22" SLIP ROLL CONSTRUCTION

Sheet Metal Slip Rolls

Bill of Materials:

1. 1 pc. Crs. 2" round X 26.125"
2. 1 pc. Crs. 2" round X 24.625"
3. 1 pc. Crs. 2" round X 23.25"
4. 1 pc. 1.5" X 3" X 5" Channel
5. 2 pcs. 1/2" X 2" X 3" Flat Hrs.
6. 2 pcs. 5" X 5.3801" X 5.5" Hrs.
7. 2 pcs. 25" X 1" X 1" X 3" Angle (If wanted for base supports).
8. 2 ea. Sprockets for roll drive. .875"id X 14 tooth - machine to fit.
9. 3 pcs. 5" X .875" X .1/2" approx. - Machine to fit. Not shown in drawing. Roller shaft adjustment wedges and front roller wedges.
10. 2 ea. .375" Bolts X 3.25" long.
11. 2 ea. .375 Bolts X 2.25" long.
12. 4 ea. .312" Bolts X length, machinist discretion. Pieces should be cut long for machining purposes.

PROCEDURES:

Note:
The way I went about machining is my own way and could certainly be done differently.

Turning down roller shafts:

I left the major diameter alone, since it is CRS, it will be close enough for sheet metal work. I chucked up the roller in a 4 jaw and dialed in. Then put a steady close to the chuck and slid it down to the other end. Checked again with dial indicator. Leave enough room away from the steady to turn down shafts,

cut grooved and face, face. Reverse the roller and turn down the other shaft. Do the other rollers the same way, as all is set up on the first. **Roll Dimensions**

Roller upright supports:

Square up each support to print specs. Lay out slots, corner angle, bolt holes to print specs. Mill slots. Drill and tap bottom, front and back adjustment holes for .375" bolt. **Roller Upright Support Dimensions**

Main Base

Channel. Lay out hole pattern on both ends for upright support and drill .375" Bolt upright support bases to main base. **Main Base Dimensions**

Assembly

Take one upright and slide the longest roller in the bottom slot. Then the shortest roller in the back slot. Then the second longest roller in the top slot. **General Assembly View**

Now the fun part begins. Take the other upright and put on other end of the shafts. After you get done tie the rollers together so that the top roller is all the way back in the slot and the other rollers are all the way up in their slots. This will help with alignment.

Flush up uprights to the shoulders on the rollers. Take what you have done so far and set the whole thing on the upright supports. Center to prints in every aspect.

Tack weld the uprights to upright support bases. Be careful not to distort. When satisfied that the rollers will turn freely, weld your sides. Make sure that you do not put too wide a leg on your weld, otherwise your bolts will not fit.

Weld on main base supports (angle) if wanted. (I did not use.).

Make adjustment bolt wedges, 4 of them. I did not put in the drawing. The length is approximately 5". Mill a radius .875" in one end of the wedges, then file to fit.

Last but not least. The upper shaft wedges (2 of them). Do the same thing as the other wedges, only the back edge should be flush with the upright edge. Tack weld on the edges and let set roll in the drill press. Drill holes in the middle of the top wedges. Go through upright, then wedge them into upright. Take a bolt that fits the hole and slip inside. Grind off tacks. The top wedges are for you to be able to take top roller in and out. Put adjustment bolts and unite.

DONE!

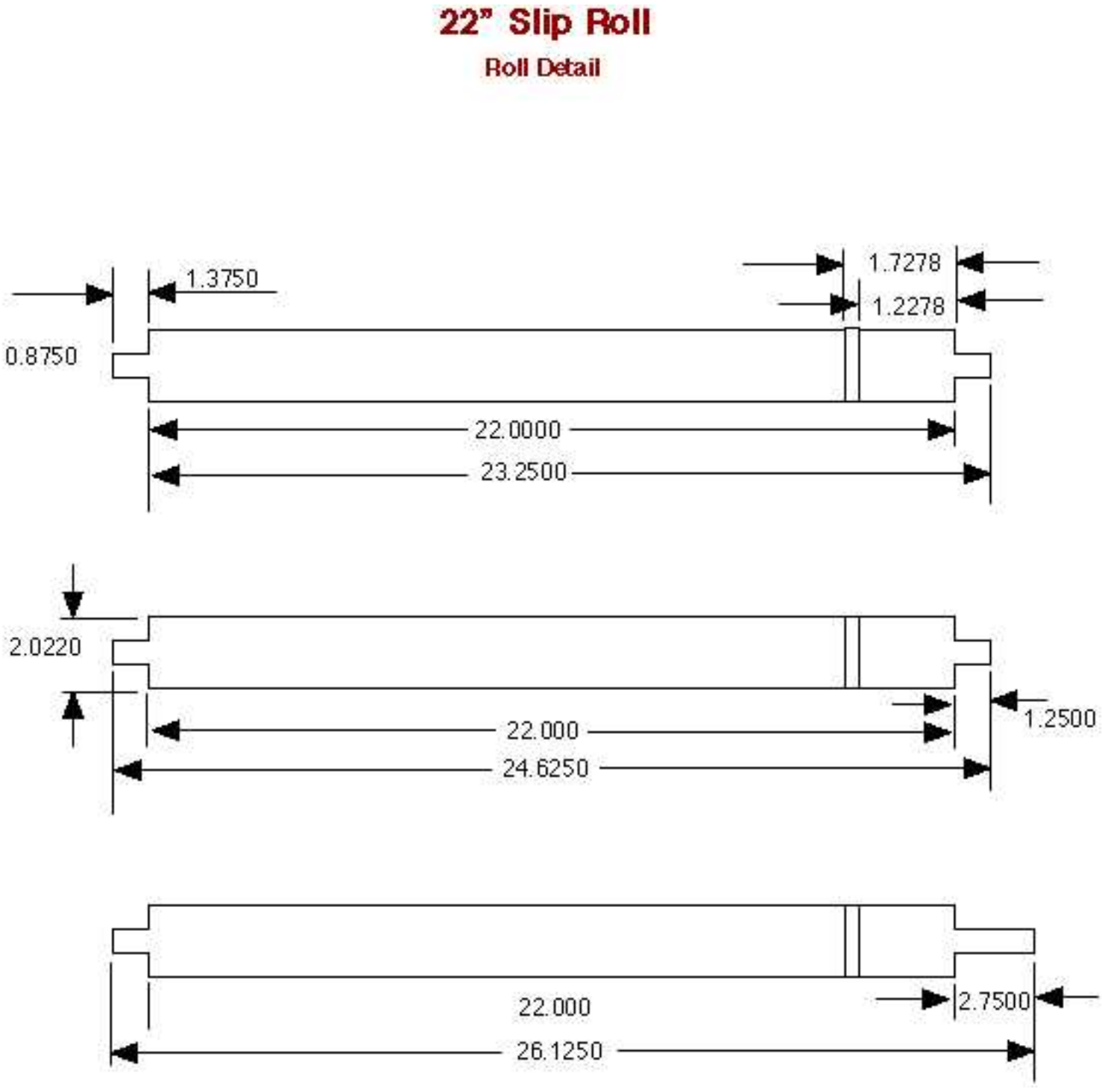
The slip roll you have just built will do .25" strap, .25 round in groves and .125 sheet easily.

Have fun.

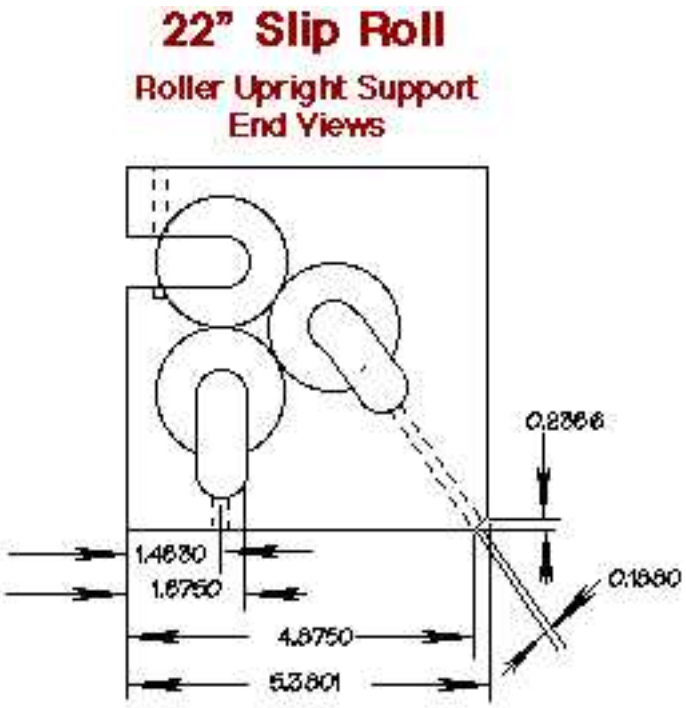
Arnie

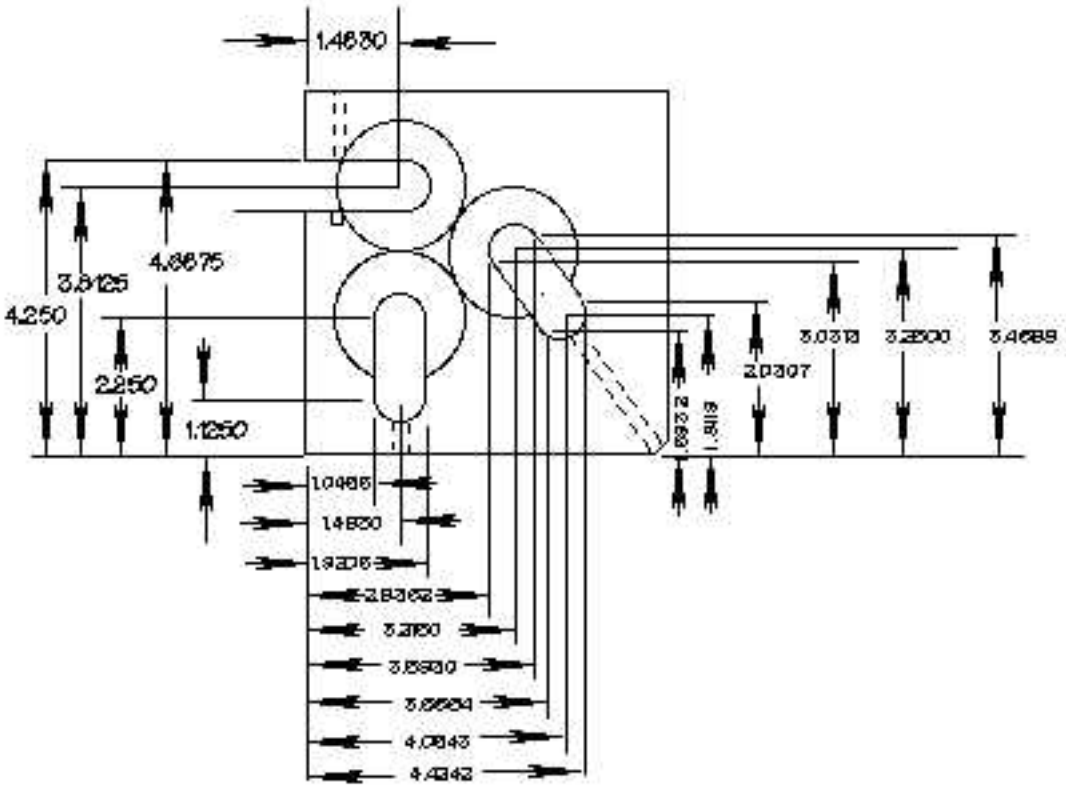
View 1 of Rolls
View 2 of Rolls
View 3 of Rolls

Email: Arnie Deeds

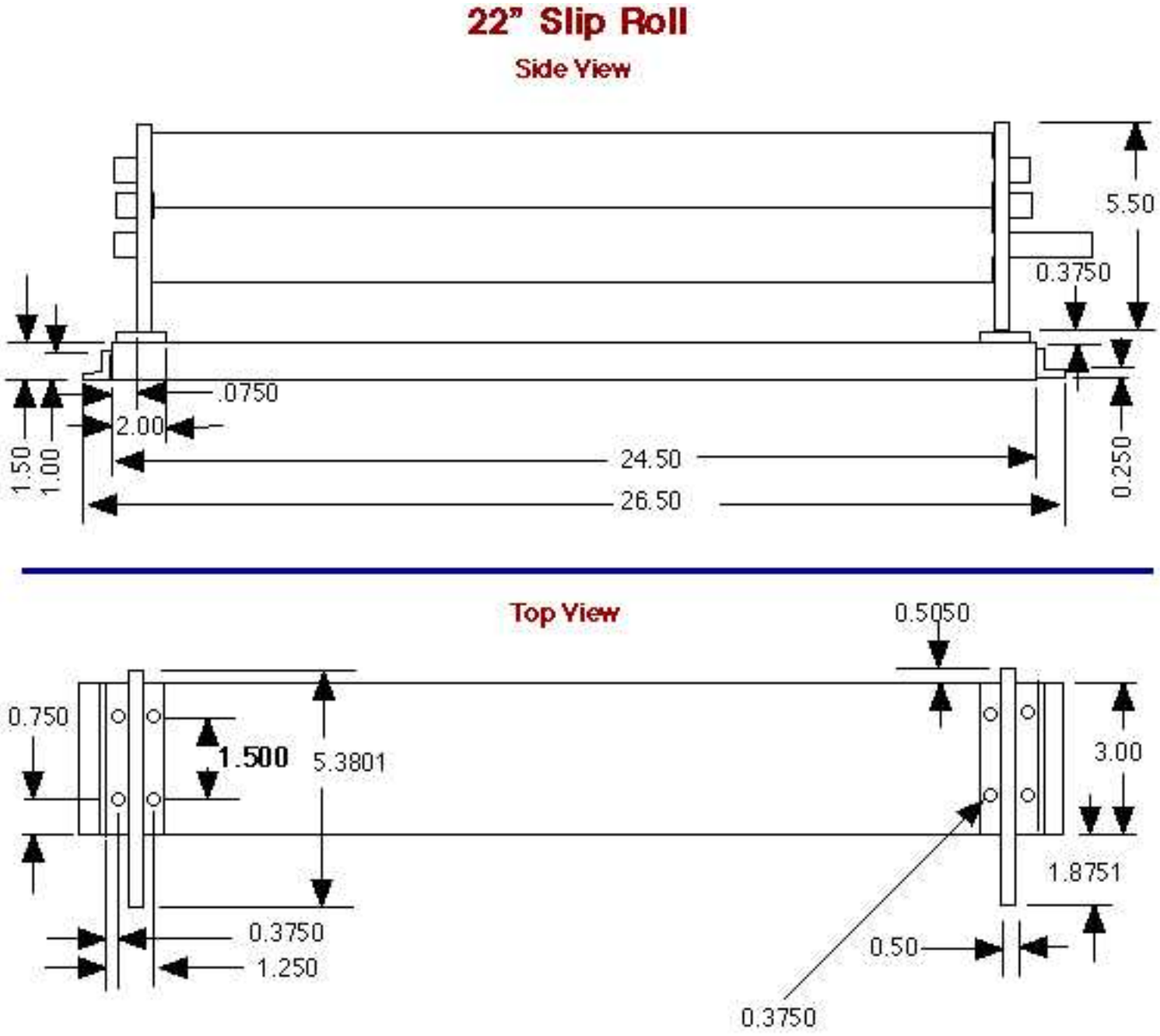


Dimensions for Machining the Three Rolls





Dimensions for Machining the Upright Supports



Dimensions for Machining the Main Base

Assembled Rolls

Assembled View of Rolls