

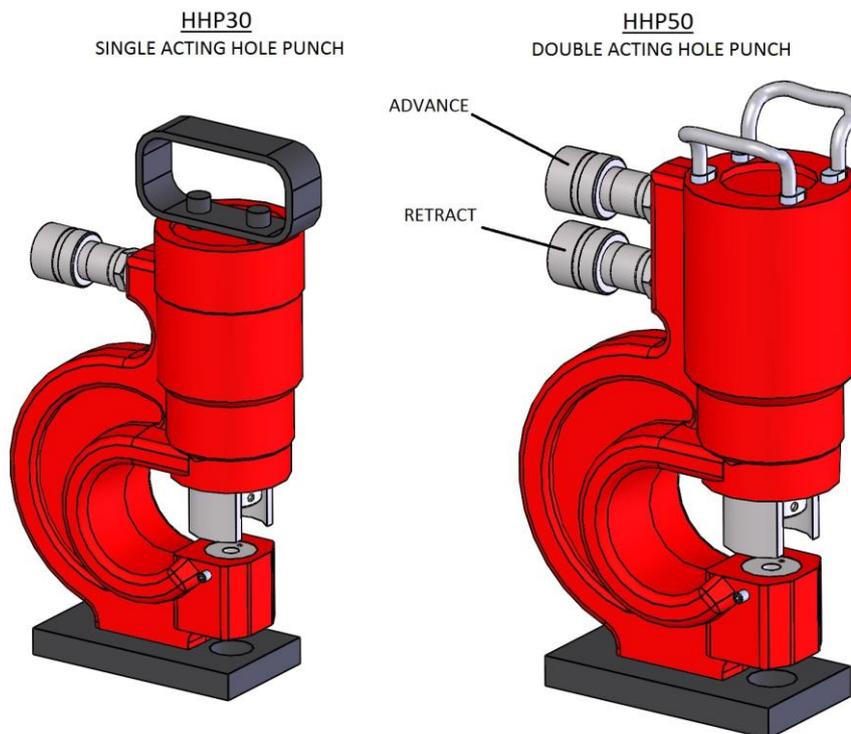
**HHP30 AND HHP50 HYDRAULIC HOLE PUNCH OPERATING AND SAFETY INSTRUCTIONS**

**INSPECTION UPON RECEIPT OF GOODS.**

On initial receipt of goods visually check for transit damage. If found contact the carrier immediately.

**DESCRIPTION**

The Hi-force HHP series hydraulic hole puncher range offers a choice of two models HHP30 and HHP50 (Refer to figure 1 for model specifications). The HHP30 hole punch is a single acting spring return punching tool with a maximum punch force of 30 tonnes. It is capable of punching holes up to 20.5mm in diameter in mild steel plates up to 10mm thick. The HHP50 hole punch is a double acting punching tool with a maximum punch force of 50 tonnes. It is capable of punching holes up to 25mm in diameter in mild steel plates up to 15mm thick. The maximum throat depth for both tools is approx 70mm. This is the maximum distance from the edge of the plate to the centre of the hole to be punched. The punch can be operated by means of a hand pump or power driven pump.



**MODEL SPECIFICATION**

Figure 1.

Model Number	Maximum force tonnes	Throat depth mm	Punch capacity (mm)		Standard punch / die sets included mm	Recommended pump & hose		Weight excl. Pump kg
			Steel plate Thickness	Hole punch diameter		Manually operated	Pneumatically operated	
HHP30	30	70	10.0	up to 20.5	10.5, 13.5, 17.5, 20.5	HP232 complete with HC3 3m hose	AHP1120 complete with HC3 3m hose	19.8
HHP50	50	70	15.0	up to 25.0	10.5, 13.5, 17.5, 20.5, 25.0	HP232D c/w 2 x HC3	AHP1141 c/w 2 x HC3	42.0

**SAFETY.**

Read these instructions and safety warnings fully. Failure to do so could result in Personal injury or equipment damage.

**WARNING:** Wear suitable personal protection equipment when operating hydraulic equipment. Safety glasses are essential.

**DANGER:** Keep all body parts away from punch and work piece during operation.

**WARNING:** Do not exceed rated pressure of tool (700 bar maximum working pressure). Do not connect to a pump with a higher rated pressure.

**WARNING:** Ensure that all components in the system are rated for 700 bar.

**CAUTION:** Use a pressure gauge whenever possible.

**DANGER:** Do not handle pressurised hoses. Oil escaping under pressure from a ruptured hose can penetrate the skin. If oil is injected under the skin it is a serious medical emergency. See a doctor immediately.

**CAUTION:** Avoid damaging hydraulic hose. Always route hoses to ensure they are free from sharp bends and kinks.

**CAUTION:** Always disconnect the punch from the pump when changing punches and dies.

**PREPARATION FOR USE**

Refer to figure 2 for identification of parts.

Select the size of punch required based on the hole size that needs to be made (Refer to Figure 1 for punch / die sizes).

Slacken the die retaining screw in the side of the anvil, and fit the die into the recess with the identification spot upwards. Tighten the die retaining screw.

Unscrew and remove the locking collar using the tommy bar provided. Fit the punch into the locking collar in the direction shown in figure 3.

Ensure that the identification spot on the punch is the same colour as that on the die.

Figure 2. Component Identification (HHP30)

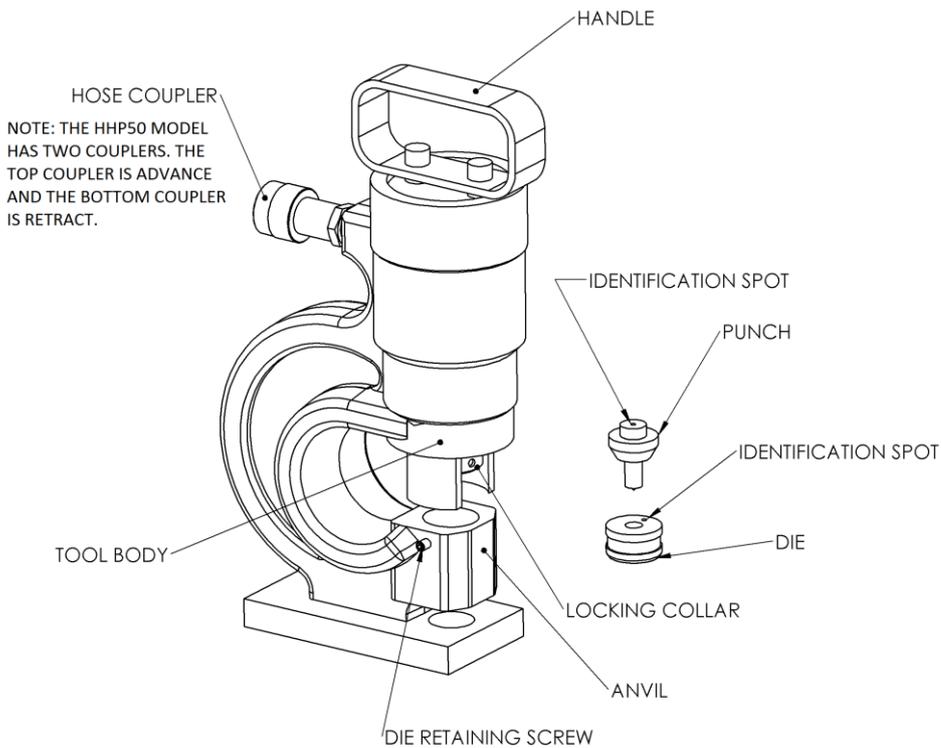
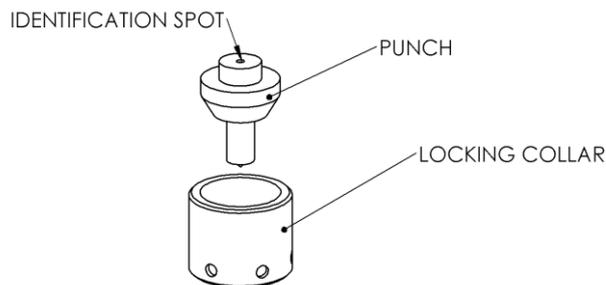


Figure 3. Punch assembly



Screw the locking collar back into the tool body ensuring that the punch is correctly centred in the collar and that it goes fully into the recess in the piston of the tool. Tighten the locking collar using the tommy bar but do not use excessive force.

Connect a hydraulic pump to the tool using a high pressure hose (HHP30 requires 1 hose and the HHP50 requires 2 hoses) of convenient length. Do not use any tools to tighten the sleeve on the coupler. Hand tight is sufficient.

Operate the pump slowly to advance the punch and check that it is correctly centred to the die. Retract the punch by operating the pump valve to allow oil to flow back to the reservoir. (Refer to pump instructions for more details) Repeat this operation several times with the punch lower than the pump to ensure there is no air in the system and familiarise yourself with the operation.

The hydraulic hole punch is now ready to use.

### **OPERATION**

Mark the required position of the hole on the steel plate. For accurate location use a centre punch or small drill to mark the exact centre of the hole.

Move the hole punch into position with the aid of the handle and the C shaped section of the tool body. **Do not use the hose or coupler for lifting and positioning the tool.**

Advance the punch slowly until it is just touching the steel plate and adjust the position of the tool if required.

Operate the pump to advance the punch. Stop the pump as soon as the punch breaks cleanly through the steel plate.

Retract the punch to by allowing oil to return to the pump reservoir and remove the tool from the steel plate.

Ensure that the blank from the punched hole is not jammed inside the die, and check there is no damage to the punch or die. The tool is now ready for the next operation.

### **MAINTENANCE**

Inspect all parts for damage after very use and replace as required.

Remove all debris from around anvil after every use. If the tool is to be stored for a period of time, coat punches, dies and locking collar with moisture repellent spray such as WD40 or oil. Do not leave the tool exposed to the environment.