PERFORADORES MECÁNICOS REDONDOS
MECHANICAL CIRCULAR PUNCHES

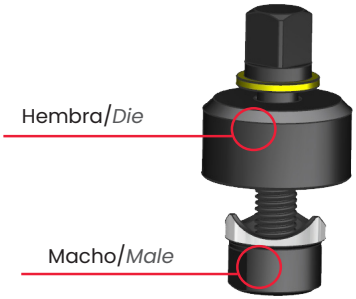
Características de los perforadores / *Technical Features*

Los perforadores mecánicos se componen de / *Mechanical punches are made up of* :

Macho / *Male* Hembra / *Die*

Tornillo / *Screw* Arandela / *Washer*

Los perforadores estándar pueden cortar hasta 4 mm en chapas de acero y chapas de acero inoxidable / *The standard punches can cut up to 4 mm in steel sheet plates and in stainless steel sheet plates.*



Existe una gama completa de perforadores de chapa redondos de Ø13mm aØ115mm. / *There is a complete range of circular knockout punches from Ø13mm to Ø115mm.*

Las piezas principales de los perforadores de chapa son el macho y la hembra. / *Male and die are the principal parts of the knock out punches.*

En ambas piezas los cortes están rectificados (afilados) para facilitar el trabajo. / *In both parts, the cuts are rectified (sharp) to facilitate the work.*

Los perforadores mecánicos de la serie 54 utilizan tornillos de muy alta resistencia 140kg/mm2. Las medidas están en la tabla de despiezas

54 mechanical punches use screws of very high resistance 140kg/mm2. See the dimensions in the spare part table.

REF	mm	Pulg	PG	Tornillo screw	Macho Male	Hembra Die
54/13	12,5	1/2"	-	542008 M8X1,25	541301	541302
54/14	14	-	-		541401	541402
54/15	15	-	9		541501	541502
54/16	16	5/8"	-		541601	541602
54/17	17	-	-		541701	541702
54/18	18,4	-	11		541801	541802
54/19	19	3/4"	-		541901	541902
54/20	20,4	-	13	540010 M10X1,25	542001	542002
54/21	21	-	-		542101	542102
54/22	22,5	7/8"	16		542201	542202
54/23	23	-	-		542301	542302
54/24	24	-	-		542401	542402
54/25	25	1"	-		542501	542502
54/26	26	-	-		542601	542602
54/27	27	-	-		542701	542702
54/28	28,4	1 3/32"	21	540012 M12X1,50	542801	542802
54/29	29	-	-		542901	542902
54/30	30	-	-		543001	543002
54/31	31	-	-		543101	543102
54/32	32	1 1/4"	-		543201	543202
54/33	33	-	-		543301	543302
54/34	34	1 11/32"	-		543401	543402
54/35	35	-	-		543501	543502
54/36	36	-	-		543601	543602
54/37	37	-	29		543701	543702
54/38	38	1 1/2"	-		543801	543802
54/39	39	-	-		543901	543902

REF	mm	Pulg	PG	Tornillo screw	Macho Male	Hembra Die
54/40	40	-	-	540014 M14X1,50	544001	544002
54/41	41	-	-		544101	544102
54/42	42	-	-		544201	544202
54/43	43	1 11/16"	-		544301	544302
54/44	44	-	-		544401	544402
54/45	45	1 3/4"	-		544501	544502
54/46	46	-	-		544601	544602
54/47	47	-	36		544701	544702
54/48	48	-	-		544801	544802
54/49	49	-	-		544901	544902
54/50	50	-	-		545001	545002
54/51	51	2"	-		545101	545102
54/52	52	-	-		545201	545202
54/55	55	-	42	540020 M20X1,50	545501	545502
54/60	60	2 3/8"	48		546001	546002
54/62	62	2 7/16"	-		546201	546202
54/63	63	2 1/2"	-		546301	546302
54/65	65	2 9/16"	-		546501	546502
54/70	70	2 3/4"	-		547001	547002
54/72	72	2 13/16"	-		547201	547202
54/75	75	-	-		547501	547502
54/76	76	3"	-		547601	547602
54/80	80	3 1/8"	-		548001	548002
54/85	85	3 3/8"	-		548501	548502
54/89	89	3 1/2"	-		548901	548902
54/90	90	-	-		549001	549002
54/91	91	3 9/16"	-		549101	549102
54/95	95	3 3/4"	-		549501	549502
54/100	100	-	-		5410001	5410002
54/102	102	4"	-		5410201	5410202
54/105	105	4 1/8"	-		5410501	5410502
54/110	110	4 5/16"	-		5411001	5411002
54/115	115	4 1/2"	-		5411501	5411502
54/116	116	4 9/16"	-		5411601	5411602

Instrucciones de uso / *Use instructions*

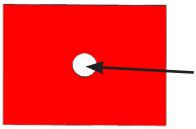
NO ES RECOMENDABLE USAR LLAVES DE IMPACTO / *IT IS NOT RECOMMENDED TO USE POWER TOOLS*

1- Mantenga las normas de higiene y seguridad en el trabajo. / *Keep the standards of hygiene and safety at work .*

2- Utilice los elementos de protección individual obligatorios. /*Always wear suitable personal protective equipment.*

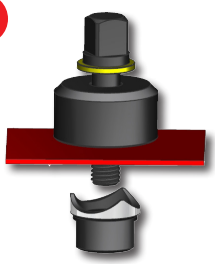
Haga un agujero en la chapa un poco más grande que el diámetro del tornillo del perforador . Como el tornillo es de 20 puede hacer el agujero previo de 22.

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



Si hace el agujero con una broca, tenga cuidado de no dejar la rebarba como se ve en la figura anterior, si el agujero está muy justo y deja rebarba esta se introducirá en la rosca del tornillo. Al cortar no lo notara pero al intentar sacar el tornillo para soltar el perforador este se puede gripa. / *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.*

1



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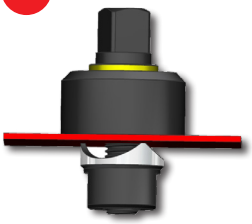

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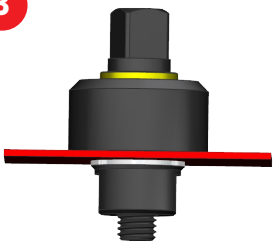
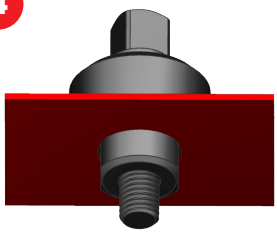


Coloque la chapa entre el macho y la hembra. Si el perforador y la chapa están bien engrasados el corte será mucho más fácil. / *Place the sheet between the male and the die. If the punch and the plate are well greased the cut will be much easier.*

Gire el tornillo con una llave hasta que el macho atraviese la chapa. / *Turn the screw with a wrench until the tap goes through the plate.*

4



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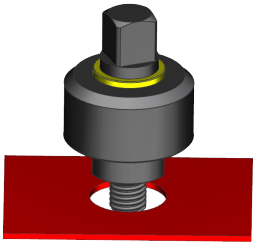


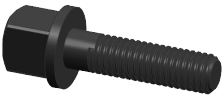
Gira el tornillo con una llave hasta que la superficie cortante del macho atraviese la chapa. Puede sacar el perforador completamente de la chapa cortada. / Turn the screw with a wrench until the cutting surface of the male pierce the sheet plate. Then, the sheet plate can be completely remove from the knock-out punch.

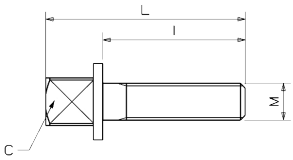
6

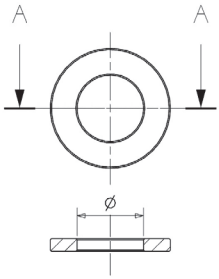
7

Desmonte el perforador desenroscando el tornillo (en este momento puede grpar el tornilo si había rebarba). Elimine el recorte de chapa del interior de la hembra. / *Disassemble the knockout punch by loosen the screw. (In this moment, the screw can seize up if there is any burring) Remove the cut sheet plate from the internal part of the die.*

Tornillo y tuerca de enlace / *Screw and joining nut*





REF	Metrica/ Metric	C	L	l	Perf. Con este tornillo / *Punches with that screw*
540008	M8 x 1,25	10	42	30	Ø13 a Ø19
540010	M10 x 1,25	12	52	38	Ø20 a Ø27
540012	M12 x 1,25	14	69	50	Ø28 a Ø39
540014	M14 x 1,50	18	84	62	Ø40 a Ø52
540020	M20 x 1,50	22	105	80	Ø55 a Ø115

REF	Ø	Metrica/ Metric
54000	9	M8
54001	11	M10
54002	13	M12
54003	15	M14
54004	20,2	M20