



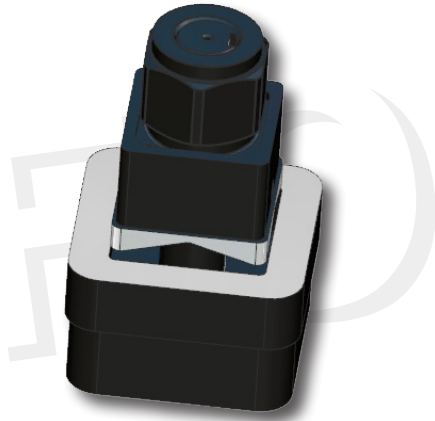
Hydraulic Square Knockout punches

User's Manual



54 Serie

■ 1. TECHNICAL FEATURES



The hydraulic punches are composed of two parts;

The full punches, male and die.

The hydraulic power unit includes a hydraulic cylinder, a pump and hose.

Standard punches can cut up to 2mm in sheets and 1.5 in stainless steel plates.

■ 2. HYDRAULIC PART

It is composed of; a pump, a hydraulic cylinder, a hose and all the screws and adapters necessary for the use of hydraulic Circular Knockout Punches.



There are two complete equipment available:

- 5400CH Complete hydraulic equipment of 8 tons.
- 5414CH Complete hydraulic equipment of 14 tons.

2.1. Hydraulic pump

It is a one speed pump.

Maximum pressure 700bar

Oil capacity 328cm³

The oil cap is use for the ventilation and filling.

Acts as a pressure relief valve is the case of an accidental pressurization of the tank.

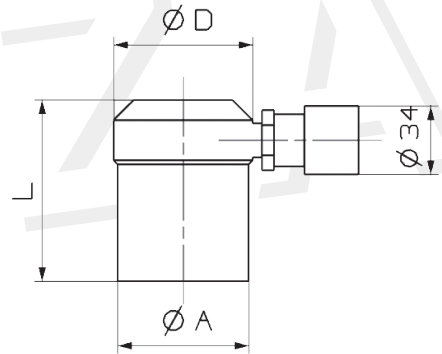
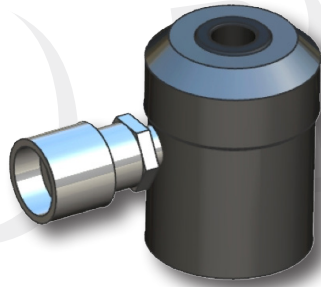
Model 009542 includes 900mm long hose.



In order to work always with the pump, always put the cover in the ventilation (VENT) position.

2.2. Hydraulic cilinder

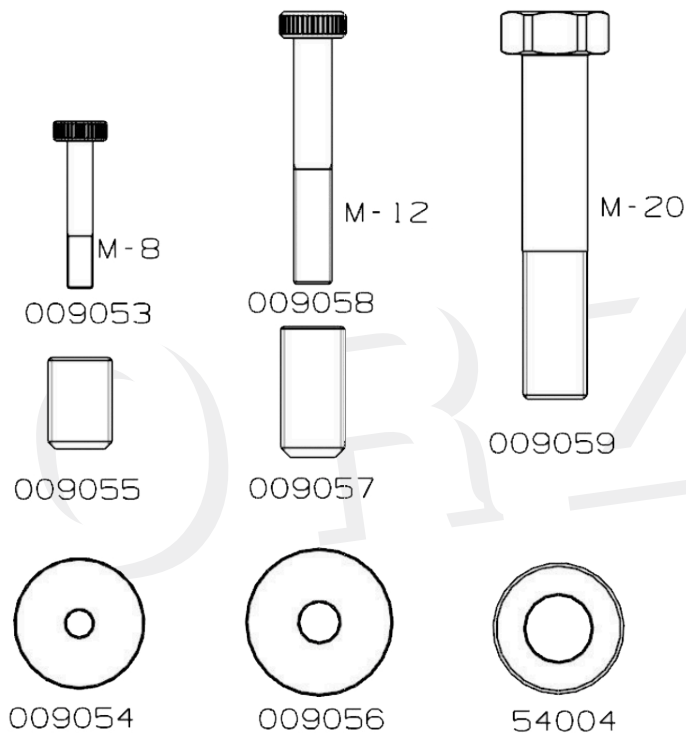
Hydraulic single acting cylinders, return by spring.
 Maximum pressure 700 bar.
 Stroke 20mm.
 Available in two sizes



Reference	ØA	ØD	L	Stroke	TON
0094541	65	69	90	15	8
0094544	80	86	90	15	14

2.3. Screws and adapters

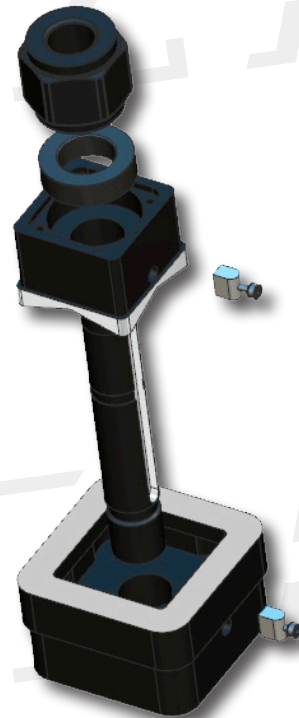
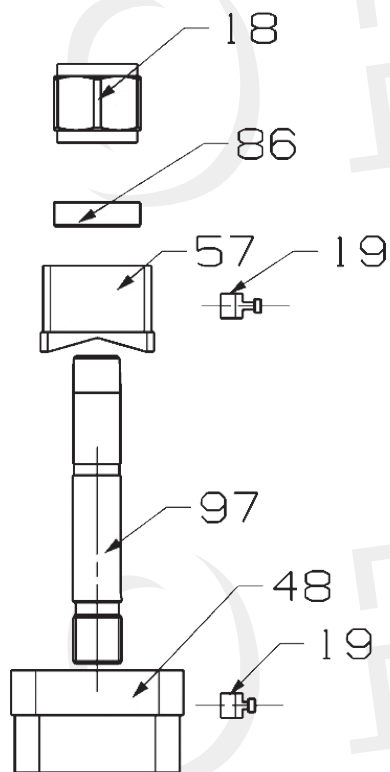
The complete hydraulic assembly contains all the screws, washers and the necessary adapters to use with all Circular Punches. The spindle for square and rectangular punches is delivered with them.



3. SQUARE KNOCK OUT PUNCHES

The male and the die present rectified cutting surfaces (sharp surfaces).

The male and the die are always well aligned thanks to the two shaft keys (19)



4. USER INSTRUCTIONS

Make a hole in the sheet a little bit higher than the diameter of the drilling screw; it can be $\text{Ø}8$, 12 or 20mm.

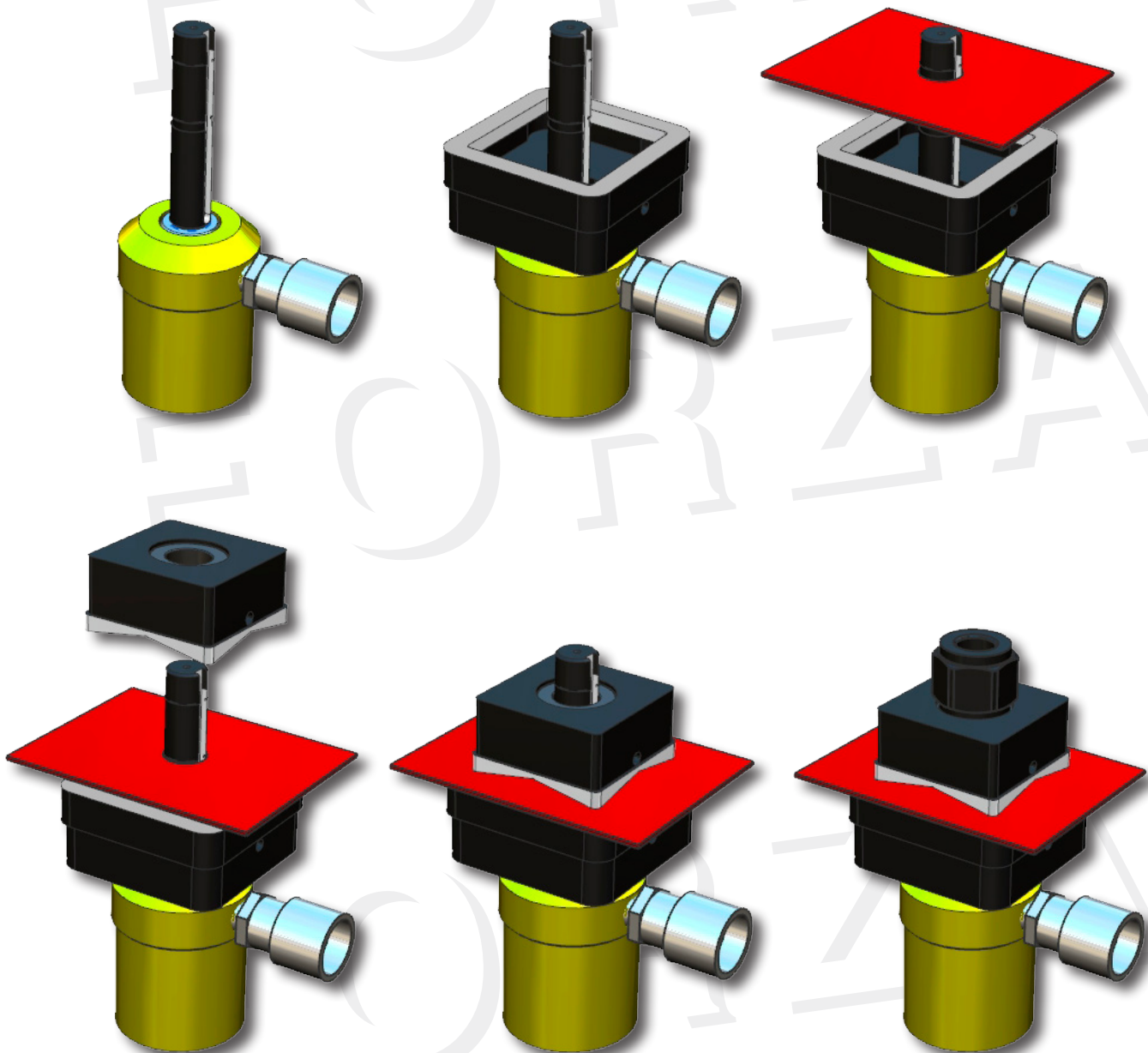
For example, as the screw is of 20 Ø , the previous hole must be of 22 Ø .



If the hole is made with a drill, be careful not to leave rough edges as seen in the previous figure, if the hole is very tight and it leaves rough edges it will be introduced in the thread of the screw. When cutting, you will not notice it, but when you try to remove the screw to release the knockout punch, it can be seized up.

Place the sheet between the male and the die. If the punch and the plate are well greased the cut will be much easier.

Operate with the pump until the sheet is cut.



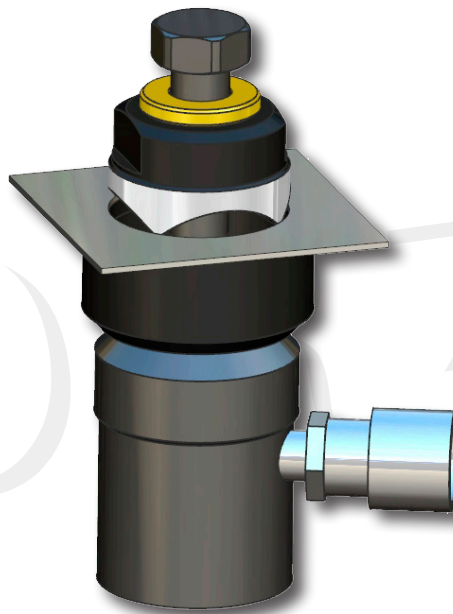
CAUTION

In case there is not enough stroke for cutting while using the pump, please make sure the screw has completely been turned into the cylinder and that the washer has been assembled correctly.

If the user continues using the hydraulic unit, the pump's handle will require a lot of effort and consequently the piston will get blocked in the below position.

Please use a bench vice to solve the above situation while fastening the screw head and stretch vigorously.

Keep in mind to turn completely the screw to the hydraulic cylinder and to assemble the washer.





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