

Section 6: Z Rod

The following is the assembly instructions for the z rod assembly. The complete Mendel uses a total of 2 of these assemblies. The bill of materials for this assembly is:

Description	Printed/Made/Purchased	Quantity
M8 SS threaded rod, 330mm	Purchased	1
M8 Washer	Purchased	5 (must use M8!)
M8 Nut	Purchased	3
M3 X 12 SHCS	Purchased	2
608 bearing	Purchased	1

In this section we will make the z axis threaded rods and bearings from purchased parts.

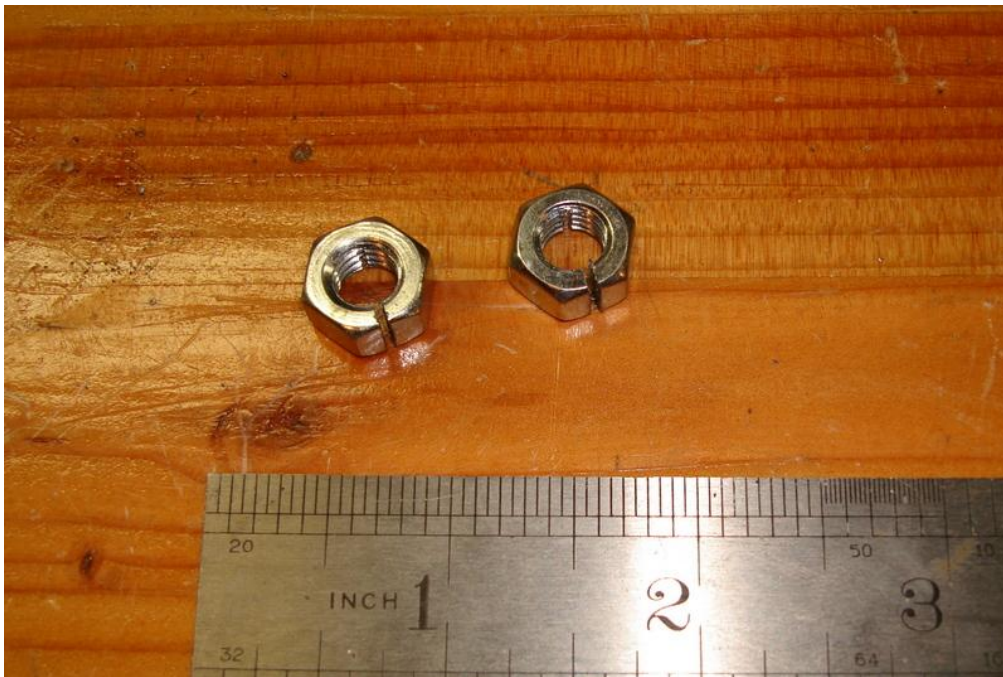
For this part, you can just assemble it skipping the following description of facing the nut the bearing rides against in a lathe. I have made several in this way (like the standard Mendel), and they tend to not move freely. Following the truing step illustrated below eliminates this problem. I highly recommend it if you have access to a lathe (or a friend with one). It takes about 30 seconds for each part, so no more than a six pack in payment should be necessary....



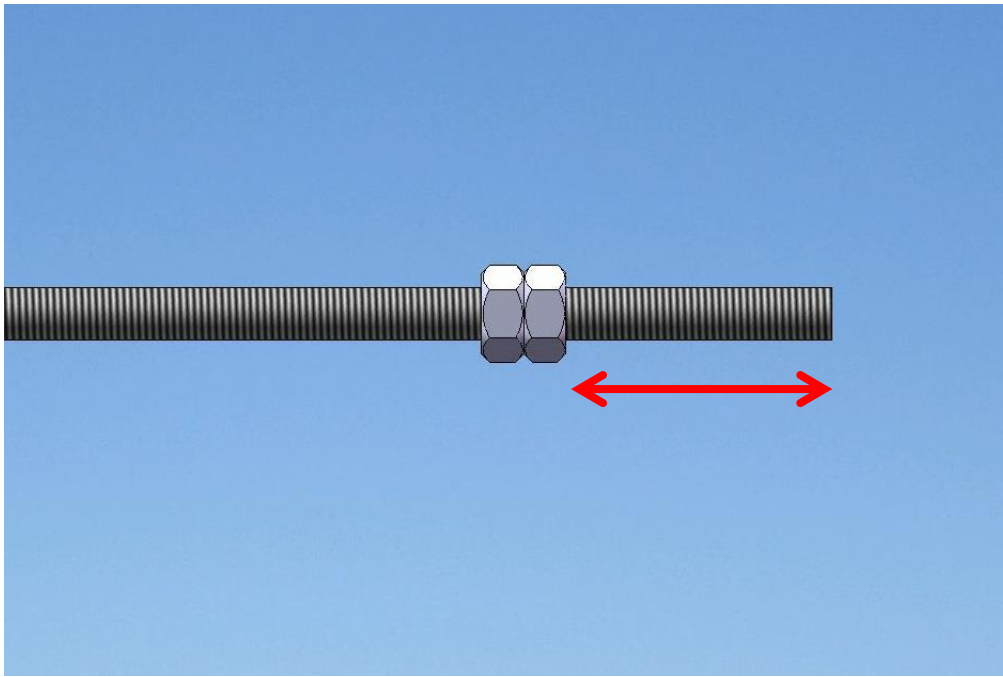
First take an M8 nut and place in a vise as shown.



Cut through only one side with a hacksaw.



The result. This will be a jig to hold it in the 3 jaw lathe chuck.

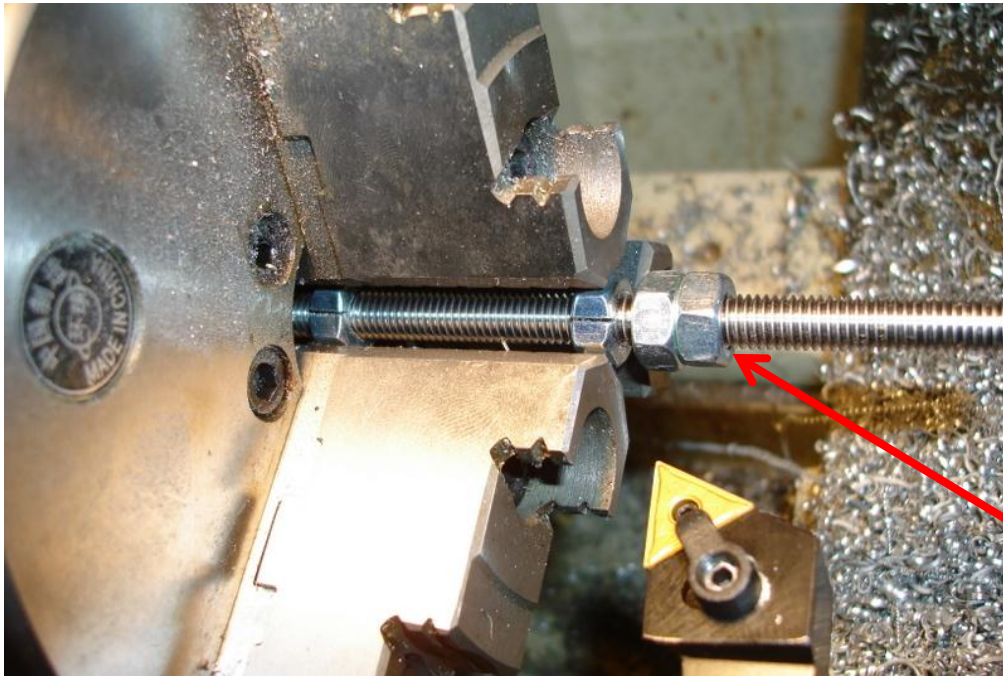


This step locks two M8 nuts together so the nearest face is 42mm from the end of the rod.

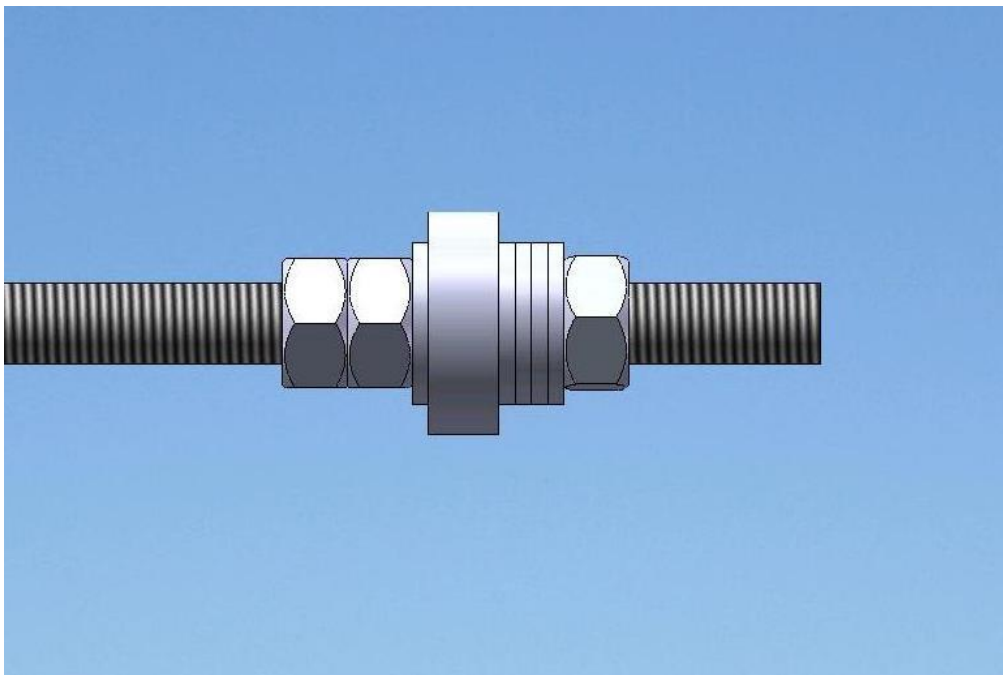
Run each nut on the rod, about 2 nut thicknesses apart, centered about where they will wind up when tightened 42mm from the end. Place permanent Loktite or epoxy on the section of the rod they will run over when tightened. Then run them together very firmly. Let cure.



Now run the cut nuts on the rod, one near the locked nuts and the other the lathe jaw depth away.



Put in the lathe and tighten jaws as shown. Note the cut clamps the rod firmly when the jaws are tightened. Lightly face the face shown, just a fraction of a millimeter by hand feeding across the face with the cross feed.



Now put on M8 washer, 608 bearing, 4 more washers and M8 nut. Snug firmly.