ETH STUDENT PROJECT HOUSE

HYDRAULIC PRESS

For metal forming and assembly

SAFETY

This is a brief manual. Consider also **manufacturer's manual** and **ask supervisor in case of doubts**.

- **Wear protective gloves**
- **Wear safety shoes**
- **Wear robust clothing**
- **Wear safety glasses**
- **No rings, necklaces or other jewellery**
- **No loose or baggy clothing**
- **Keep distance to moving parts**
- **Don't put hands/fingers or any other part of your body between the piston and the table**

MACHINE OVERVIEW

1. Pressure gauge (manometer)
2. Connection hose from hand pump to hydraulic cylinder
3. Levers
4. Hydraulic hand pump
5. Feet
6. Support bolts for press table
7. Press table
8. Support blocks
9. Piston
10. Frame
11. Hydraulic cylinder
12. Valve

BEFORE USAGE

WARNINGS

- In the event of improper usage there is a risk of injury.
- Securely place the workpiece on the support blocks.
- Make sure nothing can fall down or be thrown away before applying pressure!
- Never reach into the working area of the hydraulic press during operation
- Keep hands outside of the press and away from moving parts

USAGE (1)

Working table preparation

In order to work safely on the hydraulic workshop press, adjust the support bolts.

1. Lift the press bed on one side and hold in place.
2. Take the support pin of the raised side out of the stand bore.
3. Adjust the press table to the required height or slightly above the corresponding stand hole.
4. Insert the support pin into the corresponding hole in the stand.
5. Lower the press table onto the support bolts.
6. Carry out steps also on the second side so that the table is positioned horizontally.

USAGE (2)

Applying pressure to the workpiece

1. Lock the support blocks on the press table.
2. Place the workpiece securely on the support blocks.
3. Turn the valve (12) clockwise until it is completely closed.
4. Move the pump lever up and down. The pump starts to work and the hydraulic cylinder is lowered.
5. When the hydraulic cylinder is above the workpiece, release the pump lever.
6. Align the workpiece and the hydraulic cylinder.
7. Operate the pump lever to press the piston onto the workpiece. Pay attention to the display of the pressure gauge.
8. After doing work on the piece, turn the valve (12) counterclockwise. The hydraulic cylinder returns to its starting position/rest position.
9. Remove the workpiece

ATTENTION

→ Make sure the retaining bolts are correctly attached!

→ Make sure the workpiece is centered relative to the piston!

→ Keep hands outside of the press and away from moving parts!