

HYDRAULIC PIPE BENDING MACHINE

INSTRUCTION



OPERATION MANUAL INSTRUCTIONS FOR HYDRAULIC PIPE BENDING MACHINES

Construction

Fig. 1 shows its constructional appearance.

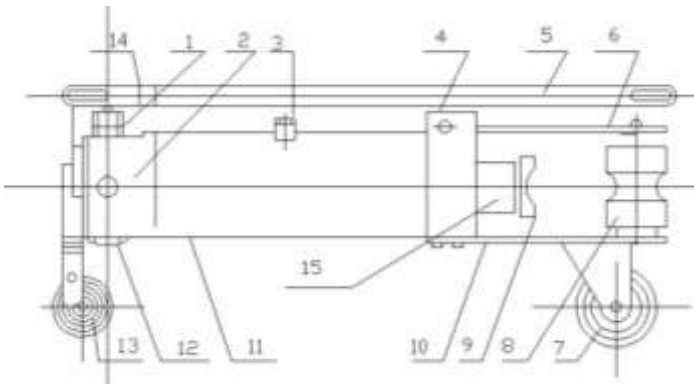


Fig. 1: structure figure

- | | |
|-----------------------|----------------------|
| 1- Ram Pump | 2- Switch |
| 3- Filler | 4- Cylinder Seat |
| 5- Handle | 6- Upper Wing Board |
| 7- Back Wheel | 8- Supporting Wheel |
| 9- Tube-Bending Mould | 10- Lower Wing Board |
| 11- Fuel Tank | 12- Filter |
| 13- Front Wheel | 14- Handle Seat |
| 15- Piston Rod | |

1. Resume

This series bending machines are designed and made carefully and adopt fast-slow hand pump, overload discharging mechanism and oil filter in its hydraulic system which features reasonable structure, light in weight small in volume and long lifespan, etc. It is an ideal bending tools for bending pipes and tubes.

2. Technical Index

Model	Max. Working Pressure	Max. Working Capacity	Bending Angle	Fuel Tank's Volume (15# lubricant)
SWG-2A	44MPa	250mm	$90^{\circ} \leq \alpha < 180^{\circ}$	1.2 Kg
SWG-3B	59Mpa	320mm	$90^{\circ} \leq \alpha < 180^{\circ}$	2.5 Kg
SWG-4D	62Mpa	420mm	$90^{\circ} \leq \alpha < 180^{\circ}$	4.0 Kg

3. Operating Instruction

1. Tighten the switch and grease the touch place between supporting wheel, mould and work piece.

2. Choose the suitable mould according to the size of tube and fit them on the top of piston rod and mount two supporting wheels with their notch facing towards the mould. Be sure the supporting wheel must be

put in the corresponding holes on the wing board according the size of them. The two supporting wheels must be installed symmetrically or else it will cause mold and mechanism damaged.

3. After having placed the work piece cover the upper wing board. First, use fast pump to make bending mold press the work piece the use slow pump to hold work piece at a suitable angle. When the work piece is bended turn on the switch and the working piston will be reset automatically to turn over the upper wing board to take out the work piece.

4. Note

1. Check the oil position in the fuel tank before using. If it is not enough, please fill the oil.

2. Please turn off the switch before operating, otherwise, the pressure will not go up and loose the oil screw to make fuel tank ventilated.

3. The size of work piece must fit the groove in mould. If it is not fit, it will cause work piece shrunken or make the mould splited.

4. For welding the tube, make sure the welding line be away from bending position. In case of bending the two supporting wheel must be revolved at once and the work piece must be slid in the groove of supporting wheel. Otherwise the operation must be stopped.

5. Please keep the machine clean after using. The lubricant must be filtered with 80# mesh and the filter must be clean regularly.

6. 15# lubricant is available for this machine.

5. Wearing Parts

To serve the machine easily, all the wearing parts are put into the package of spare parts.

1. YX sealing ring, D28: 1 pc
2. YX sealing ring, D16: 2 pcs

6. Actions in case of trouble

6.1 Trouble: Crown bar flex while piston rod is extended at a certain length.

Cause:

- Oil screw is not loosen.
- Output port of pump is not sealed, and the ball in oil out valve is not round.

Resolvent:

- Fasten the oil screw.
- There are dirt in oil, must replace with clean lubricant or replace the steel balls.

6.2 Trouble: Oil leakage in piston rod of fast and slow pump.

Cause:

- Oil ring damaged.

Resolvent:

- Replace oil ring in spare parts package.

6.3 Trouble: Oil leakage in switch.

Cause:

- Rubber ring is too loose.

Resolvent:

- Dismantle limit screw and switch then fasten the rubber ring.

6.4 Trouble: Crown bar can not work.

Cause:

- Steel ball damaged in switch.
- The top of switch do not touch the ball, or the ball is dropped.

Resolvent:

- Replace the steel ball.
- Fasten the switch or put the steel ball in it.

6.5 Trouble: Oil leakage in top of crown bar.

Cause:

- Sealing ring damaged at tip of piston rod.

Resolvent:

- Replace with 14×2.4 , type O rings (Purchase).

6.6 Trouble: Oil suction is not enough in fast and slow pump.

Cause:

- There is dirt in the filter or oil is not enough.

Resolvent:

- Remove No.12 part and clean mesh with gasoline then fill it.

6.7 Trouble: The positioning hole is split in mold.

Cause:

- There are side load in mold: the bending position is not correct for re-bend work piece.

Resolvent:

- Check the position of the two supporting wheel if they are symmetrical and grease the touch place between wheel and work piece.

6.8 Trouble: Pump backflow.

Cause:

- The steel ball in oil-out valve can not be reset..

Resolvent:

- Extend the piston rod (15) to make ram pump work then knock the handle seat (14) with hammer.

7. Manufacturer's Warranty

The warranty period shall be 3 months from delivery of the new product to the first user but shall be a maximum of 6 months after delivery to the Dealer. The date of delivery shall be documented by the submission of the original purchase documents, which must include the date of purchase and the designation of the product. All functional defects occurring within the warranty period, which clearly the consequence of defects in production or materials, will be remedied free of charge.

The remedy of defects shall not extend or renew the guarantee period for the product. Damage attributable to natural wear and tear, incorrect treatment or misuse, failure to observe the operational instructional instructions, unsuitable operating materials, excessive demand, use for unauthorized purposes, interventions by the Customer or a third party or other reasons, for which LONGHUA is not responsible, shall be excluded from the warranty.

The user shall be responsible for the cost of shipping and returning the product.

The Matching Mould & Tube Diameter And Thickness (Unit: mm)

SWG-2A	Matching Mould	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"			
	Tube Dia.	21.25	26.75	33.5	42.25	48	60			
	Thickness S	2.75	2.75	3.25	3.5	3.5	3.5			
SWG-3B	Matching Mould	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	
	Tube Dia.	21.25	26.75	33.5	42.25	48	60	75.5	88.5	
	Thickness S	2.75	2.75	3.25	3.5	3.5	3.5	3.75	4	
SWG-4D	Matching Mould	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	4"
	Tube Dia.	21.25	26.75	33.5	42.25	48	60	75.5	88.5	108
	Thickness S	2.75	2.75	3.25	3.5	3.5	3.5	3.75	4	4.5

Note: Range of thickness S

SWG-2A: $4.5 \geq S \geq \text{Standard S}$

SWG-3B: $4.5 \geq S \geq \text{Standard S}$

SWG-4D: $4.5 \geq S \geq \text{Standard S}$

Packing List

Serial No.	Name	Quantity	Remarks
1	Body of Bender	1	
2	Wing Board	2	
3	Bending Mould		SWG-2A: 6 PCS SWG-3B: 8 PCS SWG-4D: 9 PCS
4	Supporting Wheel	2	
5	Supporting Wheel Pin	2	
6	Handle	1	
7	Package of Spare Parts	1	One sealing ring for fast pump Two sealing rings for slow pump
8	Operating Manual	1	