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Using the RC-6 Hoop Bender

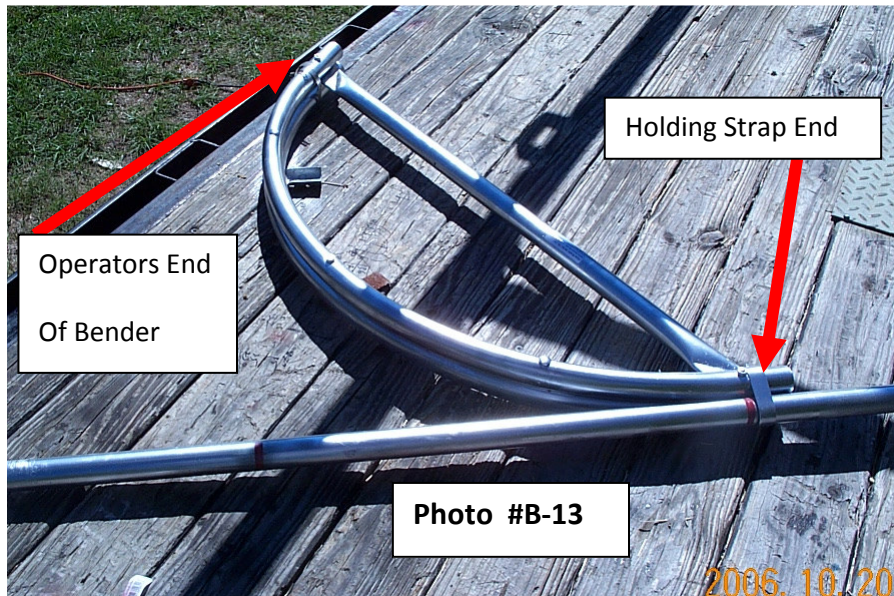
We have designed the RC-6 bending Tool specifically for producing six foot wide row crop cover applications.



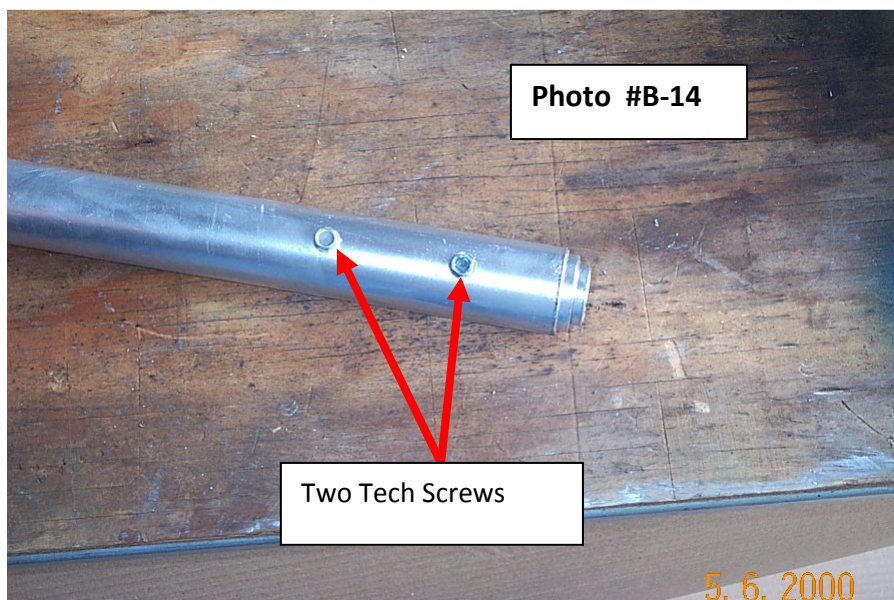
In addition it also can be used to produce a very nice six foot wide walk in greenhouse simply by attaching the hoops to straight vertical tubing poles. These mini greenhouses are not only great for small hobby they also are used extensively for small walk in seed starting chambers.



Unlike other manual tubing benders, the RC-6 along with all of our other compact bending tools are mounted (bolted) to a table, or any flat work surface that is stable and will not move. The tubing is then inserted into the holding strap and the tubing is pulled around the bender as opposed to other tubing benders that are pulled around the tubing. By securing the bender in a fixed position and pulling the tubing around the bender, the operator can maintain precise control of the tubing being bent.



The user (operator) stands at the end of the bender indicated in photo above. Tubing being bent is inserted into the holding strap indicated in photo above.

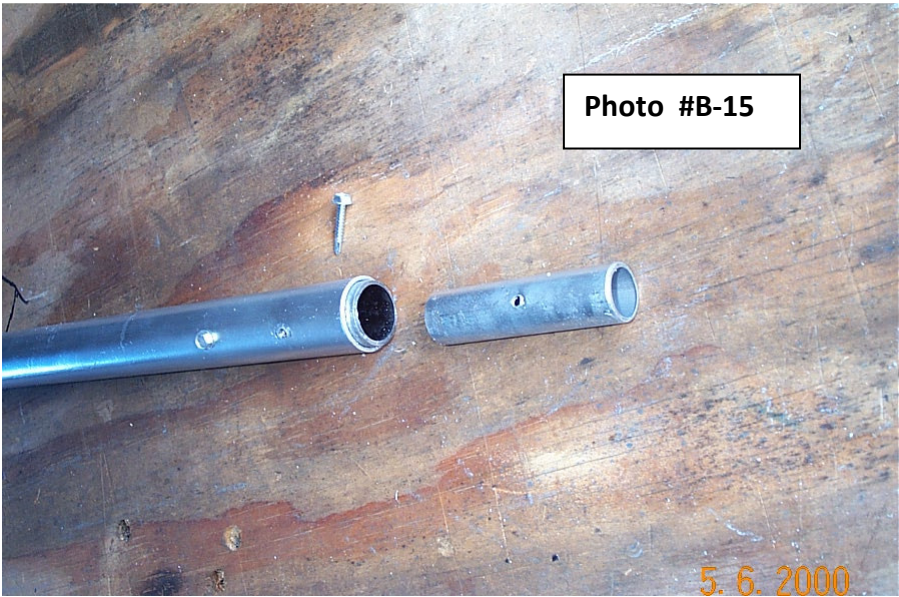


Above photo.

The end of the provided lever bar having two tech screws is used to bend 1/2" and 3/4" thin wall emt tubing (electrical metal tubing) and for the finish bending strokes on the small (swaged) end of 1 3/8" chain link fence tubing.

This end arrives ready to bend 1/2" emt tubing. #B-14 As you bend the tubing and approach the end you will need extra leverage, for 1/2" emt simply slide this end of the lever bar over the 1/2" emt until it contacts the first screw, then finish bending the end as shown in photos #B-25 and #B-26.

The lever bar is the only part that will wear and need to be replaced in time. This is because of the stresses incurred. But don't worry it will produce a lot of hoops before that occurs. This lever bar is unique to the RC-6 bender, as it is made entirely from standard stock pipe and tubing sizes available at all hardware stores and designed to bend 3 different tubing sizes.



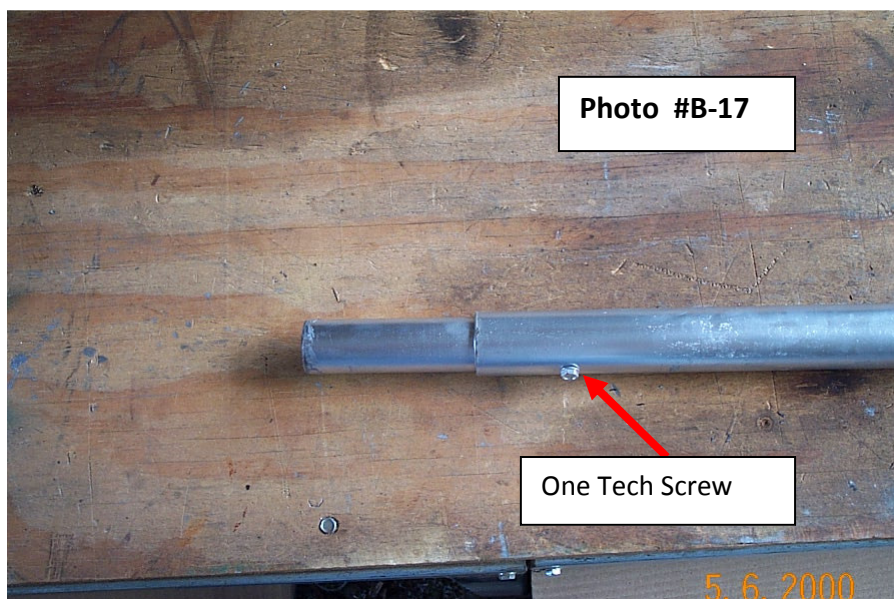
Above photo.

If you choose to bend hoops using 3/4" emt, remove the first screw and remove the smallest sleeve as shown above. Now your ready to bend 3/4" emt, #B-15. Slide this end over the 3/4" emt until it contacts the second and remaining screw.



Above photo.

If your building hoops using 1 3/8" chain link fence tubing remove the second screw and the second sleeve as shown above. Now this end is ready for bending the swaged end of 1 3/8" tubing, #B 16.



Above photo.

The opposite end of your lever bar (one tech screw) is used solely for bending the un-swaged ends of 1 3/8" fence tubing, #B-17.

Mounting The Bender



Above photo.

Mount the bender on any stable work surface. Use two 1/4" lag bolts or two 1/4" carriage bolts (provided), #B-18. Bender can also be mounted in a vertical position to a fence, barn door as long as it is mounted far enough off the ground to allow the tubing to curve as it is bent. See photo below.



Above photo.

The ultimate vertical mount. Even if you don't have a tractor, #B-19 You get the ideal on vertical mounting.

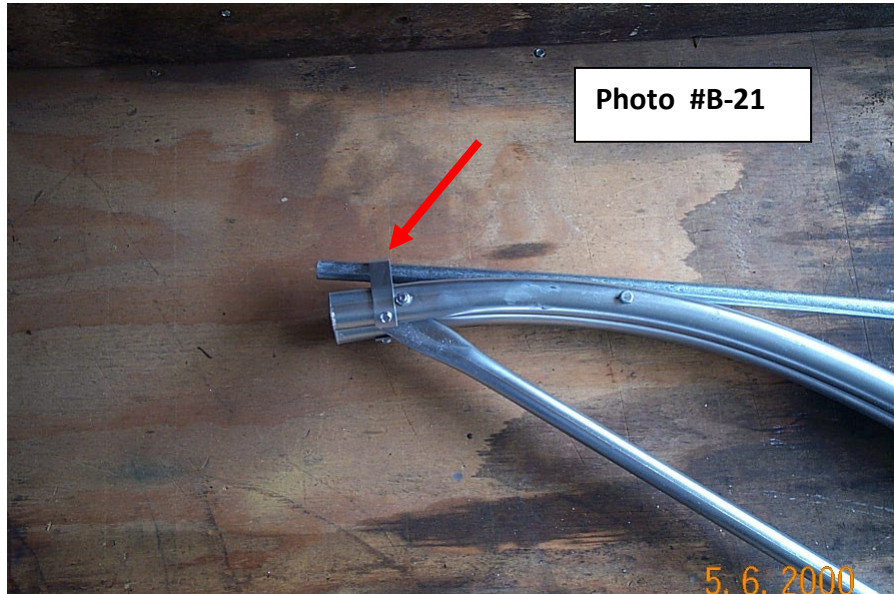


Photo #B-20

A simple 2x4 frame with a sheet of plywood attached becomes a portable table that slides into the truck bed or pulls out for bending, #B-20. The fender wells jam the plywood top and keeping it stable while bending. The 1X2 wood strips simply help hold the tubing level with the bender throughout the bending process.

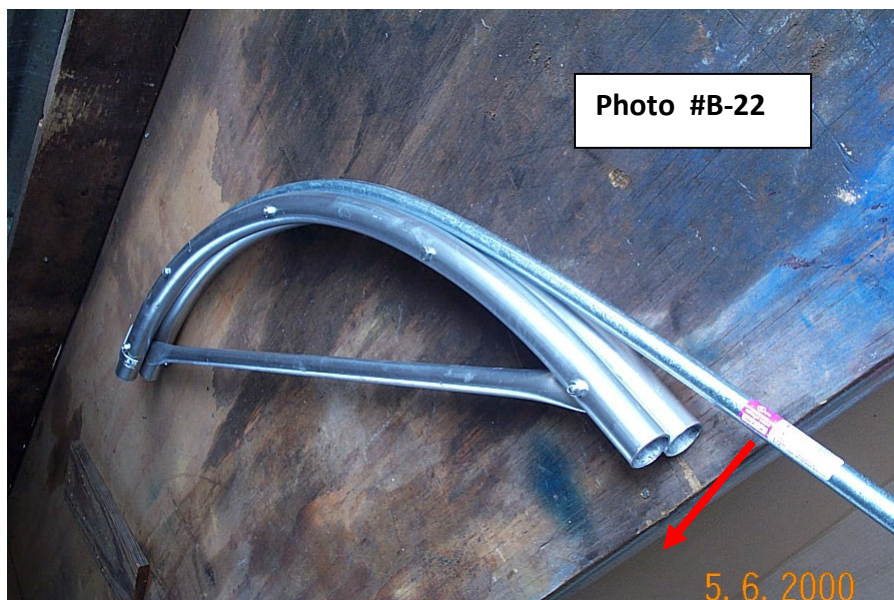
So there you have a few mounting ideals.

Bending The Hoops



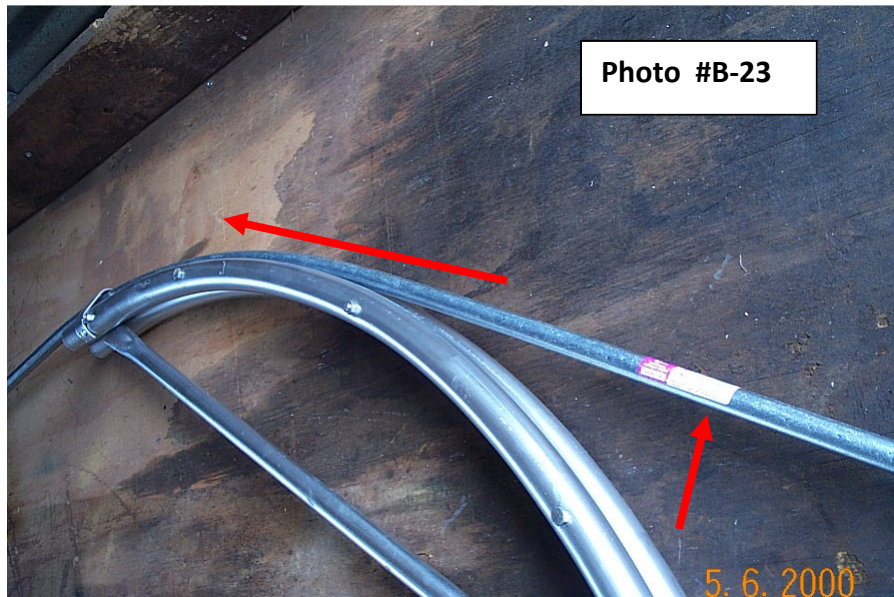
Above photo.

Here we are bending 1/2" od EMT tubing. Start by inserting a few inches of the tubing through the holding strap, #B-21 **In this case we will refer to this end of the 10' length of 1/2" EMT as end #1, the other end of this tubing (located now towards the operator end of the bender) is referred to as end #2.** Then pull the 1/2' EMT towards you around the bender



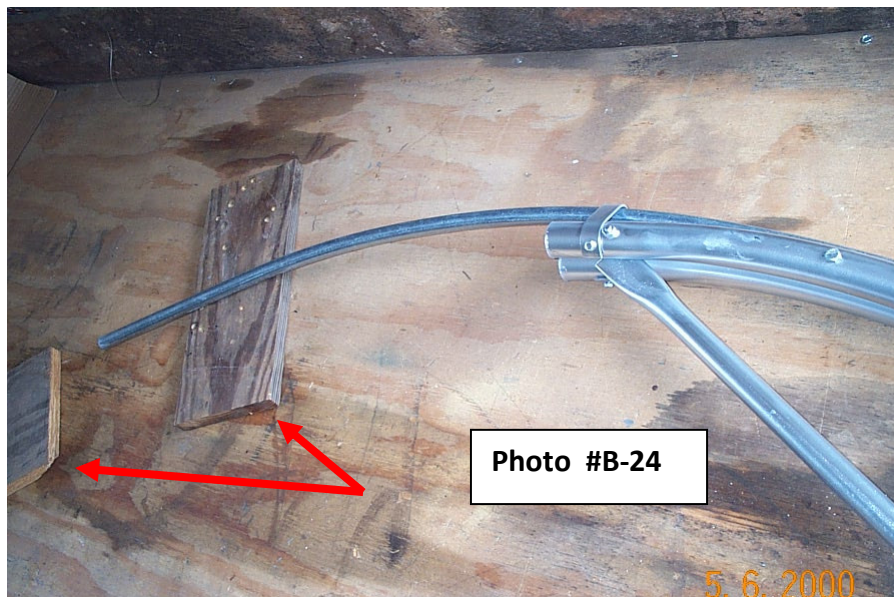
Above photo.

Stop the bending stroke (pull) 4 to 6 inches before reaching the operators end of the bender, as shown in photo #B-22



Above photo.

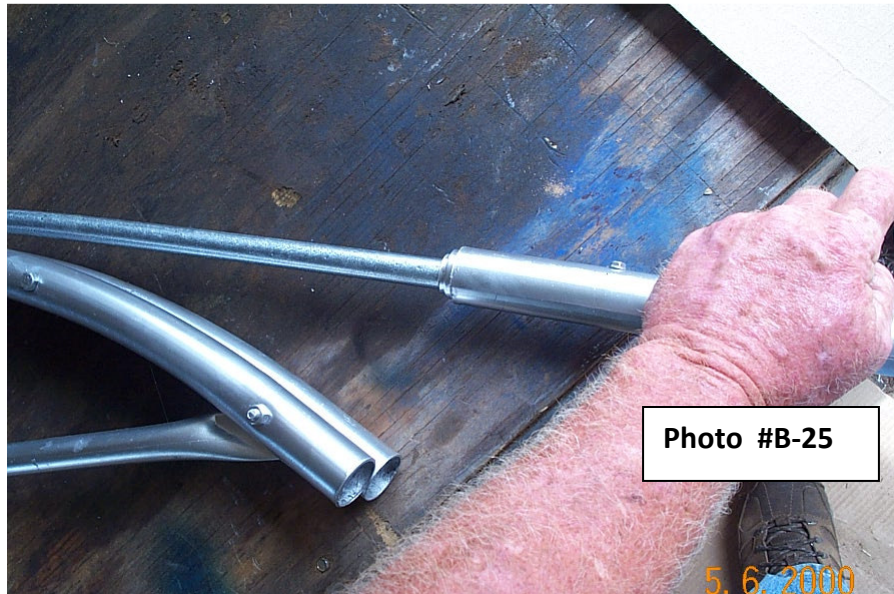
Release pressure on the tubing and push about one half of the portion you just bent through the holding strap #B-23. This is important, do not push more that $\frac{1}{2}$ of any previous bent portion (stroke) through the holding strap, otherwise you will not maintain a smooth consistent radius.



Above photo.

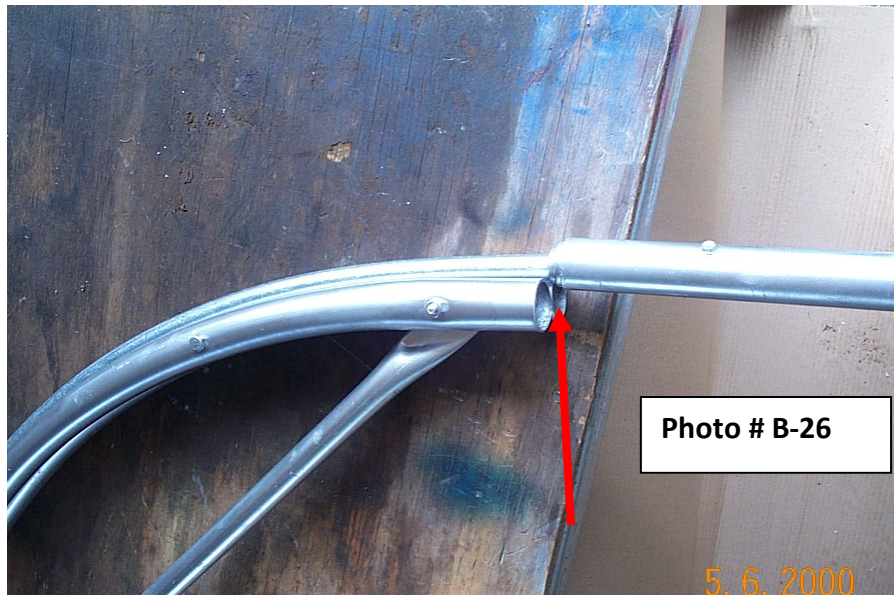
Here I've placed scrap $\frac{3}{4}$ " wood pieces in position to support the bent tubing as I proceed with the bending process, #B-24

Bending tubing in this manner is much like using a ratchet wrench. Simply pull around the bender, release pressure, push part through holding strap and pull again. Again don't get greedy and push more than half of any previous portion through the holding strap before beginning the next pull.



Above Photo.

This is the last pull for finishing end #2 of the $\frac{1}{2}$ " emt. Remember that end number #1 is the other end you first started through the holding strap. With the bent portion and end #1 resting on $\frac{3}{4}$ " wood supports at the other end of the bender. Slide the lever bar over the $\frac{1}{2}$ " tubing until it contacts the first tech screw inside the lever bar, #B-25. It will be a loose fit but that's ok. Push or pull the $\frac{1}{2}$ " emt through the holding strap so that the end of the lever bar will just miss the end of the bender on this last pull, (see photo #B-26)



Above photo.

Using the lever bar, Un-like the general bending strokes this time I've pulled the tubing all the way to the end of the bender, and as you can see above the lever bar just missed making contact with the bender. This step produces a near vertical ground entry for the end.

Remove the tubing from the bender. Turn it 180 degrees, now insert end #2 back through the holding strap. Pushing the tubing far enough through the holding strap so that end #1 is now in position to finish the bend same as the other end, show in photo #B-26 above.

The only time the last bending stroke at the ends of your tubing are required to be finished differently is when finishing the ends of 1 3/8" tubing. In the photo below you can see that the last bending stroke at each end (when bending 1 3/8" tubing) the lever bar/ tubing junction must be on the bender , not past the end of the bender. Care must be taken when finishing off the swaged end of 1 3/8" top rail fence tubing so as not to cause a collapse of the swaged end.



You now have a complete hoop. After just a few hoops you will be able to complete a hoop about every 60 to 120 seconds, depends on if you stop for a sip of coffee.

NOTE: Understand that not all tubing is manufactured with the exact same base metal alloys. Therefore if using tubing from two different sources you may notice a difference in finished hoop widths. If your hoop is not exactly six feet wide it can easily be compressed inward or you can just as easily spring it outward a little to achieve the 6 ft width.

