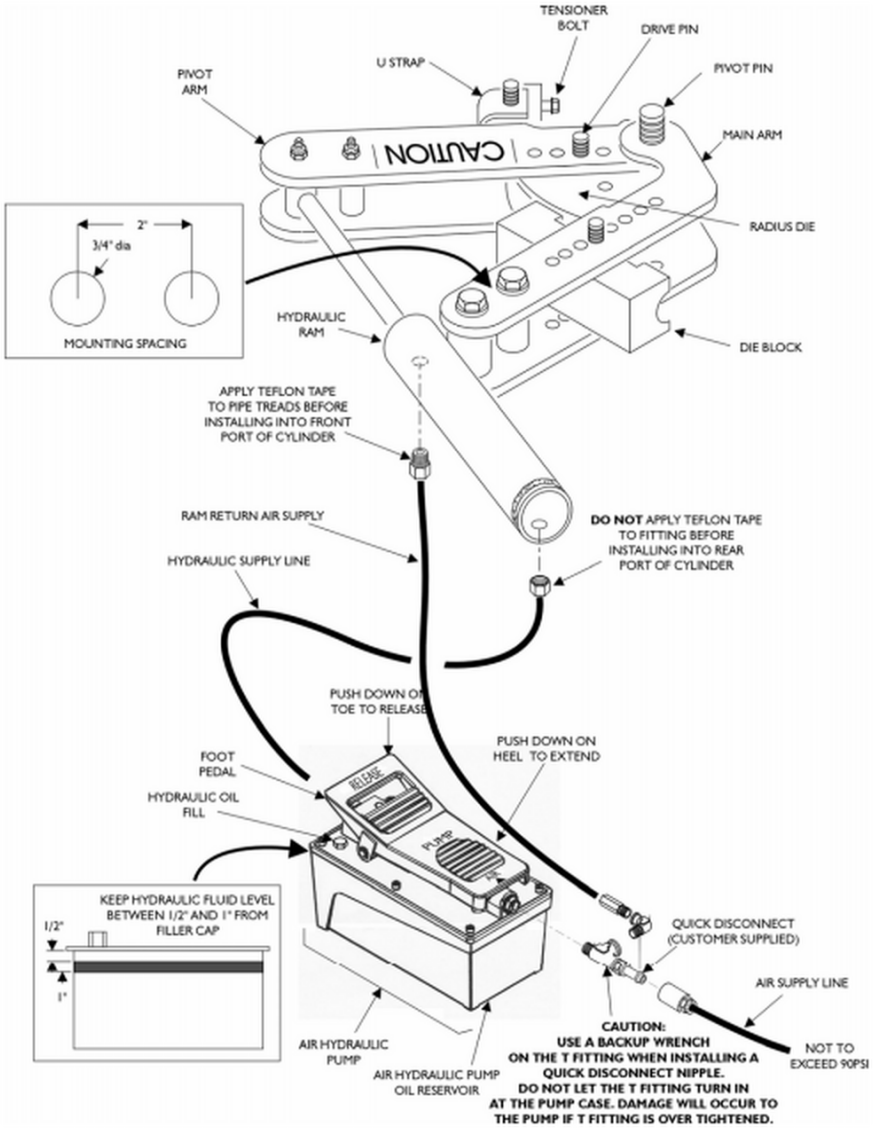


Figure 1. Bender overall view.

MOUNTING THE BENDER

1.JMR offers a U-Weld Stand Kit specifically designed for the TBAH-250 HYDRAULIC/PNEUMATIC BENDER.

2. If you are fabricating your own permanent mounting for the bender, ie: to a workbench, make sure it is stable and securely mounted to the floor.

3. If you are fabricating your own portable mounting for the bender, make sure the base is large enough to be stable when bending long pieces of material.

4. See Figure 1 for mounting dimensions.

AIR/HYDRAULIC TUBE BENDER
TBAH-250

WARNING

Read and understand all warnings, instructions and manual information before attempting to use this equipment.

1. NEVER store or leave the cylinder in the full extended/open position. If left in the extended position the hydraulic fluid will drain from the cylinder. When the air supply is reattached the cylinder could retract uncontrollably causing equipment damage and/or severe personal injuries. Use care when reattaching the air supply to the bender. Make sure there are no dies, pins, body parts on the bender when reattaching the air source to the pump. User assumes all risks when using this product.
2. Always pay close attention to what you are doing. Turn off cell phones and any other electronic device when using this machine.
3. This machine is meant to be operated by competent individuals who have a thorough understanding of tube bending and machines in general.
4. The bender is intended to be used by a single operator. Never allow a second individual to operate the machine while another holds the tube.
5. Always wear eye protection while operating tube bender.
6. Never put your hands or other body parts into bender apparatus.
7. Never wear loose clothing while operating a tube bender.
8. Always work in a clean, safe, well lit, level work area.
9. Never use the wrong size die/type die for the tube being bent.
10. Never operate the tube bender with broken, worn or damaged parts.
11. DO NOT attempt to repair and reuse any damaged bender parts.
12. DO NOT attempt to repair and reuse any damaged AIR HYDRAULIC PUMP parts.
13. Use the AIR HYDRAULIC PUMP in the upright position only.
14. Hold the foot valve down ONLY until you hear the pump slow down after the full stroke is attained.
15. Alteration of these products is strictly prohibited.
16. Use only those adapters and attachments provided and approved by the manufacturer.
17. Always inspect hoses and connections for damage prior to use.

WARRANTY

1. One year limited warranty on tube bender.
2. Limited lifetime manufacturer's warranty on the Air Hydraulic Pump.
3. Limited lifetime warranty on dies against breakage. Warranty is void if damaged due to abuse or misuse.
4. Warranty items must be sent to JMR Manufacturing postage prepaid for inspection. JMR Manufacturing will replace or repair items at their discretion.
5. JMR Manufacturing makes every attempt to satisfy customers as quickly as possible.
6. JMR Manufacturing will not accept any responsibility for personal injury or property damage arising from the failure of any parts manufactured and/or sold by JMR Manufacturing, LLC.

BLEEDING THE HYDRAULIC SYSTEM

WARNING

Never put your hands or other body parts into bender apparatus.

1. Use only a high quality hydraulic oil to fill the hydraulic pump. **DO NOT** use any other type of oil in the bender, i.e.: motor oil, transmission fluid, etc.
2. Connect the foot control to an air supply, not to exceed 90 psi as shown in Figure 1.
3. Using the foot control valve (heel down to extend and toe down to retract), cycle the bender cylinder several times and check that the level of hydraulic oil is between ½" and 1" from the fill plug. Add hydraulic oil if necessary. See Figure 1.
4. Be sure to check the level of the hydraulic oil frequently. **DO NOT** allow the reservoir to run dry. This will void the warranty.
5. Under normal use, the pivot bushings should be greased every 250-500 cycles. Under high use conditions it will be necessary to grease the pivot bushings every month or more often as necessary.
6. Inspect and replace bushing when worn or sloppy.

WARNING

DO NOT attempt to use damaged parts in the tubing bender.

For your safety, DO NOT attempt to repair and reuse any damaged bender parts.

1. Replace any worn, bent, or damaged parts immediately. Replacement parts are available from JMR Manufacturing or your local dealer.
2. Replace any worn or damaged hydraulics hoses immediately. Replacement hoses are available from JMR Manufacturing or your local dealer.
3. Replace any worn or damaged Air Hydraulics Pump parts immediately using only factory authorized parts. Parts are available from JMR Manufacturing or your local dealer.
4. Dies are available for tubing (measured by outside diameter), or Sched 40 pipe. Always use the proper size/type of die for the material being worked.

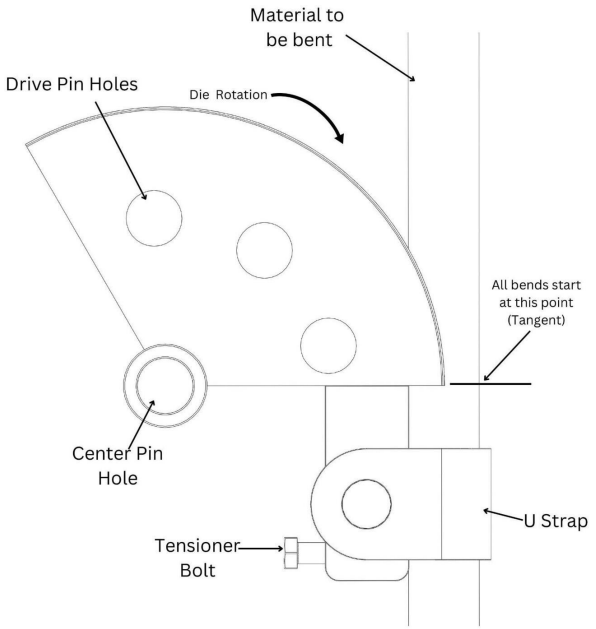


Figure 2. Bends start at the edge of the radius die.

OPERATION OF THE BENDER

WARNING

Because of the precision air return NEVER store or leave the cylinder in the full extended/open position. If left in the extended position the hydraulic fluid will drain from the cylinder. When the air supply is reattached the cylinder could retract uncontrollably and could cause equipment damage and/or severe personal injuries. Use extreme care when reattaching the air supply to the bender. Make sure there are no dies, pins, body parts on the bender when reattaching the air source to the pump.

1. Connect the foot control valve to an air supply, not to exceed 90lbs as shown in Figure 1.
2. The tubing material should be clean and free from defects.
3. Always grease the die block prior to bending.
4. Make sure that all drive pins are fully seated.
5. Pass tube into die and position as required for start of bend. All bends will start at the edge of the radius die as shown in Figure 2.
6. Install the U strap and snug retainer bolt if needed.

WARNING

Never put your hands or other body parts into bender apparatus.

Using the foot control valve, extend the ram (down on the heel portion of the foot valve. See Figure 1.) to the full stroke (or as needed for shorter bends).

WARNING

DO NOT hold the foot valve down any more than a few seconds after the full stroke is attained. Serious injury and/or equipment damage may occur if the foot valve is held open and excess pressure is allowed to build up in the hydraulic cylinder.

Burst hazard exists if hose or connection pressure exceeds rated pressure.

There is an approximate maximum 41º bend for each full stroke of the ram.

Pulling up on the drive pin, begin to slowly retract the ram (down on the toe of the foot control valve) removing the pin when tension on the pin is released and before it starts to rotate the die.

WARNING

In some cases when retracting the ram the tubing being bent could become stuck in the radius die. Using great caution, pull sharply on the end of the tubing to release the tubing from the radius die.

1. Slowly retract the ram (down on the toe of the foot control valve) until the second die drive hole lines up.
2. Re-install the pin fully and repeat the above bend process to complete the total bend.
3. To repeat bends, without the degree wheel, measure ram's travel.
4. When the tube is bent the desired amount, slowly retract (down on the toe of the foot control valve) the ram allowing the drive pin to rotate the die and releasing the tube. It may be necessary to loosen the U-strap retaining bolt.

WARNING

In some cases when retracting the ram the tubing being bent could become stuck in the radius die. Using great caution, pull sharply on the end of the tubing to release the tubing from the radius die.

1. Remove the tube.
2. Use the smaller diameter drive pin (included) with any die that uses the first drive hole (closest to the pivot point).