



PUNJAB HYDRAULICS PVT.LTD.

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Instruction

I. Brief Introduction

Model PHPL01 pipe locking machine is mainly used for buckling processing for high pressure rubber pipe assembly in the mechanical engineering. It can also be used for buckling the two-way bends, especially large bends and irregular shape bends.

This machine features small and portable appearance, big force, low noise and easy to operate. The buckling amount can be precise adjusted through a scale. It makes the mould base division to be more even through the double inclined plane eight-flap mould seat equipped with a high accuracy guiding device.

II. Main Technical Feature

Buckling range: $\Phi 4\text{mm}$ — $\Phi 51\text{mm}$ (4 layers steel wire rubber hose)

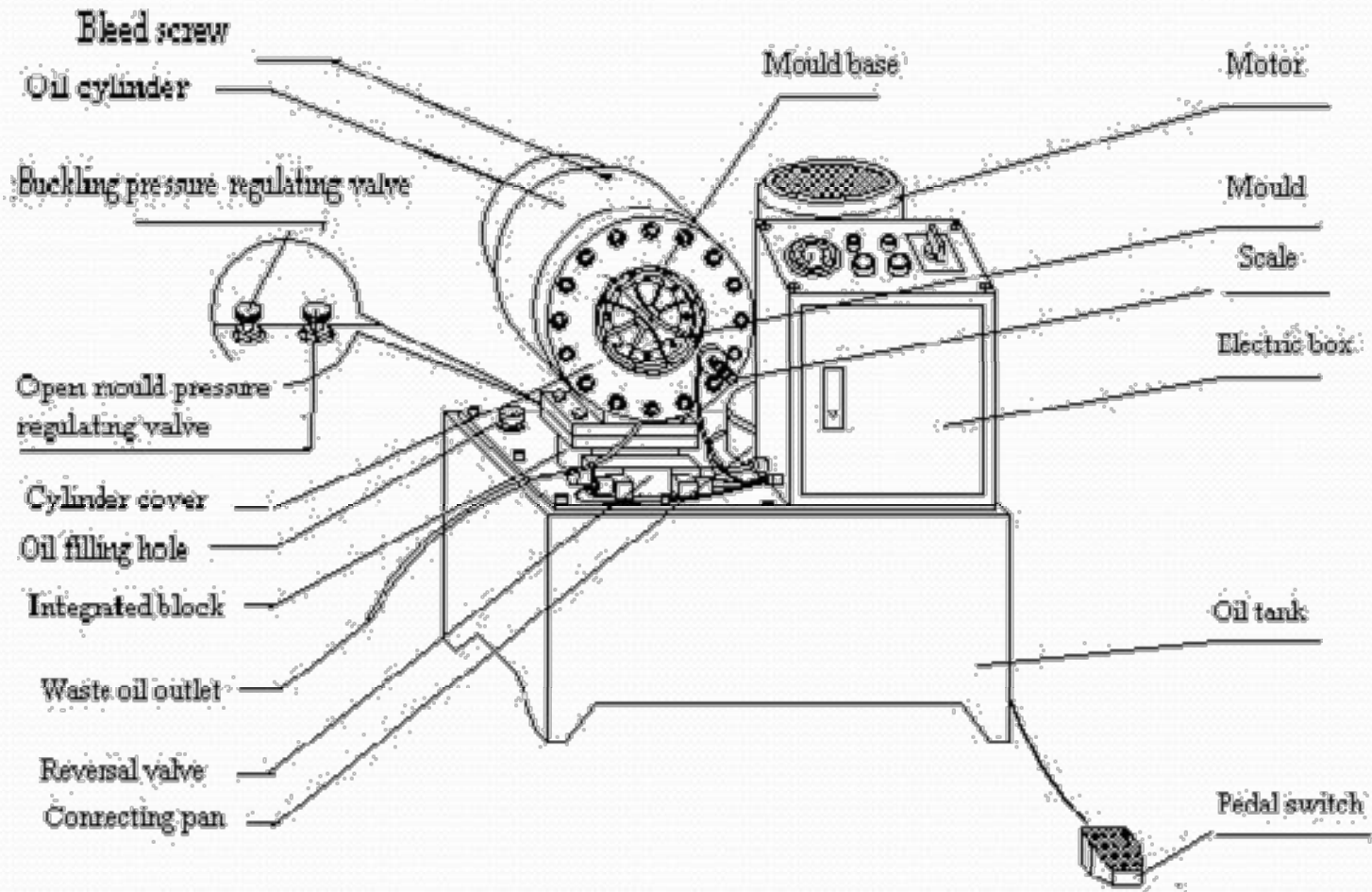
Max. buckling force: 449T

Scale accuracy: 0.02mm

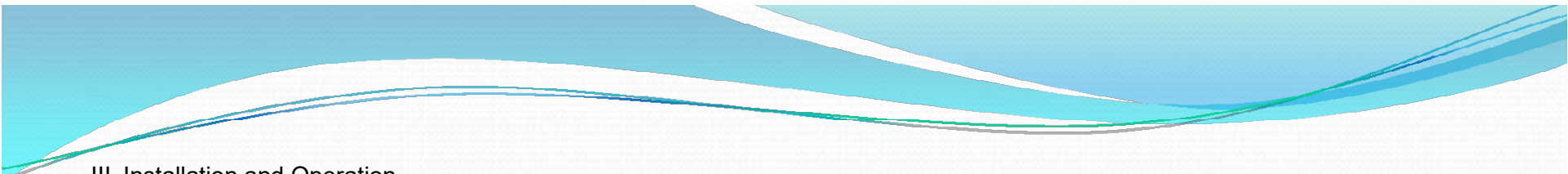
Rated pressure: 31.5 MPa

Oil pump displacement: 5ml/rad (380V); 2.5ml/rad (220V)

Overall dimensions: 670(L)×490(W)×780(H)mm



Model PHPL01 – A Pipe Locking Machine




III. Installation and Operation

Add sufficiently 79 liters of Great Wall brand 46# anti-abrasion hydraulic oil. If the room temperature is lower than 10°C, 10% transformer oil is need to add.

Connect the electric source well as per the machine requirements, to make the direction of the motor rotation to be consistent with the rotation direction marking, and grounding protection shall be done.

2. Regulating the scale

The scale is used for regulating the amount of the buckling. When it is regulated clockwise, the buckling amount will decrease, when it is regulated anticlockwise, the buckling amount will increase. The scale is connected together with oil cylinder end cover through three socket head screws and three springs on the scale base. When using a hand to pull the scale (vertical to the oil cylinder end cover direction), the scale can flexibly leave from the oil cylinder end cover. When releasing the scale, the scale will be



recovered relying on spring force. Before the machine is turned on, inspect carefully if the scale telescoping is flexible and if the lead connection is reliable.

- The primary scale is turned within 0 line of the secondary scale, turn the machine on for test run, and observe if all actions are normal. If when the piston conducts reciprocating movement, there is a crawling phenomenon, the bleed screw on the oil cylinder top shall be unscrewed for exhausting air.

- Pressure regulation

The buckling pressure and opening mould pressure will be regulated through two knobs at the back of the oil cylinder (see figure), when it is regulated clockwise, the pressure will increase, when it is regulated anticlockwise, the pressure will decrease (The pressure has already been well regulated when ex-factory).

5. Operation

Based on the size of the rubber hose to be buckled, select suitable mould as per the technical parameter reference table of the locking pipe and mount it on the mould base. Regulated well the scale position as per the data in the data in the table, the pipe locking can be done. After pipe locking, use a vernier caliper to measure the outside diameter dimension of the pipe sleeve after buckling to see if it meets the reference table data of the parameter. If it does not meet the data, the scale shall be precisely regulated until it meets the requirements. Because the manufactures of the pipe sleeve are different, so, specific dimension, material, hardness etc are certainly not the same. These factors would result different influences on the pipe locking result, therefore, the data in the table is only for reference, the detailed data take the pressure test as the basis.

IV. Notices

- When buckling, make the joint to locate the mould center as much as possible, the joint is not buckled on the hex nut.
- Prevent tool and other foreign matter from entering the locking head.
- After the work is finished for each time, the eight-block mould base must be made to extend to the greatest extent, this can make the spring to be at extension status. If not, the spring will be damage.
- When working, the hand should not stretch into the locking head.

•The power supply must be switched off when maintenance is done.

V. Maintenance and Care

※Maintenance

Hydraulic oil in the oil tank should be frequently checked, if oil amount is found to be insufficient, the oil shall be timely supplemented. If the oil liquid is polluted, it shall be filtered or replaced.

The locking head shall keep internal cleanliness. Avoid the foreign matters during processing to enter into the locking head oil cylinder via the mould to affect the normal use. Wipe out the foreign matters, which are brought by the mould body in time when buckling the joint.

Frequently fill suitable grease into the mould body for lubrication.

VI. Promise

We will provide a guarantee to keep the machine in good repair within 12 months from the day when the machine is purchased. All fitting troubles will be free of charge repaired (or replaced if necessary) during the guarantee period. The damage resulted from improper use or accident damage does not belong to free of charge repair range.

Troubleshooting

Trouble phenomena	Trouble reason	Eliminating method
Machine has not action	Oil tank has not been filled with oil	Fill oil as per requirement
	Motor rotation direction is not correct	Regulate two phase lines
	Electric trouble	Overhaul electric circuits
Scale is damaged	The scale is fastened on the oil cylinder end face by the screw	Regulate the scale as per the instruction to make scale to telescope freely
	Conductor at scale location is connected with scale	Anew connect the scale conductor to make it to be insulated from scale base
	Electric trouble	Overhaul electric circuits and electric elements
	Scale conductor cutting	Anew connect scale

	System pressure is excessively low	Adjust buckling pressure-regulating valve
No buckling	The valve core of solenoid reversal valve is seized by foreign matters	Dismount solenoid reversal valve, use gasoline to clean the valve core.
	Electric trouble	Overhaul electric circuits
Mould is not opened	Opening mould pressure is excessively low	Adjust opening mould pressure regulating valve
	Electric trouble	Overhaul electric circuits
Big noise	Installation is not stable	Conduct horizontal stable installation
	Hydraulic oil is excessively dirty	Filter or change it
	Filter is blocked	Use gasoline to clean the filter
Mould base crawls	Gas in the hydraulic oil has not been exhausted completely	Suitable unscrew the bleed screw, make the piston in the oil cylinder to move back to last position to exhaust gas, then screw down bleed screw.
	Lubrication is poor	Smear grease on the working inclined face of mould base
Oil leakage	Joint is not tightened closely	Tighten the oil pipe joint
	Sealing washer is damaged.	Replace sealing washer.

V. A parameter list of the tooting and the press force for every type of rubble tube (for reference)

order	Innerdiameterof the rubbletube		Outerdiameter of therubble tube	Used tooting	Half locking &	Whole locking &
					pressing meter pressure MPa	pressing meter pressure MPa
1	Φ6	I	Φ15	Φ15	5.5	6~8
		II	Φ17		6	9~11
2	Φ10	I	Φ19	Φ21	6.5~7	10~11
		II	Φ21		7.5~8	13~16
3	Φ13	I	Φ23	Φ25	8.5~9	14~17
		II	Φ25		10~11	15~18
		III	Φ27			

4	Φ16	I	Φ26	Φ28	9~10	15~18
		II	Φ28		10~11	18~22
5	Φ19	I	Φ29	Φ30	9	15~17
		II	Φ31		11~12	20~22
		III	Φ35		22~24	29~31
6	Φ22	I	Φ32	Φ34	12~13	17~19
		II	Φ34		14~16	19~21
		III	Φ38		20~25	25~30
7	Φ25	I	Φ36	Φ38	10~11	16~18
		II	Φ38		15~16	20~24
		III	Φ42		26~28	28~32
8	Φ32	I	Φ44	Φ42	12~13	18~22
		II	Φ46	Φ45	16~18	30~34
		III	Φ50		32	32~38
9	Φ38	I	Φ50	Φ50	14	22~26
		II	Φ52	Φ55	20	28~32
		III	Φ60		26~30	44~48
10	Φ51	I	Φ63	Φ60	25	26~28
		II	Φ65	Φ65	30	40
		III	Φ69		35	48

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THANKS FOR YOUR VISIT!