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DIY Tube Jig Instructions

Material list
1 ¾" tube jig - 10' of 1 ¾"x.120 tube, 2' of 1 ½"x.120 tube and 8' of 1 ½"x.060 tube
1 ½" tube jig - 10' of 1 ½"x.120 tube, 2' of 1 ¼"x.120 tube and 8' of 1 ¼"x.060 tube

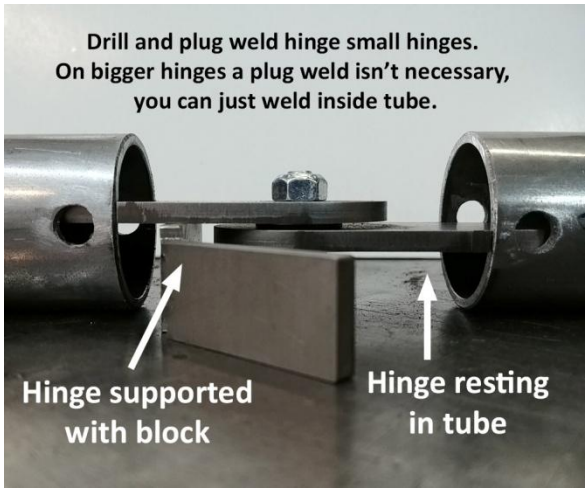
Full kit part list - 2 of each coped tube, one left, one right side. Single 80° cope tube
2 large hinges and 2 small hinges
1 large straight extension 12" long
2 each small extension tubes in .060 wall tube 9", 13 ½", 21" lengths

Coping Tubes - Using paper flat wraps
1. Wrap paper template around tube, align edges, tape it together. Tuck flap under or cut it off if you wish.
2. Mark the start of each cope angle and rotation. Mark the end cut. Picture to the left
3. Remove paper, cut and cope the tube with a notcher. Then deburr and degrease tube.
4. Repeat for all coped tube pieces. Large pieces can be hand cut if your notcher won't cope it.

Aligning notch rotation - Mark each notch separately

1. Hold a piece of angle iron on a tube(in vise) and mark a centerline on the tube.
2. Slide paper template on coped tube. Hold coped tube on centerline tube.
3. Rotate paper template until the top and bottom notches align with the centerline as pictured to the right. This ensures that the notches are rotated inline with the actual cope.
4. Repeat step 3 for the second cope
5. Mark holes to drill. You want one left hand and one right hand coped tube.
6. Remove template, cut notches, then drill holes
7. Assemble jamb screws and nuts, hold centered in hole and weld.
8. Repeat for all coped tubes

Hinges - The large hinge will have a jamb bolt, the small hinge will not.
1. Cut tube to length and mark a centerline on it.
2. Wrap template and mark holes, then drill.
3. Separate hinge pieces, sand tab leftovers. Bend the extra piece to a 45° angle.



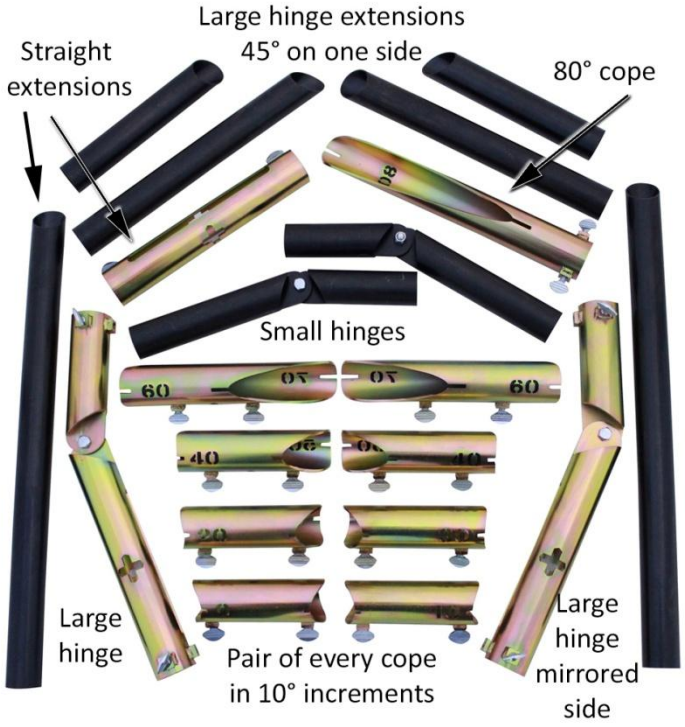
4. Assemble hinge pieces with brass washer. Slide hinge in a tube, use extra piece to hold top hinge side, then slide into second tube. Pictured to the left. Plug weld hinges to tubes.

5. Assemble jamb screws and nuts, hold centered in hole and weld.

6. Repeat for other hinges.

Straight extension tubes - We recommend cutting a 45° angle on one side. This comes in handy when a tube will mate to something flat.

(2) at 9" - (2) at 13 ½" - (2) at 21"
1 ¾" tube jig - use 1 ½" x .060
1 ½" tube jig - use 1 ¼" x .060



Finishing the Tube Jig kit
Protect from rust by oiling, waxing or painting the parts.
Install stickers on coped tube pieces.

Demonstration Videos

Make sure to watch our videos that show how to use the Tube Jig. These videos are helpful for beginners and experts by showing the step by step process and different ways the jig can be used.

You can find the videos on our website in the Tube Jig category and on YouTube by just searching for 911 Motorsports.

www.911motorsports.net

Using the Tube Jig - Setup and adjustment

1. Start by getting rough measurements of the tube you want to bend.
2. Layout the tube jig pieces next to each other and arrange to make the tube, then assemble and adjust to your rough measurements.
3. Now you can put the tube jig into place and adjust it for a perfect fit. Hold the tube jig while positioning with an adjustable stand, magnets, clamps or a buddy.

Tips

- The coped tubes are directional, ones with a left sticker will be on the Left side when used on top of a tube. This will be reversed when used under a tube.
-The hinge pieces overlap in length, if you run out of room then just swap to a shorter or longer side.
-Adjust one piece at a time. Use one hand to hold the jig and your other hand to loosen the thumb screw and adjust.

Making a tube

1. Measure the final angle for your copes and write it down. Tighten hinges so they don't move
2. Then lay the jig on a table, if you set it up correctly the thumb screws should be up in the air and not touching the table. That is important so you can accurately measure bend rotation.
3. Transfer the numbers to your final tube and start bending.

Tips

-Mark centerline of bend first, then mark the tangent/start of bend and make sure to add the bend offset for your bender.
-When doing two bends or more on a single tube it is best to start from the center and work to each end.

The easy way to find the start of bend/tangent point - This is NOT where the tube crushes, but usually pretty close. Set an angle finder to the desired degree of bend and hold it against the radius die on your bender. Make a mark where the angle finder contacts the die, this is the tangent point. Measure from your tangent mark to the center of your angle finder(where the legs intersect, not the pivot), this is the distance from center of bend to tangent/actual start of bend. This works because every size and radius of any die is exactly half the tube, the center line.

Bend location offset - This is the distance between where the bend truly starts in the die(tangent) and the position on the die or bender where you line up the bend start point.

Finding your offset - Cut a piece of tube that will allow you to make a 90 degree bend. Place a mark a couple of inches down the tube (we are going to use 3" in our example, on 1 3/4" tube with a 6" CLR die). Lineup the tube mark to the point on the die or bender you would like to use as your start mark, e.g. edge of die, strap, screw… Bend the tube creating a 90 degree bend. When completed hold a large square on the outside of the tube, measure the leg length (marked tube) from the end to the square. In our example below the leg measured 10.5".

Formula: Bend Location Offset = CLR + Mark Location + (1/2 of the OD) - leg length

Example: Bend Location Offset = 6 + 3.0 + .875 - 10.5 = -.625 (5/8")

Now we know the tangent or actual start of bend is 5/8" from our mark. That is the bend offset to add for this bender/die setup when bending.

Coping the tube

Mark cope distance and rotation. Set the tube jig on top of your final tube if possible, center it between bends and transfer where the cope will start. If you can't do this then you will want to measure it using the centerline to tangent numbers to transfer onto the final tube.

Tip - Every coped tube has slots to measure and transfer rotation angles. A piece of 1/8" flat bar will slide in and let you measure the angle of rotation.

We hope the Tube Jig saves you time and money! This is a brand new product, so we would love to hear any and all feedback that you might have. If you have any questions feel free to give us a call or email.

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