

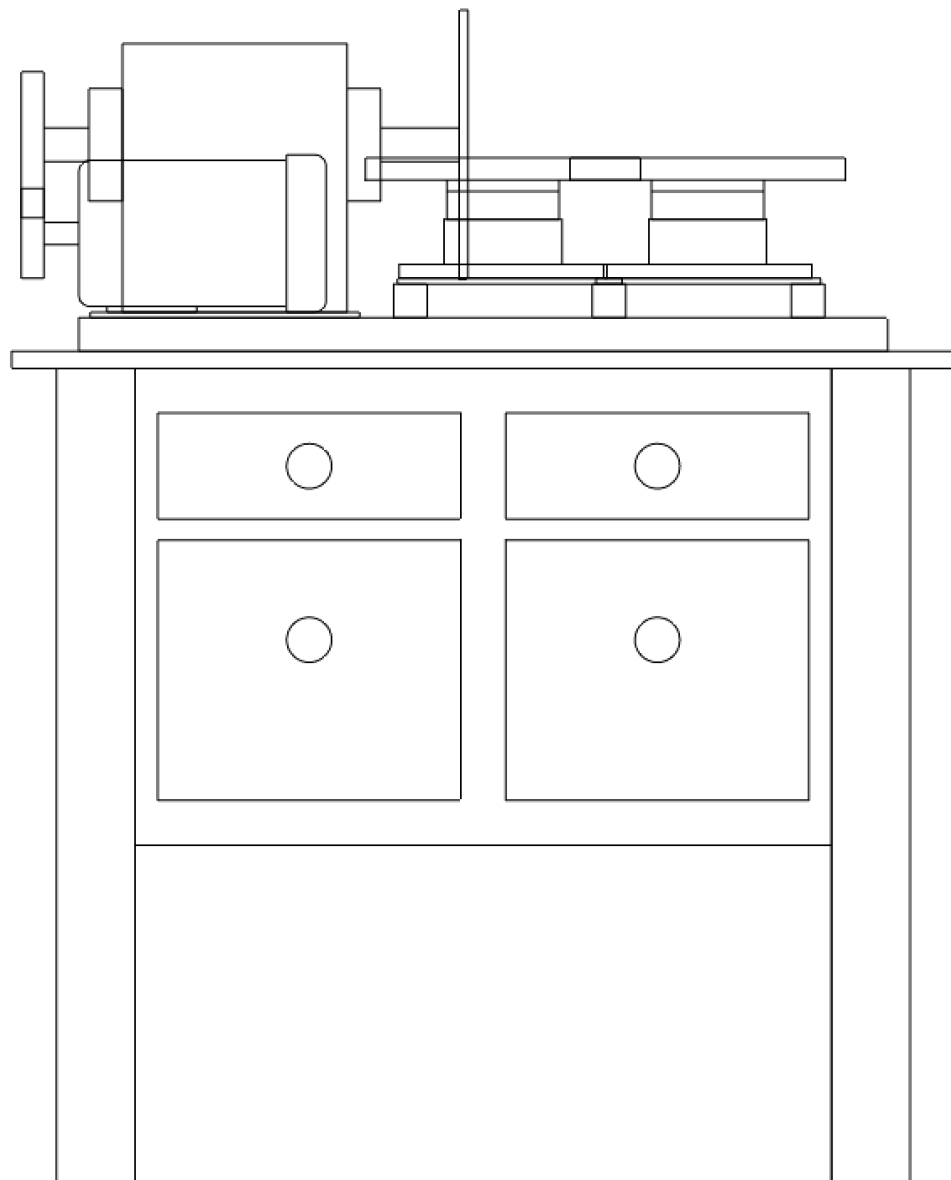
Rim Lathe

FIRST DRAFT

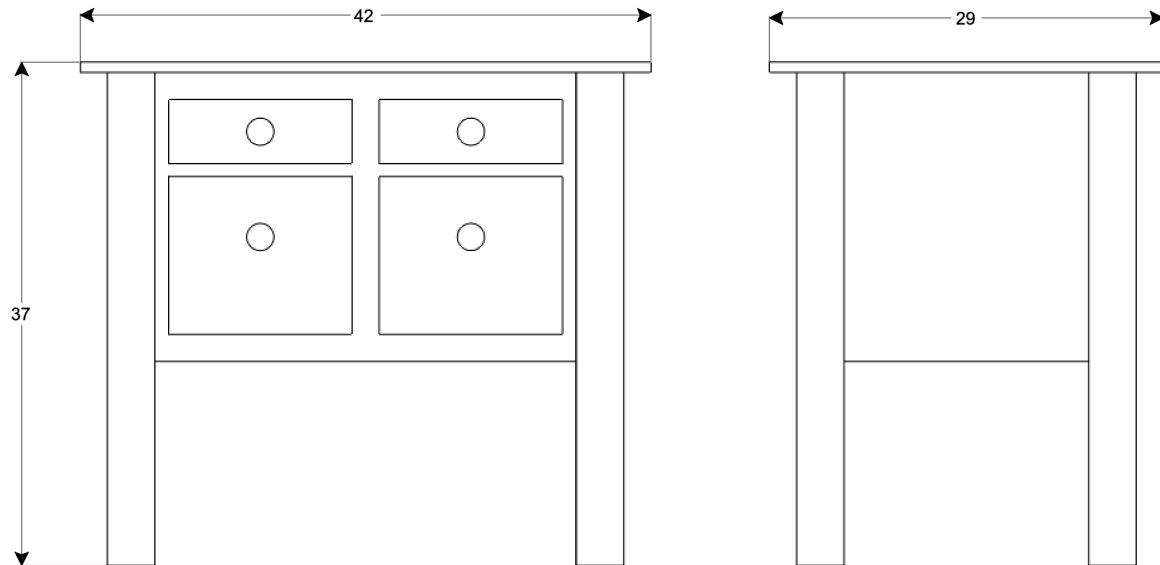
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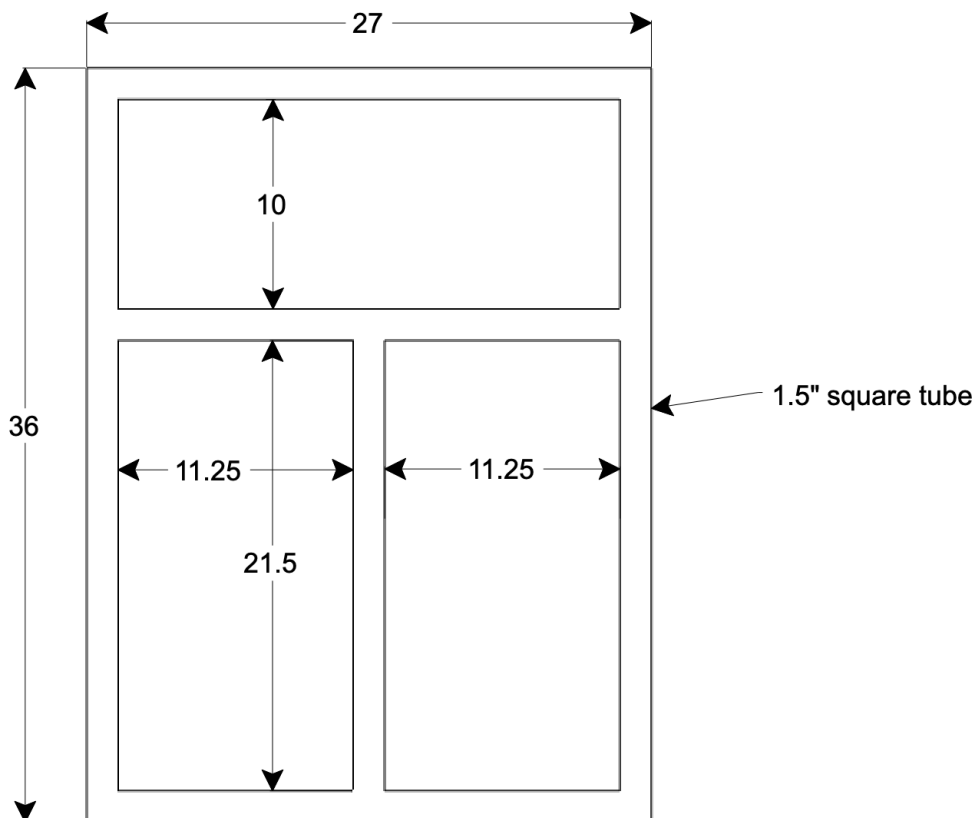


Cabinet



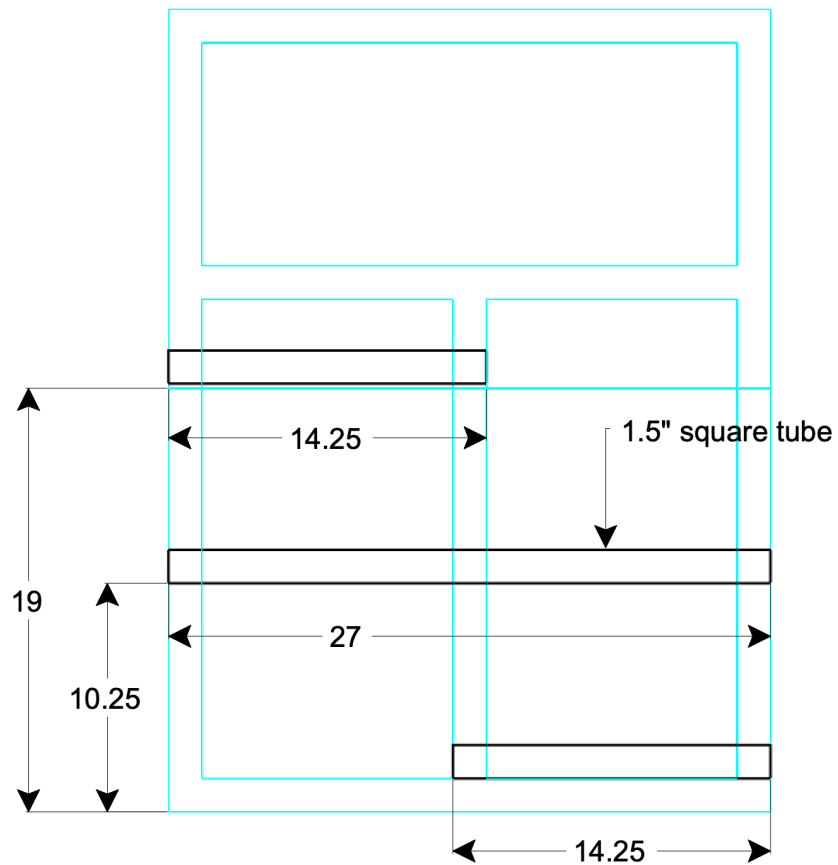
Welded base, layer 1

The welded base is made from 1.5" square steel tube.

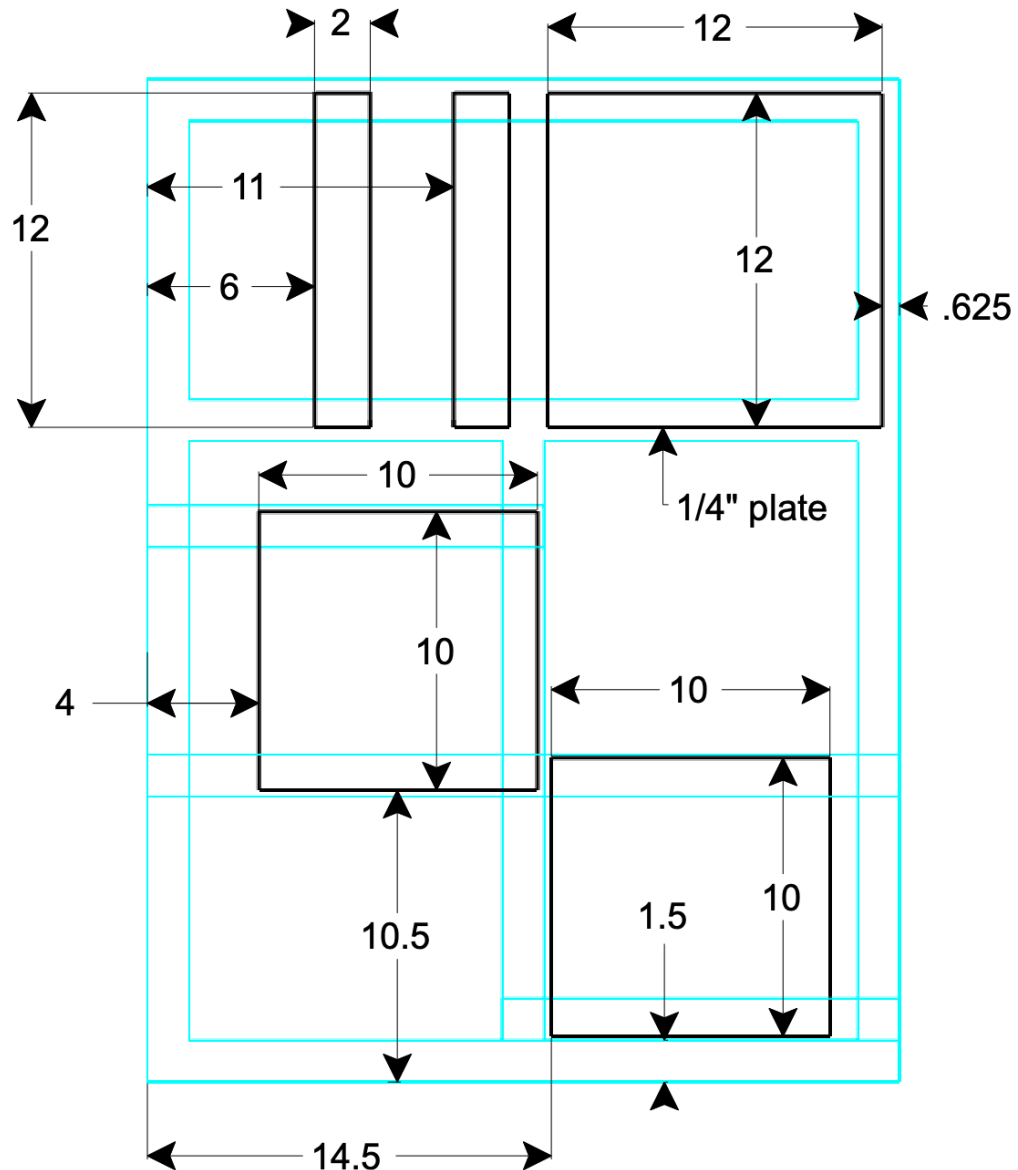


Welded base, layer 2

The welded base layer 2 is made from 1.5" square steel tube.

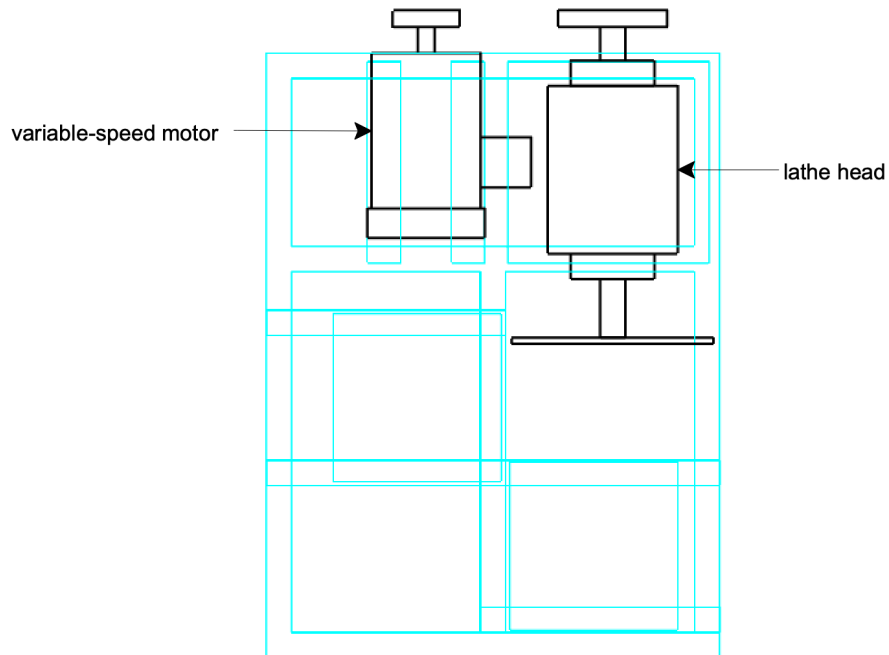


The welded base layer 3 is made from 1/4" steel plate. This layer is used to attach the motor, lathe head and two milling tables.



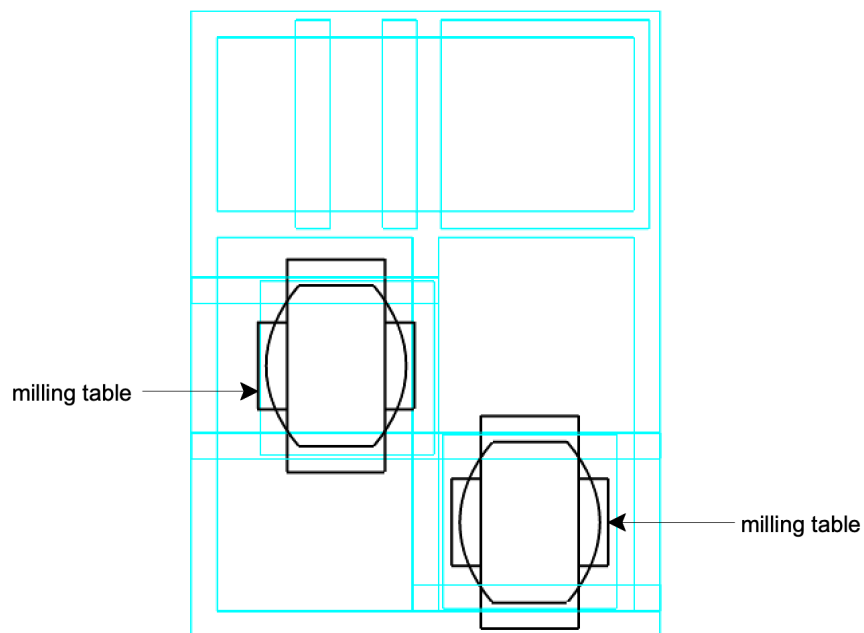
Lathe head and motor

The lathe head and motor are bolted to the sheet metal layer of the welded base.



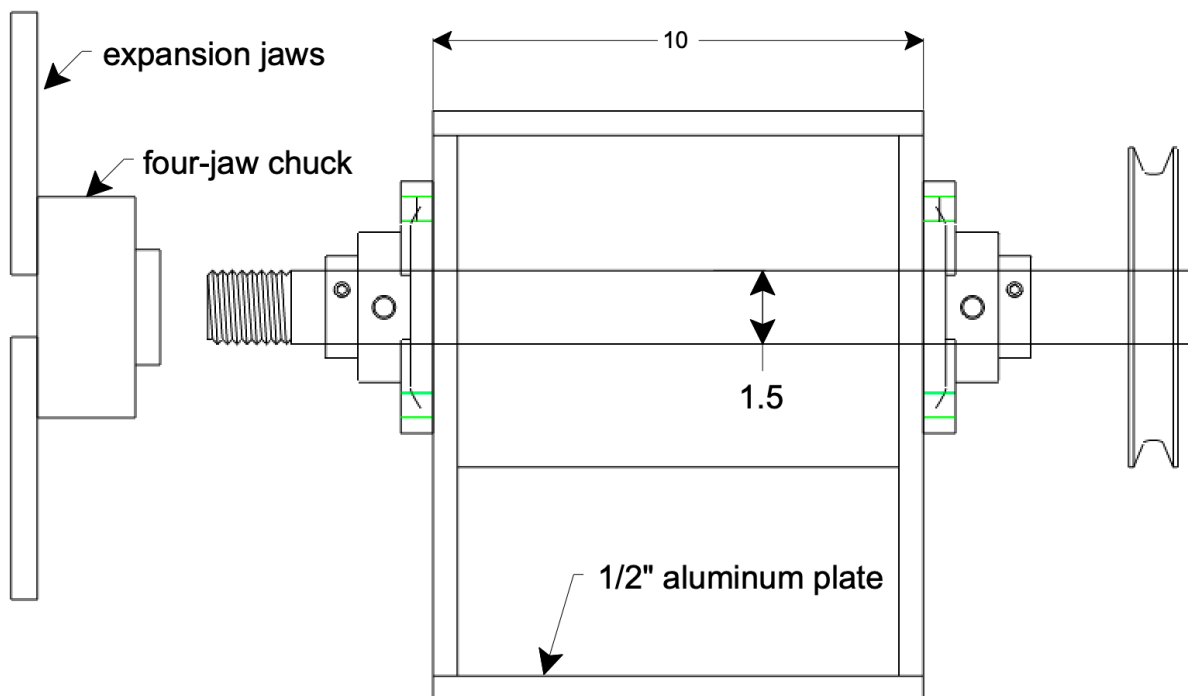
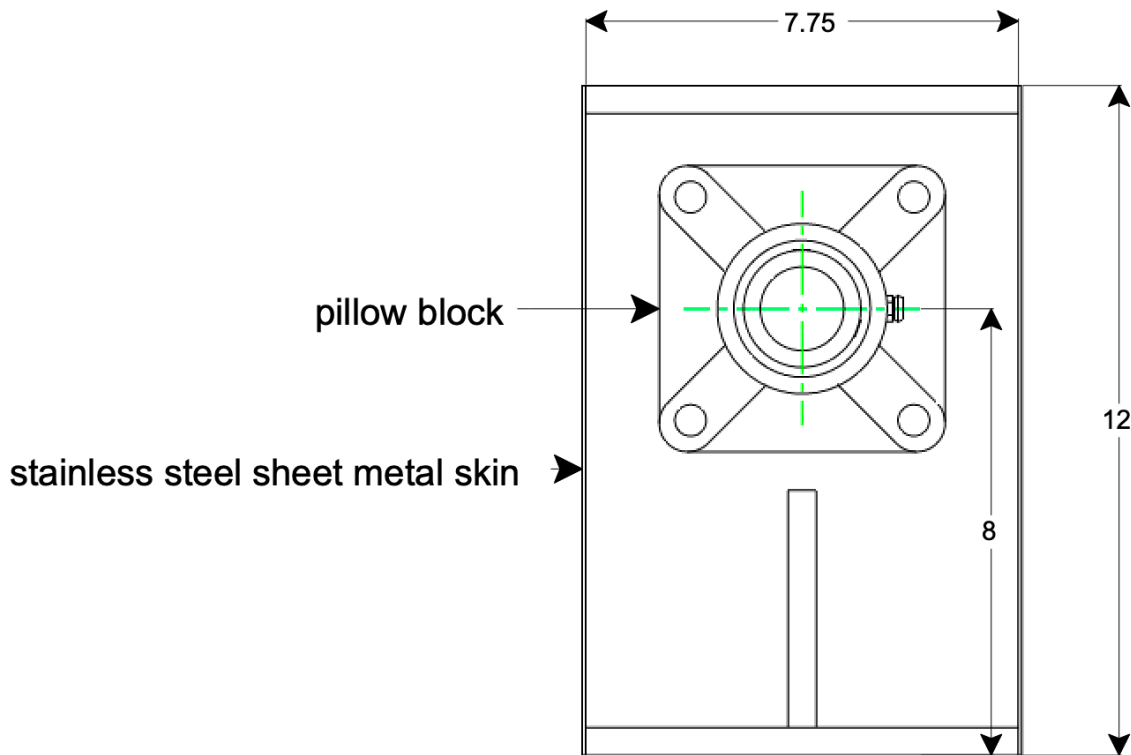
Milling tables

The milling tables are bolted to the sheet metal layer of the welded base.



Lathe head

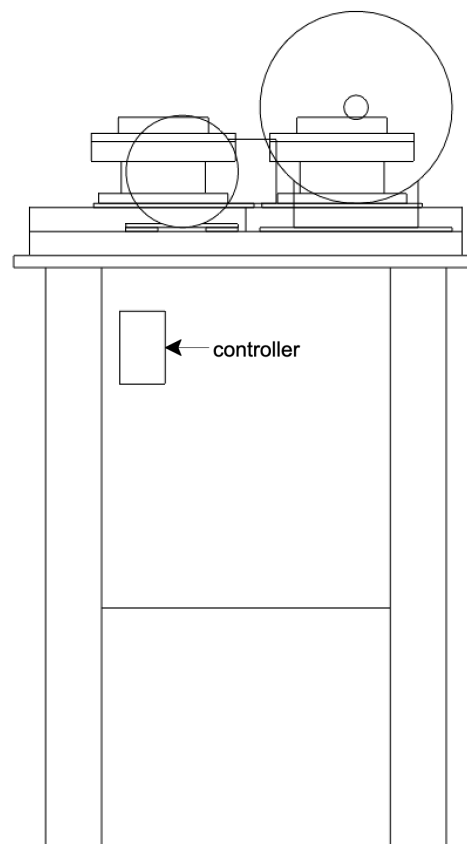
The lathe head is constructed with half inch aluminum plate. All parts are bolted together by drilling and tapping as needed. There is a sheet metal skin covering the sides.



Electronics

The variable speed motor is 220 volts. I use a converter that goes from 110 volts to 220 volts and also works as a speed control for the motor.

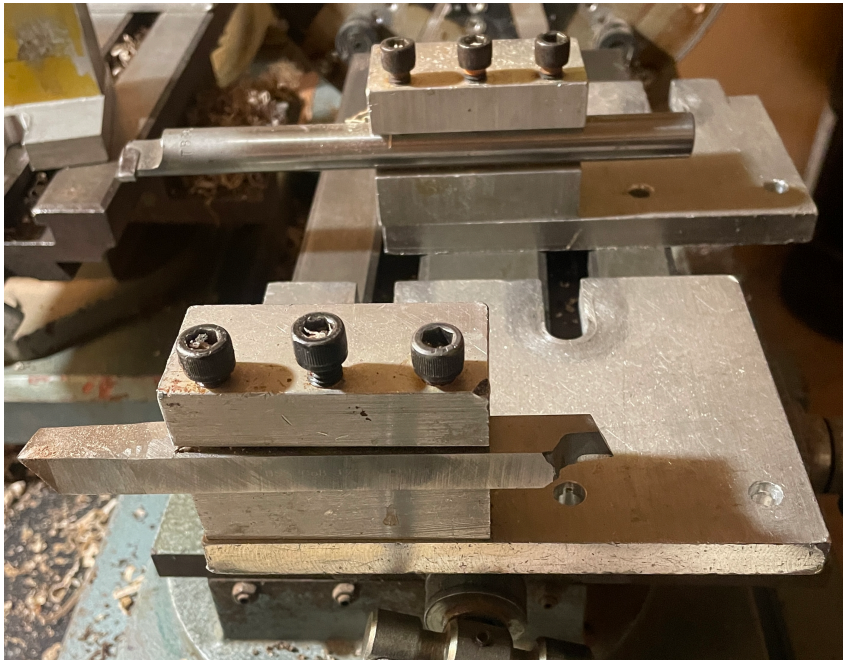
The controller should be mounted in a convenient location because it will be used frequently to start, stop and adjust the motor.



Tools and tool holders

Most of the cutting will be done by a square piece of tool steel and a boring bar. You may want to add a cutoff tool as well.

You can make tool holders out of scrap aluminum plate and bar. You could consider a machinists' tool post also.



Some items you'll need

Item	Quan	Comments
Controller	1	Automation Direct
Motor	1	Balder
1.5" steel tube		About 20 feet
12 x 12 x 1/4 steel plate	1	
10 x 10 x 1/4 steel plate	2	
2 inch wide steel plate		2 feet
1.5" diameter Shaft	1	24"
Pillow blocked	2	
Chuck and Jaws option 1	1 set	One Way Manufacturing (in Canada) Strong Hold chuck with Jumbo Jaws This is what I have, but Nova products seem to be mad a little better (see next)
Chuck and Jaws option 2	1 set	Nova Company Supernova chuck or Titan chuck with Large Cole Jaws
Pulley for the motor	1	
Pulley for the shaft	1	
Belt	1	
T Nuts	2	For bolting the tool holders. Two is the minumum. Buy more for convenience.
Bolts	2	For bolting the tool holders. Two is the minumum. Buy more for convenience.
Boring bar	1	TBB625 from McMaster Carr
Tool steel blank	1	1/2 x 1/2 x 6. This will do all the cutting except for the bore.
Milling table	2	Phase I