



INSTRUCTIONS FOR:

**INDUSTRIAL PIPE BENDERS 9 & 15 TON**

MODEL No's: **PBS90.V2 PBS91.V4**

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.

**⚠ IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.**

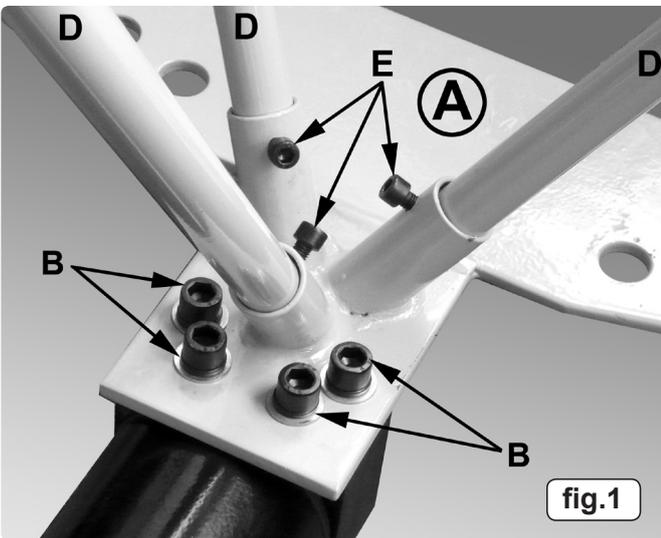
**1. SAFETY INSTRUCTIONS**

- ✓ Ensure the pipe bender is in sound condition and good working order. Take action for immediate repair or replacement of damaged parts. *Use recommended parts only. The use of improper parts may be dangerous and will invalidate the warranty.*
- ✓ Keep bender and associated parts clean for best and safest performance.
- ✓ Locate the pipe bender in a suitable, well lit work area.
- ✓ Keep work area clean and tidy and free from unrelated materials.
- ✓ Use on level and solid ground, preferably concrete.
- ✓ Ensure all non-essential persons keep a safe distance whilst the pipe bender is in use.
- ✓ Check that bending die is correctly seated on ram and that roller shafts are fully engaged in the frame before operating hydraulic unit.
- ✓ Use a qualified person to lubricate and maintain the hydraulic unit.
- ✓ Confirm that the recommended *hydraulic oil* is used during maintenance.
- ✓ Wear appropriate safety clothing including gloves and eye protection.
- ✓ Keep hands away from die and rollers when bending pipe.
- ▲ **Caution!** Cut pipe edges may be sharp, take care when handling any cut steelwork.
- \* **DO NOT** operate the pipe bender if damaged.
- \* **DO NOT** allow untrained persons to operate the pipe bender.
- \* **DO NOT** exceed the rated capacity of the hydraulic unit (see below).
- \* **DO NOT** use the pipe bender for purposes other than that for which it is intended.
- \* **DO NOT** top up system with brake fluid. Use hydraulic oil only.
- \* **DO NOT** alter the pressure control valve.
- ✓ Store pipe bender in a dry, childproof area, with the hydraulic ram retracted.

**2. INTRODUCTION & SPECIFICATION**

Tripod mounted pipe benders suitable for bending pipes up to 180° (3 x 60° bends). Compact hydraulics with integral 9 or 15 ton ram. Suitable for bending DIN classified medium and heavy pipe. Two-speed hydraulic pump gives fast positioning of pipe in dies and the power to bend up to 50mm pipe (PBS90), or 75mm pipe (PBS91). The units are supplied with six/eight interchangeable pipe dies and are supplied in a heavy wooden crate for easy transportation.

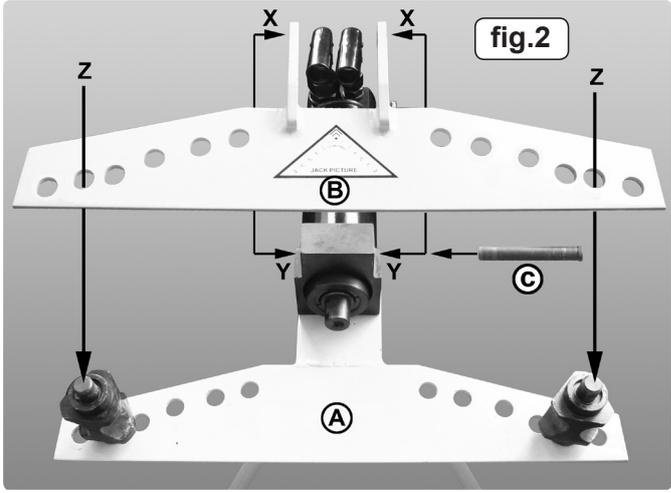
<b>MODEL:</b> .....	<b>PBS90</b> .....	<b>PBS91</b>
Maximum Load .....	9ton .....	15ton
Maximum Pipe Ø .....	50mm .....	75mm
Height .....	700mm .....	700mm
Weight .....	53kg .....	117kg
Die Sizes .....	13mm(1/2"), 19mm(3/4") .....	13mm(1/2"), 19mm(3/4")
.....	25mm(1"), 31mm(1-1/4") .....	25mm(1"), 31mm(1-1/4")
.....	37mm(1-1/2"), 50mm(2") .....	37mm(1-1/2"), 50mm(2")
.....	.....	64mm(2-1/2"), 75mm(3")



**3. ASSEMBLY**

**WARNING!** Ensure that you have read and understood Section 1 Safety Instructions before operating the pipe bender. **WARNING!** When the pipe bender is packed in its box it is extremely heavy and will require at least 2 people to move it. The pump unit itself is also very heavy and should be handled with care.

- 3.1 Remove the pump unit from the box and place it upside down on a smooth flat clean surface.
- 3.2 Identify the four 12mm socket cap mounting bolts and slide a spring washer and then a plain washer onto each bolt. Referring to fig.1 align the four mounting holes in the lower plate (A) with the threaded holes in the block at the front of the pump unit. Insert the four 12mm socket cap bolts and screw down finger tight. Take the 10mm hex key provided and fully tighten the four bolts.
- 3.3 Adjacent to the mounting bolts are three tubular sockets for the tripod legs. Insert a tripod leg into each socket. See D in fig.1. Screw an 8mm socket cap bolt through the side of each socket to clamp the legs in place as shown at E in fig.1. Tighten each bolt using the 6mm hex key.
- 3.4 Turn the assembly the right way up so that it is standing on its tripod legs. Care should be taken when doing this, get another person to help you as the unit is heavy.



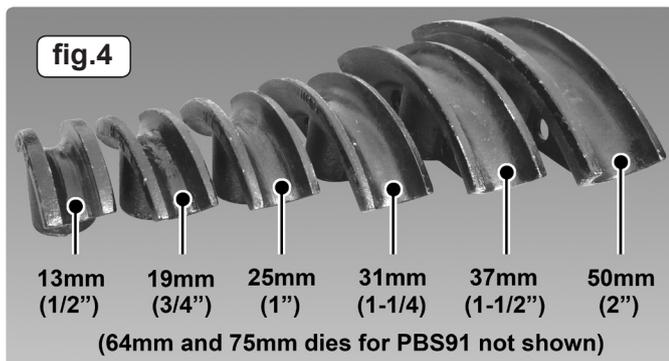
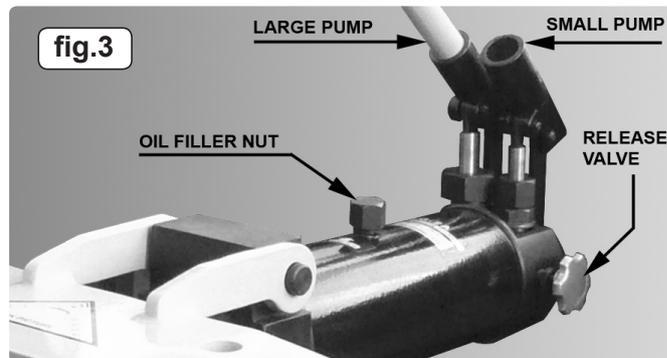
- 3.5 Locate the bending rollers (see Z above) into suitable holes in the lower plate (A) so that they are displaced equally either side of the pump unit.
- 3.6 Identify the pivot pin (C) for the upper plate (B) and have it ready for insertion. (see fig.2.)
- 3.7 Lower the upper plate (B) onto the pipe bender so that the upward facing shafts of the bending rollers locate into the plate and the pivot arms are lying either side of the front of the pump block. Referring to fig.2 align holes 'X' in the pivot arms with the hole 'Y' in the pump block and fully insert the pivot pin (C).

**4. OPERATION**

When using hydraulic type pipe benders, the bent pipe or tube is prone to deformation on both the inside and outside curvature. The pipe or tube can be deformed into an oval shape or creased depending on the wall thickness of the material. This is not a fault and largely unavoidable. Consider packing the pipe or tube with dried sand or similar medium before bending as this may help to alleviate deformation of the pipe or tube. Pack the sand tight and cap both ends.

- 4.1 The nut on the oil filler located on the top of the pump body doubles as a vent and needs to be opened one turn before using the unit. The nut should be done up tightly if the unit is moved or stored away for a long period, to prevent hydraulic oil spillage. See fig.3.
- 4.2 Before using the pipe bender purge any air from the hydraulic system by opening the relief valve situated on the side of the unit anticlockwise and pumping the handle several times. Close release valve.
- 4.3 Hinge up the top plate. Select the required die (see fig.4) and place it onto the end of the ram piston. See fig.5.
- 4.4 Position the rollers according to the triangular label in the centre of the top plate. See fig.2-B.
- 4.5 Rotate the rollers so that the most appropriate of the three contours available will be against the pipe.

**Note! Consider packing the pipe or tube with dried sand or similar medium before bending as this may help to alleviate deformation of the pipe or tube. Pack the sand tight and cap the ends.**



- 4.6 Introduce the pipe between the die and the rollers, swing down the upper plate ensuring that it locates correctly onto the roller shafts and position the pipe so that the centre of the required bend is in the centre of the die.
- 4.7 Close the release valve by turning the knob clockwise. Insert the pump handle into the socket above the larger of the two pumping pistons (see fig.3) and pump to close the gap between the die and pipe. Before applying bending pressure do a final check on the positioning of the pipe. Now insert the handle into the socket above the smaller of the pumping pistons and pump until the required degree of bend is achieved.
- 4.8 Open the release valve and the piston will retract under spring tension. Raise the upper plate and remove or reposition the pipe as required.
- 4.9 After use, store the pipe bender with the ram fully retracted and the pumping pistons in the down position.

## 5. MAINTENANCE

- 5.1 Regularly oil all moving parts.
- 5.2 Annually replace hydraulic oil using Sealey Hydraulic Jack Oil - HJO/500ML or HJO/5L. **Never use brake fluid.**

## 6. DECLARATION OF CONFORMITY



Parts support is available for this product. To obtain a parts listing and/or diagram, please log on to [www.sealey.co.uk](http://www.sealey.co.uk), email [sales@sealey.co.uk](mailto:sales@sealey.co.uk) or phone 01284 757500.

**NOTE:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

**IMPORTANT:** No liability is accepted for incorrect use of this product.

**WARRANTY:** Guarantee is 12 months from purchase date, proof of which will be required for any claim.



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