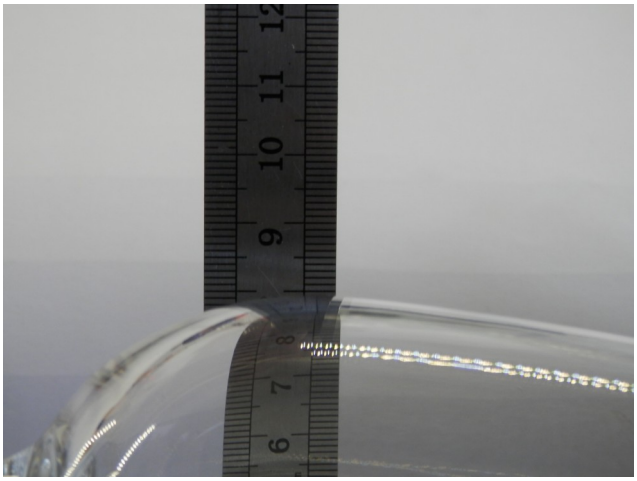


11. Mount the small white wheels on the other side. Use the spacers and make sure you use the M5 T block not the standard M4 blocks
It is advanced because you need to play around with your specific round body and some rubber bands (for more friction to get it working perfectly)

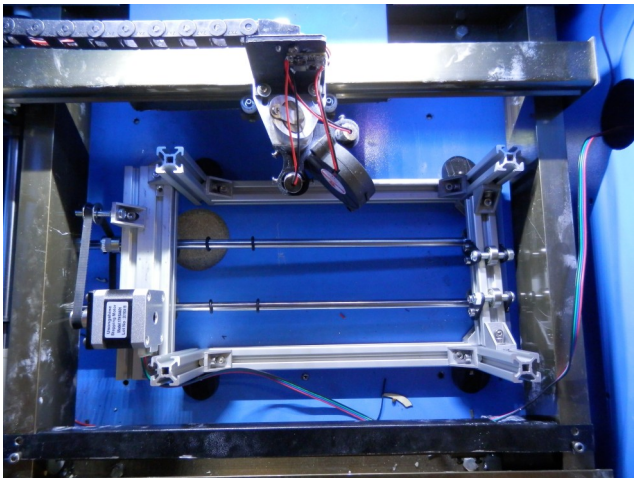


How to use the rotary axis:

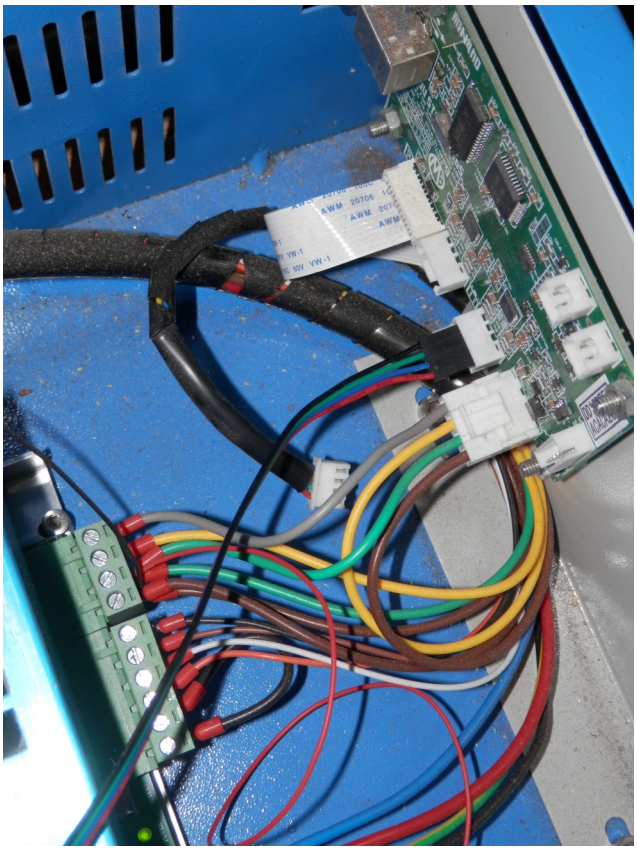
12. Insert your workpiece in the rotary axis and make sure that the surface is about 8cm from the bottom(that is the focus distance from the ground of the laser in the K40)



13. Remove the Adjustable Z axis (get yours here: www.xs-robotics.de) and insert the rotary axis.



14. Unplug the Y Axis Motor and connect the rotary axis cable (already connected in the picture)



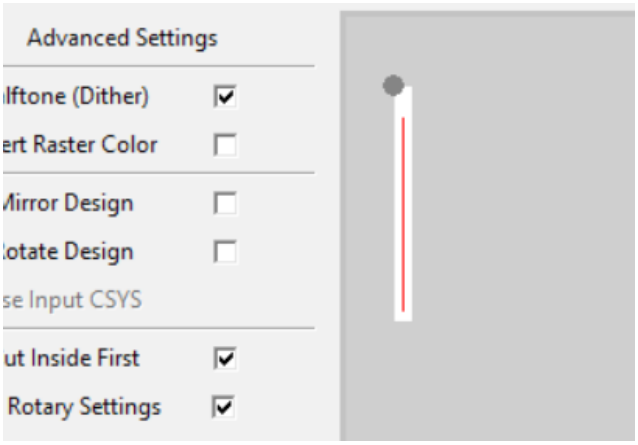
13. Turn on the laser and home the y axis by hand to trigger the sensor.

14. Open K40 whisperer and read the following page about the rotary settings (https://www.scorchworks.com/K40whisperer/k40w_manual.html#rotary_settings)

15. Enable advanced settings and rotary settings.

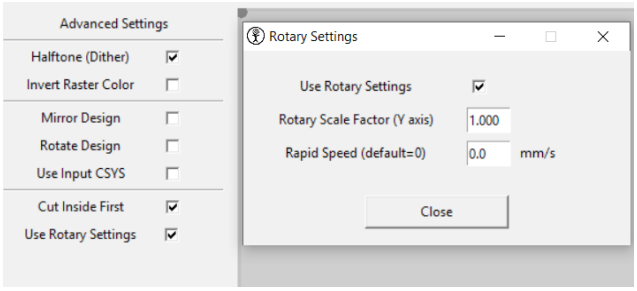
16. Vector cut a 3cm line in your body(use some cardboard around your glass if you don't want to waste a glass for the calibration process)

17. Measure the distance the laser has engraved.



18. Calculate the “Rotary Scale factor” with this formula “(input length)/(engraved length) = Needed Scale Factor “

19. Now you are ready to engrave your own designs



20. Have fun with your laser cutter. :D

If you have any questions or suggestions, please contact: mail@xs-robotics.de

By the way: We also have an adjustable honycomb z-axis and Air Assist on offer. Please contact us if you have any questions.

More upgrades and products from xsrobotics are on our website (www.xs-robotics.de)