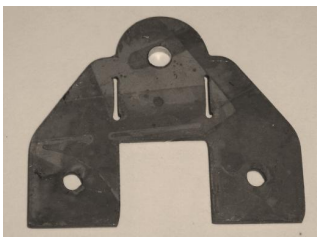
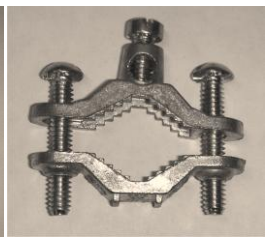
Included Parts List

Pattern holder bracket
qty. 1 ☐



Torch upper mount
qty. 1 ☐

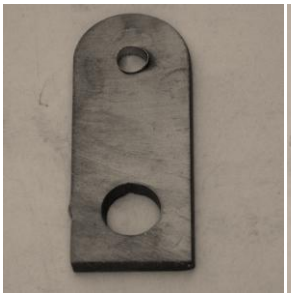
Frame mount brackets
qty. 2 ☐



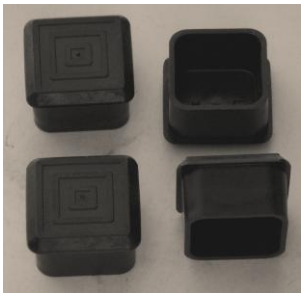
Pattern holder
qty. 2 ☐

torch mount bracket
qty. 2 ☐

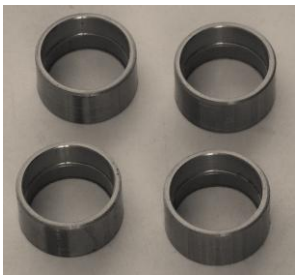
Center bracket
qty. 2 ☐



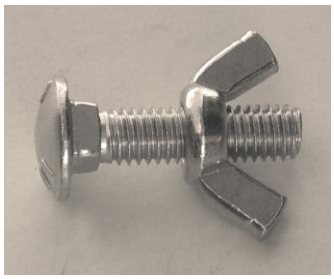
Lower torch mount
qty. 1 ☐



Tube caps
qty. 4 ☐



Bearing cups
qty. 4 ☐

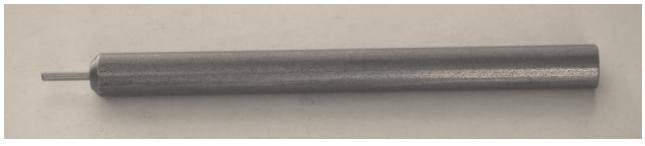


Carrage bolt & wingnut
qty. 1 ☐

Bearings
qty. 4 ☐

Pattern holder u-bolt
qty. 1 ☐

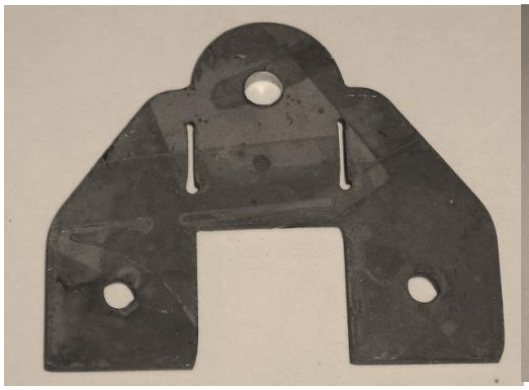
Torch pivot tube qty. 1 ☐



Pattern stylist qty. 1 ☐

Bracket folding

Fold all 4 sides of the pattern holder bracket upwards and weld as shown.




Finish drill the Plasma Torch adapter upper mount Clamp holes to 1/4", then clamp and fold the mount around a length of 1" square tube as shown above.


Finish drill the tracer frame mounting brackets holes to 5/16" then fold both as shown.

Material List

Acquired locally

5 lengths of 1" thin wall square tubing 24" long

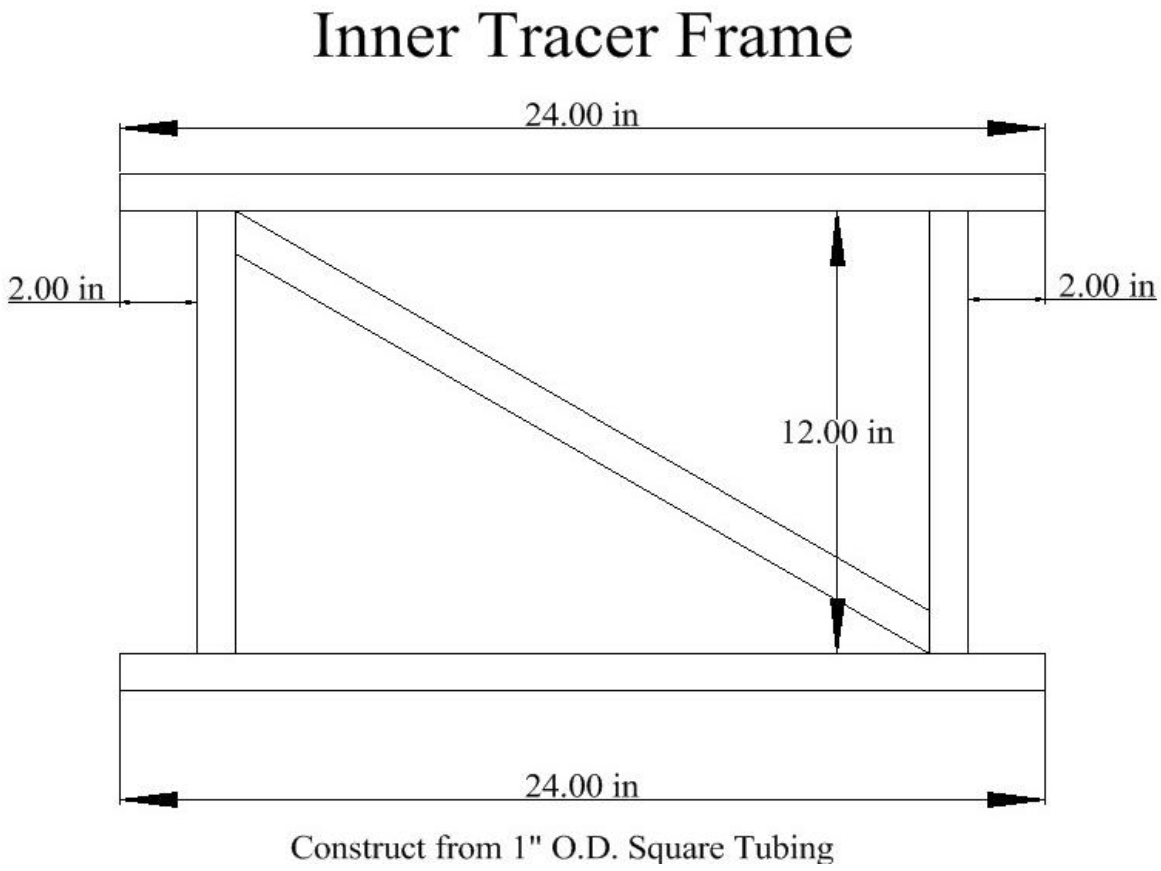
1 length of 1" thin wall square tubing 22" long

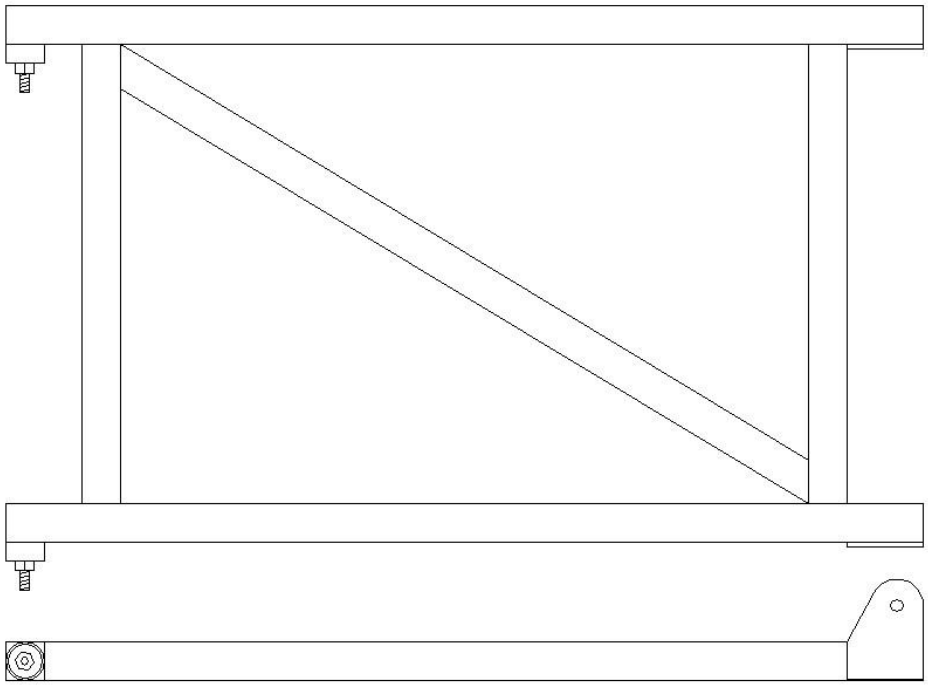
4 lengths of 1" thin wall square tubing 12" long

1 length of 2" schedule 40 water pipe 14" long

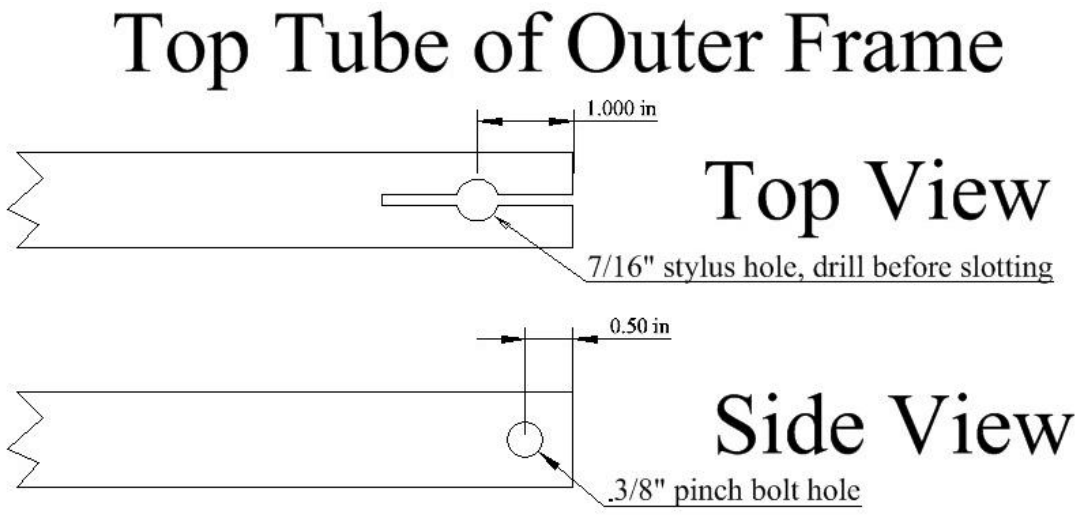
1 length of 1" x 1/8" wall angle iron 7" long

1 length of 1" O.D. round tubing 24" long

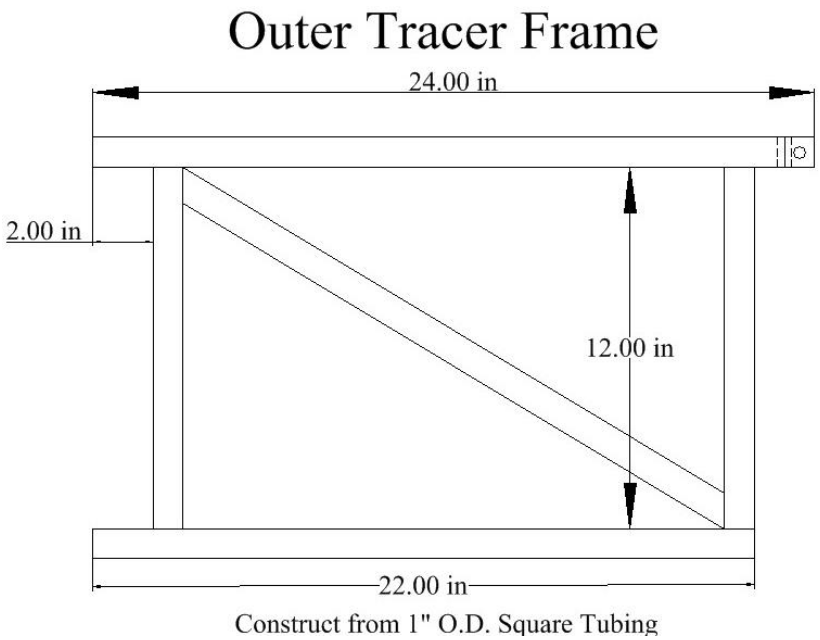




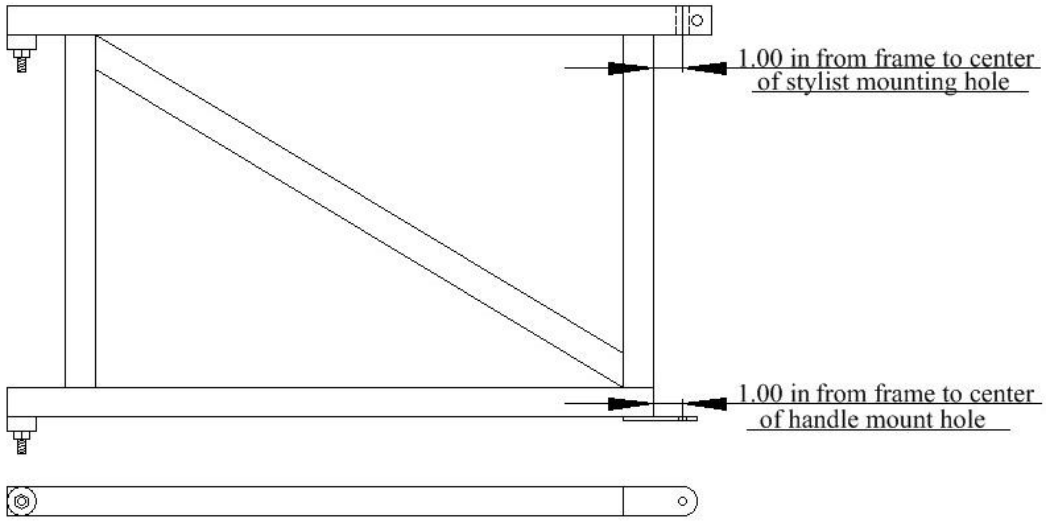
Weld on the bearing cups as shown in the image making sure the machined inner surface is pointed away from the frame. Also weld on the tracer hinge brackets and finish drill the bolt hole to 5/16".



Modify a 24" length of 1" square tubing as shown in the diagram above to serve as a stylus holder. You may use a small file to make one of the pinch bolt holes square to accept a carriage bolt, otherwise you can insert a 3/8" x 1 1/2" bolt and tack weld.

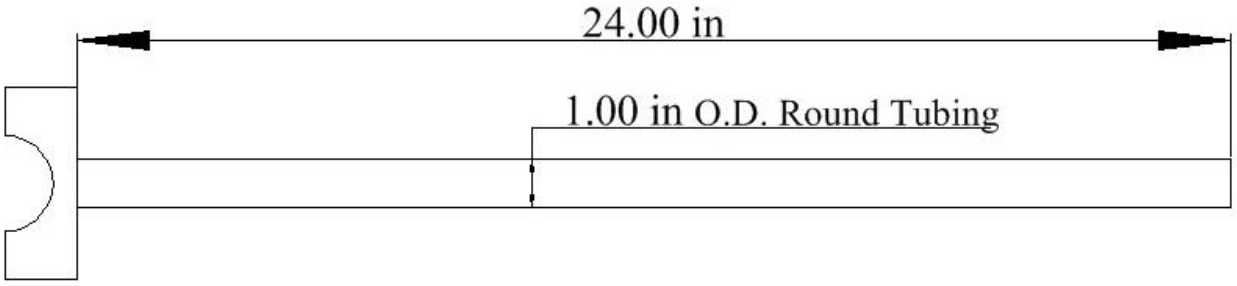


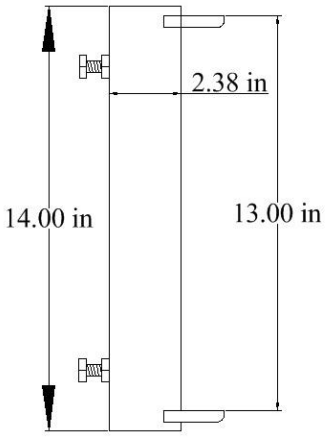
Position the stylus holder tube as shown and construct the outer frame.



Weld on the bearing cups as shown in the image making sure the machined inner surface is pointed away from the frame. Also weld on the torch handle lower bracket and finish drill the bolt hole to 1/4".

Pattern Holder

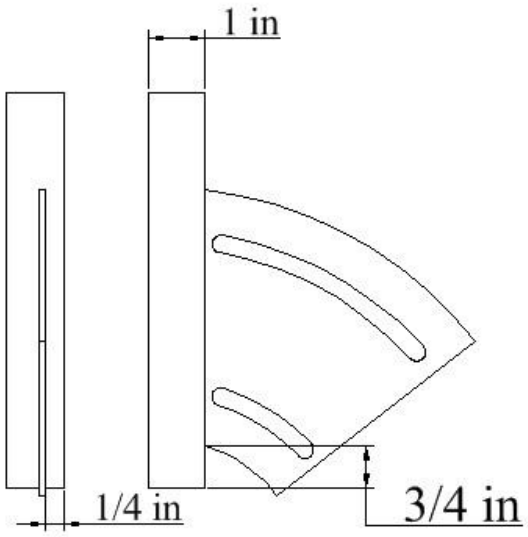




Tracer Mounting Tube

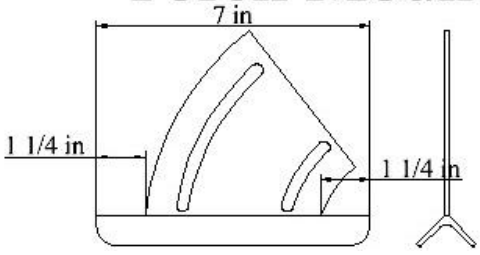
Utilizing a 14" long length of 2" schedule 40 water pipe and the previously folded tracer frame mounting brackets, construct the tracer frame mounting tube as shown. Drill two 7/16 holes in the opposite side of the tube as the mounting brackets. Next weld on two 3/8 nuts over the holes, these will serve as set screws when mounting the tracer to the stand pipe.

Torch Pivot Bracket



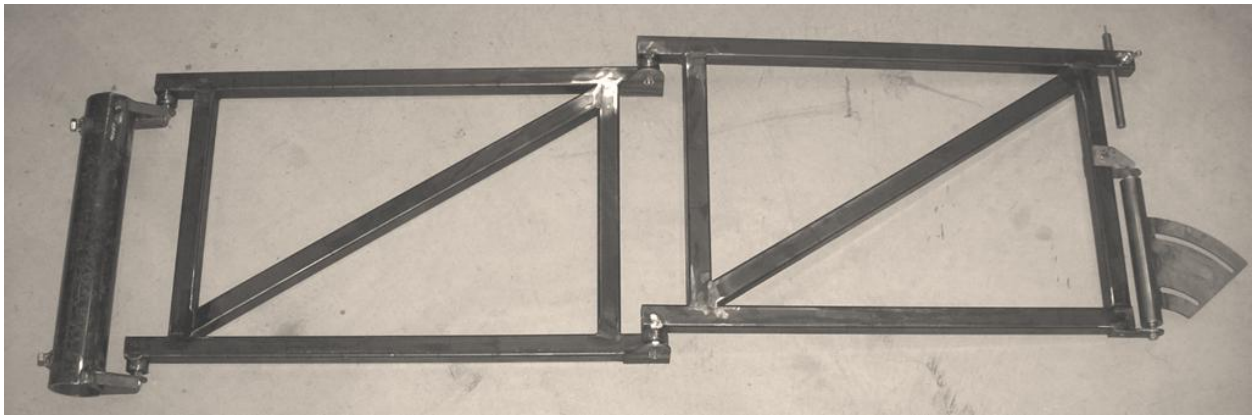
The Torch mount pivot bracket needs to be welded off center to allow the torch mount bracket to be centered on the pivot point when bolted on the left side of the pivot bracket, This can easily be accomplished by laying the tube on a flat surface, followed by laying the pivot bracket on top of a 1/4" piece of flat stock. Be sure to position the bracket 3/4" from the bottom of the pivot tube.

Torch Mount



The torch mount is made from a 7" length of 1" angle iron, round the corners as shown in the drawing, then weld the bracket vertically and centered on the corner of the angle iron as shown. The torch can be mounted using hose clamps or similar devises.

Assembly



Using an appropriate size socket and hammer drive the bearings into the bearing cups, and assemble the tracer as shown in the above image.

The assembly can now be mounted to any 2" O.D. tube mounted to your welding table. We recommend that the stand pipe be adjustable to allow the tracer to be squared up to your table as needed. Also constructing adjustable height "feet" to place under your material is very handy for quick and precise adjustments. You can find a video of the tracer in action at www.rottenleonard.com