



**Hydraulic hand-punching tool „HS-6“**

**Art. 217602**



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## 1 Technical Data

### *Hydraulic plate punching machine 217602*

<b>Cutting pressure</b>	Approx. 60 kN
<b>Cutting material</b>	Steel plates up to max. 3 mm
<b>Lift</b>	22 mm
<b>Manual exertion</b>	Approx. 350 N
<b>Length</b>	240 mm
<b>Weight</b>	2,4 kg
<b>Oil specification</b>	Hydraulic oil GW ISO 7 <i>Use only water and acid free oil!!!</i>
<b>Connecting thread</b>	¾ - 16 UNF

## 2 Safety Instructions

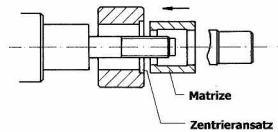
### **Attention:**

Before using the tool please read all safety instructions. Always keep these safety instructions together with the tool and ensure the instructions are heeded at all times. HAUPA cannot legally be held responsible for any damage or injury sustained which is related to incorrect usage of the tool or as a result of poor maintenance. Should there be any further questions regarding use of the product or any aspect safety measures, please contact HAUPA.

1. Keep your workplace clean and free from foreign bodies and always take care that there is sufficient lighting.
2. Always wear protective clothes and spectacles.
3. Make sure that the tool is protected from external damage e.g. the effects of excessive heat, open fires, sharp edges, moving pieces of machinery, corrosive chemicals and damp.
4. Avoid high pressure on the tool! Use the cutter only according to technical data regarding cutting material and cutting capacity.
5. Do not try to extend the handles beyond their normal length!
6. Only allow authorized personnel to carry out repair and maintenance work to the tool. Any maintenance / repair work carried out by unauthorized personnel will invalidate the guarantee.

7. Make sure that the matrix is concordant with the cutting edge concerning the diameter.
8. Check the oil level in adequate intervals. While re-filling pay attention to outermost cleanness. Use only oil with an assorted specification (s. 1 Technical Data).
9. Keep children, pets and unauthorized persons away from the workplace.
10. Keep the safety instructions with the tool.

### 3 Tool – Operation

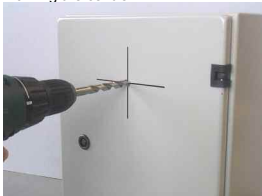


#### Necessary to consider:

While using tools for  $\varnothing 15$ , 2mm (PG9) and  $\varnothing 16$ , 5mm at metrical thread it is necessary to insert the matrix into the sleeve's spigot to ensure the cutting edge rides centric into the matrix.

#### Operation:

1-Predrill with  $\varnothing 10$ , 5 after narking out and marking the centre



2-screw completely linkage (screw thread entirely) in.



3-attach distance bush and die plate



4-entering tension bolt into drill hole, screw cutting crest on.



5-Close the drain valve by reversing the lowering lever (push).



6-Pump movements till the plate is separated by the cutting edge.



7-Pull package including button out.



8-Activate return by throwing the lowering lever.



9-unscrew the cutting edge and remove the button.



### **Oil re-fill instructions:**

*Attention: Please use only hydraulic oil according oil specification (s. 1 Technical Data) 1*

- Plate punching machine must be vertically.
- Open lowering lever.
- Open oil filler screw.
- Re-fill oil up to the first thread.
- Close oil filler screw.
- Close lowering lever.
- Several liftings while the tool is vertically (ventilation – approx. 40-45 liftings).
- If necessary re-fill further oil till oil volume doesn't change any longer.

The plate punching machine is now usable.

## 4.1 Trouble – Shooting

Problem	Possible cause
<ul style="list-style-type: none"> <li>• No lift in spite of pump movements!</li> <li>• Lift yes, but without force!</li> <li>• Lift doesn't reach whole distance!</li> <li>• No return!</li> <li>• No complete return!</li> <li>• External oil loss!</li> <li>• No lift at working in vertical position!</li> </ul>	<p>1 / 4 / 6</p> <p>3</p> <p>4</p> <p>2 / 4</p> <p>4</p> <p>5</p> <p>4 / 6</p>
Cause	Repair
<ol style="list-style-type: none"> <li>1. Drain valve is not tight or not closed tightly enough.</li> <li>2. Drain valve doesn't open.</li> <li>3. Pressure valve doesn't close properly.</li> <li>4. Too little oil.</li> <li>5. Seal damaged.</li> <li>6. Air in the system.</li> </ol>	<p>Exert more pressure.</p> <p>Execute pump movements.</p> <p>Execute pump movements quickly to clear out any possible dirt.</p> <p>Oil should be re-filled by authorized maintenance person.</p> <p>Replace seal.</p> <p>Execute lift movements in a horizontal position. Thereafter vertical movements. Open oil filler screw and refill oil.</p>

## 5 Spare Parts

Art.-Nr.	Description	Pc(s)	Art.-Nr.	Description	Pc(s)
80-004-01	Grips	1	80-004-02	Handle cover	1
50-028-04	Valve block	1	00-032-34	Cheese head screw	1
50-028-11	Piston	1	00-020-33	O-Ring	2
50-028-27	Big handle	1	50-099-14	Cylinder	1
50-028-28	Small handle	1	50-099-15	Piston	1
50-028-30	Pressure piece	1	50-099-16	Spacer	1
50-028-32	Bolt	2	50-099-17	Spacer tube	1
50-028-55	Closing	1	50-099-18	Securing nut	1
50-028-56	Ball knob	1	00-020-86	O-Ring	1
50-059-24	Guide tube	1	00-020-85	O-Ring	1
50-059-25	Valve insert	1	00-081-27	Support ring	1
00-020-107	O-Ring	1	00-112-03	Quad-Ring	1
00-020-26	O-Ring	3	00-021-08	Support ring	1
00-022-09	Support ring	3	50-099-25	Felt ring	1
00-004-01	Ball	1	50-099-26	Rubber boot	1
00-112-06	Quad-ring	1	00-020-10	O-Ring	2
00-021-07	Support ring	1	00-013-64	Pressure spring	1
00-013-21	Pressure spring	1	00-143-01	Seal disc	1
00-013-54	Pressure spring	1	00-143-02	Cover disc	1
00-014-12	Lens head screw	8	00-143-03	Washer	1
00-059-01	Closing plug	1	00-143-04	Pressure valve	1
00-005-01	Lock washer	2	00-143-05	Cone	

**Please use only original HAUPA spare parts!**

## 6 Special Advice

HAUPA will not be held responsible if the tool is operated without reference to the appropriate operating instructions manual.

Request for the appropriate manual must be made to HAUPA before the unit is used. Failure to comply with this requirement will result in the operator being entirely responsible for their action and any possible damage or injury which may occur as a result. In other words, HAUPA relinquishes all liabilities for such actions.

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# 7 Technical Drawing 217602

