

# X2 INSTALLATION

[www.heavymetalcnc.com](http://www.heavymetalcnc.com)

Remove the handles from X and Y



Remove the two cap screws attaching the Y lead screw





Remove the two cap screws for the end piece of the table





Remove the two cap screws at the handle end of the table



Now you can slide the table off to expose this





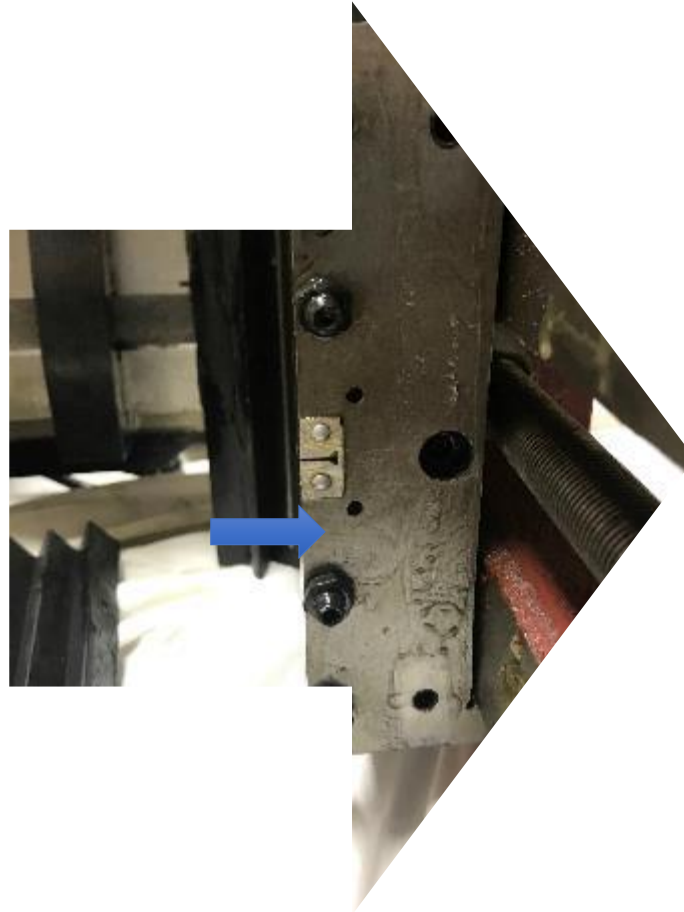
There are two set screws to remove the lead nut of the X axis



You will want to remove the way cover



There is a set screw to remove the Y axis lead nut





Lay the machine over on its side and you can get the Y lead screw out



While the machine is on its side, install the new ball screw and nut



It will install the same way the old one was installed



- You will find that when you start to install things, they will bind up on you.
- This is where the tweaking process comes in.
- You will need to loosen and tighten things more than once to get the alignment correct.



Install the X ballnut block the same as the old lead screw and nut



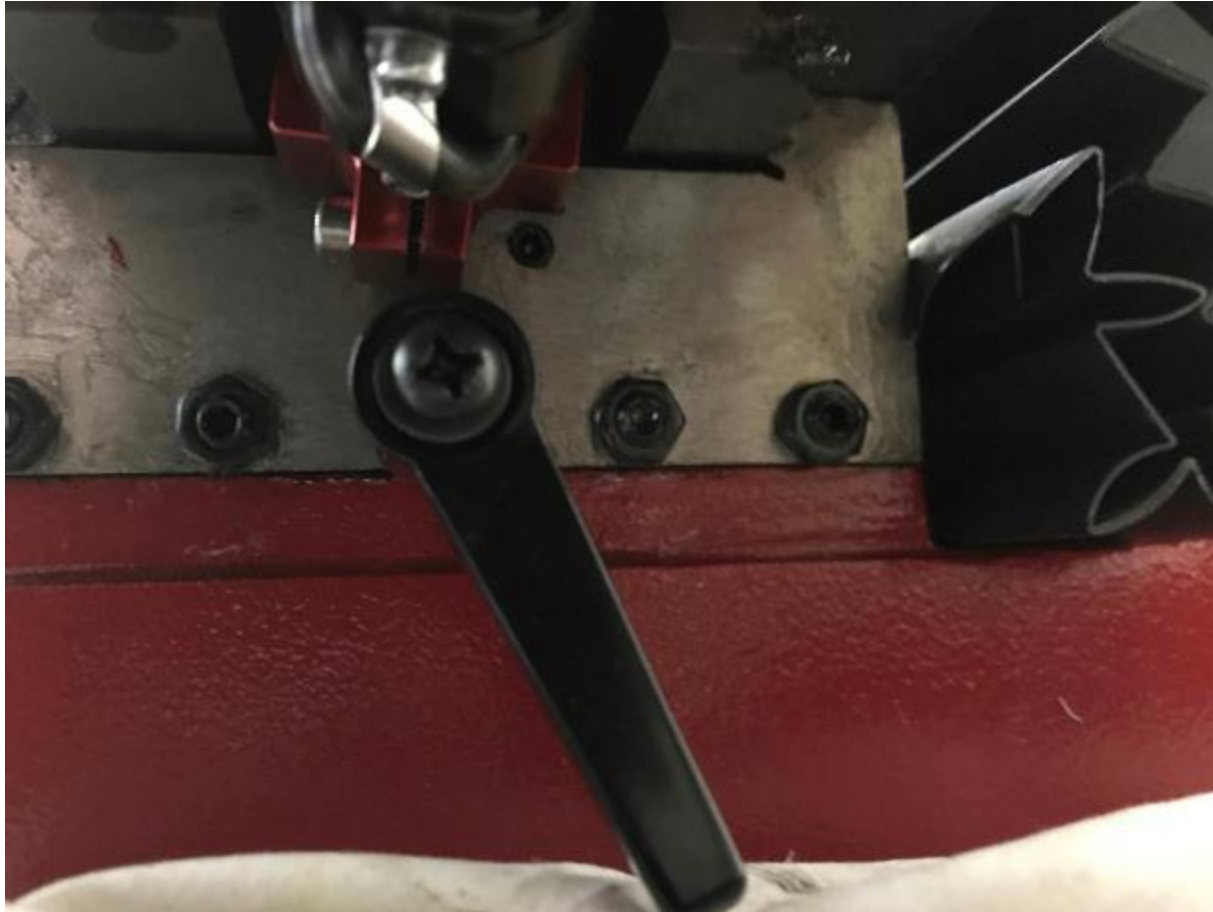
Now you can slide the table back on



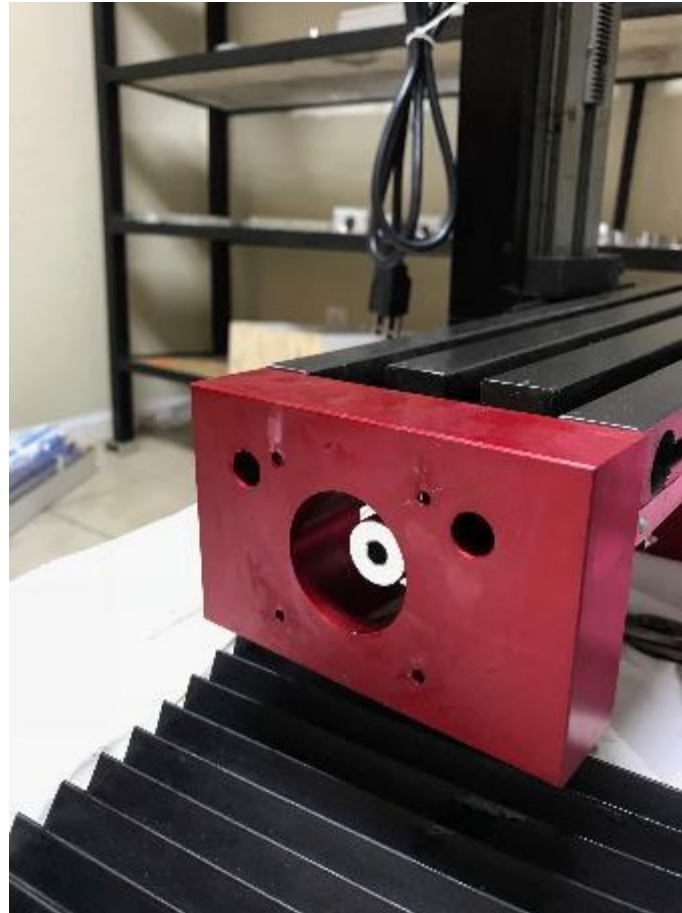
Use the long 6mm screws that came with the kit.  
Put the extension on and also the end cap from the  
handle end. Use the existing thrust bearings



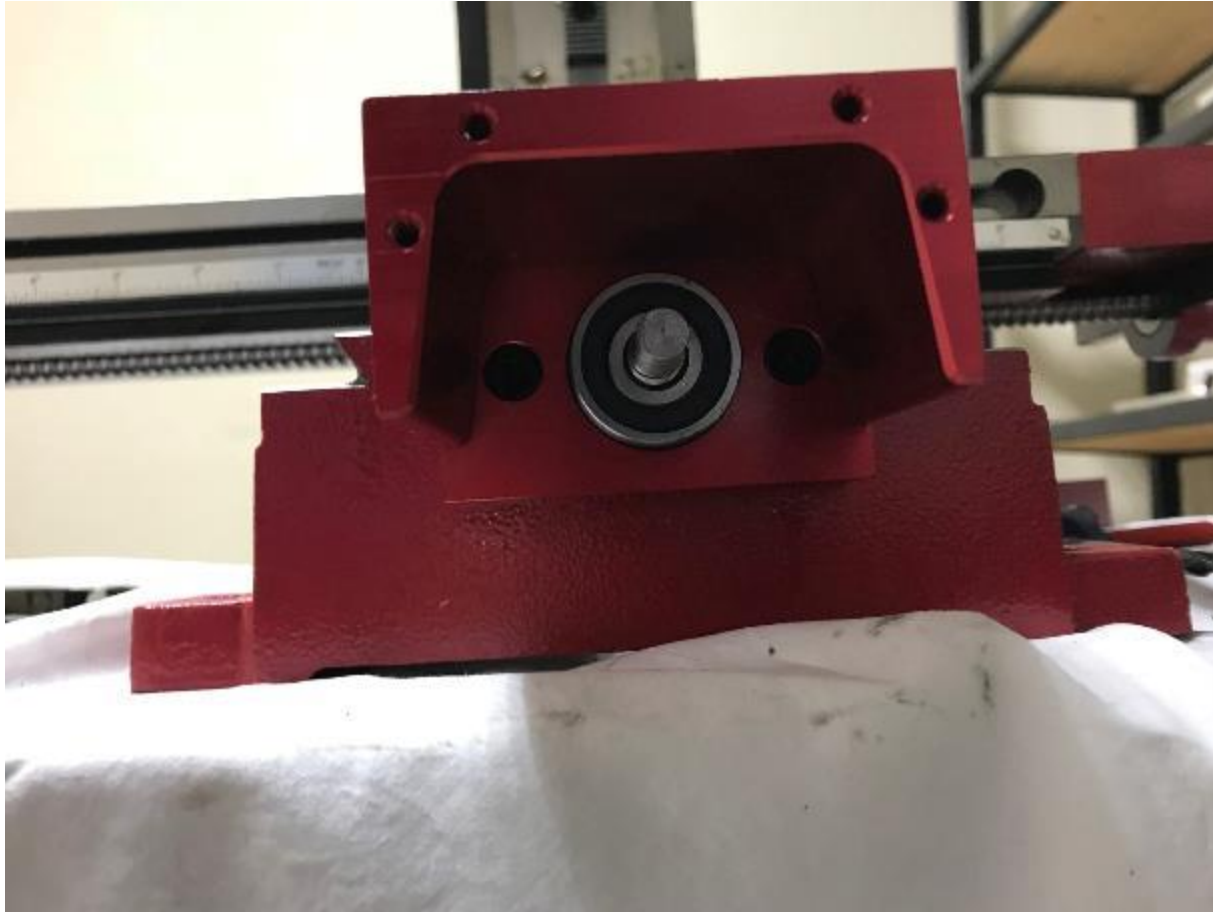
You can still get to the set screws for the X ballnut, to make adjustments



Bolt the X motor mount to the other end of the table



Remove the ¼" plate from the Y assembly to bolt it to the machine





Screw on the two nuts, and put the coupling back on

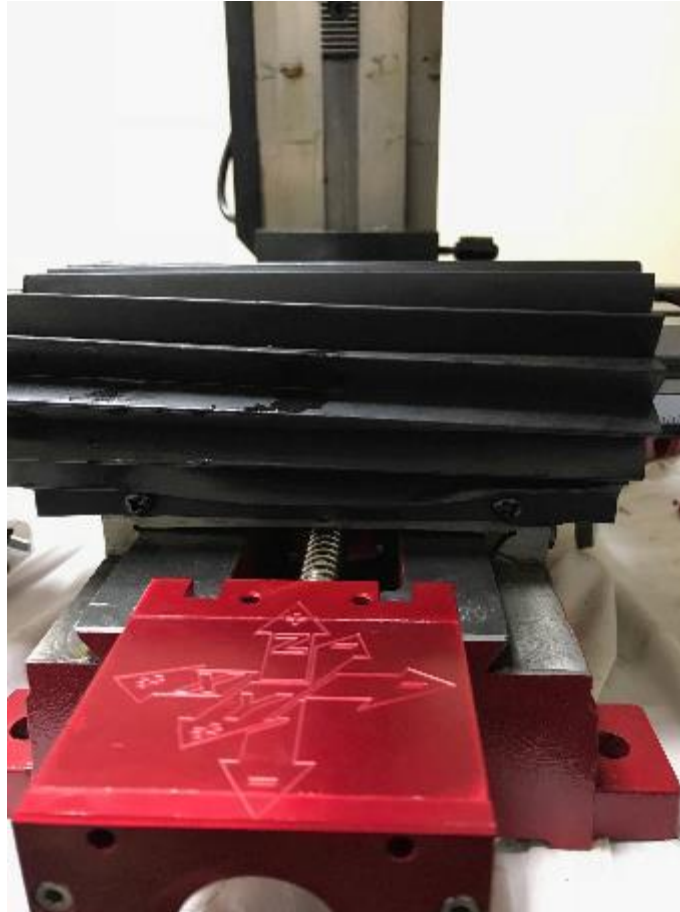


Bolt it down to the machine





Re-attach the ¼" plate to the Y assembly



Now we can move on to the Z axis



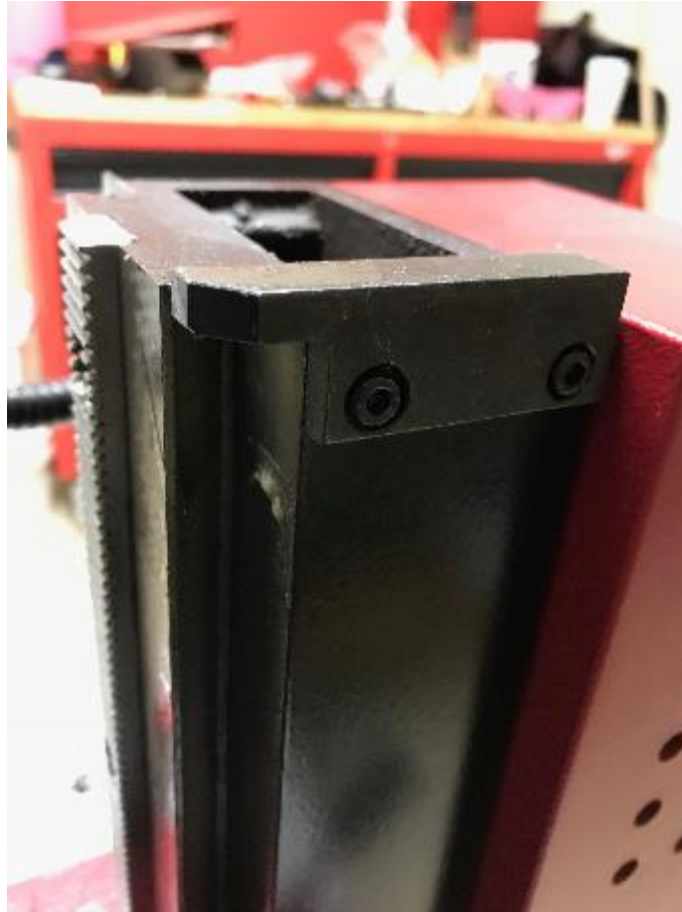
Start by removing the gas spring



Detach this cap screw from the back of the machine. It holds the gas spring from inside the column



This is the stop for the head. Remove it.



With the head all the way down, remove the screws for the spline rail



Now move the head all the way to the top,  
until it is in this position





You can now remove the other two screw  
from the spline rail, and remove







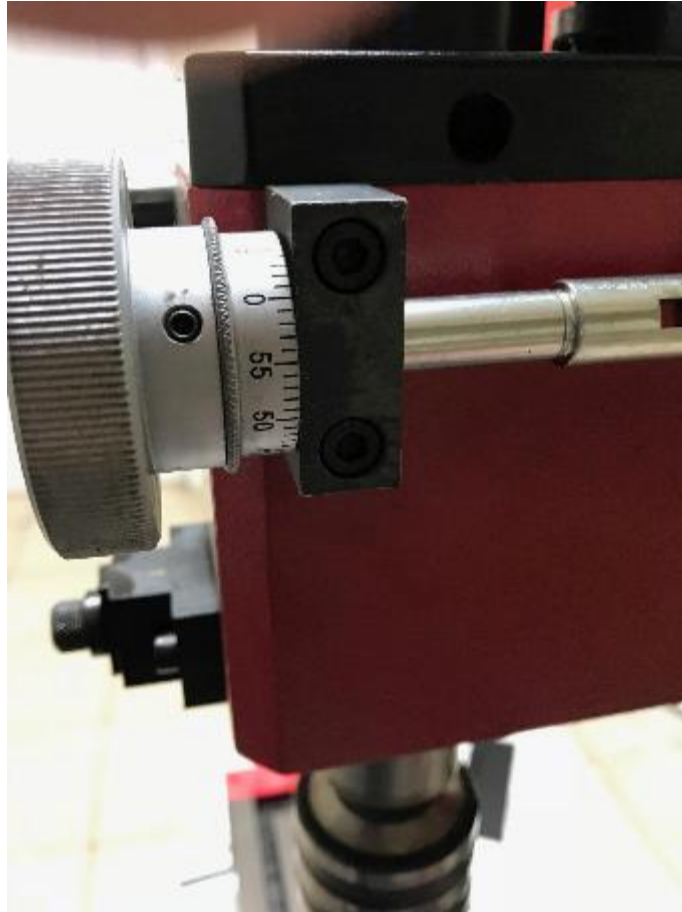
Remove the cover for the fine feed.



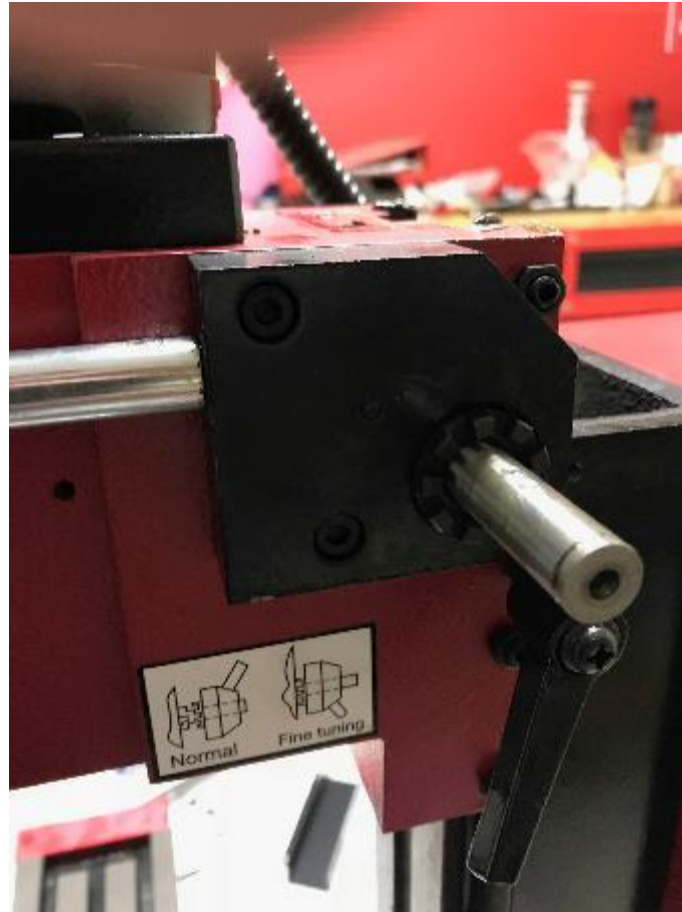
# Remove the handle



Remove the two cap screws for the fine feed

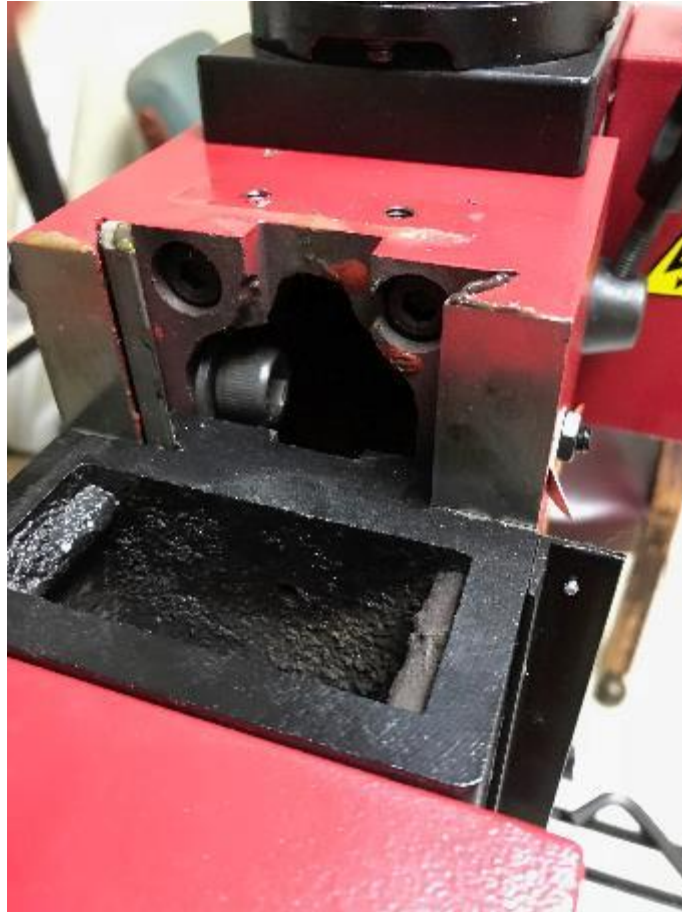


Remove the two cap screws from behind the handle





The 12mm bolt that came with the kit will go in the hole where the spline gear was







Bolt the block with the 12mm cap screw, and the 2 6mm screws that had the plate bolted to the head



Slowly move the head down until the Z top mount sets on top of the column



- We have heard some feed back on issues with the Z axis binding.
- When starting to install the Z axis ball screw, bolt down the side block with the existing holes from the machines first.
- Then you can hold the top plate in place and move the head up and down with a drill attached to the coupling. This will allow you to get smooth movement from top to bottom before deciding on where to drill the mounting holes for the Z top plate.
- We also slotted the Z top plate for some final fine adjustment just in case.
- Mounting of the Z axis should be a slow and steady process to insure alignment is correct. This will avoid any binding issues.

You can drill the holes thru with a ¼" drill, or you can drill and tap them for a 6mm cap screw



Either way, you can use the 6mm cap screws and nuts that come with the kit



Now you are ready to tweak everything in,  
and start on the electronics

