

# Hydraulic Bender

# Before Operating Your Tools, Please Read This Instruction Carefully



ITEM NO.61-251-131 MODEL NO . #H131

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# **WORK PRINCIPLE FIGURE**

- 1.OPERATION HANDLE
- 2.PLUNGER
- 3.SEA:ING O-RING
- 4.CYCLINDER CAP
- 5.RELEASES VALVE
- 6.TANK
- 7.YC SEALING RING
- 8.PISTON
- 9.BACK SPRING
- 10.CYLINDER
- 11.DIRECTOR SLEEVE
- 12.SHELL DIE
- 13.ROLLING WHEEL
- 14.TOP BOARD & BOTTOM BOARD
- 15.THIN SCREW



# A. FEATURES:

- 2.Can work through out the whole ram stroke
- 3. With automatic return

# B. APPLICANTION SCOPE:

- 1. Capable of bending pipes outside diameter from 21.3mm to 60mm
- 2. Capable of bending low-carbon steel; stainless steel pipe & nonferrousmetal pipes.

# C. MAIN SPECIFICATIONS:

- 1. Horizontally lay up, top bending structure. 1. Max. capacity: 10ton
  - 2.Max. oil tank pressure: 42 Mpa
  - 3.Max. outside diameter of pipe: 60mm
  - 4.Max. ram stroke: 155mm
  - 5.Net weight: 50kg
  - 6. Volume (fold-up pack age): 712×59×21cm

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7. Bending pipe technical specifications:

| Dia.   | Outside Dia. | Max.Thickness | Radius | Angle  | Ratio |  |
|--------|--------------|---------------|--------|--------|-------|--|
| 1/2"   | 21.3mm       | 3.25mm        | 62mm   | 0-110° | 2.9   |  |
| 3/4"   | 26.8mm       | 3.50mm 78mm   |        | 0-110° | 2.9   |  |
| 1"     | 33.5mm       | 4.00mm        | 98mm   | 0-90°  | 2.92  |  |
| 1-1/4" | 42.3mm       | 4.00mm        | 128mm  | 0-90°  | 3.03  |  |
| 1-1/2" | 48.0mm       | 4.25mm        | 148mm  | 0-90°  | 3.08  |  |
| 2"     | 60.0mm       | 4.50mm        | 187mm  | 0-90°  | 3.12  |  |

# \*\* OPERATION INSTRUCTION

- 1.Before using, rotating three supporting stands (No.38) into the position. Remove the stands and fold the bender for moving or storage after using.
- The working bench is composed with fixed bottom board (No.25) and movable top board (No.21). Before bending, the top board shall be close to the top board (No.21) and the roller wheel (No.24). After the bending is completed, the pipe can be taken out by opening the top board.
- 3. There are marks of size on the socket of both the top and bottom boards, the small die and the curved supporting surface on the rolling wheel. Use the suitable size according to the work before operating.



4.Rotating tightly the release valve (No.4) before operating. Open release valve when bending is completed and the ram will return auto matically.

5. The tank between the outer-casing and the cylinder shall be filled properly with normally 1-1.2 hydraulic oil (No.10). If the tank is over fed, it will be difficult for the piston to return and on the contrary the ram will be difficult for the piston to return and on the contrary the ram will not move all the way to the end.

6. If the pressure on the handle shows the sign of reducing and oil leakage occurs on the pump after a long time use, remove the trunk piston in the pump and replace the sealing ring. It is the same problem when it sounds noisy if heavy-load or light-road.

7. The Y x sealing ring can be replaced by removing the thin screw, the direct sleeve and the piston.

8.If the transporting, rotating, side down display cause the ram unable to proceed, it shows that the air comes into the tank. Please follow the steps listed below to eliminate the air.

A.Release the piston base (No.10), rotate tightly the release valve (No.4), press the truck piston several times till the oil flow out from the gap between the piston base (No.10) and valve block (No.1), then close the piston base. Try to bend again, if the ram (No.33) proceeds, the machine is normal. Otherwise, please try the second step.

B.Release the adjustable valve, press the truck piston several times till the oil flow out of the adjustable valve. Then close the adjustable valve. Try it again, if the ram proceeds, and no "two steps proceed and one step move back" occurs, the machine is normal. Otherwise, pleasetry the third step.

C.Use a hammer to hit the truck piston for several times to clear up the bubbles in the oil till the machine works normally.

D.If you follow all the steps afford-said, it still appears that the ram can't proceed. It is because of the less of the oil. You may fill up the oil till the oil level are not below the O-ring in the piston base.

# Caution: Clear up the air after filling up the oil.

9.If the truck piston (No.11) can't bounce back after being pressed down, you may check the oil level to see if it complies with G.D. standard. You shall also check the spring (No.6) to see if it is damaged. Then you may fill up the oil and change the spring.



| Parts No. | Description | Qty. | Remark |
|-----------|-------------|------|--------|
| 3         | O-Ring      | 1    |        |

# PART LIST

| No. | Description        | Qty. | No. | Description     | Qty. | No. | Description     | Qty. |
|-----|--------------------|------|-----|-----------------|------|-----|-----------------|------|
| 1   | Valve block        | 1    | 14  | Adjusting valve | 1    | 27  | Shell die       | 6    |
| 2   | Ball               | 3    | 15  | O-Ring          | 3    | 28  | Check           | 1    |
| 3   | O-Ring             | 3    | 16  | Oil guage       | 3    | 29  | Ram seal        | 1    |
| 4   | Release valve      | 1    | 17  | Reservoir       | 1    | 30  | Guide socket    | 1    |
| 5   | Top spring plug    | 1    | 18  | O-Ring          | 1    | 31  | Spring          | 1    |
| 6   | Spring             | 1    | 19  | O-Ring          | 1    | 32  | Handle          | 1    |
| 7   | Bottom spring plug | 1    | 20  | Tank nut        | 1    | 33  | Ram             | 1    |
| 8   | O-Ring             | 1    | 21  | Top board       | 1    | 34  | Yx-sealing ring | 1    |
| 9   | O-Ring             | 1    | 22  | Pin             | 1    | 35  | Handle socket   | 1    |
| 10  | Piston base        | 1    | 23  | Cotter pin      | 2    | 36  | Pin             | 1    |
| 11  | Truck piston       | 1    | 24  | Rolling wheel   | 2    | 37  | Cotter pin      | 2    |
| 12  | Spring             | 1    | 25  | Bottom nut      | 1    | 38  | Stand           | 3    |
| 13  | Lock washer        | 1    | 26  | Clamping nut    | 1    |     |                 |      |

