



indygo

— *mold base* —

PORTAMOLDES,
PORTAMATRICES
Y ACCESORIOS

CATÁLOGO
GENERAL

Portamoldes standard

Los portamoldes standard se entregan totalmente armados e incluyen los bujes, columnas, tornillos, topes y retractores, pudiéndose entregar desarmado bajo pedido. Cada componente es fabricado según normas ISO 9001 versión 2000.

El perfecto centrado de los agujeros de bujes y columnas, respecto de cualquiera de los laterales de las placas de trabajo, permite el inicio de los mecanizados desde cualquier posición.

Dado que las placas son totalmente intercambiables entre sí, los clientes pueden obtener diferentes placas standard y armar su propio portamolde.

Nuestra gama de producción se amplía con la construcción de portamoldes especiales bajo plano.

Tolerancias

- Centrado de columnas: ± 0.01 mm
- Planitud: 0.005 mm cada 100 mm
- Escuadrado: 0.01 mm cada 100 mm
- Entre centros de agujeros: ± 0.005 mm

Tabla de Dimensiones Standard (mm)

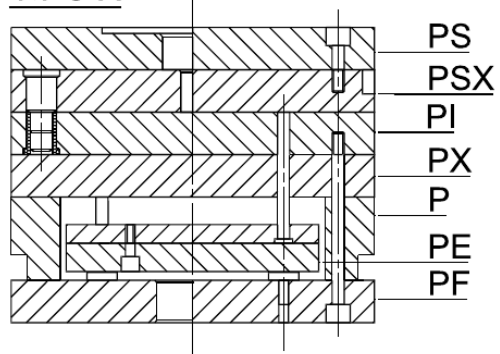
A	156	196	246	296	346	396	446	496	546	596
156	•	•	•							
196		•	•	•	•					
246			•	•	•	•				
296				•	•	•	•			
346					•	•	•	•		
396						•	•	•	•	
446							•	•	•	•

Recorrido de extracción y superficie útil máxima

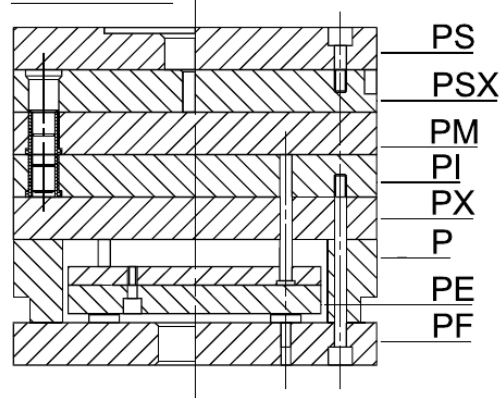
Serie	Largo	Paralelas	Extracción	Superficie útil aprox.	Serie	Largo	Paralelas	Extracción	Superficie útil aprox.	
156	156	57	22	96x156	346	346	77	34	246x346	
		77	42				97	54		
	196	57	22	96x196			396	117		74
		77	42			77		34		
	246	57	22	96x246		97		54		
		77	42			117	74			
196	196	57	22	116x196		446	77	34	246x446	
		77	42				97	54		
	246	57	22	116x246			117	74		246x496
		77	42			77	34			
	296	57	22	116x296		97	54			
		77	42			117	74			
	346	57	22	116x346	396	77	34	296x396		
		77	42			97	54			
	246	246	57	22		156x246	446		117	74
			77	42	77			34		
296		57	22	156x296	97	54		296x496		
		77	42		117	74				
346		57	22	156x346	496	77	34		296x546	
		77	42			97	54			
396		57	22	156x396		117	74	346x446		
		77	42		77	34				
296		296	57	22	196x296	446	446		97	49
			77	42				117	69	
	97		62	147				99		
	346	57	22	196x346	496		97	49	346x546	
		77	42				117	69		
		97	62				147	99		
	396	57	22	196x396	546		97	49	346x446	
		77	42				117	69		
		97	62				147	99		
	446	57	22	196x446	546		97	49	346x496	
		77	42				117	69		
		117	69				147	99		

Combinaciones posibles de placas

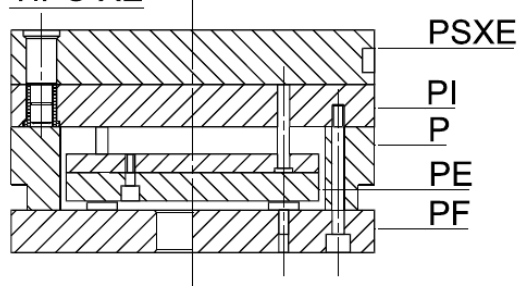
TIPO X



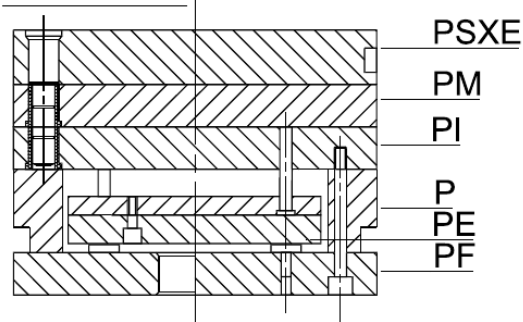
TIPO X+M



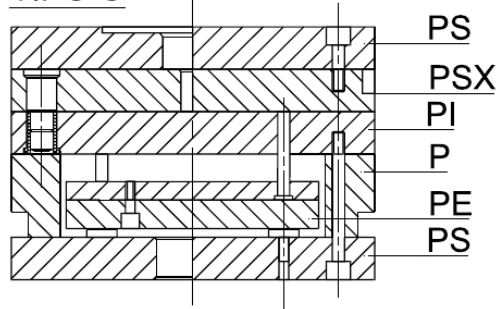
TIPO XE



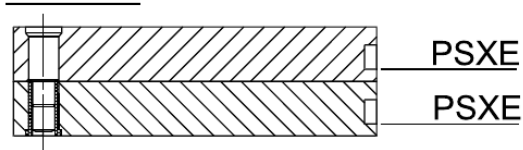
TIPO XE+M



TIPO O



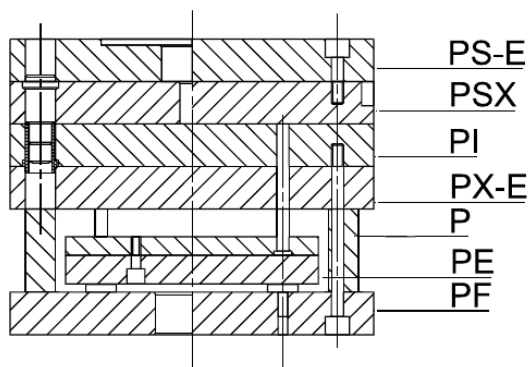
TIPO XP



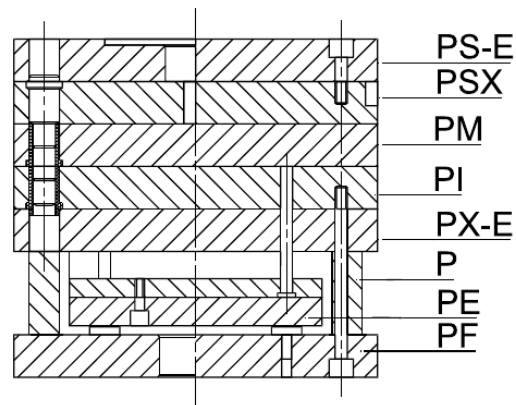
Línea S (tipos X-S y XM-S)

Esta línea lleva ECO-1S y EBU-1S permitiendo así tener 4 placas o más perfectamente centradas sin necesidad de utilizar espinas.

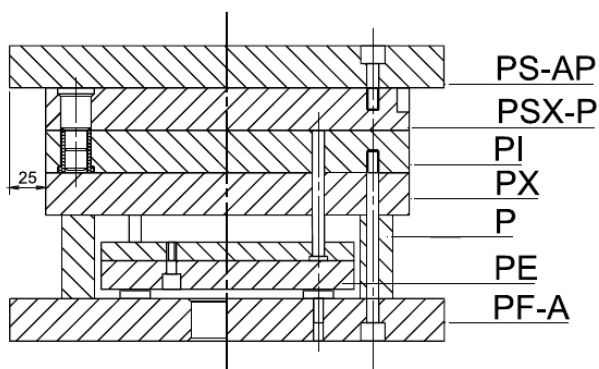
TIPO X-S



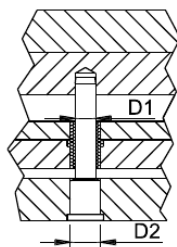
TIPO XM-S



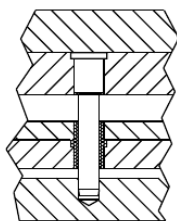
Portamoldes con tapas con aletas: TIPO X con aleta



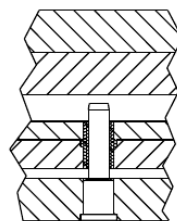
TIPO XF



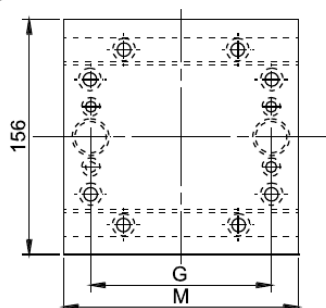
TIPO XG



TIPO ST

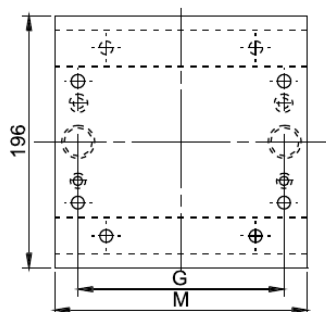


Serie 156



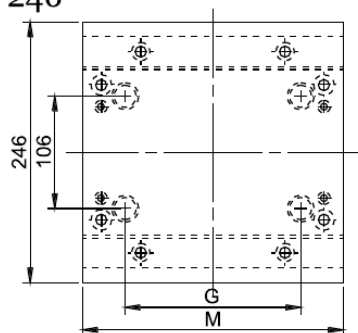
L X M	G	D 1	D 2
156 x 156	120	16	22
156 x 196	160	16	22
156 x 246	210	16	22

Serie 196



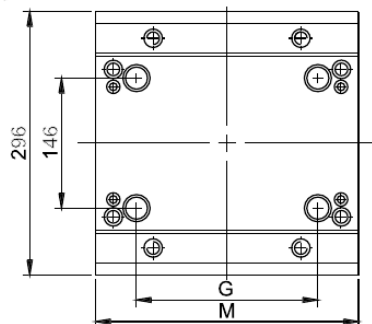
L X M	G	D 1	D 2
196 x 196	160	16	22
196 x 246	210	16	22
196 x 296	260	16	22
196 x 346	310	16	22

Serie 246



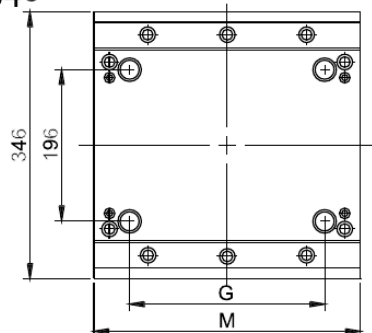
L X M	G	D 1	D 2
246 x 246	166	16	22
246 x 296	216	16	22
246 x 346	266	16	22
246 x 396	316	16	22

Serie 296



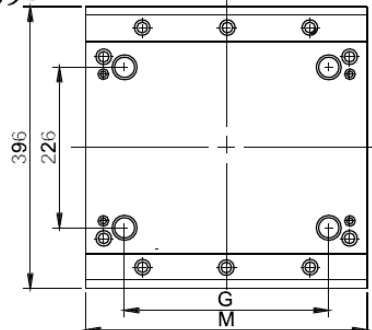
L X M	G	D 1	D 2
296 x 296	204	20	28
296 x 346	254	20	28
296 x 396	304	20	28
296 x 446	354	20	28

Serie 346



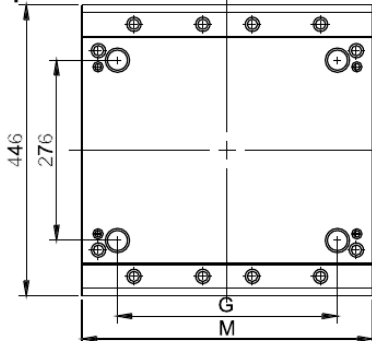
L X M	G	D 1	D 2
346 x 346	254	20	28
346 x 396	304	20	28
346 x 446	354	20	28
346 x 496	404	20	28

Serie 396



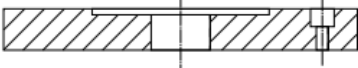
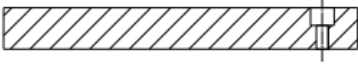
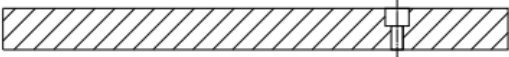
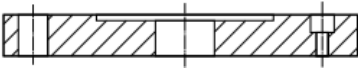
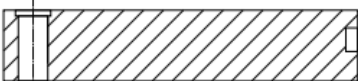
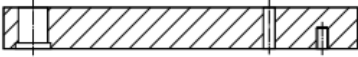
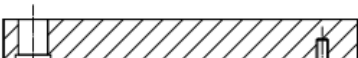
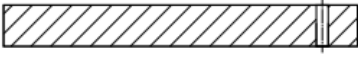
L X M	G	D 1	D 2
396 x 396	288	25	34
396 x 446	338	25	34
396 x 496	388	25	34
396 x 546	438	25	34

Serie 446



L X M	G	D 1	D 2
446 x 446	338	25	34
446 x 496	388	25	34
446 x 546	438	25	34
446 x 596	488	25	34

Denominación de placas intercambiables

PS Placa superior de fijación	
PS-P Placa superior de fijación plus	
PS-AP Placa superior de fijación con aleta tipo Plus(+ 25 mm a cada lado)	
PS-E Placa superior de fijación encolumnada	
PSX Placa superior de fijación porta cavidades	
PSX-P Placa superior de fijación porta cavidades plus	
PSXE Placa superior de fijación porta cavidades, molde de 2 placas	
PM Placa móvil	
PI Placa inferior porta cavidades	
PI-P Placa inferior porta cavidades plus	
PX Placa soporte o sufridera	
PX-P Placa soporte o sufridera plus	

Denominación de placas intercambiables

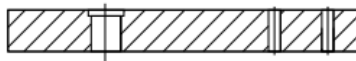
PX-E

Placa soporte o sufridera encolumnada



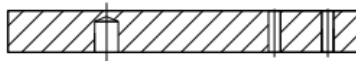
PX-G

Placa soporte o sufridera guiada



PX-C

Placa soporte o sufridera con clavado de columna guiado



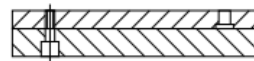
P

Paralelas



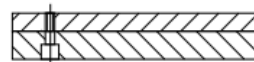
PE

Placas expulsoras



PE-P

Placas expulsora Plus



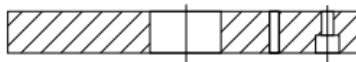
PE-G

Placas expulsora guiada



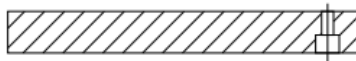
PF

Placa inferior de fijación



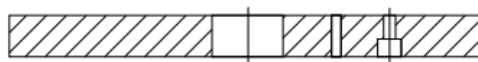
PF-P

Placa inferior de fijación Plus



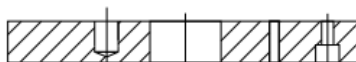
PF-A

Placa inferior de fijación con aleta
(+ 25 mm a cada lado)



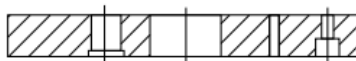
PF-C

Placa inferior con clavado de columna de guiado

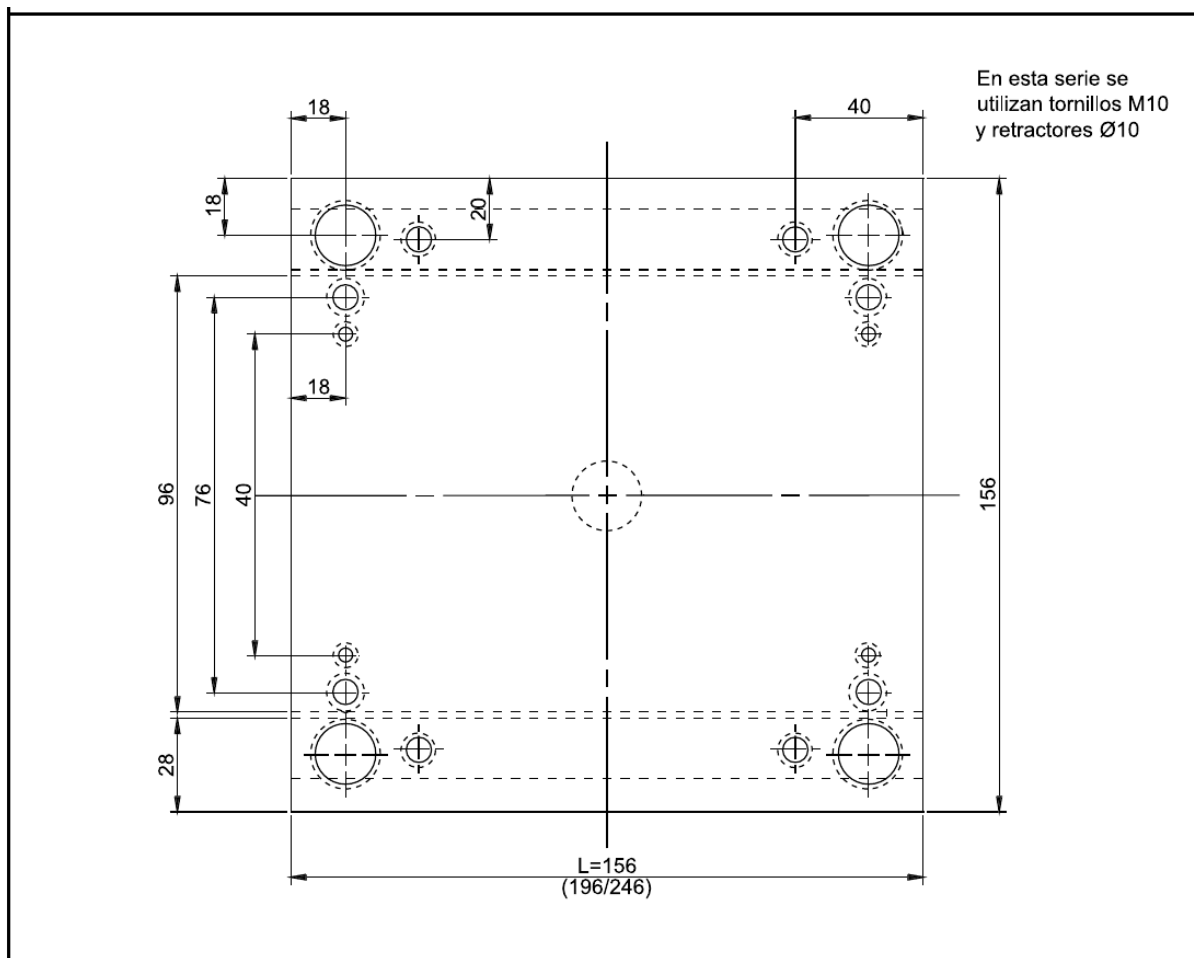


PF-G

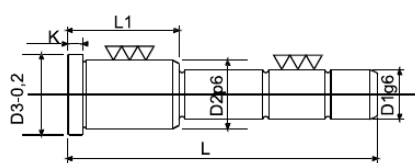
Placa inferior guiada



Portamoldes standard Serie 156

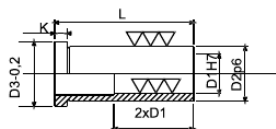


Columna ECO-1



					L										
D1	D2	D3	K	L1	40	45	50	60	70	80	90	100	120	140	160
				22	●	●	●	●	●	●	●	●	●	●	●
				26	●	●	●	●	●	●	●	●	●	●	●
16	22	26	5	36				●	●	●	●	●	●	●	●
				46					●	●	●	●	●	●	●
				56						●	●	●	●	●	●
				66							●	●	●	●	●

Buje EBU-1



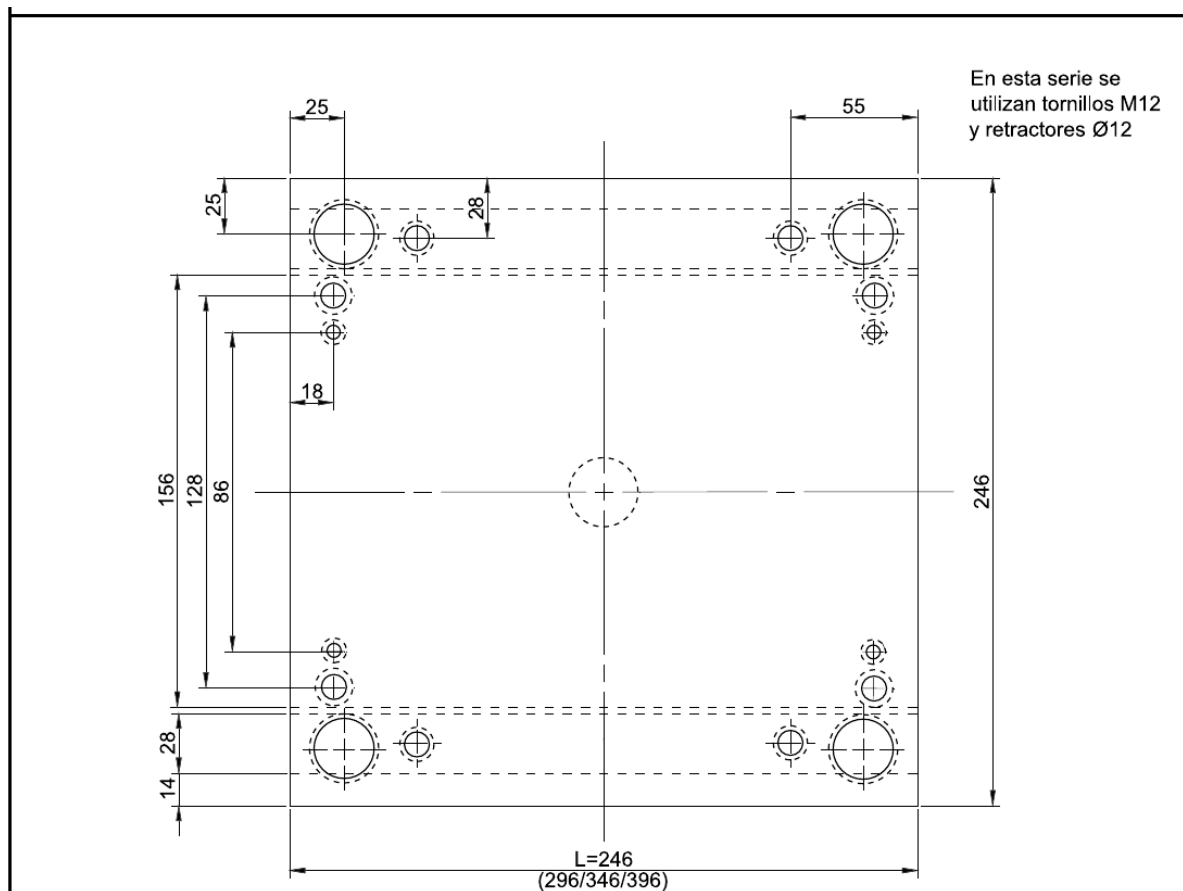
					L					
D1	D2	D3	K	L	22	26	36	46	56	66
16	22	26	5		●	●	●	●	●	●

11

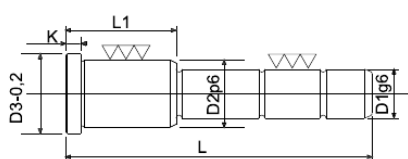
Serie 196

PS			L	S	22	26	36	46	56	66	76
			196	●							
			246	●							
			296	●							
			346	●							
PSE-P			L	S	22	26	36	46	56	66	76
			196	●							
			246	●							
			296	●							
			346	●							
PSX			L	S	22	26	36	46	56	66	76
			196		●	●	●	●	●		
			246		●	●	●	●	●		
			296		●	●	●	●	●		
			346		●	●	●	●	●		
PSXE			L	S	22	26	36	46	56	66	76
			196					●	●	●	●
			246					●	●	●	●
			296					●	●	●	●
			346					●	●	●	●
PM			L	S	22	26	36	46	56	66	76
			196	●	●	●					
			246	●	●	●	●				
			296		●	●	●				
			346		●	●	●	●			
PI			L	S	22	26	36	46	56	66	76
			196		●	●	●	●	●	●	●
			246		●	●	●	●	●	●	●
			296		●	●	●	●	●	●	●
			346		●	●	●	●	●	●	●
PX			L	S	22	26	36	46	56	66	76
			196		●						
			246		●						
			296		●						
			346		●						
PXE			L	S	22	26	36	46	56	66	76
			196		●						
			246		●						
			296		●						
			346		●						
P			L	S	57	77					
			196	●	●						
			246	●	●						
			296	●	●						
			346	●	●						
PE			L	S	18/12						
			196	●							
			246	●							
			296	●							
			346	●							
PF			L	S	22	26	36	46	56	66	76
			196	●							
			246	●							
			296	●							
			346	●							

Portamoldes standard Serie 246

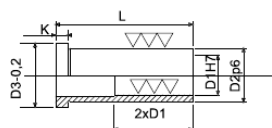


Columna ECO-1



					L											
D1	D2	D3	K	L1	50	60	70	80	90	100	120	140	160	180	200	
				26	●	●	●	●	●	●	●	●	●	●	●	
				36		●	●	●	●	●	●	●	●			
20	28	32	6	46			●	●	●	●	●	●	●			
				56				●	●	●	●	●	●	●	●	
				66						●	●	●	●	●	●	
				76							●	●	●	●	●	

Buje EBU-1

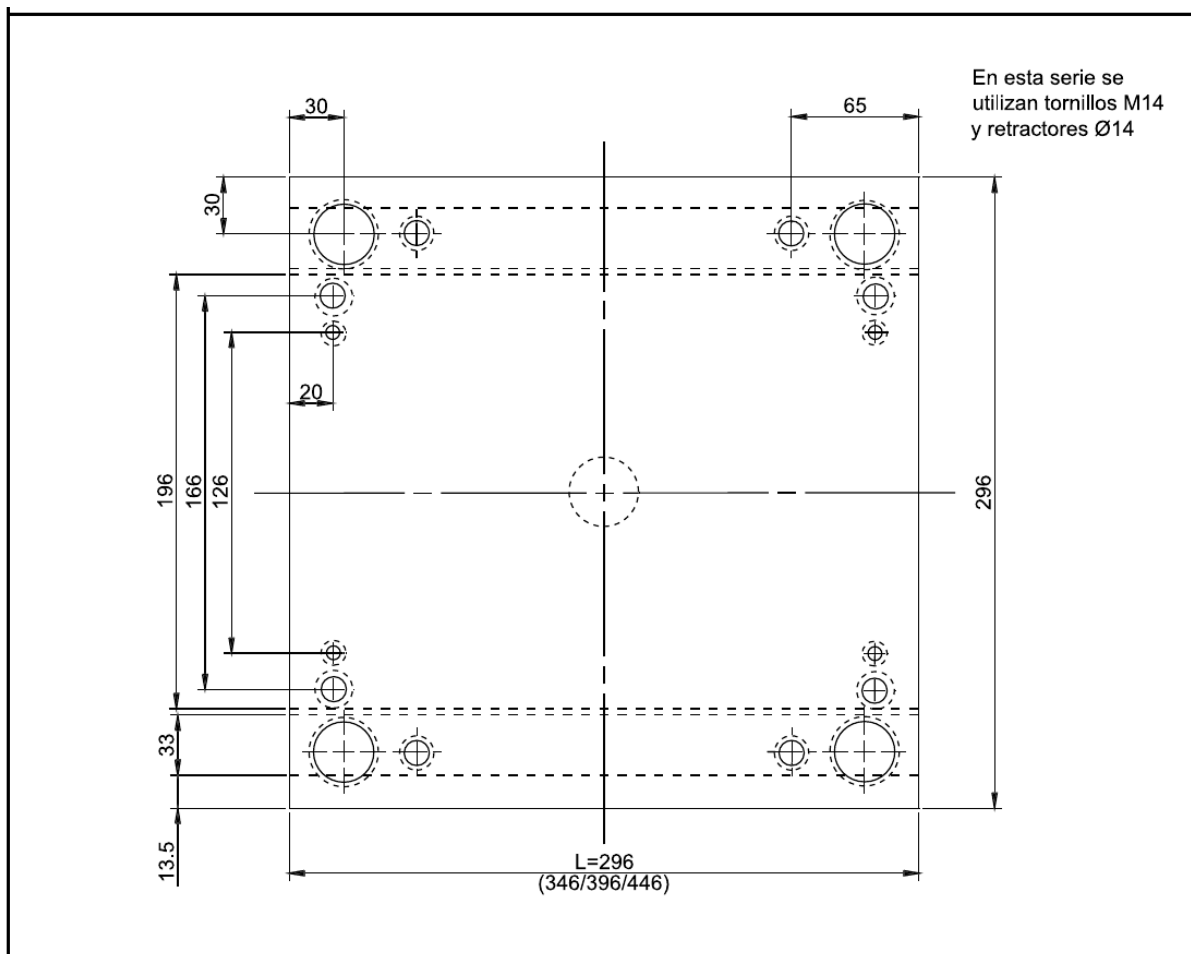


				L						
D1	D2	D3	K	26	36	46	56	66	76	96
20	28	32	6	●	●	●	●	●	●	●

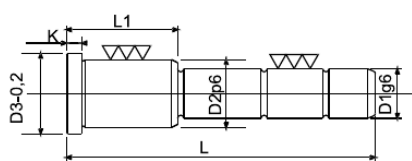
Serie 246

PS			<table><tr><td>L</td><td>S</td><td>22</td><td>26</td><td>36</td><td>46</td><td>56</td><td>66</td><td>76</td></tr><tr><td>246</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>296</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>346</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>396</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr></table>	L	S	22	26	36	46	56	66	76	246			●						296			●						346			●						396			●					
L	S	22	26	36	46	56	66	76																																								
246			●																																													
296			●																																													
346			●																																													
396			●																																													
PSE-P			<table><tr><td>L</td><td>S</td><td>22</td><td>26</td><td>36</td><td>46</td><td>56</td><td>66</td><td>76</td></tr><tr><td>246</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>296</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>346</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>396</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr></table>	L	S	22	26	36	46	56	66	76	246			●						296			●						346			●						396			●					
L	S	22	26	36	46	56	66	76																																								
246			●																																													
296			●																																													
346			●																																													
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PSX			<table><tr><td>L</td><td>S</td><td>22</td><td>26</td><td>36</td><td>46</td><td>56</td><td>66</td><td>76</td></tr><tr><td>246</td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td></tr><tr><td>296</td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td></tr><tr><td>346</td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td></tr><tr><td>396</td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td></tr></table>	L	S	22	26	36	46	56	66	76	246			●	●	●	●			296			●	●	●	●			346			●	●	●	●			396			●	●	●	●		
L	S	22	26	36	46	56	66	76																																								
246			●	●	●	●																																										
296			●	●	●	●																																										
346			●	●	●	●																																										
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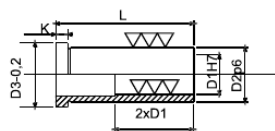


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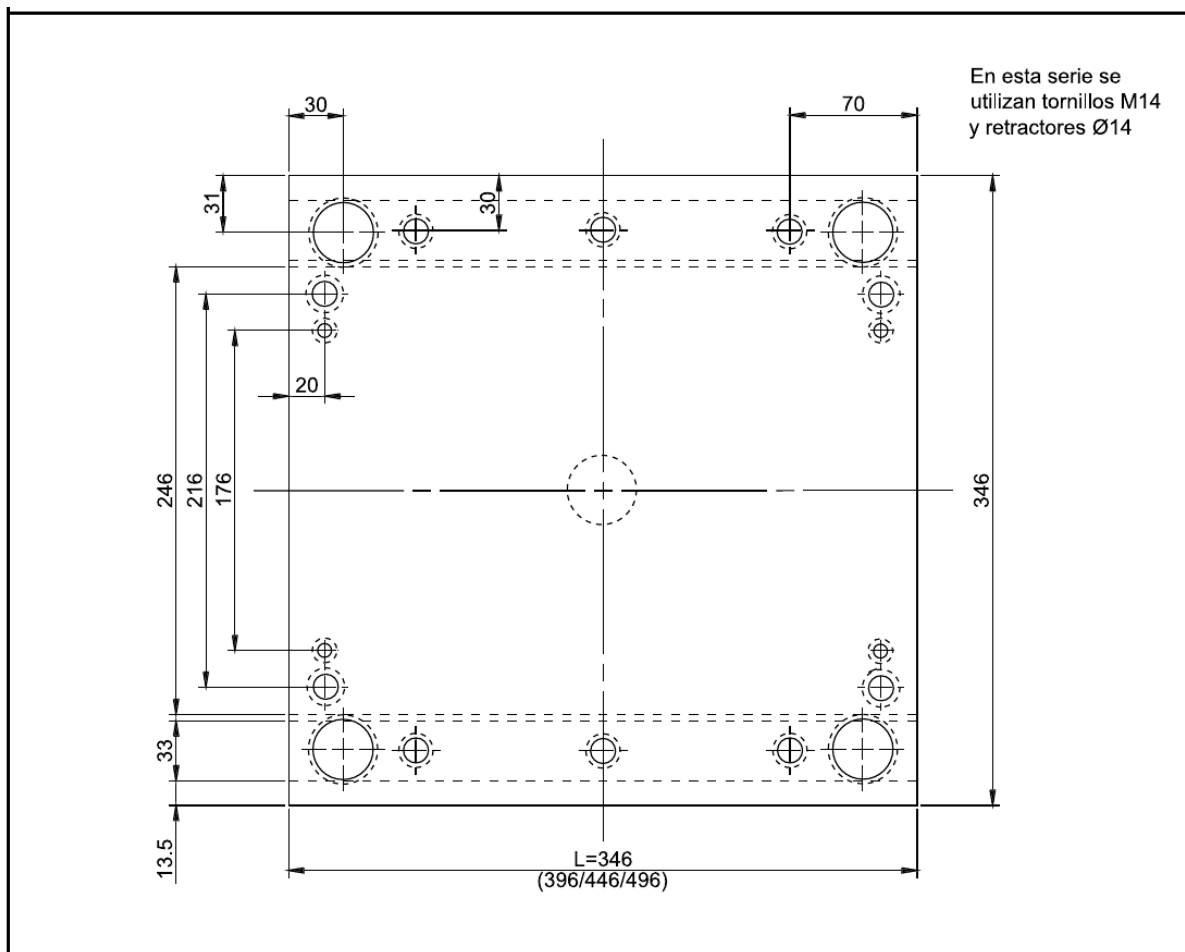


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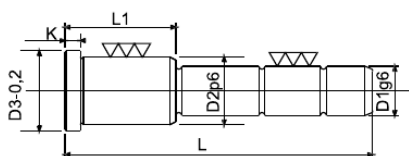
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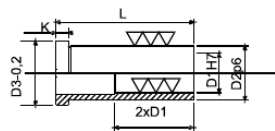


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				36	●	●	●	●	●	●	●	●						
				46		●	●	●	●	●	●	●	●					
25	34	38	7	56			●	●	●	●	●	●	●					
				66				●	●	●	●	●	●	●				
				76					●	●	●	●	●	●	●			
				86						●	●	●	●	●	●	●		
				96					●	●	●	●	●	●	●	●	●	

Buje EBU-1

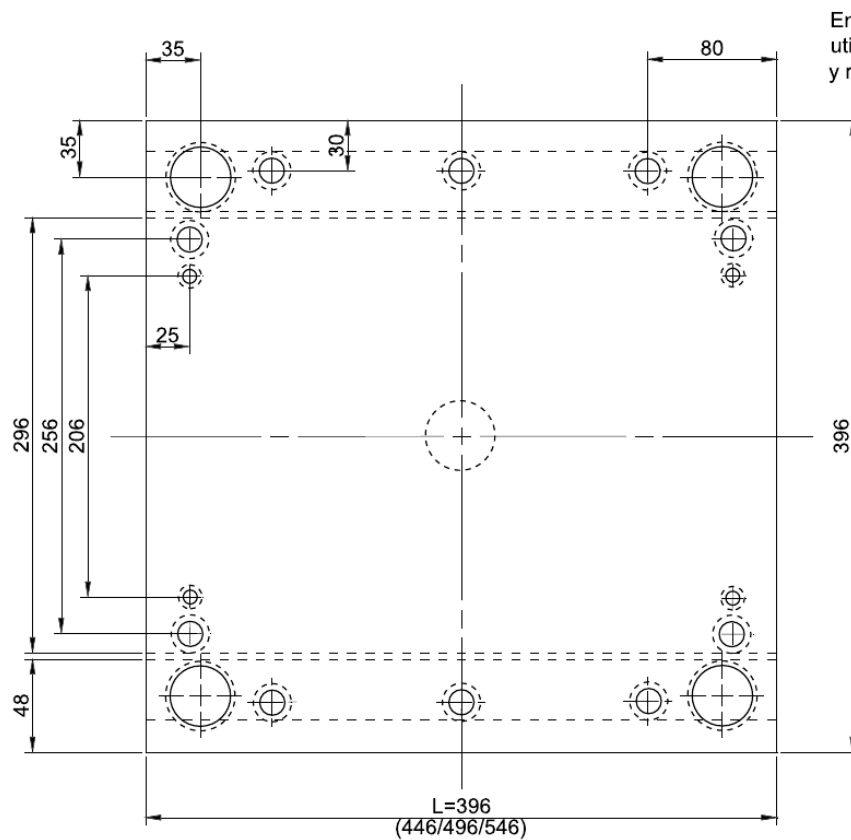


					L						
D1	D2	D3	K	L	26	36	46	56	66	76	96
25	34	38	7		●	●	●	●	●	●	●

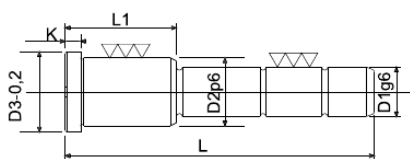
Serie 346

PS			<table> <tr> <th>L \ S</th><th>22</th><th>26</th><th>36</th><th>46</th><th>56</th><th>66</th><th>76</th></tr> <tr> <td>346</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>396</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>446</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>496</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	L \ S	22	26	36	46	56	66	76	346		●						396		●						446		●						496		●					
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346		●																																									
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PSE-P			<table> <tr> <th>L \ S</th><th>22</th><th>26</th><th>36</th><th>46</th><th>56</th><th>66</th><th>76</th></tr> <tr> <td>346</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>396</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>446</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>496</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	L \ S	22	26	36	46	56	66	76	346		●						396		●						446		●						496		●					
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L \ S	26	36	46	56	66	76	96																																				
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396			●	●	●	●	●																																				
446			●	●	●	●	●																																				
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L \ S	26	36	46	56	66	76	96																																				
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PX			<table> <tr> <th>L \ S</th><th>22</th><th>26</th><th>36</th><th>46</th><th>56</th><th>66</th><th>76</th></tr> <tr> <td>346</td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr> <td>396</td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr> <td>446</td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr> <td>496</td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr> </table>	L \ S	22	26	36	46	56	66	76	346				●				396				●				446				●				496				●			
L \ S	22	26	36	46	56	66	76																																				
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L \ S	77	97	117																																								
346	●	●	●																																								
396	●	●	●																																								
446	●	●	●																																								
496	●	●	●																																								
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Portamoldes standard Serie 396

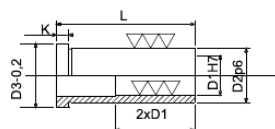


Columna ECO-1



D1	D2	D3	K	L1	L											
					90	100	120	140	160	180	200	220	240	260	280	
				36		●										
				46	●	●	●	●	●							
				56	●	●	●	●	●	●	●	●	●			
				66			●	●	●	●	●	●	●	●	●	●
32	40	45	7	76			●	●	●	●	●	●	●	●	●	●
				86				●	●	●	●	●	●	●	●	●
				96					●	●	●	●	●	●	●	●
				106					●	●	●	●	●	●	●	●

Buje EBU-1



D1	D2	D3	K	L							
32	40	45	7	36	46	56	66	76	86	96	106
				●	●	●	●	●	●	●	●

Serie 396

PS		
PSE-P		
PSX		
PSXE		
PM		
PI		
PX		
PXE		
P		
PE		
PF		

L \ S	22	26	36	46	56	66	76
396		●					
446		●					
496		●					
546		●					

L \ S	22	26	36	46	56	66	76
396		●					
446		●					
496		●					
546		●					

L \ S	36	46	56	66	76	96	106
396		●	●	●	●	●	●
446		●	●	●	●	●	●
496		●	●	●	●	●	●
546		●	●	●	●	●	●

L \ S	36	46	56	66	76	96	106
396			●	●	●	●	●
446			●	●	●	●	●
496			●	●	●	●	●
546			●	●	●	●	●

L \ S	36	46	56	66	76	96	106
396	●	●	●	●	●	●	●
446	●	●	●	●	●	●	●
496	●	●	●	●	●	●	●
546	●	●	●	●	●	●	●

L \ S	36	46	56	66	76	96	106
396		●	●	●	●	●	●
446		●	●	●	●	●	●
496		●	●	●	●	●	●
546		●	●	●	●	●	●

L \ S	22	26	36	46	56	66	76
396				●			
446				●			
496				●			
546				●			

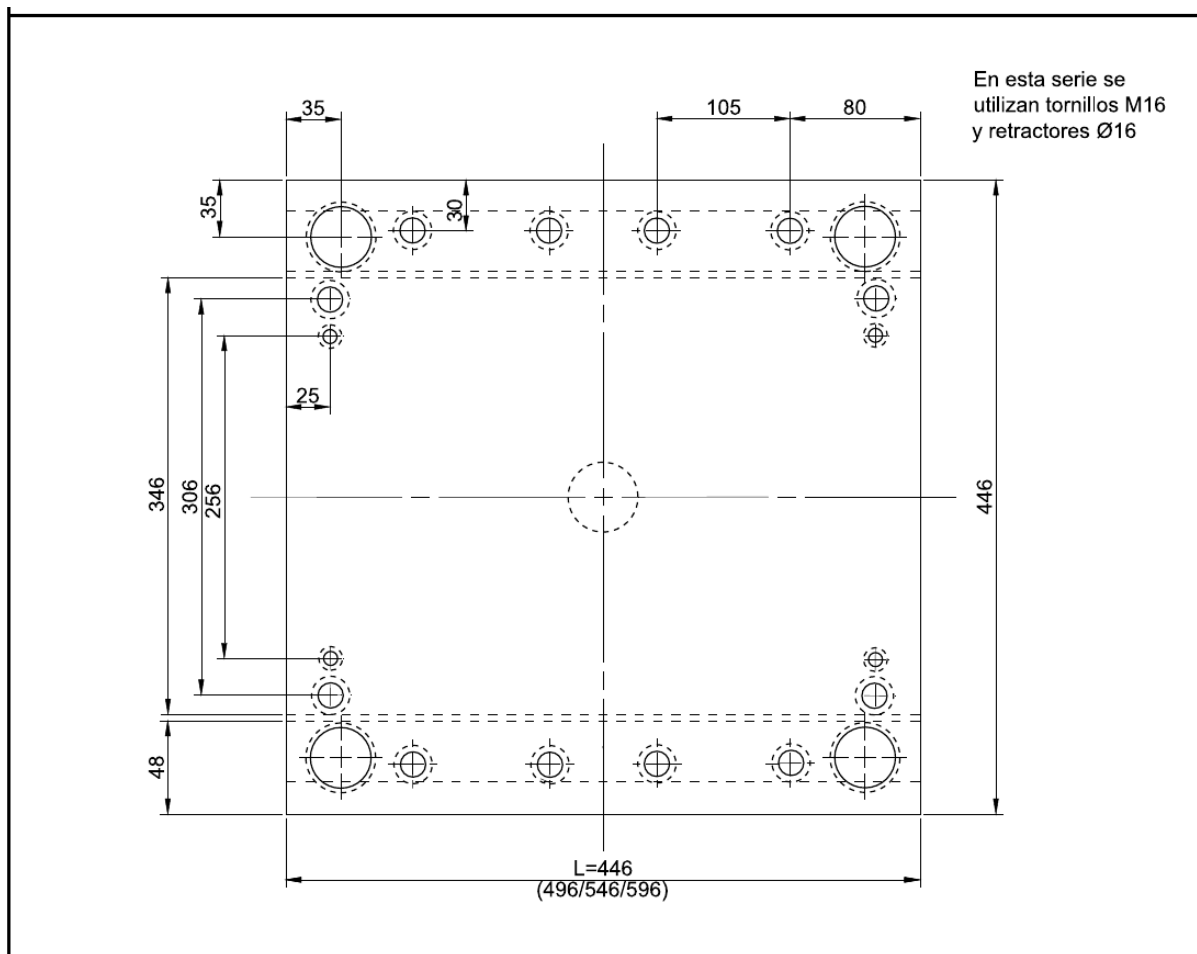
L \ S	22	26	36	46	56	66	76
396				●			
446				●			
496				●			
546				●			

L \ S	77	97	117				
396	●	●	●				
446	●	●	●				
496	●	●	●				
546	●	●	●				

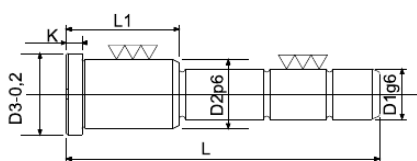
L \ S	22/16						
396	●						
446	●						
496	●						
546	●						

L \ S	22	26	36	46	56	66	76
396		●					
446		●					
496		●					
546		●					

Portamoldes standard Serie 446

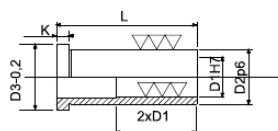


Columna ECO-1



D1	D2	D3	K	L1	L											
					90	100	120	140	160	180	200	220	240	260	280	
				36		●										
				46	●	●	●	●	●							
				56	●	●	●	●	●	●	●	●	●			
				66			●	●	●	●	●	●	●	●	●	●
32	40	45	7	76			●	●	●	●	●	●	●	●	●	●
				86				●	●	●	●	●	●	●	●	●
				96				●	●	●	●	●	●	●	●	●
				106				●	●	●	●	●	●	●	●	●
				116				●	●	●	●	●	●	●	●	●

Buje EBU-1



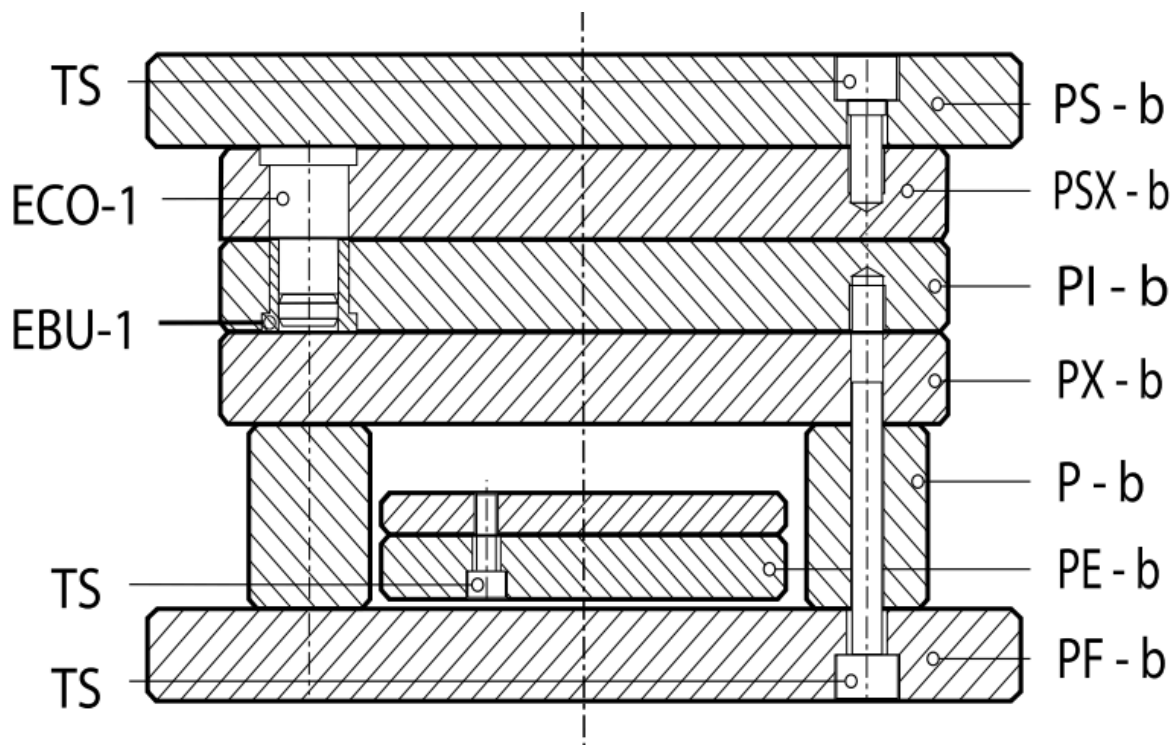
D1	D2	D3	K	L							
				36	46	56	66	76	86	96	106
32	40	45	7	●	●	●	●	●	●	●	●

Serie 446

PS <table><tr><td>L</td><td>S</td><td>22</td><td>26</td><td>36</td><td>46</td><td>56</td><td>66</td><td>76</td></tr><tr><td>446</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>496</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>546</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>596</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr></table>	L	S	22	26	36	46	56	66	76	446			●						496			●						546			●						596			●										
L	S	22	26	36	46	56	66	76																																										
446			●																																															
496			●																																															
546			●																																															
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L	S	22	26	36	46	56	66	76																																										
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496		●	●	●	●	●	●	●																																										
546		●	●	●	●	●	●	●																																										
596		●	●	●	●	●	●	●																																										
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L	S	46	56	66	76	96	106	116																																										
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496			●	●	●	●	●	●																																										
546			●	●	●	●	●	●																																										
596			●	●	●	●	●	●																																										
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PE <table><tr><td>L</td><td>S</td><td>27/16</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>446</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>496</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>546</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>596</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	L	S	27/16							446		●							496		●							546		●							596		●											
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PF <table><tr><td>L</td><td>S</td><td>22</td><td>26</td><td>36</td><td>46</td><td>56</td><td>66</td><td>76</td></tr><tr><td>446</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>496</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>546</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>596</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr></table>	L	S	22	26	36	46	56	66	76	446			●						496			●						546			●						596			●										
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446			●																																															
496			●																																															
546			●																																															
596			●																																															

Porta Moldes — Línea Básica

A+B	Tipo	PS-b/PF-b	PSX-B/PI-b	PX-b	P-b	PE-b	ECO-1	EBU-1	TS-1 / TS-2
156x156	B1	22	26	26	57	18/12	16X26X50	16X26	10x25 / 10x110
156x156	B2	22	36	26	57	18/12	16X36X70	16X36	10x25 / 10x110
156x196	B3	22	26	26	57	18/12	16X26X50	16X26	10x25 / 10x110
156x196	B4	22	36	26	57	18/12	16X36X70	16X36	10x25 / 10x110
196x196	B5	22	26	26	57	18/12	16X26X50	16X26	10x25 / 10x110
196x196	B6	22	36	26	57	18/12	16X36X70	16X36	10x25 / 10x110
196x246	B7	22	26	26	57	18/12	16X26X50	16X26	10x25 / 10x110
196x246	B8	22	36	26	57	18/12	16X36X70	16X36	10x25 / 10x110
196x296	B9	22	36	26	57	18/12	16X36X70	16X36	10x25 / 10x110
196x296	B10	22	46	26	57	18/12	16X46X90	16X46	10x25 / 10x110
246x246	B11	26	26	36	57	18/12	20X26X50	20X26	12x30 / 12x130
246x246	B12	26	36	36	57	18/12	20X36X70	20X36	12x30 / 12x130
246x296	B13	26	36	36	57	18/12	20X36X70	20X36	12x30 / 12x130
246x296	B14	26	46	36	57	18/12	20X46X90	20X46	12x30 / 12x130
246x346	B15	26	36	36	57	18/12	20X36X90	20X36	12x30 / 12x130
246x346	B16	26	46	36	57	18/12	20X46X90	20X46	12x30 / 12x130



Portamoldes especiales

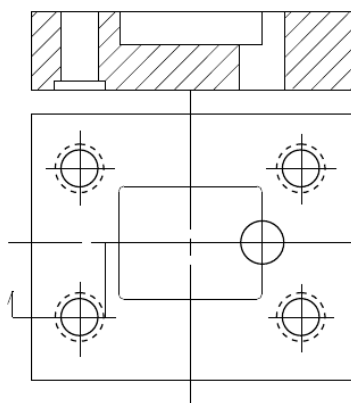
Si ninguna de las opciones de portamoldes standard que la línea ofrece satisface los requerimientos técnicos que su trabajo requiere, se brinda el servicio de fabricar portamoldes especiales bajo pedido.

Nuestro departamento de asistencia técnica al cliente puede ayudarle a solucionar este tipo de problemas y encontrar la solución más viable para su portamolde. Dado el gran volumen de materiales en stock y la disponibilidad de maquinaria de última generación y de gran precisión, podemos responder con la celeridad requerida ante cualquier pedido.

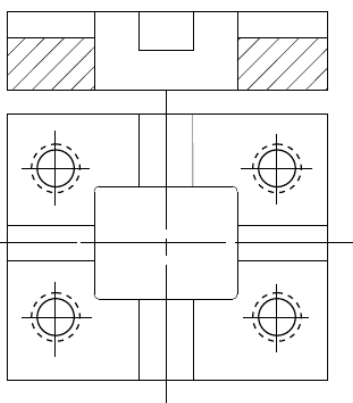
Es sumamente importante la presentación de planos finales y certeros para la cotización y posterior fabricación de los trabajos especiales.

Ejemplos de mecanizados especiales

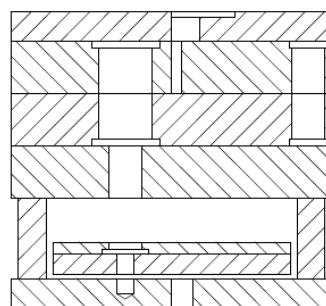
Ejemplo 1



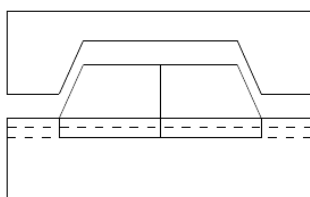
Ejemplo 2



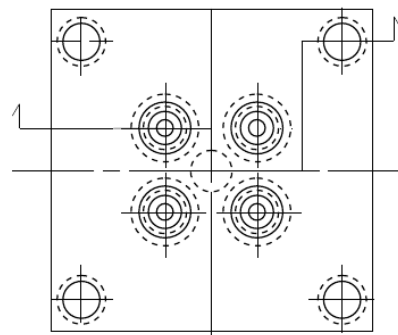
Ejemplo 3



Ejemplo 4



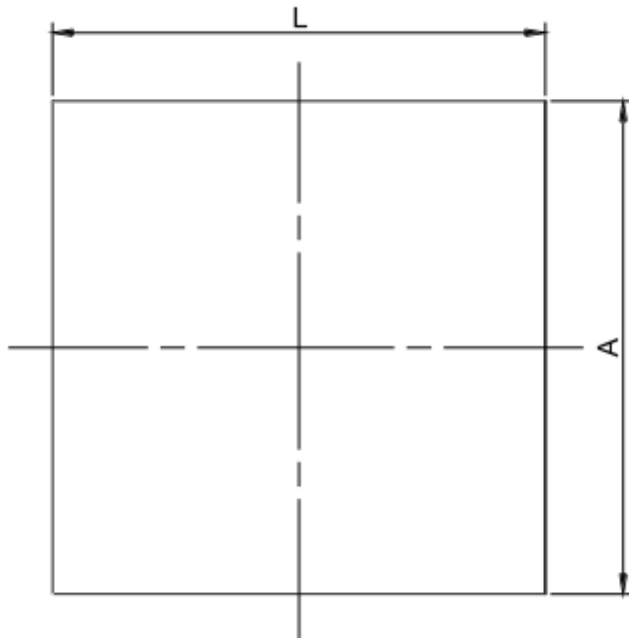
Indicar:
Diametros,
Altura de cabezas,
Entrecentros y
Tolerancias.



Placas AX y placas especiales

Las placas AX son placas ciegas, escuadradas, rectificadas y con chaflanes.

Se pueden fabricar en acero SAE 1045, SAE 4140, SAE 4140 bonificado y AISI P-20 bonificado.



Tolerancia de fabricación

- Ancho: $-0 // +0,8$
- Largo: $-0 // +0,8$
- Escuadrado: $\pm 0^{\circ} 30'$
- Espesor: $-0 // +0,02$

Favor de especificar previamente si se requieren las placas con mayor sobremedida.

Se pueden fabricar placas fresadas, escuadradas y/o rectificadas, con chaflanes, en medidas especiales, bajo pedido.

Cómo ordenar

Cant AX Espesor x Ancho x Largo - Material

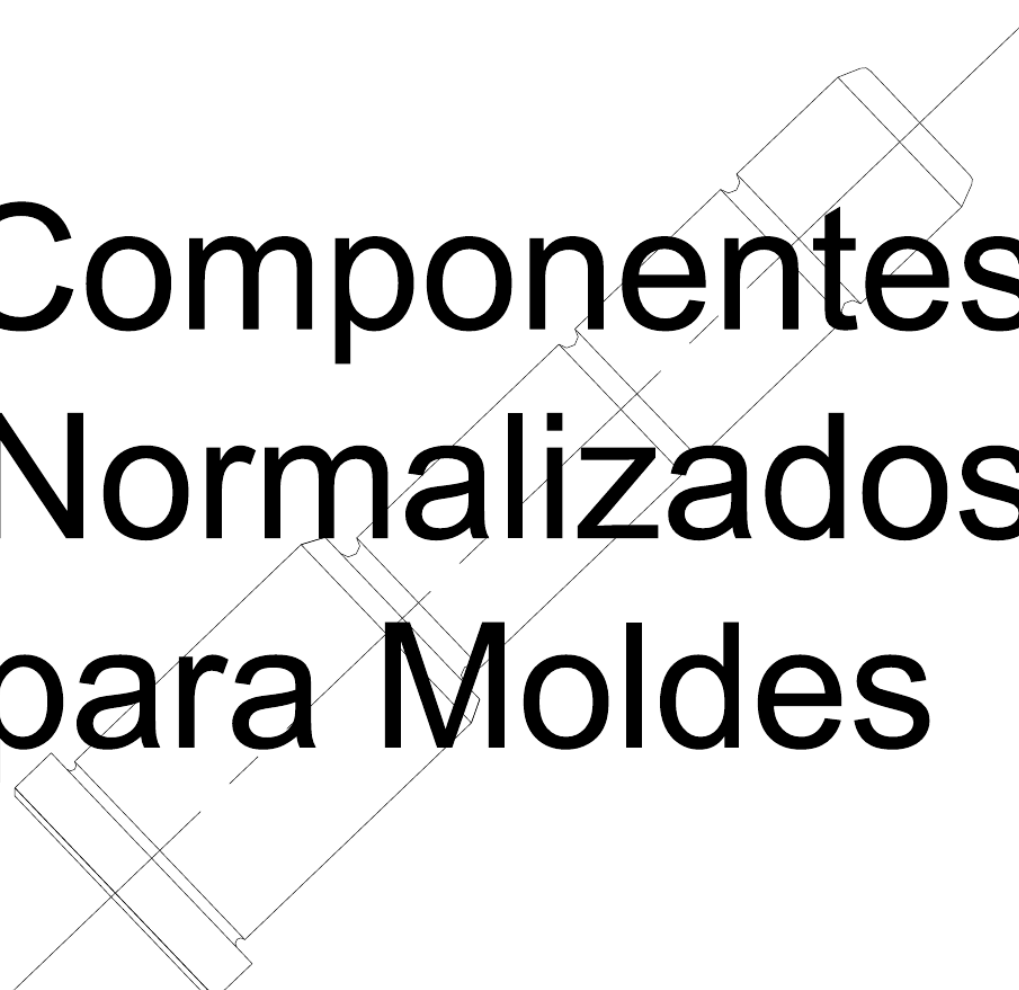
Ejemplo: 4 AX 76 x 346 x 346 - AISI P20

En el cuadro a continuación se presentan las medidas standard de las placas AX (ver imagen adjunta y archivo Excel para tabla completa de disponibilidad por espesor).

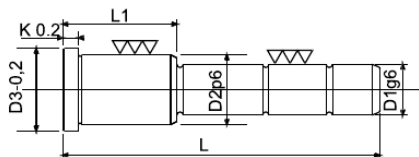
Placas AX y placas especiales — disponibilidad por espesor S

	S									
	22	26	36	46	56	66	76	96	106	116
156x156	●	●	●	●	●	●				
156x196	●	●	●	●	●	●				
156x246	●	●	●	●	●	●				
196x196	●	●	●	●	●	●	●			
196x246	●	●	●	●	●	●	●			
196x296	●	●	●	●	●	●	●			
196x346	●	●	●	●	●	●	●			
246x246	●	●	●	●	●	●	●			
246x296	●	●	●	●	●	●	●			
246x346	●	●	●	●	●	●	●			
246x396	●	●	●	●	●	●	●			
296x296		●	●	●	●	●	●	●		
296x346		●	●	●	●	●	●	●		
296x396		●	●	●	●	●	●	●		
296x446		●	●	●	●	●	●	●		
346x346		●	●	●	●	●	●	●		
346x396		●	●	●	●	●	●	●		
346x446		●	●	●	●	●	●	●		
346x496		●	●	●	●	●	●	●		
396x396		●	●	●	●	●	●	●	●	
396x446		●	●	●	●	●	●	●	●	
396x496		●	●	●	●	●	●	●	●	
396x546		●	●	●	●	●	●	●	●	
446x446		●	●	●	●	●	●	●	●	●
446x496		●	●	●	●	●	●	●	●	●
446x546		●	●	●	●	●	●	●	●	●
446x596		●	●	●	●	●	●	●	●	●

Componentes Normalizados para Moldes



Columna guía de dos diámetros ECO-1



Acero: SAE 8620

Dureza: HRC 60-62

Proceso: Cementado, templado y revenido.

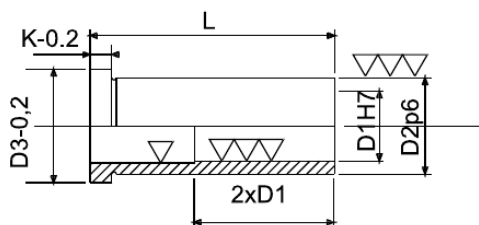
Terminación: Rectificado emboque 25% de L1

Cómo ordenar: Q ECO-1 D1 x L1 x L

Ejemplo: 4 ECO-1 16 x 36 x 70

					L (mm)																			
D 1	D 2	D 3	K	L1	40	45	50	60	70	80	90	100	120	140	160	180	200	220	240	260	280			
12	18	22	5	22			●	●	●	●														
				26			●	●	●	●														
				36			●	●	●	●	●	●												
				46					●	●	●	●	●											
14	20	24	5	22			●	●	●	●	●													
				26				●	●	●	●	●	●	●										
				36					●	●	●	●	●	●	●									
				46					●	●	●	●	●	●	●									
16	22	26	5	56						●	●	●												
				22	●				●	●	●	●	●											
				26		●			●	●	●	●	●	●										
				36				●	●	●	●	●	●	●										
				46					●	●	●	●	●	●	●	●								
				56						●	●	●	●	●	●	●	●							
18	26	30	5	66							●	●	●	●	●									
				76							●	●	●	●	●	●	●							
				26				●	●	●	●	●	●	●										
				36				●	●	●	●	●	●	●	●									
				46				●	●	●	●	●	●	●	●	●								
				56					●	●	●	●	●	●	●	●	●							
20	28	32	6	66							●	●	●	●	●	●								
				76							●	●	●	●	●	●	●							
				26			●		●	●	●	●	●	●	●									
				36			●		●	●	●	●	●	●	●	●								
				46				●	●	●	●	●	●	●	●	●	●							
				56					●	●	●	●	●	●	●	●	●	●						
25	34	38	7	66							●	●	●	●	●	●								
				76							●	●	●	●	●	●	●	●						
				86								●	●	●	●	●	●	●	●					
				96									●	●	●	●	●	●	●	●				
				106										●	●	●	●	●	●	●	●			
				116											●	●	●	●	●	●	●	●		
32	40	45	7	36								●	●	●	●									
				46							●	●	●	●	●	●								
				56							●	●	●	●	●	●	●							
				66								●	●	●	●	●	●	●						
				76									●	●	●	●	●	●	●	●				
				86											●	●	●	●	●	●	●			
40	48	52	7	96										●	●	●	●							
				106											●	●	●	●	●	●				
				116												●	●	●	●	●	●			
				126													●	●	●	●	●	●		
				46											●	●	●	●	●	●	●	●		
				56											●	●	●	●	●	●	●	●	●	

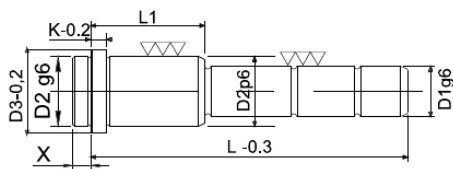
Buje guía con collar EBU-1



Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y revenido.
Terminación: Rectificado
Cómo ordenar: Q EBU-1 D₁ x L
Ejemplo: 4 EBU-1 40 x 106

				L (mm)											
D 1	D 2	D 3	K	22	26	36	46	56	66	76	86	96	106	116	126
12	18	22	5	●	●	●	●	●							
14	20	24	5	●	●	●	●	●							
16	22	26	5	●	●	●	●	●	●	●	●	●			
18	26	30	5	●	●	●	●	●	●	●	●	●			
20	28	32	6	●	●	●	●	●	●	●	●	●	●	●	●
25	34	38	7			●	●	●	●	●	●	●	●	●	●
32	40	45	7			●	●	●	●	●	●	●	●	●	●
40	48	52	8			●	●	●	●	●	●	●	●	●	●

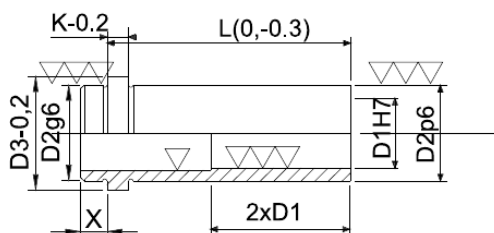
Columna guía dos diámetros c/cabeza guía ECO-1S



Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y revenido.
Terminación: Rectificado
Cómo ordenar: Q ECO-1s D1 x L1 x L
Ejemplo: 8 ECO-1S 32 x 66 x 140

						L (mm)									
D 1	D 2	D 3	K	X	L 1	70	80	90	100	120	140	160	180	200	220
16	22	26	5	10	26	●	●	●	●	●					
					36		●	●	●	●					
					46		●	●	●	●	●	●			
					56				●	●	●	●			
					66					●	●	●	●		
					76						●	●	●		
20	28	32	6	10	36	●	●	●	●	●					
					46		●	●	●	●	●				
					56			●	●	●	●	●			
					66				●	●	●	●			
					76					●	●	●	●		
					96						●	●	●	●	
25	34	38	7	10	36		●	●	●	●					
					46		●	●	●	●	●				
					56			●	●	●	●	●			
					66				●	●	●	●			
					76					●	●	●	●		
					96						●	●	●	●	
32	40	45	7	10	46		●	●	●	●	●				
					56				●	●	●	●			
					66				●	●	●	●	●		
					76					●	●	●	●	●	●
					96						●	●	●	●	●
40	48	52	8	10	56					●	●	●			
					66					●	●	●	●		
					76					●	●	●	●	●	
					96							●	●	●	●

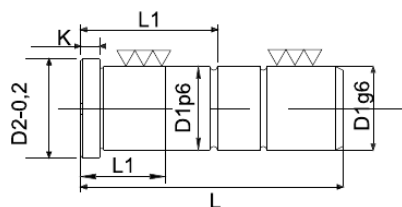
Buje guía con collar y guía anterior EBU-1S



Acero : SAE 8620
Dureza : HRC 60-62
Proceso: Cementado, templado y revenido.
Terminación : Rectificado
Cómo ordenar : Q EBU-1S D₁ x L
Ejemplo : 4 EBU-1S 25 x 56

					L (mm)							
D 1	D 2	D 3	K	X	26	36	46	56	66	76	86	96
16	22	26	5	10	●	●	●	●	●	●		
20	28	32	6	10	●	●	●	●	●	●	●	●
25	34	38	7	10		●	●	●	●	●	●	●
32	40	45	7	10			●	●	●	●	●	●
40	48	52	8	10			●	●	●	●	●	●

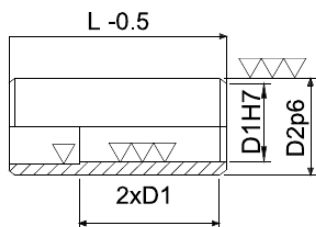
Columna guía de un diámetro ECO-2



Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y revenido.
Terminación: Rectificado
Cómo ordenar: Q ECO-2 D1 x L
Ejemplo: 4 ECO-2 20 x 200

			L	50	60	70	80	90	100	120	140	160	180	200	220	240	260	280
			L1	20	20	20	20	20	25	25	25	30	30	30	30	40	40	40
D 1	D 2	K																
12	16	5		●	●	●	●	●	●	●	●							
14	18	5		●	●	●	●	●	●	●	●	●						
16	20	5		●	●	●	●	●	●	●	●	●	●	●				
18	22	5		●	●	●	●	●	●	●	●	●	●	●				
20	24	6			●	●	●	●	●	●	●	●	●	●	●	●		
25	30	7					●	●	●	●	●	●	●	●	●	●	●	●
32	37	7								●	●	●	●	●	●	●	●	●
40	45	8								●	●	●	●	●	●	●	●	●

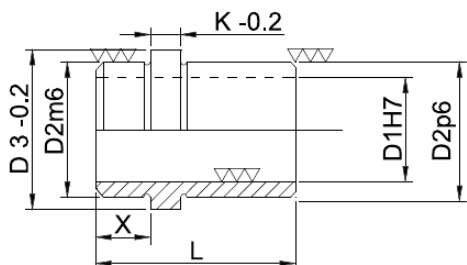
Buje guía liso EBU-2



Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y revenido.
Terminación: Rectificado
Cómo ordenar: Q EBU-2 D₁ x L
Ejemplo: 4 EBU-2 40 x 76

		L (mm)									
D 1	D2	22	26	36	46	56	66	76	86	96	106
12	18	●	●	●	●						
14	20	●	●	●	●						
16	22	●	●	●	●	●	●	●			
18	26	●	●	●	●	●	●	●			
20	28		●	●	●	●	●	●	●	●	
25	34		●	●	●	●	●	●	●	●	
32	40			●	●	●	●	●	●	●	●
40	48				●	●	●	●	●	●	●

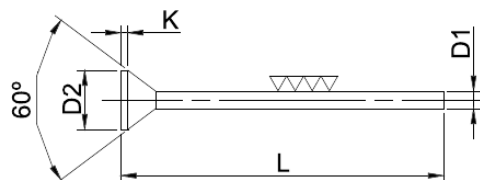
Buje guía EBU-3



Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y revenido.
Terminación: Rectificado
Cómo ordenar: Q EBU-3 D₁ x L
Ejemplo: 4 EBU-3 16 x 40

					L (mm)				
D 1	D 2	D 3	K	X	32	40	50	65	80
14	20	24	5	16	●	●			
16	22	26	5	16	●	●			
18	26	30	5	16	●	●			
20	28	32	6	16	●	●			
25	34	38	7	16	●	●			
32	40	45	7	25			●	●	
40	48	52	8	32				●	●

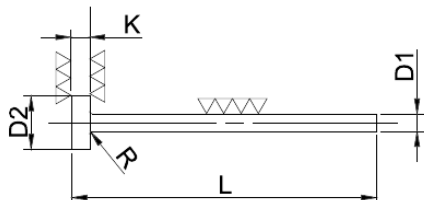
Expulsor con cabeza cónica (templado) EES-1



Acero: DIN 1.2842 SAE-01
Dureza: Cuerpo HRC 61 ± 1.
Cabeza HRC 45 ± 5.
Proceso: Lapidado
Cómo ordenar:
Q EES-1 D1 x L
Ejemplo: 50 EES-1 4 x 150

D 1 (g6)	D 2 (-0,12)	K	L(mm)			
			100	125	160	200
1,0	1,8	0,5	●	●	●	
1,25	2,0	0,5	●	●	●	
1,5	2,2	0,5	●	●	●	
1,75	2,8	0,5	●	●	●	
2,0	3,0	0,5	●	●	●	●
2,1	3,2	0,5	●	●	●	●
2,25	3,5	0,5	●	●	●	●
2,5	3,5	0,5	●	●	●	●
2,75	4,0	0,5	●	●	●	●
3,0	4,5	0,5	●	●	●	●
3,1	4,5	0,5	●	●	●	●
3,25	4,5	0,5	●	●	●	●
3,5	5,0	0,5	●	●	●	●
3,75	5,0	0,5	●	●	●	●
4,0	5,5	0,5	●	●	●	●
4,1	5,5	0,5	●	●	●	●
4,2	5,5	0,5	●	●	●	●
4,5	6,0	0,5	●	●	●	●
5,0	6,5	0,5	●	●	●	●
5,1	6,5	0,5	●	●	●	●
5,25	6,5	0,5	●	●	●	●
5,5	7,0	0,5	●	●	●	●
6,0	8,0	0,5	●	●	●	●
6,5	9,0	1,0	●	●	●	●
7,0	9,0	1,0	●	●	●	●
7,5	10,0	1,0	●	●	●	●
8,0	10,0	1,0	●	●	●	●
8,5	11,0	1,0	●	●	●	●
9,0	11,0	1,0	●	●	●	●
9,5	12,0	1,0	●	●	●	●
10,0	12,0	1,0	●	●	●	●
10,5	13,0	1,0	●	●	●	●
11,0	13,0	1,0	●	●	●	●
12,0	14,0	1,0	●	●	●	●
13,0	15,0	1,0	●	●	●	●
14,0	16,0	1,5	●	●	●	●
15,0	17,0	1,5	●	●	●	●
16,0	18,0	1,5	●	●	●	●
17,0	19,0	1,5	●	●	●	●
18,0	20,0	1,5	●	●	●	●
20,0	22,0	1,5	●	●	●	●

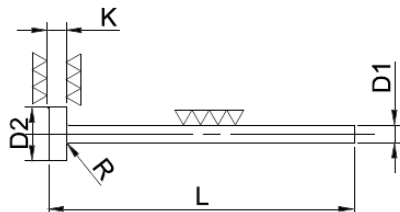
Expulsor con cabeza cilíndrica nitrurado EES-2C



Acero: DIN 1.2343 SAE H13
Dureza: Superficie 950 Vickers 68-70 HRC
Cabeza: 390-450 vickers HRC 45+/-5
Resistencia a la tracción: 140-150Kg-mm²
Resistencia al revenido: 500°C-550°C
Proceso: Rectificado y lapidado.
Cómo ordenar: Q EES-2C D1 x L
Ejemplo: 20 EES-2C 8 x 400

D 1 (g6)	D 2 (-0,2)	DIN K (-0,05)	L(mm)											
			100	125	160	200	250	300	400	500	630	800	1000	
2,0	4	2	●	●	●	●	●	●						
2,5	5	2	●	●	●	●	●	●						
3,0	6	3	●	●	●	●	●	●	●					
3,5	6	3	●	●	●	●	●	●	●					
4,0	8	3	●	●	●	●	●	●	●					
4,5	8	3	●	●	●	●	●	●	●					
5,0	10	3	●	●	●	●	●	●	●	●	●			
5,5	10	3	●	●	●	●	●	●	●	●	●			
6,0	12	5	●	●	●	●	●	●	●	●	●			
6,5	12	5	●	●	●	●	●	●	●	●	●			
7,0	12	5	●	●	●	●	●	●	●	●	●			
7,5	12	5	●	●	●	●	●	●	●	●	●			
8,0	14	5	●	●	●	●	●	●	●	●	●			
8,5	14	5	●	●	●	●	●	●	●	●	●			
9,0	14	5	●	●	●	●	●	●	●	●	●			
10,0	16	5	●	●	●	●	●	●	●	●	●	●	●	
11,0	16	5	●	●	●	●	●	●	●	●	●	●		
12,0	18	7	●	●	●	●	●	●	●	●	●	●	●	
14,0	22	7	●	●	●	●	●	●	●	●	●	●	●	
16,0	22	7	●	●	●	●	●	●	●	●	●	●	●	
18,0	26	7	●	●	●	●	●	●	●	●	●	●	●	
20,0	26	8	●	●	●	●	●	●	●	●	●	●	●	
25,0	32	10			●	●	●	●	●	●	●	●	●	
32,0	40	10				●	●	●	●	●	●	●	●	

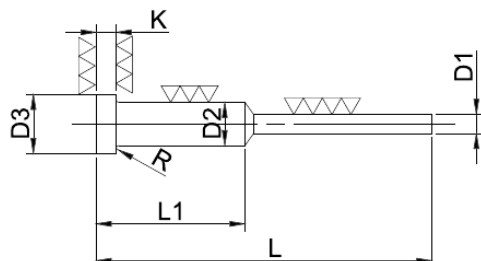
Expulsor con cabeza cilíndrica templado EES-2T



Acero: DIN 1.2843 SAE 01
Dureza: Cuerpo 61 ± 2 HRC
Cabeza: 45 ± 5 HRC
Proceso: Rectificado y lapidado.
Cómo ordenar: Q EES-2T D1 x L
Ejemplo: 25 EES-2T 4 x 125

D 1 (g6)	D 2 (-0,2)	K (-0,05)	L(mm)					
			100	125	160	200	250	315
2,0	4	2	●	●	●	●		
2,5	5	2	●	●	●	●	●	
3,0	6	3	●	●	●	●	●	●
3,5	7	3	●	●	●	●	●	●
4,0	8	3	●	●	●	●	●	●
4,5	8	3	●	●	●	●	●	●
5,0	10	3	●	●	●	●	●	●
6,0	12	5	●	●	●	●	●	●
7,0	12	5	●	●	●	●	●	●
8,0	14	5	●	●	●	●	●	●
9,0	14	5	●	●	●	●	●	●
10,0	16	5	●	●	●	●	●	●
12,0	18	7	●	●	●	●	●	●
14,0	22	7	●	●	●	●	●	●
16,0	22	7	●	●	●	●	●	●
20,0	26	8	●	●	●	●	●	●

Expulsor c/ cabeza cilíndrico c/ rebaje EES-3 / EES-3T



EES-3T (templado)

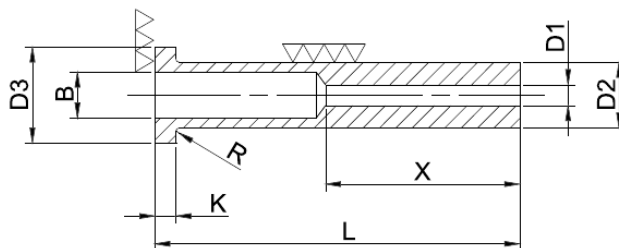
Acero: DIN 1.2842 SAE 01
Dureza: Cuerpo 61 ± 2 HRC
Cabeza: 45 ± 5 HRC
Proceso: Rectificado y lapidado
Cómo ordenar: Q EES-3T D1 x L
Ejemplo: 12 EES-3T 2 x 150

EES-3 (nitrurado)

Acero: DIN 1.2343 SAE H 13
Dureza: Superficie 950 vickers 68-70 HRC
Cabeza: 390-450 Vickers 45 ± 5 HRC
Resistencia a la tracción: 140-150 Kg/mm²
Resistencia al revenido: 500°C-550°C.
Proceso: Rectificado y lapidado
Cómo ordenar: Q EES-3 D1 x L
Ejemplo: 12 EES-3 2 x 150

D 1 (g6)	D 2 (g6)	D 3 (-0,2)	K	L	L1
1,5	3	6	3	150	50
1,5	3	6	3	200	75
2,0	3	6	3	150	50
2,0	3	6	3	200	75
2,5	3	6	3	150	50
2,5	3	6	3	200	75

Expulsor Tubular EES-4 / EES-4T



EES-4T (templado)

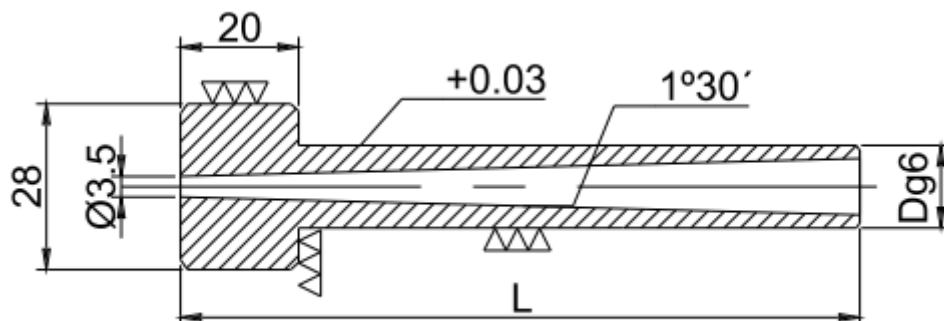
Acero: DIN 1.2842 SAE 01
Dureza: Cuerpo 61 $\pm$ 2 HRC
Cabeza: 45 $\pm$ 5 HRC
Proceso: Rectificado y lapidado
Cómo ordenar: Q EES-4T D1 x L
Ejemplo: 12 EES-4T 6 x 75

EES-4 (niturado)

Acero: DIN 1.2343 SAE H 13
Dureza: Superficie 950 vickers 68-70 HRC
Cabeza: 390-450 Vickers 45 $\pm$ 5 HRC
Resistencia a la tracción: 140-150 Kg/mm²
Resistencia al revenido: 500°C-550°C.
Proceso: Rectificado y lapidado
Cómo ordenar: Q EES-4 D1 x L
Ejemplo: 12 EES-4 6 x 75

D1 H6	D2 g6	D3 -0.2	K -0.05	B	R	X	L(mm)							
							75	100	125	150	160	175	200	250
2,0	4	8	3	2,3	0,3	29	●	●	●					
2,5	5	10	3	2,8	0,3	29	●	●	●	●				
3,0	5	10	3	3,3	0,3	39	●	●	●	●	●	●	●	
3,5	6	12	5	3,8	0,3	37	●	●	●	●	●	●	●	
4,0	6	12	5	4,3	0,5	41	●	●	●	●	●	●	●	●
4,5	8	14	5	4,8	0,5	45	●	●	●	●	●	●	●	●
5,0	8	14	5	5,3	0,5	48	●	●	●	●	●	●	●	●
6,0	10	16	5	6,3	0,5	48	●	●	●	●	●	●	●	●
8,0	12	20	7	8,3	0,7	48	●	●	●	●	●	●	●	●
10,0	14	22	7	10,3	0,7	48	●	●	●	●	●	●	●	●
12,0	16	22	7	12,3	0,7	48	●	●	●	●	●	●	●	●

Boquilla de inyección EUG-1 / 1T



EUG-1:

boquilla para inyección, no templada, acero SAE 8640.

Cómo ordenar: Q EUG-1 W Ø D x L.

Ejemplo: 1 EUG-1 Ø14 x 115.

EUG-1T:

boquilla para inyección, templada, acero SAE 4140, 55/58 HRC.

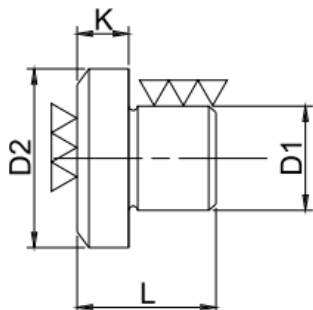
Cómo ordenar: Q EUG-1T W Ø D x L.

Ejemplo: 1 EUG-1T Ø14 x 85.

Longitudes L (mm) disponibles: 50, 65, 75, 85, 95, 105, 115 (para Ø14).

D	L(mm)						
	50	65	75	85	95	105	115
14	●	●	●	●	●	●	●
18	●	●	●	●	●	●	●

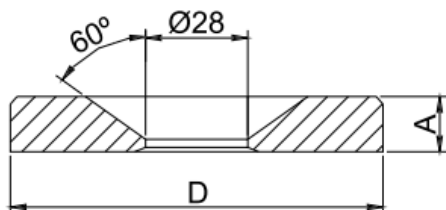
Topes placas expulsoras EA-1



Acero: SAE 8620
Proceso: Cementado, templado y revenido
Cómo ordenar: Q EA-1 D1 x L
Ejemplo: 4 EA-1 8 x 21

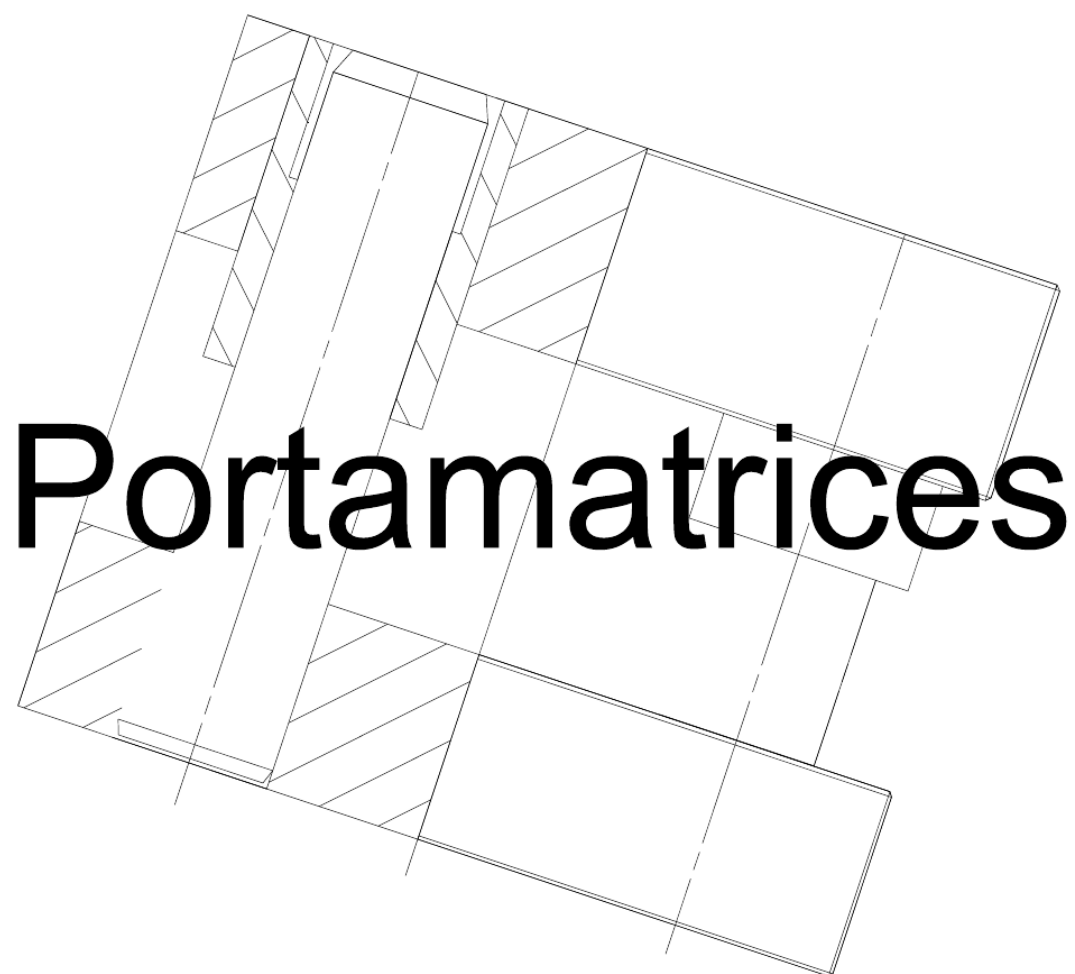
D1 m6	D 2	K	L
8	18	5	21
14	24	6	21

Anillos centradores EAC-1



Acero: SAE 4140
Cómo ordenar: Q EAC-1 ØD
Ejemplo: 1 EAC-1 Ø 90

D	A
Ø60	10
Ø70	10
Ø80	10
Ø90	10
Ø100	12
Ø125	12
Ø150	12
Ø175	20



Portamatrices standard

Especificaciones Técnicas

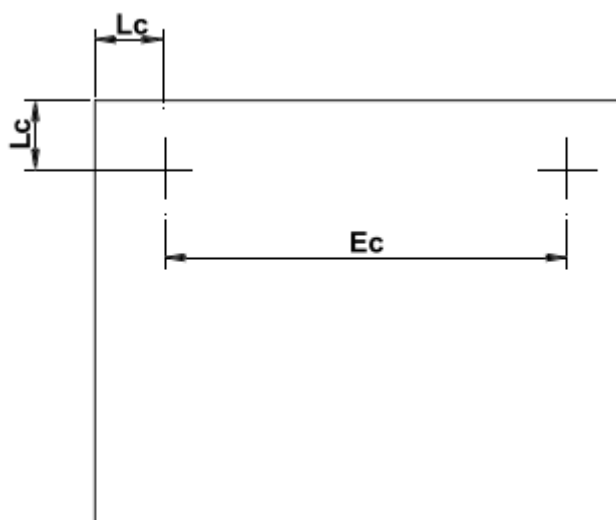
Los portamatrices se proveen con placas de acero SAE 1045 y componentes de deslizamiento ECO-4 / EBU-4; bajo requerimiento se pueden proveer con ECO-7 / EBU-7 ó ECBB-4 ó ECBB-7.

También se pueden fabricar los portamatrices con prensachapa, lo cual también tiene que ser especificado con anterioridad.

Los portamatrices se entregan armados.

Cálculo de la ubicación de bujes y columnas en un portamatrix

Dimensión Lc: distancia del borde de la placa al centro del buje o columna.



Diferentes tipos de portamatrices

Los cuatro tipos de Portamatrices standard que ofrecemos son los siguientes:

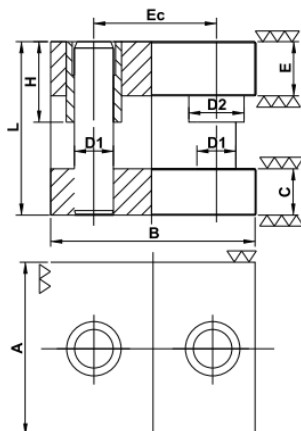
Tipo F: con dos columnas al medio

Tipo L: con dos columnas en diagonal

Tipo Z: con dos columnas atrás o adelante

Tipo D: con cuatro columnas

Portamatrices standard — Tipo F



Características Técnicas

Material: placas acero SAE 1045; bujes y columnas SAE 8620.

Tratamiento: bujes y columnas templado, revenido y cementado, dureza 60:62 RC.

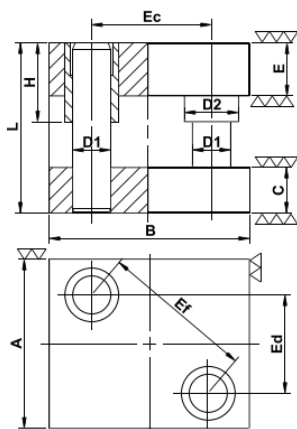
Cómo ordenar

Cantidad x Tipo Liviano o Pesado

Por ejemplo: 1 X F 20 Pesado

Tipo	C Liv.	E Liv.	C Pes.	E Pes.	A	B	Ec	D1	L	D2	H
F 1	26	26	36	36	156	156	108	20	145	30	60
F 2	26	26	36	36	156	196	138	25	145	36	70
F 3	36	36	46	46	196	196	138	25	170	36	70
F 4	36	36	46	46	196	246	178	30	170	45	80
F 5	36	36	46	46	196	296	228	30	170	45	80
F 6	36	36	46	46	196	346	278	30	170	45	80
F 7	36	36	46	46	246	246	176	30	170	45	80
F 8	36	36	46	46	246	296	218	34	185	50	80
F 9	36	36	46	46	246	346	268	34	185	50	80
F 10	36	36	46	46	246	396	318	34	185	50	80
F 11	36	36	46	46	296	296	218	34	185	50	80
F 12	36	36	46	46	296	346	256	40	185	55	100
F 13	46	46	56	56	296	396	306	40	185	55	100
F 14	46	46	56	56	296	446	356	40	185	55	100
F 15	46	46	56	56	346	346	256	40	185	55	100
F 16	46	46	56	56	346	396	286	50	200	70	100
F 17	46	46	56	56	346	446	336	50	200	70	100
F 18	46	46	56	56	346	496	386	50	200	70	100
F 19	46	46	56	56	396	396	286	50	200	70	100
F 20	46	46	56	56	396	446	336	50	200	70	100
F 21	46	46	56	56	396	496	386	50	200	70	100
F 22	46	46	56	56	396	546	436	50	200	70	100
F 23	56	56	66	66	446	446	336	50	225	70	100
F 24	56	56	66	66	446	496	386	50	225	70	100
F 25	56	56	66	66	446	546	436	50	225	70	100
F 26	56	56	66	66	446	596	486	50	225	70	100

Portamatrices standard — Tipo L



Características Técnicas

Material: placas acero SAE 1045; bujes y columnas SAE 8620.

Tratamiento: bujes y columnas templado, revenido y cementado, dureza 60:62 RC.

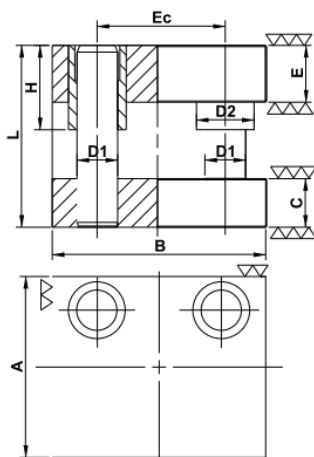
Cómo ordenar

Cantidad x Tipo Liviano o Pesado

Por ejemplo: 1 X L 18 Pesado

Tipo	C Liv.	E Liv.	C Pes.	E Pes.	A	B	Ec / Ed / Ef	D1	L	D2	H
L 1	26	26	36	36	156	156	108/106/152.7	20	145	30	60
L 2	26	26	36	36	156	196	138/96/169.3	25	145	36	70
L 3	36	36	46	46	196	196	138/136/196.2	25	170	36	70
L 4	36	36	46	46	196	246	176/126/216.5	30	170	45	80
L 5	36	36	46	46	196	296	226/126/258.8	30	170	45	80
L 6	36	36	46	46	196	346	276/126/303.4	30	170	45	80
L 7	36	36	46	46	246	246	176/176/248.9	30	170	45	80
L 8	36	36	46	46	246	296	218/166/275.2	34	185	50	80
L 9	36	36	46	46	246	346	268/166/316.3	34	185	50	80
L 10	36	36	46	46	246	396	318/166/359.6	34	185	50	80
L 11	36	36	46	46	296	296	218/216/308.3	34	185	50	80
L 12	36	36	46	46	296	346	256/206/328.6	40	185	55	100
L 13	46	46	56	56	296	396	306/206/368.9	40	185	55	100
L 14	46	46	56	56	296	446	356/206/411.3	40	185	55	100
L 15	46	46	56	56	346	346	256/256/362.0	40	185	55	100
L 16	46	46	56	56	346	396	286/236/370.8	50	200	70	100
L 17	46	46	56	56	346	446	336/236/410.6	50	200	70	100
L 18	46	46	56	56	346	496	386/236/452.4	50	200	70	100
L 19	46	46	56	56	396	396	286/286/404.5	50	200	70	100
L 20	46	46	56	56	396	446	336/286/441.2	50	200	70	100
L 21	46	46	56	56	396	496	386/286/480.4	50	200	70	100
L 22	46	46	56	56	396	546	436/286/521.4	50	200	70	100
L 23	56	56	66	66	446	446	336/336/475.2	50	225	70	100
L 24	56	56	66	66	446	496	386/336/511.8	50	225	70	100
L 25	56	56	66	66	446	546	436/336/550.4	50	225	70	100
L 26	56	56	66	66	446	596	486/336/590.8	50	225	70	100

Portamatrices standard — Tipo Z



Características Técnicas

Material: placas acero SAE 1045; bujes y columnas SAE 8620.

Tratamiento: bujes y columnas templado, revenido y cementado, dureza 60:62 RC.

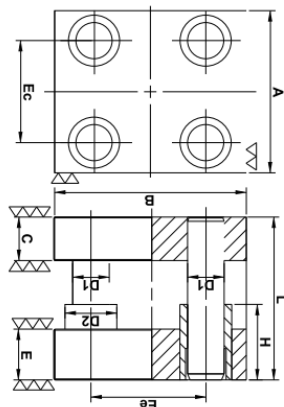
Cómo ordenar

Cantidad x Tipo Liviano o Pesado

Por ejemplo: 1 X Z 9 Liviano

Tipo	C Liv.	E Liv.	C Pes.	E Pes.	A	B	Ec	D1	L	D2	H
Z1	26	26	36	36	156	156	108	20	145	30	60
Z2	26	26	36	36	156	196	138	25	145	36	70
Z3	36	36	46	46	196	196	138	25	170	36	70
Z4	36	36	46	46	196	246	176	30	170	45	80
Z5	36	36	46	46	196	296	226	30	170	45	80
Z6	36	36	46	46	196	346	276	30	170	45	80
Z7	36	36	46	46	246	246	176	30	170	45	80
Z8	36	36	46	46	246	296	218	34	185	50	80
Z9	36	36	46	46	246	346	268	34	185	50	80
Z10	36	36	46	46	246	396	318	34	185	50	80
Z11	36	36	46	46	296	296	218	34	185	50	80
Z12	36	36	46	46	296	346	256	40	185	55	100
Z13	46	46	56	56	296	396	306	40	185	55	100
Z14	46	46	56	56	296	446	356	40	185	55	100
Z15	46	46	56	56	346	346	256	40	185	55	100
Z16	46	46	56	56	346	396	286	50	200	70	100
Z17	46	46	56	56	346	446	336	50	200	70	100
Z18	46	46	56	56	346	496	386	50	200	70	100
Z19	46	46	56	56	396	396	286	50	200	70	100
Z20	46	46	56	56	396	446	336	50	200	70	100
Z21	46	46	56	56	396	496	386	50	200	70	100
Z22	46	46	56	56	396	546	436	50	200	70	100
Z23	56	56	66	66	446	446	336	50	225	70	100
Z24	56	56	66	66	446	496	386	50	225	70	100
Z25	56	56	66	66	446	546	436	50	225	70	100
Z26	56	56	66	66	446	596	486	50	225	70	100

Portamatrices standard — Tipo D



Características Técnicas

Material: placas acero SAE 1045; bujes y columnas SAE 8620.

Tratamiento: bujes y columnas templado, revenido y cementado, dureza 60:62 RC.

Cómo ordenar

Cantidad x Tipo Liviano o Pesado

Por ejemplo: 1 X D 14 Liviano

Tipo	Espesores				Dimensión		Entrecentros		Columnas		Bujes	
	Liviano		Pesado									
	C	E	C	E	A	B	Ec	Ee	D1	L	D2	H
D 1	26	26	36	36	156	156	108	108	20	145	30	60
D 2	26	26	36	36	156	196	108	148	20	145	30	60
D 3	36	36	46	46	196	196	138	138	25	170	36	70
D 4	36	36	46	46	196	246	138	188	25	170	36	70
D 5	36	36	46	46	196	296	138	238	25	170	36	70
D 6	36	36	46	46	196	346	138	288	25	170	36	70
D 7	36	36	46	46	246	246	176	176	30	185	45	80
D 8	36	36	46	46	246	296	176	226	30	185	45	80
D 9	36	36	46	46	246	346	176	276	30	185	45	80
D 10	36	36	46	46	246	396	176	326	30	185	45	80
D 11	36	36	46	46	296	296	218	218	34	185	50	80
D 12	36	36	46	46	296	346	218	268	34	185	50	80
D 13	46	46	56	56	296	396	218	318	34	185	50	80
D 14	46	46	56	56	296	446	218	368	34	185	50	80
D 15	46	46	56	56	346	346	256	256	40	200	55	100
D 16	46	46	56	56	346	396	256	306	40	200	55	100
D 17	46	46	56	56	346	446	256	356	40	200	55	100
D 18	46	46	56	56	346	496	256	406	40	200	55	100
D 19	46	46	56	56	396	396	306	306	40	200	55	100
D 20	46	46	56	56	396	446	306	356	40	200	55	100
D 21	46	46	56	56	396	496	306	406	40	200	55	100
D 22	56	56	66	66	396	546	306	456	40	200	55	100
D 23	56	56	66	66	446	446	356	356	40	200	55	100
D 24	56	56	66	66	446	496	356	406	40	200	55	100
D 25	56	56	66	66	446	546	356	456	40	200	55	100
D 26	56	56	66	66	446	596	356	506	40	200	55	100

Portamatrices especiales

Si las opciones de portamatrices standard que la línea ofrece no satisfacen los requerimientos técnicos que su trabajo requiere, se pueden fabricar portamatrices especiales bajo pedido.

Nuestro departamento de asistencia técnica al cliente puede ayudarle a solucionar este tipo de problemas y encontrar la solución más viable para su portamatriz. Dado el gran volumen de materiales en stock y la disponibilidad de maquinaria de última generación y de gran precisión, podemos responder con la celeridad requerida ante cualquier pedido.

Es sumamente importante la presentación de planos finales y certeros para la cotización y posterior fabricación de los trabajos especiales. Se pueden realizar los siguientes trabajos especiales:

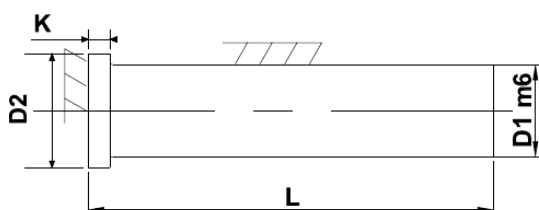
- Portamatrices que difieren de los standard en las medidas de las placas.
- Ubicación del encolumnado o variación en los diámetros de encolumnados.
- Portamatrices con prensachapas.
- Portamatrices utilizando componentes ECO-7, EBU-7, ECBB-4 y ECBB-7.

En todos los casos se requieren planos indicando todas las medidas en cuestión y especialmente indicando las tolerancias que se requieren.



Componentes Normalizados para Matrices

Punzones con cabeza cilíndrica forjada EP-2C / EP-2HSS



Acero:

EP-2C: DIN 1.2080 SAE D.3

EP-2HSS: DIN 1.3343 SAE M2

Dureza: Cuerpo HRC 62-64+/-1

Cabeza: HRC45+/- 5

Proceso: Rectificado y lapidado.

Cómo ordenar:

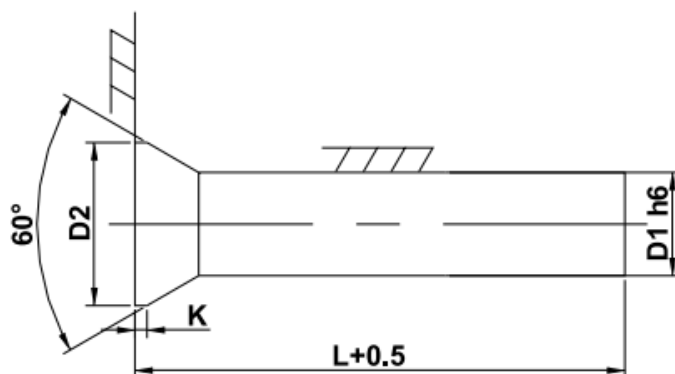
Q EP-2C D1 x L.

Q EP-2HSS D1 x L

			L(mm)	
D1 m6	D2-0.3	K+0.1	71	100
2	4	3	●	●
3	5	3	●	●
4	6	3	●	●
5	7	5	●	●
6	9	5	●	●
8	11	5	●	●
10	13	5	●	●
13	16	5	●	●
16	19	5	●	●
20	24	5	●	●
25	29	5	●	●

Punzones de calidad

Proceso: el cuerpo del punzón está rectificado y lapidado.



Materiales

EP-1

DIN 9861 forma D

Acero: DIN 1.2842 SAE 01

EP-1C

DIN 9861 forma D

Acero: DIN 1.2080 SAE D.3

EP-1HSS (hasta Ø12)

DIN 9861 forma D

Acero HSS DIN 1.3343-1.3554 SAE M2

Dureza cuerpo HRC64±2

Cabeza HRC45±5

EP-1K190 (hasta Ø12)

DIN 9861 forma DK190

Acero K190

Dureza cuerpo HRC64±1

Cabeza HRC45±5

Q EP-1 D1 x L

Ejemplo: 100 EP-1 1,1 x 71

Q EP-1C D1 x L

Ejemplo: 100 EP-1C 1,1 x 71

Q EP-1HSS D1 x L

Ejemplo: 50 EP-1HSS 5,0 x 100

Q EP-1K190 D1 x L

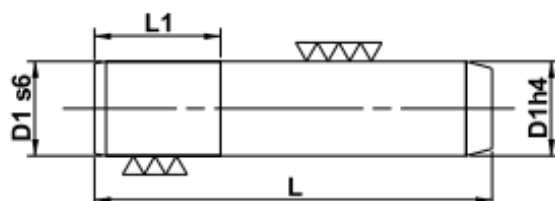
Ejemplo: 70 EP-1K190 5,5 x 71

Cómo ordenar

EP-1 / EP-1C / EP-1HSS / EP-1K190

D1	D2	K	L(mm)		D1	D2	K	L(mm)	
h6		+0,15	71	100	h6			71	100
1,0-1,1	1,8	0,5	●	●	6,5-7,4	9,0	1,0	●	●
1,2-1,3	2,0	0,5	●	●	7,5-8,4	10,0	1,0	●	●
1,4-1,5	2,2	0,5	●	●	8,5-9,4	11,0	1,0	●	●
1,6-1,7	2,5	0,5	●	●	9,5-10,4	12,0	1,0	●	●
1,75-1,8	2,8	0,5	●	●	10,5-11,4	13,0	1,0	●	●
1,9-2,0	3,0	0,5	●	●	11,5-12,4	14,0	1,0	●	●
2,1-2,2	3,2	0,5	●	●	12,5-13,4	15,0	1,0	●	●
2,3-2,5	3,5	0,5	●	●	13,5-14,4	16,0	1,0	●	●
2,6-2,9	4,0	0,5	●	●	14,5-15,0	17,0	1,5	●	●
3,0-3,4	4,5	0,5	●	●	15,0-16,0	18,0	1,5	●	●
3,5-3,9	5,0	0,5	●	●	16,1-16,9	19,0	1,5	●	●
4,0-4,4	5,5	0,5	●	●	17,0-17,9	20,0	1,5	●	●
4,5-4,9	6,0	0,5	●	●	18,0-18,9	21,0	1,5	●	●
5,0-5,4	6,5	0,5	●	●	19,0-20,0	22,0	1,5	●	●
5,5-5,9	7,0	0,5	●	●					
6,0-6,4	8,0	0,5	●	●					

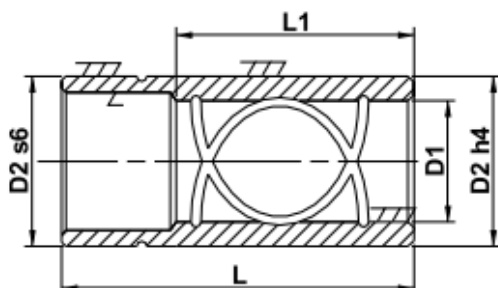
Columna sin cabeza ECO-4



Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y revenido.
Terminación: Lapidado
Cómo Ordenar:
Q ECO-4 D1x L
Ejemplo: 2 ECO-4 25 X 200

		L																	
D1	L1	85	95	105	115	125	135	145	155	170	185	200	225	250	275	300	325	350	400
16	26	●	●	●	●	●	●												
	36										●	●							
20	26	●	●	●	●	●	●	●	●	●	●	●							
	36										●	●							
25	26				●	●	●	●	●	●	●	●	●	●					
	36										●	●	●	●					
30	36				●	●	●	●	●	●	●	●	●	●	●	●			
	46												●	●	●	●			
34	36							●	●	●	●	●	●						
	46													●	●	●	●	●	
40	36							●	●	●									
	46										●	●	●	●	●	●	●	●	●
50	46									●	●	●	●	●					
	56														●	●	●	●	●

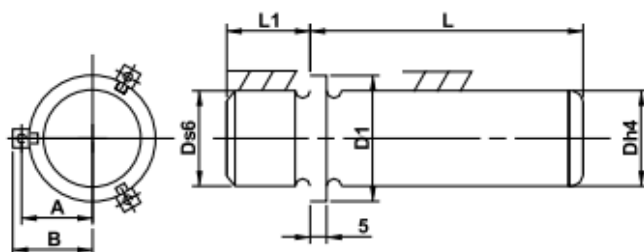
Buje liso EBU-4



Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y revenido.
Cómo Ordenar:
Q EBU-4 D1x L
Ejemplo: 2 EBU-4 25 X 200

Serie normal	D1	L1	D2 (h4-S6)	Tolerancia D1
L(mm)				
60	20	38	30	+0.008/+0.012
70	25	38	36	+0.008/+0.012
80	30	48	45	+0.006/+0.010
80	34	48	50	+0.006/+0.010
100	40	70	55	+0.006/+0.010
100	50	70	70	+0.006/+0.010
Serie corta	D1	L1	D2 (h4-S6)	Tolerancia D1
L(mm)				
45	20	30	30	+0.008/+0.012
50	25	30	36	+0.008/+0.012
55	30	37	45	+0.006/+0.010
55	34	30	50	+0.006/+0.010
60	40	35	55	+0.006/+0.010
60	50	40	70	+0.006/+0.010

Columnas Extraíbles ECO-7

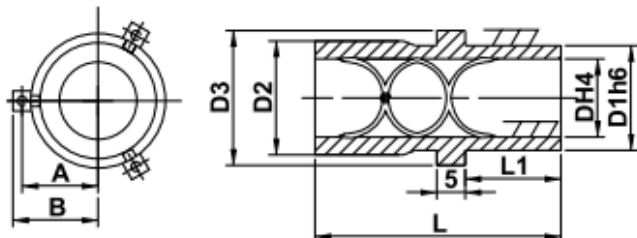


Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y rectificado.
Cada columna está provista de 3 grampas.
Tornillos de fijación: M8x20
Cómo Ordenar:
Q ECO-7 D x L
Ejemplo: 2 ECO-7 32 X 220

D	D1	A	B	L1	L
25	32.4	20.8	28.3	24	70
					80
					90
					100
					110
					120
					130
					140
					150
					160
32	42.8	26.0	33.5	30	170
					180
					100
					110
					120
					130
					140
					150
					160
					170
40	51.8	30.5	38.0	37	180
					100
					110
					120
					140
					150
					160
					200
					220
					240

D	D1	A	B	L1	L
50	64.8	37.0	44.5	45	170
					180
					200
					220
					240
					280
					320
					360
					400
					120
63	76.8	43.0	50.5	49	160
					180
					200
					220
					240
					320
					360

Buje Extraíble de Acero EBU-7



Acero: SAE 8620
Dureza: HRC 60-62
Proceso: Cementado, templado y rectificado.
Cada Buje esta provisto de 3 grampas y tornillos M8 x 20.
Cómo Ordenar:
Q EBU-7 D1x L
Ejemplo: 2 EBU-7 32 X 90

D	A	B
25	26.70	34.20
32	31.20	38.70
40	36.20	43.70
50	44.20	51.70
63	50.70	58.20

Tipo Corto

D	L	L1	D1	D2	D3
25	37	23	38	38	44
32	44	30	45	45	53
40	52	38	54	55	63
50	62	48	65	70	79
63	75	61	81	87	92

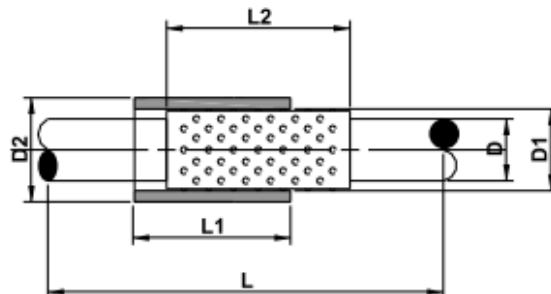
Tipo Medio

D	L	L1	D1	D2	D3
25	55	23	38	39	44
32	60	26	45	48	53
40	67	30	54	58	63
50	75	35	65	74	79
63	90	48	81	87	92

Tipo Largo

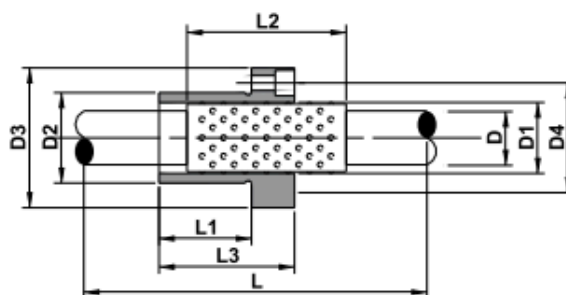
D	L	L1	D1	D2	D3
25	80	23	38	39	44
32	90	26	45	48	53
40	100	30	54	58	63
50	110	35	65	74	79
63	130	48	81	87	92

Bolilleros ECBB-4



D	16	20	25	30	40	50
D1	22	26	31	38	48	58
D2	28	33	40	48	58	70
L1	37-47-53	47-53-67	47-67-77	53-77-86	63-86-96-116	80-90-116
L2	43-54-63	54-63-74	54-74-83	58-88-103	68-94-108-128	88-108-128
L	80 a 200	100 a 220	100 a 270	100 a 240	140 a 300	160 a 300

Bolilleros ECBB-7



D	25	30	40	50
D1	31	38	48	58
D2	40	48	58	70
D3	65	72	85	104
D4	51	58	70	86
L1	43	48	52	59
L2	54-74-83	58-88-103	68-94-108-128	88-108-128
L3	63	72	80	100
L	100 a 270	100 a 240	140 a 300	180 a 300