



Hydraulic Circular Knockout punches

Manual



54 series

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1. TECHNICAL FEATURES



The hydraulic punches are composed of two parts;

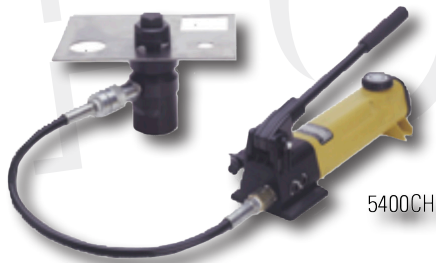
The full punches, male and die.

The hydraulic power unit includes a hydraulic cylinder, a pump, a hose and all the necessary screws and adapters.

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.

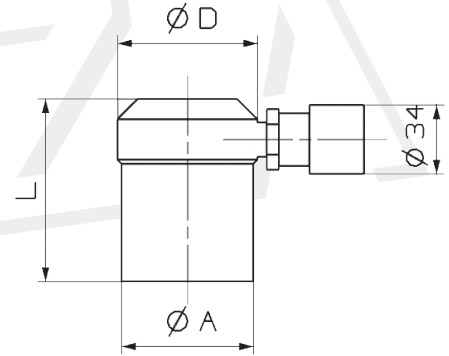
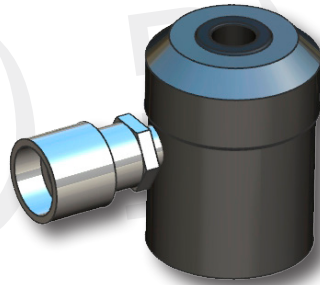
2.2. Hydraulic cilinder

Hydraulic single acting cylinders, return by spring.

Maximum pressure 700 bar.

Stroke 20mm.

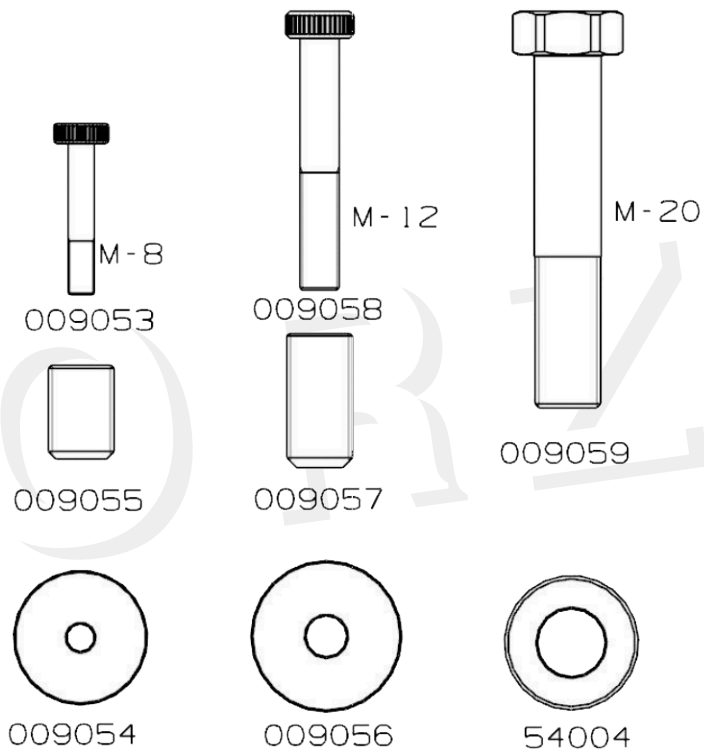
Available in two sizes



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

2.3. Screws and adapters

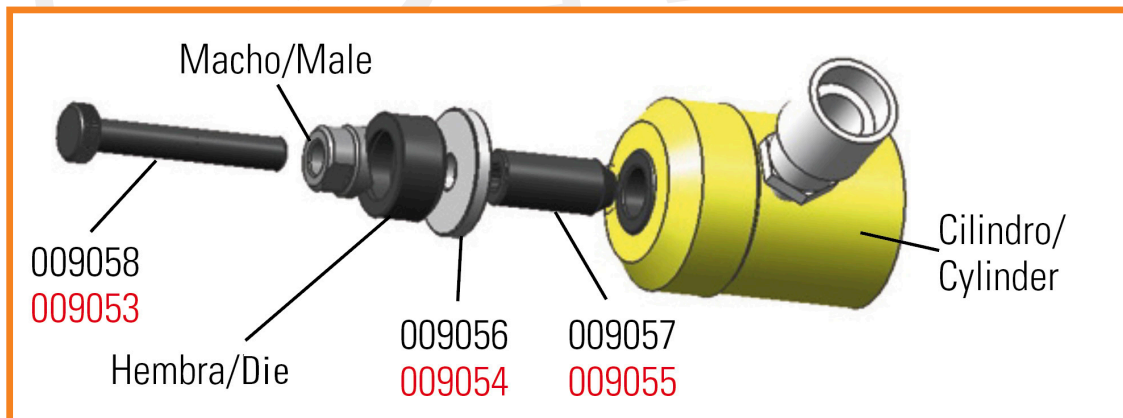
The complete hydraulic assembly contains all the screws, washers and the necessary adapters to use with all Circular Punches. The spindle for square and rectangular punches is delivered with them.



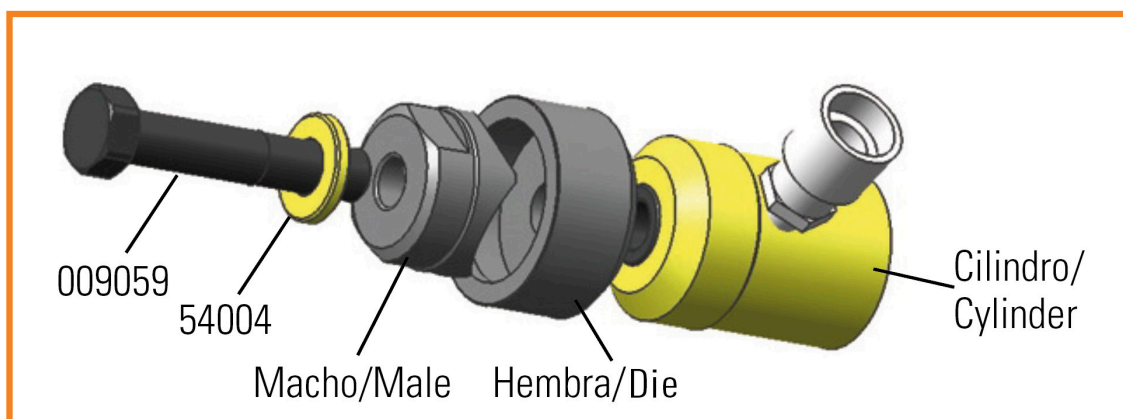
It is necessary to use a M-8 screw, M-8 adapter and M-8 washer. (pieces in red) in order to use the set with Ø13 to Ø17 mm punches.

It is necessary to use a M-12 screw, M-12 adapter and M-12 washer. (pieces in black) in order to use the set with Ø18 to Ø39 mm punches.

With M12 - M8 screw
 Punches from 18 a 39 H
 Punches from de 13 a 17 H

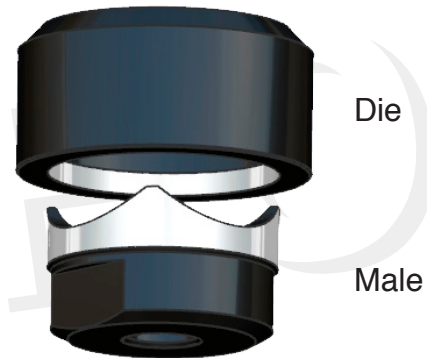


With M20 screw
 Punches from Ø40 and up.
 The cylinder is used without adapters and with the M20 screw.



3. HYDRAULIC CIRCULAR KNOCKOUT PUNCHES

There is a complete range of circular knockout punches from Ø13mm to Ø115mm.



A hydraulic circular knockout punch consists only of two parts; male and die.

In both parts, the cuts are rectified (sharp) to facilitate the work.

In red when the die is the same as the mechanics.

Reference	mm	Screw	Weigth	Male	Die
54/13H	12,5	M8 009053	0,08	541381	541302
54/14H	14		0,08	541481	541402
54/15H	15		0,08	541581	541502
54/16H	16		0,08	541681	541602
54/17H	17		0,08	541781	541702
54/18H	18	M12 009058	0,1	541881	541882
54/19H	19		0,1	541981	541982
54/20H	20		0,1	542081	542082
54/21H	21		0,1	542181	542182
54/22H	22		0,1	542281	542282
54/23H	23		0,2	542381	542382
54/24H	24		0,2	542481	542482
54/25H	25		0,2	542581	542582
54/26H	26		0,2	542681	542682
54/27H	27		0,2	542781	542782
54/28H	28		0,3	542881	542802
54/29H	29		0,3	542981	542902
54/30H	30		0,3	543081	543002
54/31H	31		0,3	543181	543102
54/32H	32		0,3	543281	543202
54/33H	33		0,3	543381	543302
54/34H	34		0,3	543481	543402
54/35H	35		0,4	543581	543502
54/36H	36		0,4	543681	543602
54/37H	37		0,4	543781	543702
54/38H	38	0,4	543881	543802	
54/39H	39	0,4	543981	543902	

Reference	mm	Screw	Weight	Male	Die
54/40H	40	M20 009059	0,6	544081	544082
54/41H	41		0,6	544181	544182
54/42H	42		0,6	544281	544282
54/43H	43		0,6	544381	544382
54/44H	44		0,6	544481	544482
54/45H	45		0,7	544581	544582
54/46H	46		0,7	544681	544682
54/47H	47		0,7	544781	544782
54/48H	48		0,8	544881	544882
54/49H	49		0,8	544981	544982
54/50H	50		0,9	545081	545082
54/51H	51		0,9	545181	545182
54/52H	52		0,9	545281	545282
54/55H	55		1,4	545581	545502
54/60H	60		1,4	546081	546002
54/63H	63		1,5	546381	546302
54/65H	65		1,8	546581	546502
54/70H	70		1,9	547081	547002
54/72H	72		1,9	547281	547202
54/75H	75		1,9	547581	547502
54/80H	80		2,4	548081	548002
54/85H	85		3,1	548581	548502
54/90H	90		3	549081	549002
54/95H	95		3,2	549581	549502
54/100H	100		3,5	5410081	5410002
54/105H	105		3,7	5410581	5410502
54/110H	110	4	5411081	5411002	
54/115H	115	4,2	5411581	5411502	

4. USER INSTRUCTIONS

Make a hole in the sheet a little bit higher than the diameter of the drilling screw; it can be Ø8, 12 or 20mm.

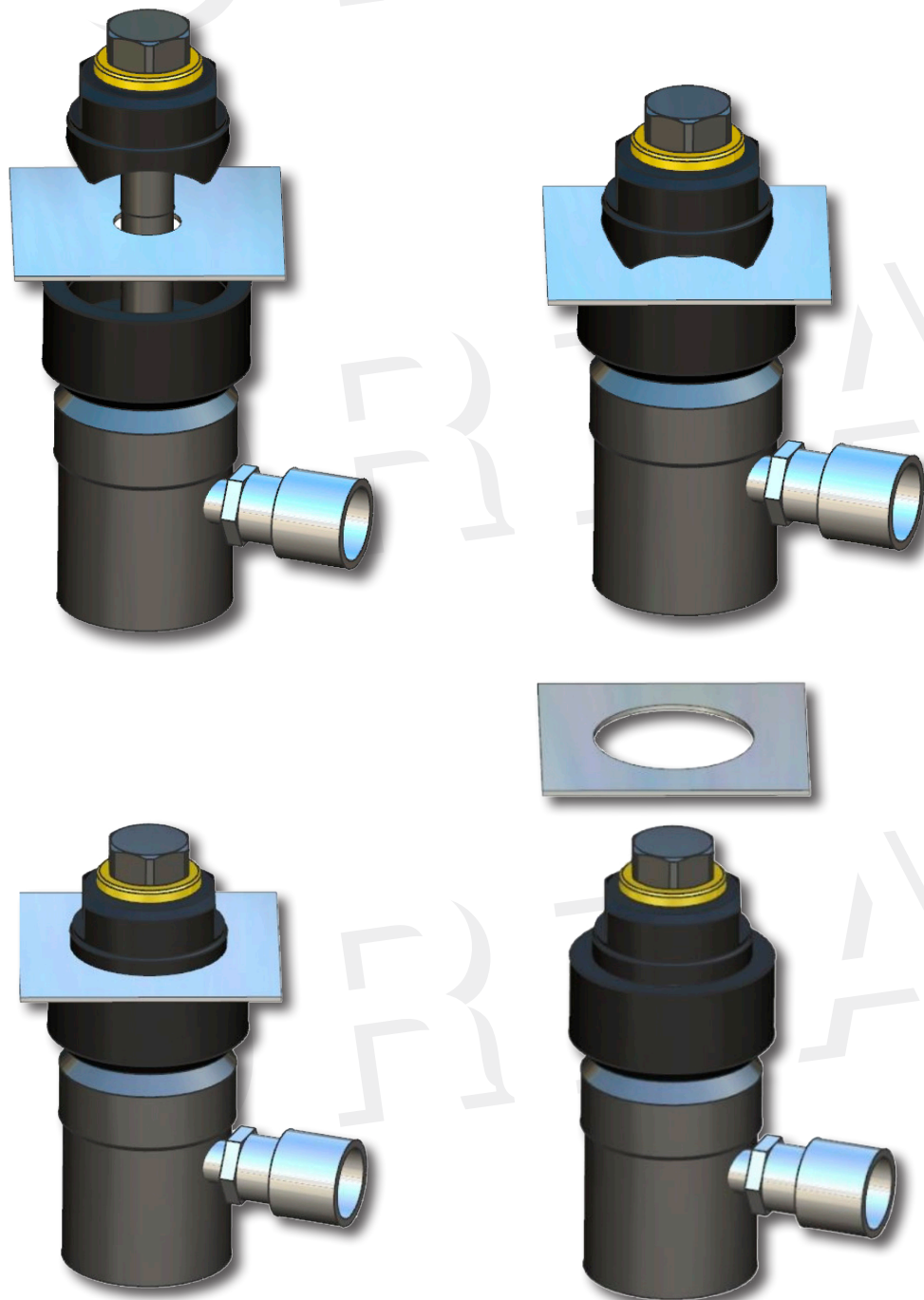
For example, when the screw is 20, you can drill a pre-drilled Ø13 hole and then enlarge it with a Ø21 drilling machine or drill Ø21 directly.



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. If the screw of the punches is M-8 or M-12 use the adapters and the suitable washers.



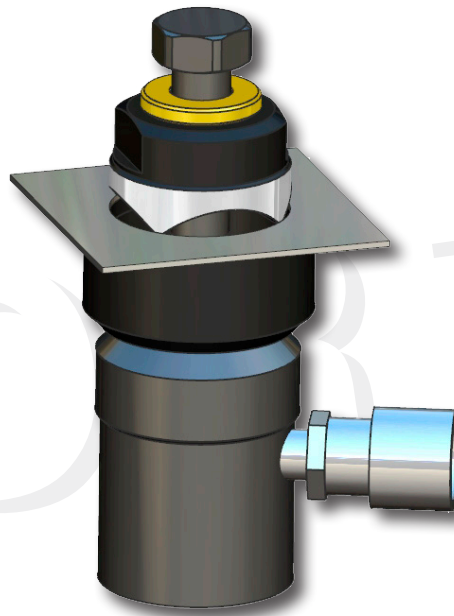
CAUTION

In case there is no 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 lots of effort and consequently the piston will get blocked in the below position.

Please to 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.



■ 5. HYDRAULIC PUNCHES SET

Pump, cylinder and hose included. You can choose between 8 or 14 Tm.

Up to 10 punches choose. (Not included in the price)

All adapters included.

Reference	Tm	Weigth
5400CH	8	6,1
5414CH	14	7,1



5400CH



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