•HIGH PRECISION MOULD BASES
•STANDARD ACCESORIES

•MOLDES DE ALTA PRECISIÓN
•ACCESORIOS STÀNDAR

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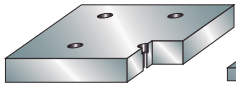
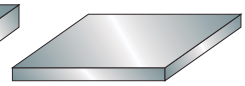
Moulds menu

PBA

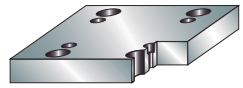


PBA-P



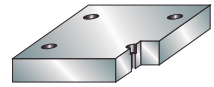
Clamping plate
Placa de fijación
Płyta mocująca
Placa base
Plaque debordante

PBA-EU



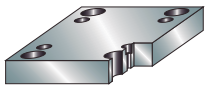
Clamping plate-EU
Placa de fijación-EU
Płyta mocująca-EU
Placa base-EU
Plaque debordante -EU

PBAS



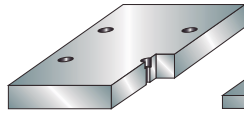
Flush Clamping plate
Placa de fijación sin alas
Płyta mocująca
Placa base sem abas
Plaque debordante

PBAS-EU

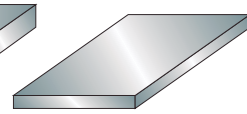


Flush Clamping plate-EU
Placa de fijación sin alas-EU
Płyta mocująca-EU
Placa base sem abas-EU
Plaque debordante-EU

PBAV

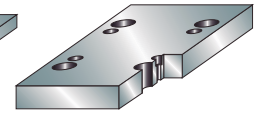


PBAV-P



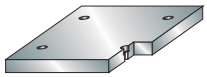
Vertical clamping plate
Placa de fijación vertical
Płyta mocująca pionowa
Placa base vertical
Plaque debordante vertical

PBAV-EU

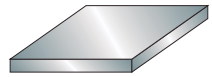


Vertical clamping plate-EU
Placa de fijación vertical-EU
Płyta mocująca pionowa-EU
Placa base vertical-EU
Plaque debordante vertical-EU

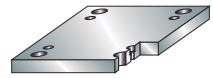
PS



PS-P

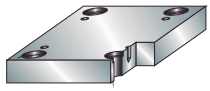


PS-EU

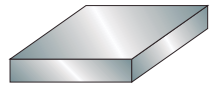


Support plate
Placa intermedia
Płyta podporowa
Placa suporte
Plaque support

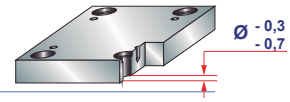
PC



PC-P

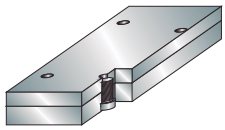


PCX



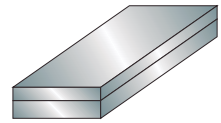
Cavity plate
Placa cavidad
Płyta formująca
Placa cavidade
Plaque porte empreintes

CPE

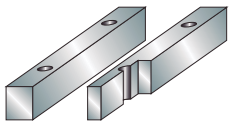


Ejector plate assembly
Juego de expulsoras
Zestaw płyt wypychaczy
Placa de extração
Jeu de plaques éjectrices

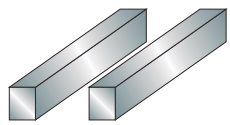
CPE-P



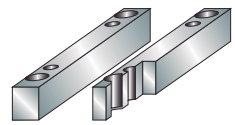
ESP



ESP-P



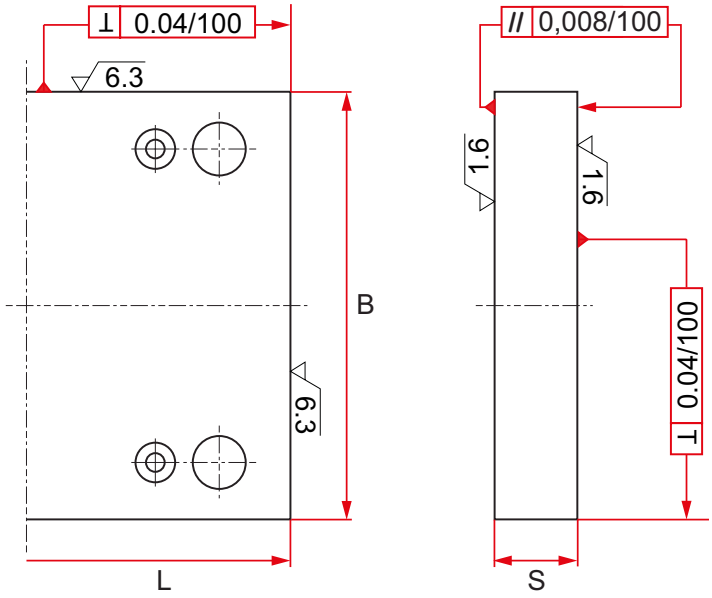
ESP-EU



Risers-EU
Regles-EU
Listwy dystansowe-EU
Calços-EU
Blocs support-EU

External measures

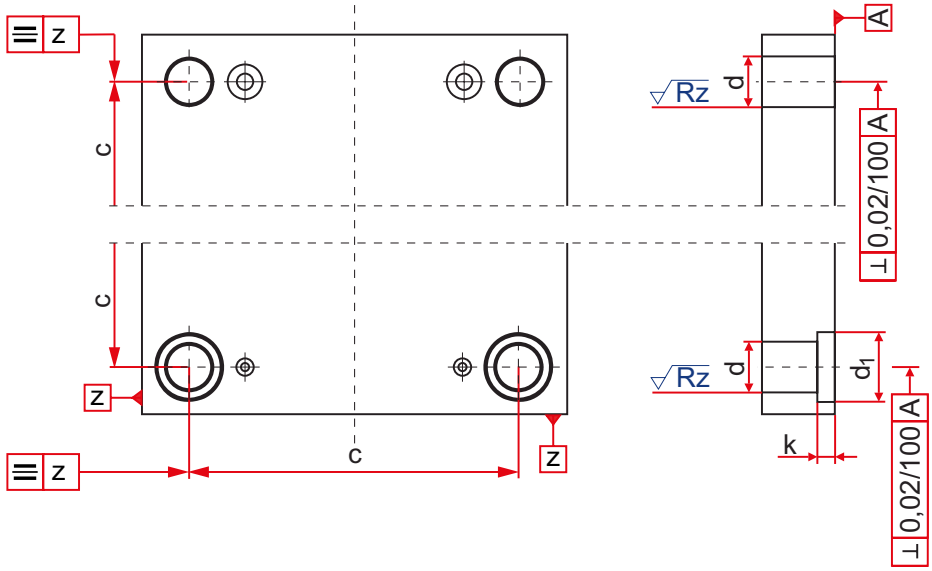
External measures - tolerances
Medidas exteriores - tolerancias
Wymiary zewnętrzne - tolerancje
Medidas externas - tolerancias
Dimensions exterieurs - tolerances



	mm	PBA - PS - ESP - CPE -PC - PCX - PCC
B	≤ 496	+0,15 0
	≤ 996	+0,20 0
L	>996	+0,30 0
S	+ 0.05 / + 0.25 mm	

Guide holes

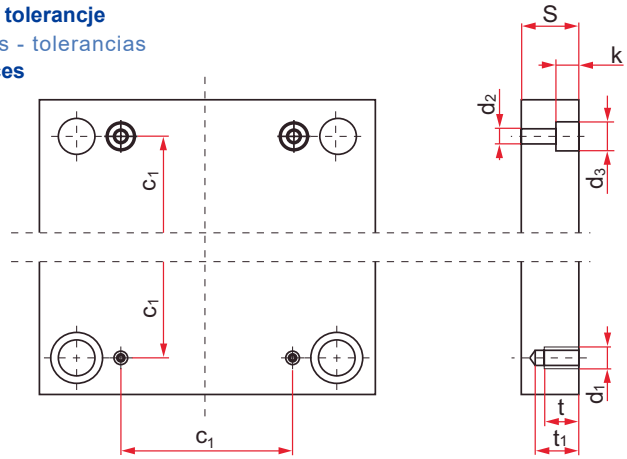
Guide holes - tolerances
Taladros guia - tolerancias
Otwory prowadzące - tolerancje
Alojamentos para guia - tolerancias
Foret pour guidage - tolerances



	mm	µm
d	>10-18	+18
	>18-30	+21
	>30-50	+25
	>50-80	+30
c	-100	±8
	>100-180	±10
	>180-315	±12
	>315-500	±15
	>500-710	±18
	>710-1000	±20
√Rz	d>10-80	≤10
d1	>10-80	+200 / -200
k	>3-30	+200/ 0
Z	0,10	

Screw holes

Screw holes - tolerances
Taladro para tornillos - tolerancias
Otwory śrub mocujących - tolerancje
Alojamentos de para fusos - tolerancias
Foret pour vises - tolerances

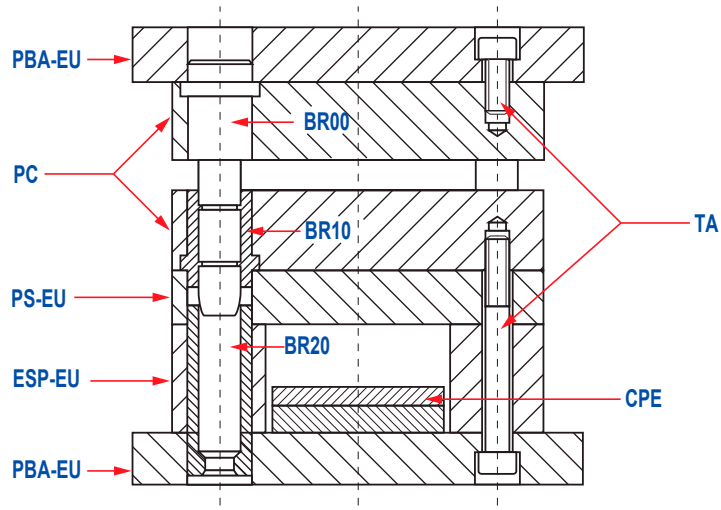


d1		M4	M6	M8	M10	M12	M16	M20
d2	Ømm	4,5	6,6	9	11	14	18	22
	Tol.	H13						
d3	Ømm	8	11	15	18	20	26	33
	Tol.	H13						
k	Ømm	4,5	7	9	13	14	18	22
	Tol.	+0,5						
C1		>30...≤120 ±0,2		>120...≤400 ±0,25			>400...≤1000 ±0,35	

d_1	M4		M6		M8		M10		M12		M16		M20	
	t	t_1	t	t_1	t	t_1	t	t_1	t	t_1	t	t_1	t	t_1
S														
9	7	-	-	-	-	-	-	-	-	-	-	-	-	-
12			9	11	-	-	-	-	-	-	-	-	-	-
17		12		13	12	15	-	-	-	-	-	-	-	-
22			12	15	16	20	17	20	-	-	-	-	-	-
27							20	25	22	25	-	-	-	-
36									24	30	30	34	-	-
46											32	40	39	44
56													40	50
66														
76														
86														
96														
116														
136														
156														
Tol.	min.7	±0,2	min.9	±0,2	min.12	±0,3	min.17	±0,3	min.20	±0,4	min.26	±0,4	min.32	±0,4

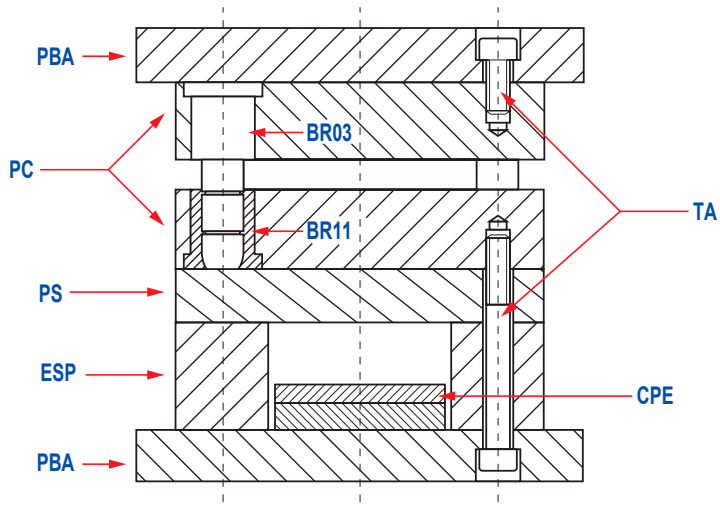
Assembly EU

Assembly EU
Montaje EU
Złożenie EU
Montagem EU
Montage EU



Assembly Standar

Assembly standard
Montaje estandar
Złożenie standardowe
Montagem standard
Montage Standard



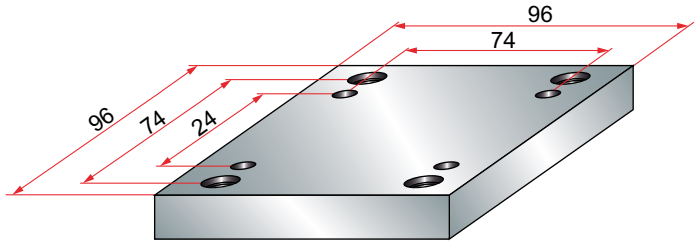
Steel table / Tabla aceros

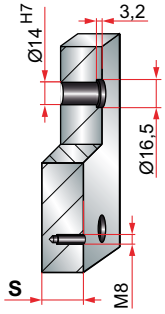
MAT.	CARACTERISTICAS / FEATURES
1,1730	*Unalloyed tool steel good machinability.*
	Acero no aleado de maquinabilidad y soldabilidad buena,
1,2083	*Steel for through hardening low corrosion, high-alloy max.240 HB (≈ max. 800 N/mm²).*
	Acero inoxidable (baja corrosión) para templado, alta aleación max. 240HB (≈ max. 800 N/mm²).
1,2085	*Corrosion resistant steel for molds with high sulfur content. Very good machinability properties.*
	Acero resistente a corrosión para moldes, con elevado contenido de azufre. Muy buenas propiedades de maquinabilidad.
1,2311	*Hardened and tempered mold steel.*
	Acero templado y revenido.
1,2312	*Hardened and tempered mold steel.*
	Acero templado y revenido.
1,2344	*Hot working steel.*
	Acero para trabajo en caliente.
1,2379	*Steel for through hardening wear-resistant, high-alloy cold-work steel . max. 255 HB (≈ max. 860 N/mm²)*
	Acero para temple, resistente a la abrasión, alta aleación para trabajo en frio. max. 255 HB (≈ max. 860 N/mm²)
1,2714 HH	*Steel for through hardening hardened and tempered; good high-temperature resistance and toughness. 38 -43 HRC (≈ 1300 - 1450 N/mm²)*
	Acero para temple. Templado y revenido. Buena resistencia a altas temperaturas y tenacidad. 38 -43 HRC (≈ 1300 - 1450 N/mm²)
1,2738 SHH	*Steel for plastic moulds boni ed, hardened and tempered; good polishability and excellent grainability; high thermal conductivity and wear resistance. 38 - 42 HRC (≈ 1200 - 1300 N/mm²)*
	Acero bonificado, templado y revenido para moldes de inyección, altas propiedades de pulido y granulosidad optimizada. Alta conductividad térmica y resistencia a la abrasión. 38 - 42 HRC (≈ 1200 - 1300 N/mm²)
1,2510	*Cold work steel, for through hardening. High dimensional stability and toughness. Working hardness 57-62 HRC max 230 HB*
	Acero para herramientas de trabajo en frío. Alta templabilidad, alta estabilidad dimensional, alta duración del filo de corte y tenacidad. Endurecimiento de trabajo 57-62 HRC max 230 HB

Steel table / Tabla aceros

APLICACIONES / APLICATIONS	
Die, mold and tool making.	1.1730
Componentes sin templar, moldes utillajes y dispositivos.	
Cavity plates and inserts for the processing of plastics, mainly for the processing of corrosive plastics.	1.2083
Placas cavidad e insertos de figura para moldes. Particularmente para plasticos corrosivos.	
Mold holders and mold accessories used in plastic injection tools.	1.2085
Porta-moldes y accesorios de moldes empleados en herramientas de inyección de plásticos.	
Mold plates and inserts for plastics injection. Good polishing properties, good EDM properties.	1.2311
Placas molde y postizos para la transformación del plástico. Buenas propiedades para pulido. Admite foto erosión y erosión estructural.	
Conditionally suitable for core parts for pressing and injection dies without special surface requirements and low mechanical stress. Mould fittings, mould frames subject low stress.Not recommended because of poor toughness.	1.2312
Solo en forma condicionada apto para punzones (machos) en herramientas de moldeo a presión e inyección, sin exigencias superficiales, escasas solicitaciones mecánicas. Accesorios de moldes, porta-moldes sujetos a pocas exigencias.	
Extruder tools including pipe extruders.Plastics and die casting molds.	1.2344
Matrices para extrusionar tubos y perfiles. Moldes para plásticos y fundición a presión.	
Cavity plates and inserts as well as wear plates cutting dies with increased wear resistance.	1.2379
Placas cavidad e insertos así como placas de fricción y matrices de corte con mayor resistencia a la abrasión.	
Mould inserts, cores and slides for injection moulds.	1.2714HH
Insertos de molde y correderas para molde de inyección.	
Cavity plates without dimension restrictions, with deep cavities and high core load.	1.2738HH
Placas cavidad sin restriccion de dimensiones , con cavidades profundas y altas cargas.	
Cavity plates and inserts as well as wear plates and cutting dies through hardened.	1.2510
Placas cavidad e insertos asi como placas de friccion y matrices de corte templadas.	

96.96





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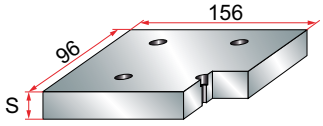
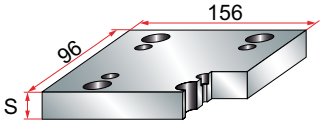


	PBA
S	17
	22

mat.: 1.1730

PBA-EU



	PBA-EU
S	17
	22

mat.: 1.1730

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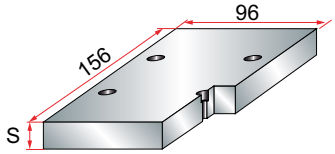

	PBAV
S	17

mat.: 1.1730

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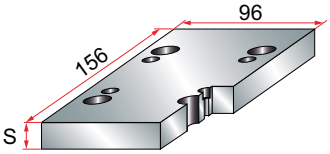

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S	17

mat.: 1.1730

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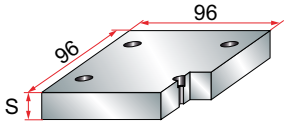

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S	17

mat.: 1.1730

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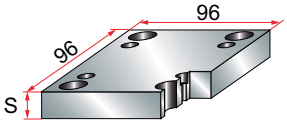

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S	17

mat.: 1.1730

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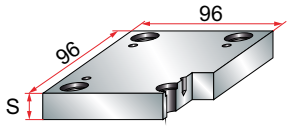

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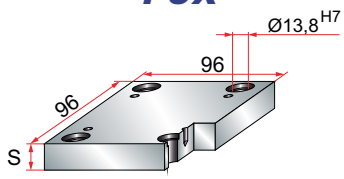
S	12	*	*	*
	17	*	*	*
	22	*	*	*
	27	*	*	*
	36	*	*	*
	46	*	*	*
	56	*	*	*

PCX



		Material			
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S	17				°
	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

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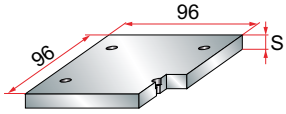
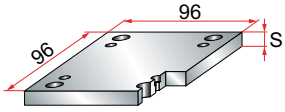


	PS
S	12
	17
	22

mat.: 1.1730

PS-EU



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S	12
	17
	22

mat.: 1.1730

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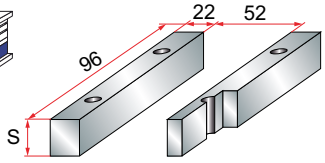
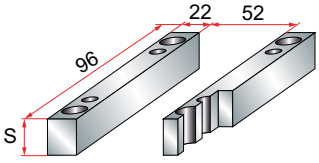


	ESP
S	36
	46
	56
	66

mat.: 1.1730

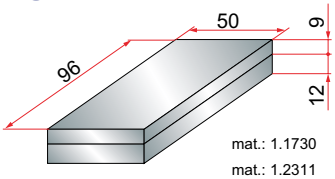
ESP-EU



	ESP-EU
S	36
	46
	56
	66

mat.: 1.1730

CPE-P

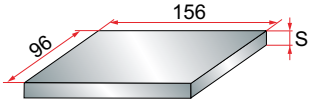


mat.: 1.1730

mat.: 1.2311

P PLATES

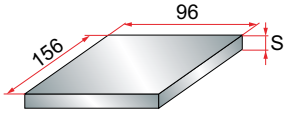
PBA-P



	PBA-P
S	17
	22

mat.: 1.1730

PBAV-P



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S	17

mat.: 1.1730

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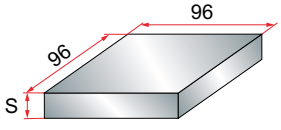

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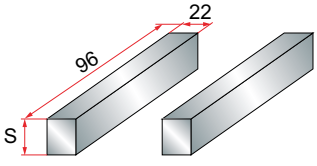
		1.1730	1.2311	1.2312	1.2085
S	12	*	*	*	
	17	*	*	*	
	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

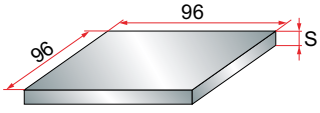
ESP-P



	ESP-P
S	36
	46
	56
	66

mat.: 1.1730

PS-P



	PS-P
S	12
	17
	22

mat.: 1.1730

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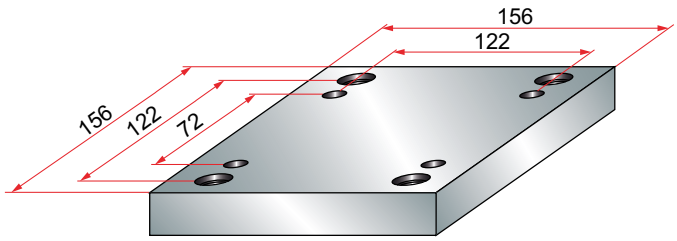

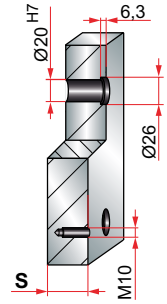

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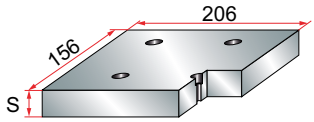

	PBA
S	22
	27

mat.: 1.1730

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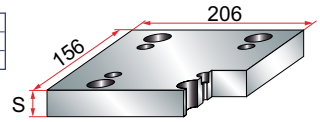

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S	22
	27

mat.: 1.1730

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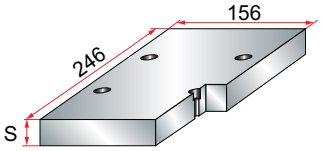

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S	22
	27

mat.: 1.1730

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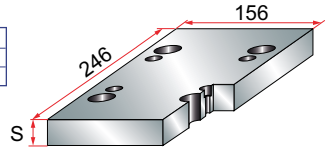

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S	22
	27

mat.: 1.1730

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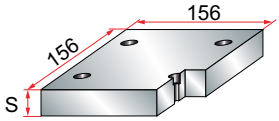

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S	22
	27

mat.: 1.1730

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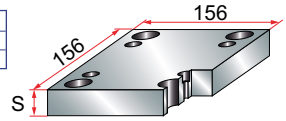
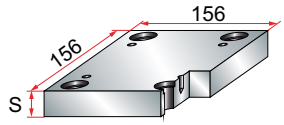


	PBAS-EU
S	22
	27

mat.: 1.1730

PC



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S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86		*	*	°
	96	*	*	*	°
	116		*	*	°

° Entrega 3/4 días - Delivery 3/4 days

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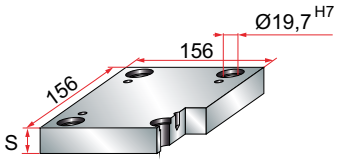

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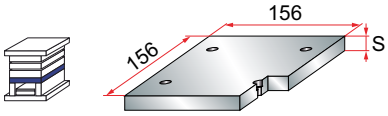
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*		°
	66	*	*		°
	76	*	*		°
	86	*	*		°
	96	*	*		°
	116	*	*		°

° Entrega 3/4 días - Delivery 3/4 days

156.156

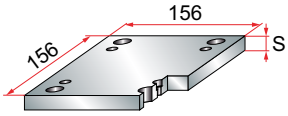
PS



	PS
S	22
	27

mat.: 1.1730

PS-EU



	PS-EU
S	22
	27

mat.: 1.1730

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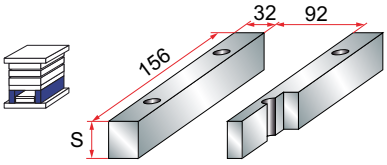
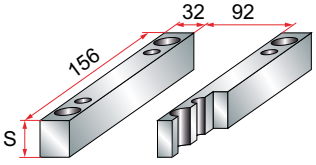


	ESP
S	46
	56
	66
	76

mat.: 1.1730

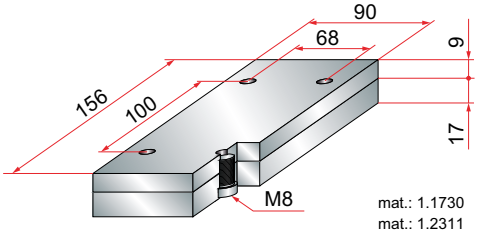
ESP-EU



	ESP-EU
S	46
	56
	66
	76

mat.: 1.1730

CPE



mat.: 1.1730
mat.: 1.2311

P PLATES

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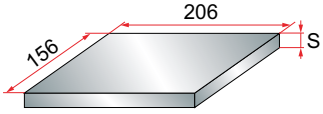
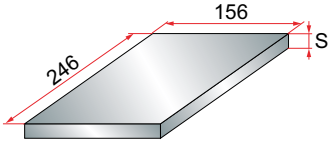


	PBA-P
S	22
	27

mat.: 1.1730

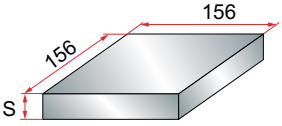
PBAV-P



	PBAV-P
S	22
	27

mat.: 1.1730

PC-P



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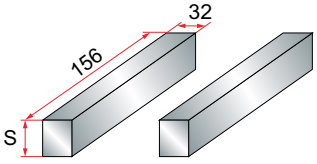
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

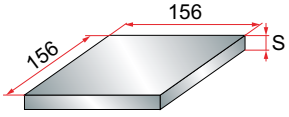
ESP-P



	ESP-P
S	46
	56
	66
	76

mat.: 1.1730

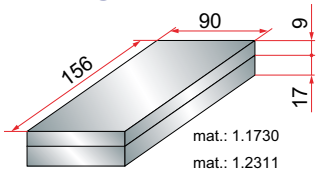
PS-P



	PS-P
S	22
	27

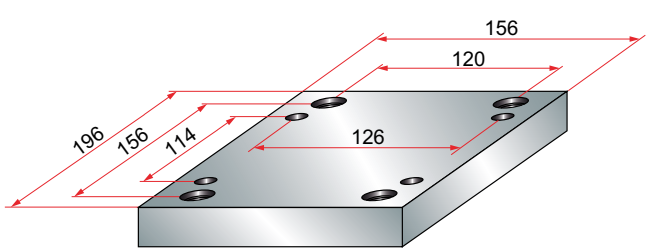
mat.: 1.1730

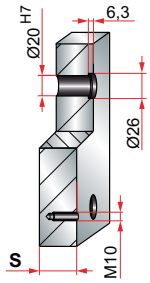
CPE-P



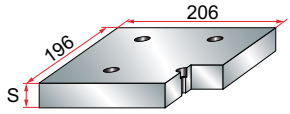
mat.: 1.1730
mat.: 1.2311

156.196





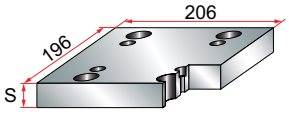
PBA



	PBA
S	22
	27

mat.: 1.1730

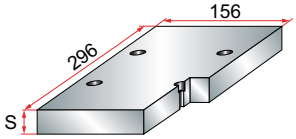
PBA-EU



	PBA-EU
S	22
	27

mat.: 1.1730

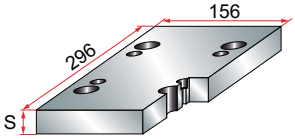
PBAV



	PBAV
S	22
	27

mat.: 1.1730

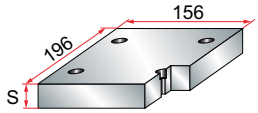
PBAV-EU



	PBAV-EU
S	22
	27

mat.: 1.1730

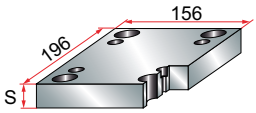
PBAS



	PBAS
S	22
	27

mat.: 1.1730

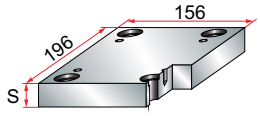
PBAS-EU



	PBAS-EU
S	22
	27

mat.: 1.1730

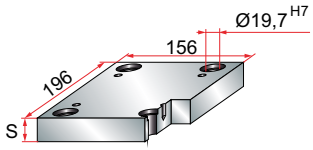
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86		*	*	°
	96	*	*	*	°
	116		*	*	°

° Entrega 3/4 días - Delivery 3/4 days

PCX

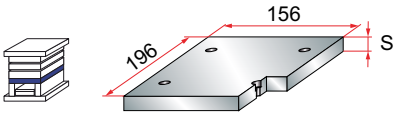


		Material			
		1.2311	1.2312	1.2344	1.2085
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*		°
	66	*	*		°
	76	*	*		°
	86	*	*		°
	96	*	*		°
	116	*	*		°

° Entrega 3/4 días - Delivery 3/4 days

156.196

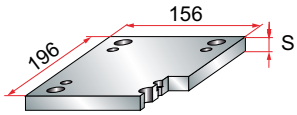
PS



	PS
S	22
	27

mat.: 1.1730

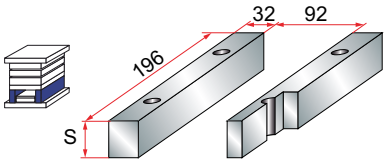
PS-EU



	PS-EU
S	22
	27

mat.: 1.1730

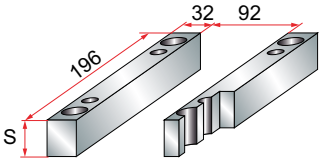
ESP



	ESP
S	46
	56
	66
	76

mat.: 1.1730

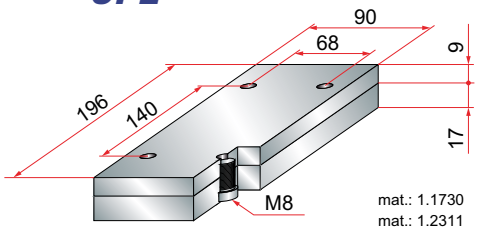
ESP-EU



	ESP-EU
S	46
	56
	66
	76

mat.: 1.1730

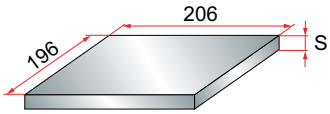
CPE



mat.: 1.1730
mat.: 1.2311

P PLATES

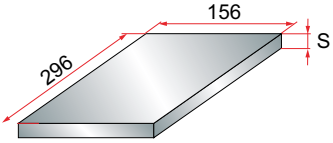
PBA-P



	PBA-P
S	22
	27

mat.: 1.1730

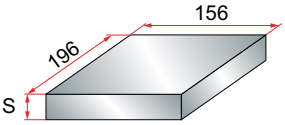
PBAV-P



	PBAV-P
S	22
	27

mat.: 1.1730

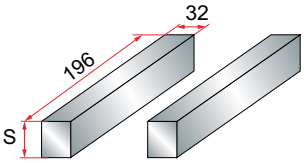
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

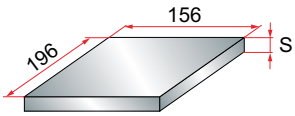
ESP-P



	ESP-P
S	46
	56
	66
	76

mat.: 1.1730

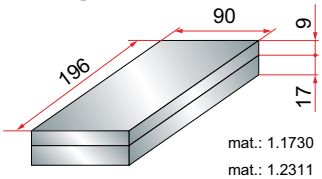
PS-P



	PS-P
S	27
	36
	46

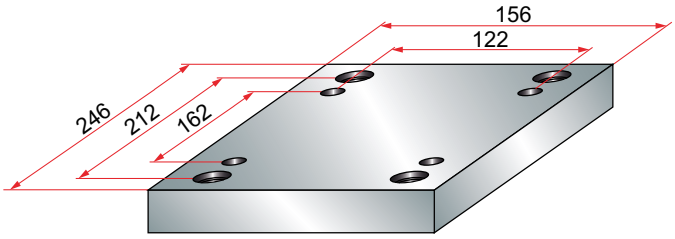
mat.: 1.1730

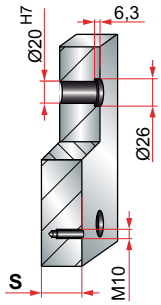
CPE-P



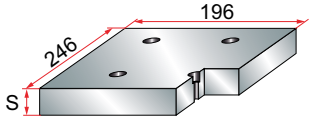
mat.: 1.1730
mat.: 1.2311

156.246





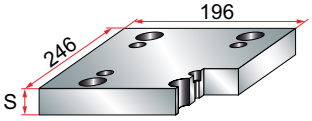
PBA



	PBA
S	22
	27

mat.: 1.1730

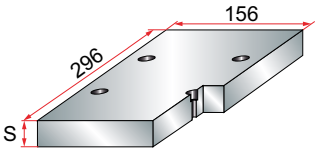
PBA-EU



	PBA-EU
S	22
	27

mat.: 1.1730

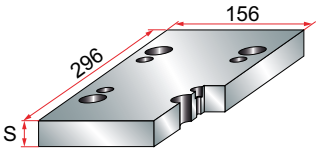
PBAV



	PBAV
S	22
	27

mat.: 1.1730

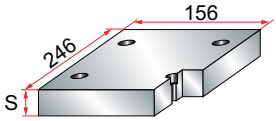
PBAV-EU



	PBAV-EU
S	22
	27

mat.: 1.1730

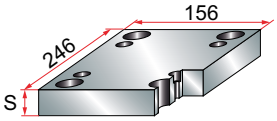
PBAS



	PBAS
S	22
	27

mat.: 1.1730

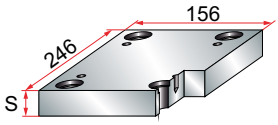
PBAS-EU



	PBAS-EU
S	22
	27

mat.: 1.1730

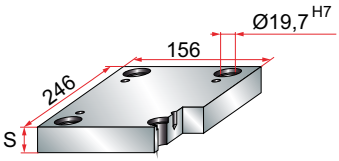
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116		*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

PCX

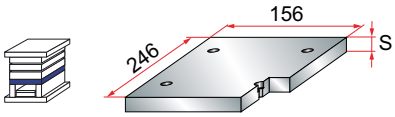


		Material			
		1.2311	1.2312	1.2344	1.2085
S	22	*	*		o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o

° Entrega 3/4 dias - Delivery 3/4 days

156.246

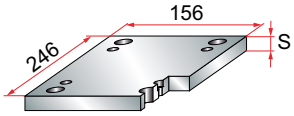
PS



	PS
S	22
	27

mat.: 1.1730

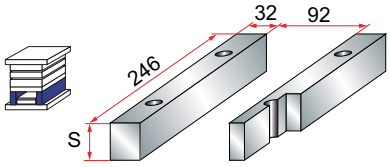
PS-EU



	PS-EU
S	22
	27

mat.: 1.1730

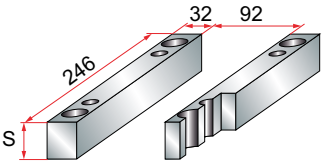
ESP



	ESP
S	46
	56
	66
	76

mat.: 1.1730

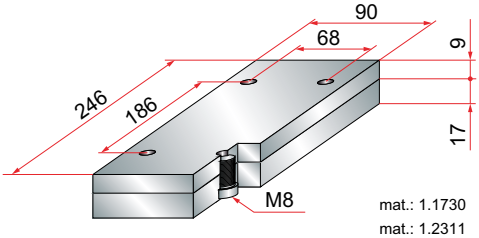
ESP-EU



	ESP-EU
S	46
	56
	66
	76

mat.: 1.1730

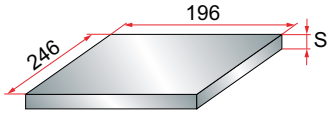
CPE



mat.: 1.1730
mat.: 1.2311

P PLATES

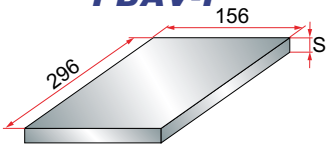
PBA-P



	PBA-P
S	22
	27

mat.: 1.1730

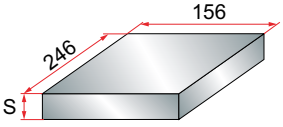
PBAV-P



	PBAV-P
S	22
	27

mat.: 1.1730

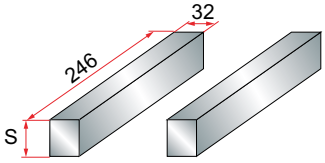
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

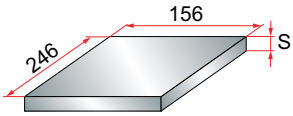
ESP-P



	ESP-P
S	46
	56
	66
	76

mat.: 1.1730

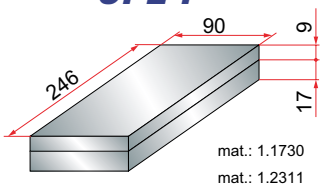
PS-P



	PS-P
S	22
	27

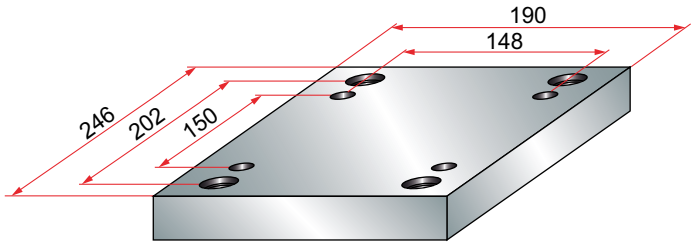
mat.: 1.1730

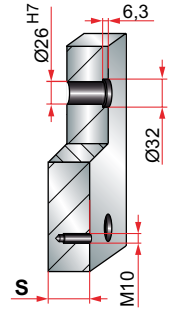
CPE-P



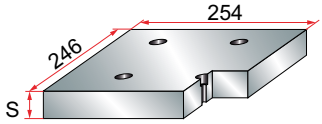
mat.: 1.1730
mat.: 1.2311

190.246





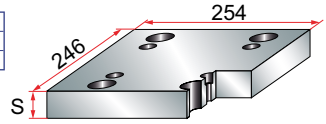
PBA



	PBA
S	22
	27

mat.: 1.1730

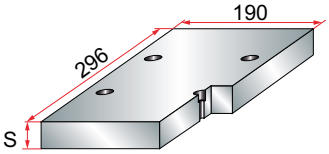
PBA-EU



	PBA-EU
S	22
	27

mat.: 1.1730

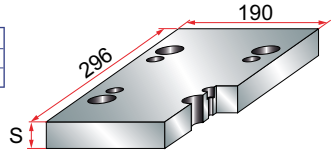
PBAV



	PBAV
S	22
	27

mat.: 1.1730

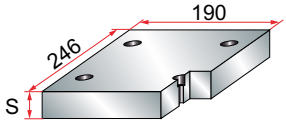
PBAV-EU



	PBAV-EU
S	22
	27

mat.: 1.1730

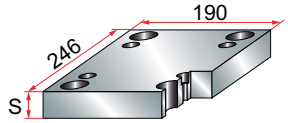
PBAS



	PBAS
S	22
	27

mat.: 1.1730

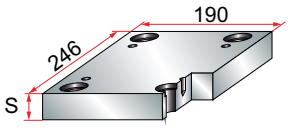
PBAS-EU



	PBAS-EU
S	22
	27

mat.: 1.1730

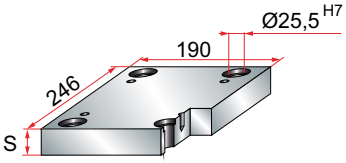
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

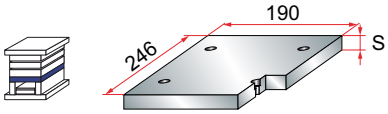


		Material			
		1.2311	1.2312	1.2344	1.2085
S	22	*	*		o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o

° Entrega 3/4 días - Delivery 3/4 days

190.246

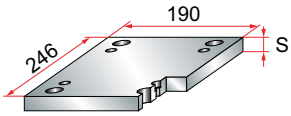
PS



	PS
S	22
	27
	36

mat.: 1.1730

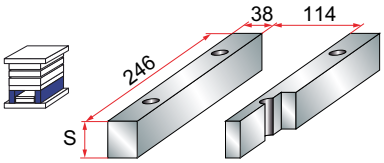
PS-EU



	PS-EU
S	22
	27
	36

mat.: 1.1730

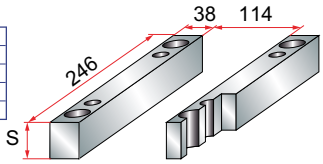
ESP



	ESP
S	46
	56
	66
	76

mat.: 1.1730

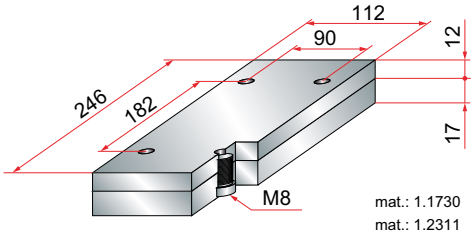
ESP-EU



	ESP-EU
S	46
	56
	66
	76

mat.: 1.1730

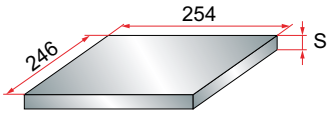
CPE



mat.: 1.1730
mat.: 1.2311

P PLATES

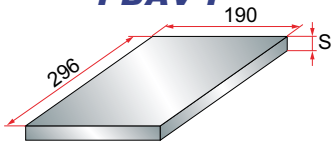
PBA-P



	PBA-P
S	22
	27

mat.: 1.1730

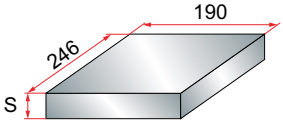
PBAV-P



	PBAV-P
S	22
	27

mat.: 1.1730

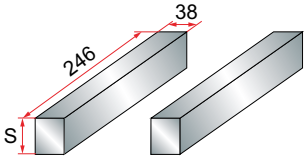
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

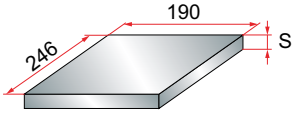
ESP-P



	ESP-P
S	46
	56
	66
	76

mat.: 1.1730

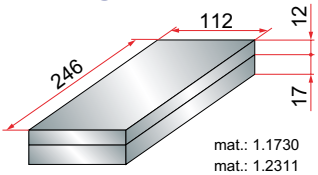
PS-P



	PS-P
S	22
	27
	36

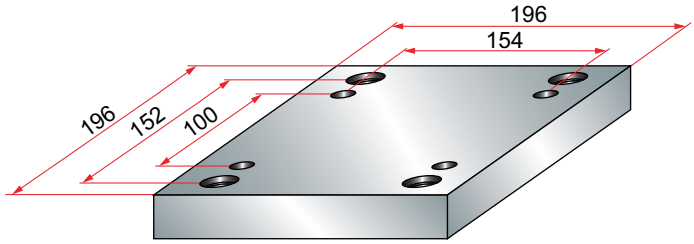
mat.: 1.1730

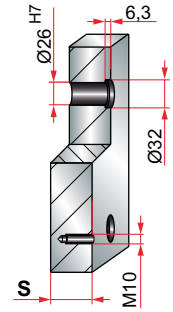
CPE-P



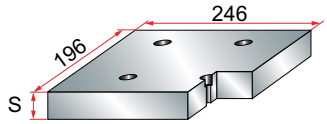
mat.: 1.1730
mat.: 1.2311

196.196





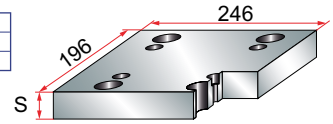
PBA



	PBA
S	22
	27

mat.: 1.1730

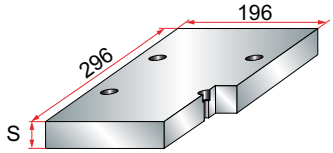
PBA-EU



	PBA-EU
S	22
	27

mat.: 1.1730

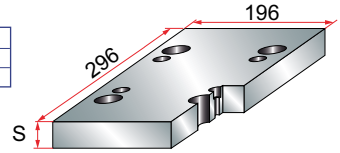
PBAV



	PBAV
S	22
	27

mat.: 1.1730

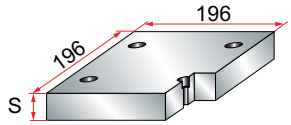
PBAV-EU



	PBAV-EU
S	22
	27

mat.: 1.1730

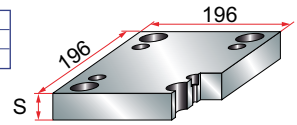
PBAS



	PBAS
S	22
	27

mat.: 1.1730

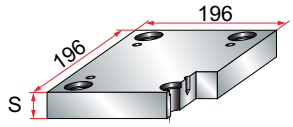
PBAS-EU



	PBAS-EU
S	22
	27

mat.: 1.1730

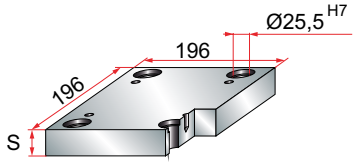
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

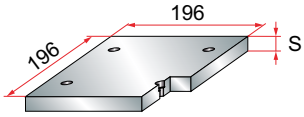


		Material			
		1.2311	1.2312	1.2344	1.2085
S	22	*	*		o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o

° Entrega 3/4 días - Delivery 3/4 days

196.196

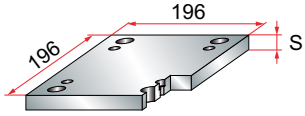
PS



	PS
S	27
	36

mat.: 1.1730

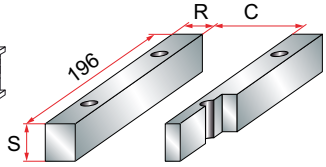
PS-EU



	PS-EU
S	27
	36

mat.: 1.1730

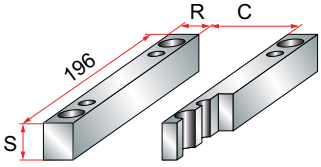
ESP



	ESP	
R	38	52
C	120	92
S	46	
	56	
	66	
	76	

mat.: 1.1730

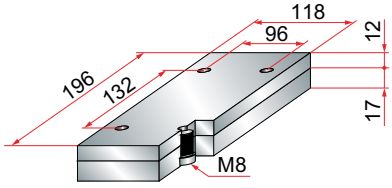
ESP-EU

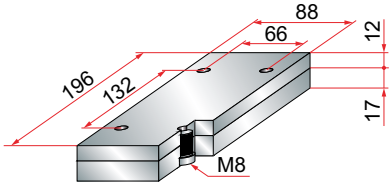


	ESP-EU	
R	38	52
C	120	92
S	46	
	56	
	66	
	76	

mat.: 1.1730

CPE

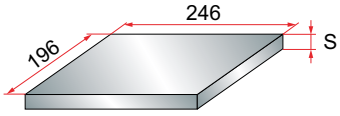




mat.: 1.1730
mat.: 1.2311

P PLATES

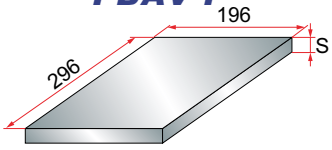
PBA-P



	PBA-P
S	22
	27

mat.: 1.1730

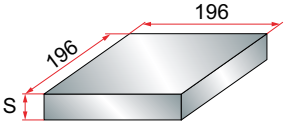
PBAV-P



	PBAV-P
S	22
	27

mat.: 1.1730

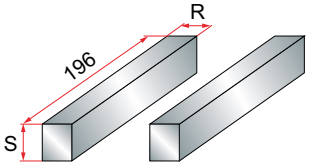
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

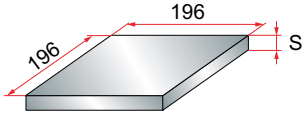
ESP-P



	ESP-P	
R	38	52
S	46	
	56	
	66	
	76	

mat.: 1.1730

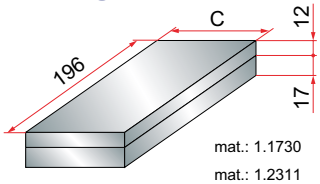
PS-P



	PS-P
S	27
	36

mat.: 1.1730

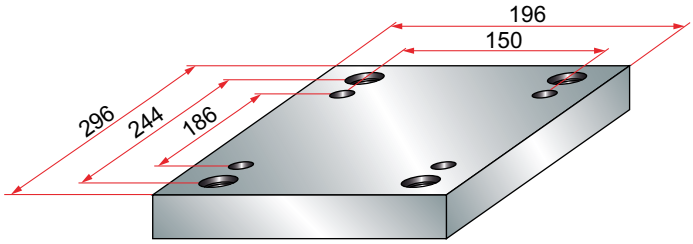
CPE-P

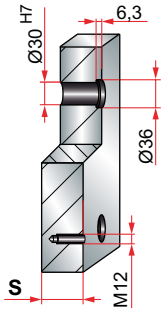


	CPE-P
C	88
	118

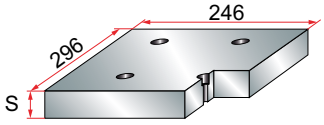
mat.: 1.1730
mat.: 1.2311

196.296





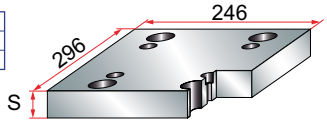
PBA



	PBA
S	27
	36

mat.: 1.1730

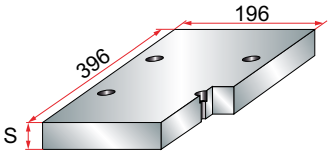
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

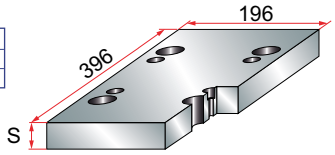
PBAV



	PBAV
S	22
	27

mat.: 1.1730

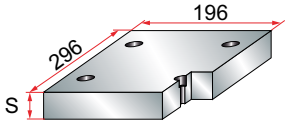
PBAV-EU



	PBAV-EU
S	22
	27

mat.: 1.1730

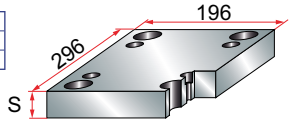
PBAS



	PBAS
S	22
	27

mat.: 1.1730

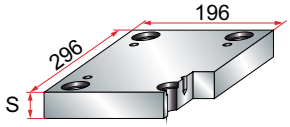
PBAS-EU



	PBAS-EU
S	22
	27

mat.: 1.1730

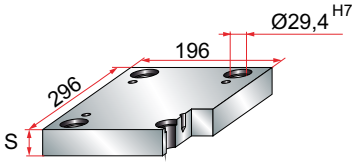
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

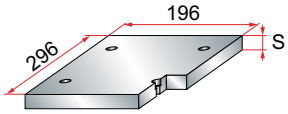


		Material			
		1.2311	1.2312	1.2344	1.2085
S	22	*	*		o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o

° Entrega 3/4 días - Delivery 3/4 days

196.296

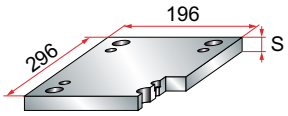
PS



	PS
S	22
	36

mat.: 1.1730

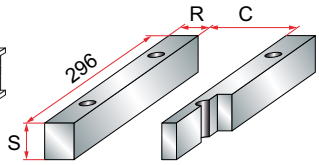
PS-EU



	PS-EU
S	22
	36

mat.: 1.1730

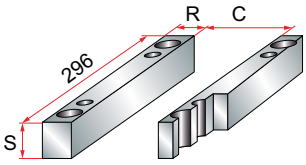
ESP



ESP		
R	43	58
C	110	80
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

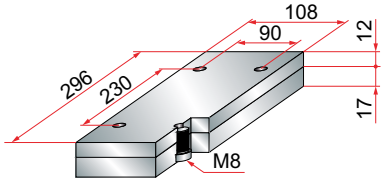
ESP-EU

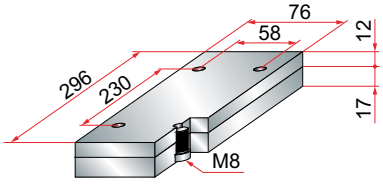


ESP-EU		
R	43	58
C	110	80
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

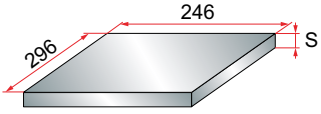




mat.: 1.1730
mat.: 1.2311

P PLATES

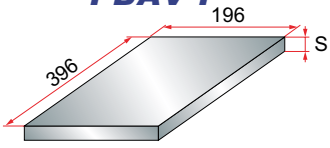
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

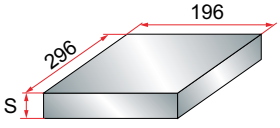
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

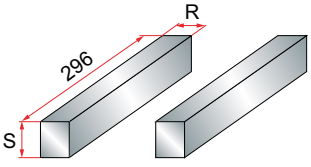
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

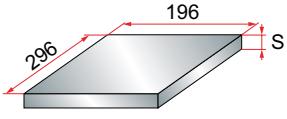
ESP-P



ESP-P		
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

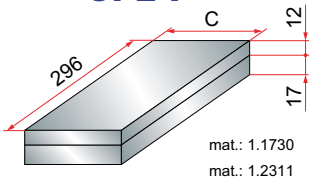
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

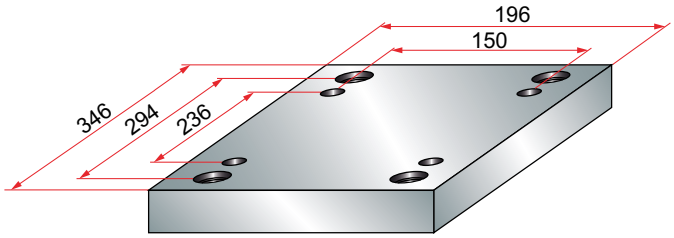
CPE-P

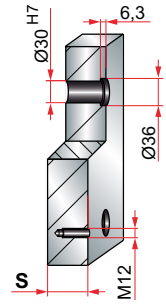


	CPE-P
C	76
	108

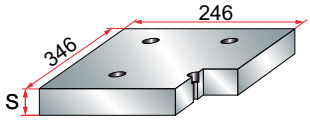
mat.: 1.1730
mat.: 1.2311

196.346





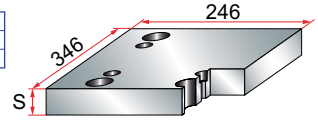
PBA



	PBA
S	27
	36

mat.: 1.1730

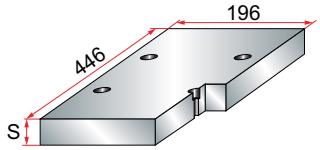
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

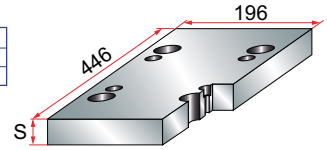
PBAV



	PBAV
S	27
	36

mat.: 1.1730

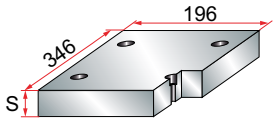
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

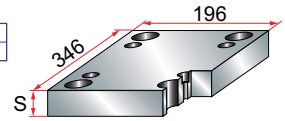
PBAS



	PBAS
S	36

mat.: 1.1730

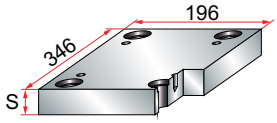
PBAS-EU



	PBAS-EU
S	36

mat.: 1.1730

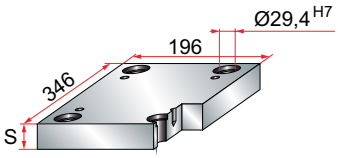
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136		*	*	o

° Entrega 3/4 dias

PCX

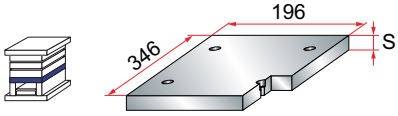


		Material			
		1.2311	1.2312	1.2344	1.2085
S	22	*	*		o
	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o

° Entrega 3/4 dias

196.346

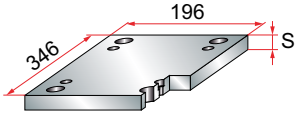
PS



	PS
S	36

mat.: 1.1730

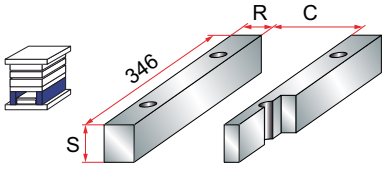
PS-EU



	PS-EU
S	36

mat.: 1.1730

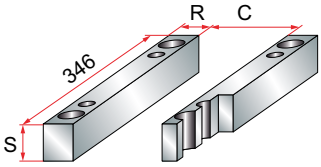
ESP



ESP		
R	43	58
C	110	80
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

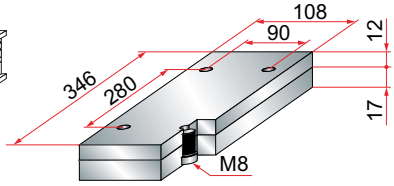
ESP-EU

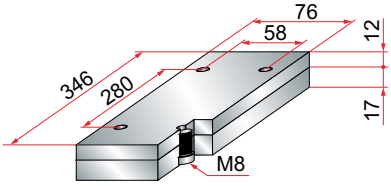


ESP-EU		
R	43	58
C	110	80
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

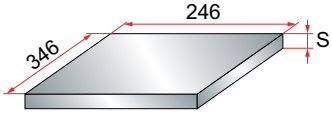




mat.: 1.1730
mat.: 1.2311

P PLATES

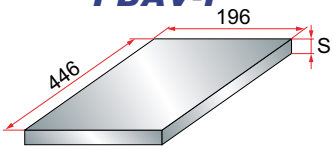
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

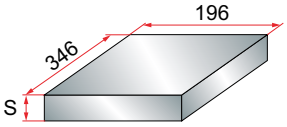
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

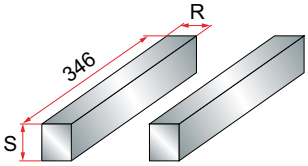
PC-P



		Material		
		1.2311	1.2312	1.2085
s	22	*	*	°
	27	*	*	°
	36	*	*	°
	46	*	*	°
	56	*	*	°
	66	*	*	°
	76	*	*	°
	86	*	*	°
	96	*	*	°
	116	*	*	°
	136	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

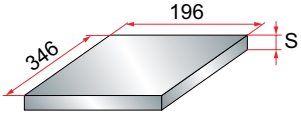
ESP-P



ESP-P		
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

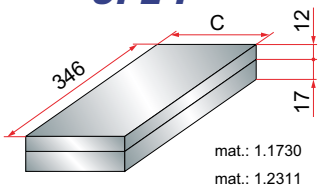
PS-P



	PS-P
S	36

mat.: 1.1730

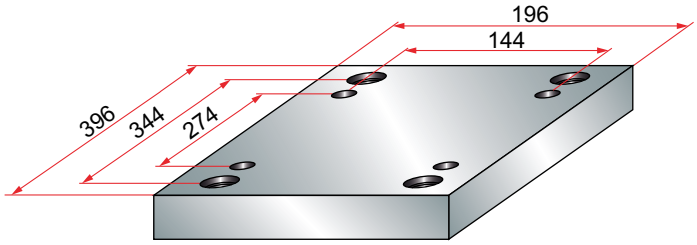
CPE-P

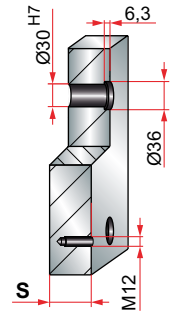


	CPE-P
C	76
	108

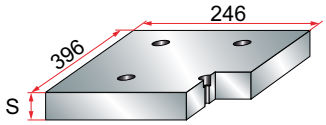
mat.: 1.1730
mat.: 1.2311

196.396





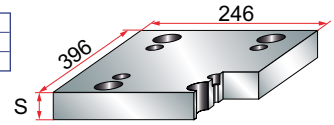
PBA



	PBA
S	27
	36

mat.: 1.1730

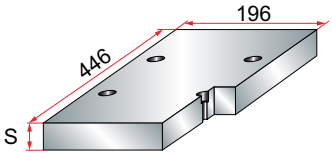
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

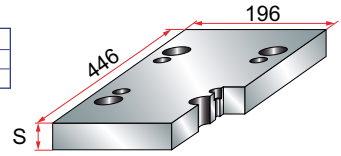
PBAV



	PBAV
S	27
	36

mat.: 1.1730

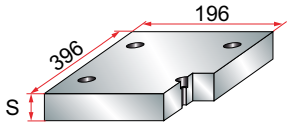
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

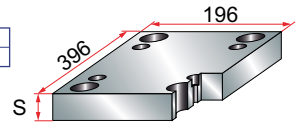
PBAS



	PBAS
S	36

mat.: 1.1730

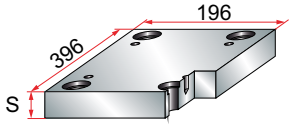
PBAS-EU



	PBAS-EU
S	36

mat.: 1.1730

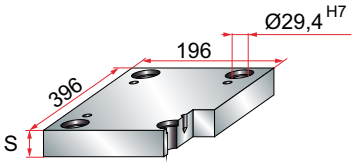
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

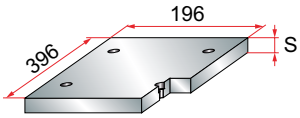


		Material			
		1.2311	1.2312	1.2344	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o

° Entrega 3/4 días - Delivery 3/4 days

196.396

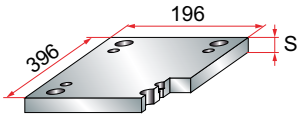
PS



	PS
S	36

mat.: 1.1730

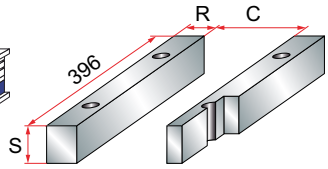
PS-EU



	PS-EU
S	36

mat.: 1.1730

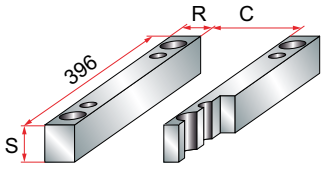
ESP



ESP		
R	43	58
C	110	80
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

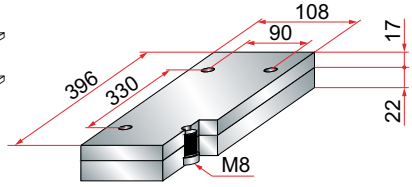
ESP-EU

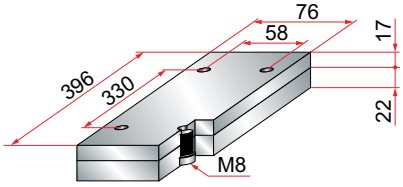


ESP-EU		
R	43	58
C	110	80
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

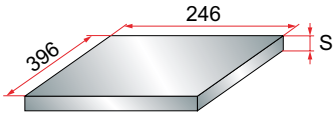




mat.: 1.1730
mat.: 1.2311

P PLATES

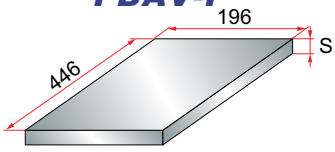
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

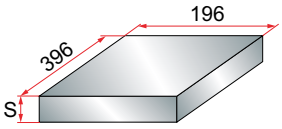
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

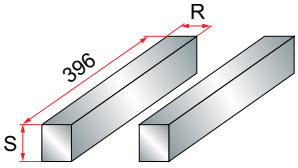
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
s	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o

º *Entrega 3/4 días*

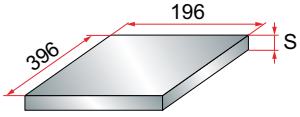
ESP-P



ESP-P		
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

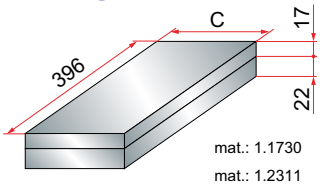
PS-P



	PS-P
s	36

mat.: 1.1730

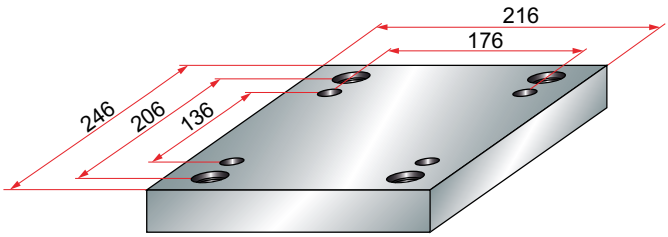
CPE-P

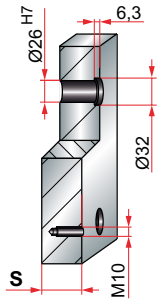


	CPE-P
C	76
	108

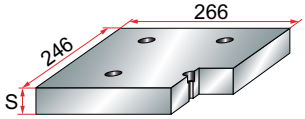
mat.: 1.1730
mat.: 1.2311

216.246





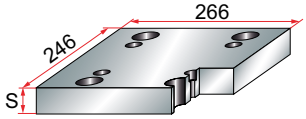
PBA



	PBA
S	22
	27
	36

mat.: 1.1730

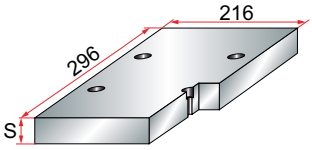
PBA-EU



	PBA-EU
S	22
	27
	36

mat.: 1.1730

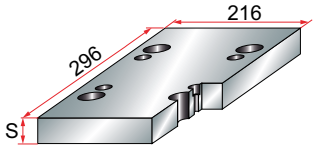
PBAV



	PBAV
S	22
	27
	36

mat.: 1.1730

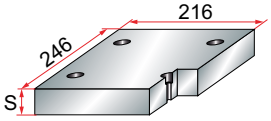
PBAV-EU



	PBAV-EU
S	22
	27
	36

mat.: 1.1730

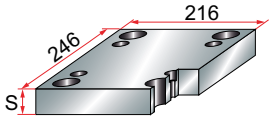
PBAS



	PBAS
S	22
	27
	36

mat.: 1.1730

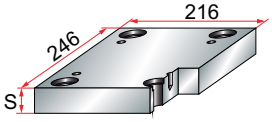
PBAS-EU



	PBAS-EU
S	22
	27
	36

mat.: 1.1730

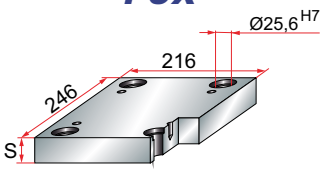
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116		*	*	

° Entrega 3/4 dias - Delivery 3/4 days

PCX

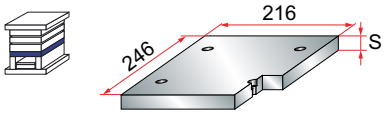


		Material			
		1.2311	1.2312	1.2344	1.2085
S	22	*	*		°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*		°
	66	*	*		°
	76	*	*		°
	86	*	*		°
	96	*	*		°

° Entrega 3/4 dias - Delivery 3/4 days

216.246

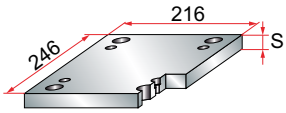
PS



	PS
S	22
	27
	36

mat.: 1.1730

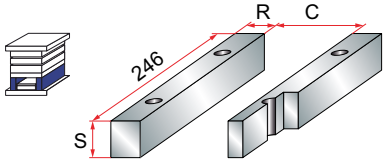
PS-EU



	PS-EU
S	22
	27
	36

mat.: 1.1730

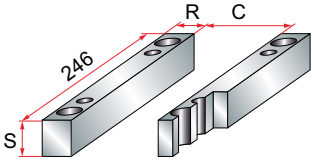
ESP



ESP		
R	36	50
C	144	116
S	46	
	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

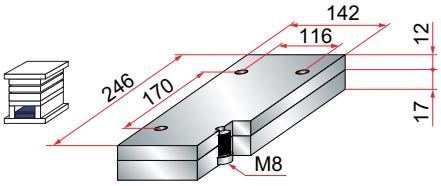
ESP-EU

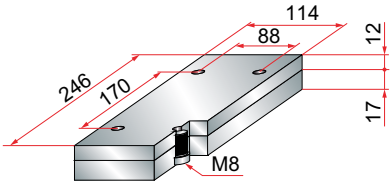


ESP-EU		
R	36	50
C	144	116
S	46	
	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

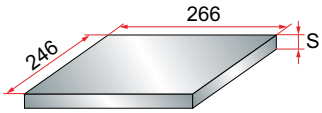




mat.: 1.1730
mat.: 1.2311

P PLATES

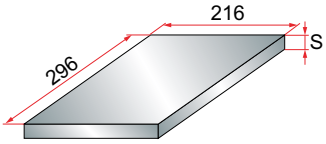
PBA-P



	PBA-P
S	22
	27
	36

mat.: 1.1730

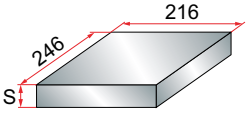
PBAV-P



	PBAV-P
S	22
	27
	36

mat.: 1.1730

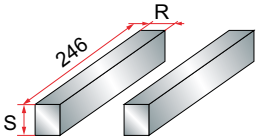
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116		*	*	

° Entrega 3/4 dias - Delivery 3/4 days

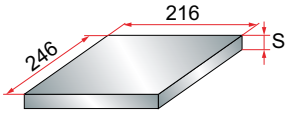
ESP-P



ESP-P		
R	36	50
S	46	
	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

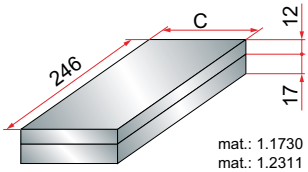
PS-P



	PS-P
S	22
	27
	36

mat.: 1.1730

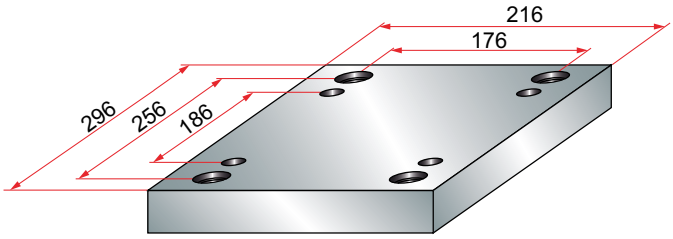
CPE-P

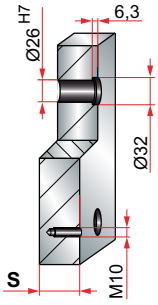


	CPE-P
C	114
	142

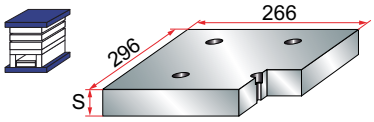
mat.: 1.1730
mat.: 1.2311

216.296





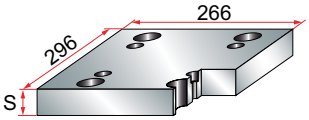
PBA



	PBA
S	22
	27
	36

mat.: 1.1730

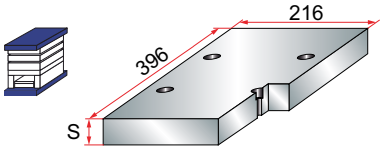
PBA-EU



	PBA-EU
S	22
	27
	36

mat.: 1.1730

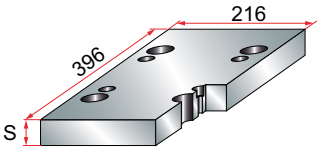
PBAV



	PBAV
S	22
	27
	36

mat.: 1.1730

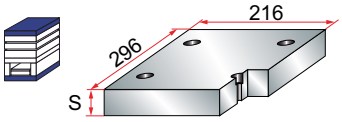
PBAV-EU



	PBAV-EU
S	22
	27
	36

mat.: 1.1730

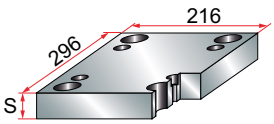
PBAS



	PBAS
S	22
	27
	36

mat.: 1.1730

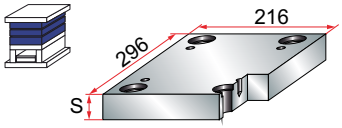
PBAS-EU



	PBAS-EU
S	22
	27
	36

mat.: 1.1730

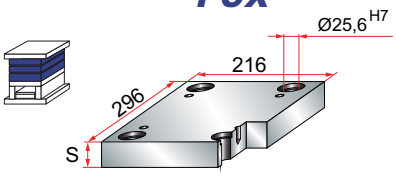
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116		*	*	

° Entrega 3/4 días - Delivery 3/4 days

PCX

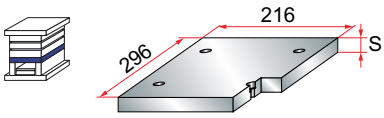


		Material			
		1.2311	1.2312	1.2344	1.2085
S	22	*	*		°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*		°
	66	*	*		°
	76	*	*		°
	86	*	*		°
	96	*	*		°

° Entrega 3/4 días - Delivery 3/4 days

216.296

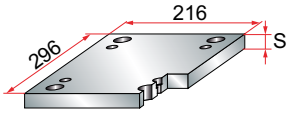
PS



	PS
S	22
	27
	36

mat.: 1.1730

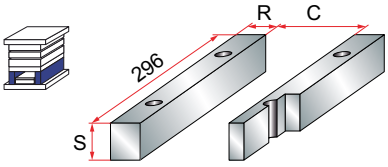
PS-EU



	PS-EU
S	22
	27
	36

mat.: 1.1730

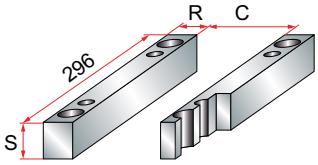
ESP



	ESP	
R	36	50
C	144	116
S	46	
	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

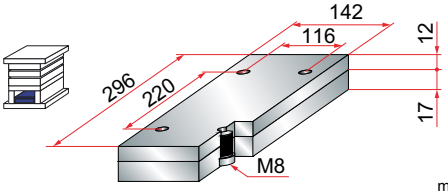
ESP-EU

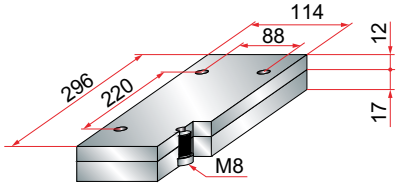


	ESP-EU	
R	36	50
C	144	116
S	46	
	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

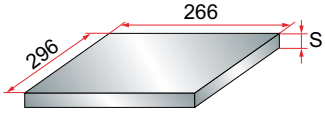




mat.: 1.1730
mat.: 1.2311

P PLATES

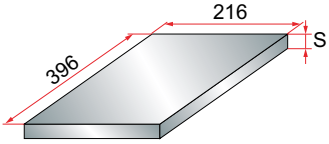
PBA-P



	PBA-P
S	22
	27
	36

mat.: 1.1730

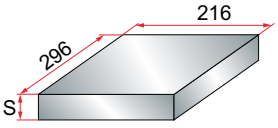
PBAV-P



	PBAV-P
S	22
	27
	36

mat.: 1.1730

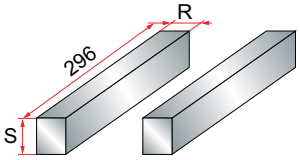
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	22	*	*	*	°
	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116		*	*	

° Entrega 3/4 dias - Delivery 3/4 days

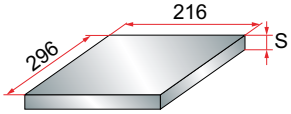
ESP-P



	ESP-P	
R	36	50
S	46	
	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

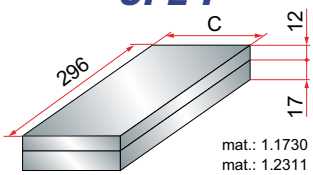
PS-P



	PS-P
S	22
	27
	36

mat.: 1.1730

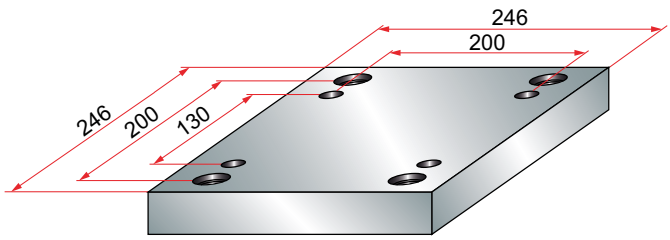
CPE-P

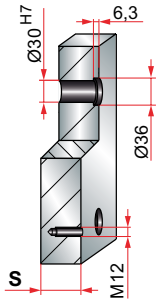


mat.: 1.1730
mat.: 1.2311

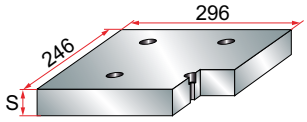
	CPE-P
C	114
	142

246.246





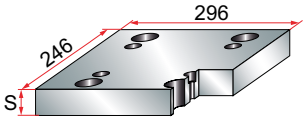
PBA



	PBA
S	27
	36

mat.: 1.1730

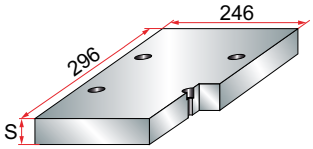
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

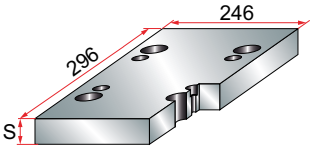
PBAV



	PBAV
S	27
	36

mat.: 1.1730

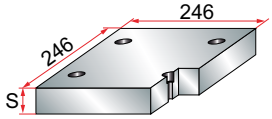
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

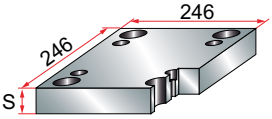
PBAS



	PBAS
S	27
	36

mat.: 1.1730

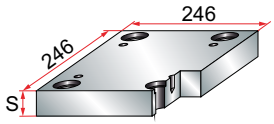
PBAS-EU



	PBAS-EU
S	27
	36

mat.: 1.1730

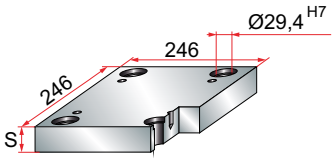
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

PCX

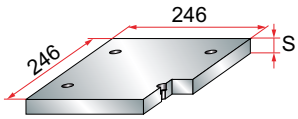


		Material			
		1.2311	1.2312	1.2344	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o
	156	*	*		o

° Entrega 3/4 dias - Delivery 3/4 days

246.246

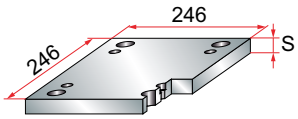
PS



	PS
S	27
	36

mat.: 1.1730

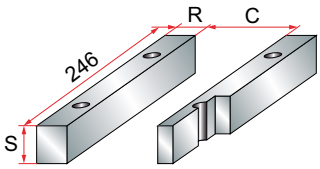
PS-EU



	PS-EU
S	27
	36

mat.: 1.1730

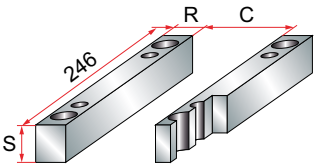
ESP



ESP		
R	43	58
C	160	130
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

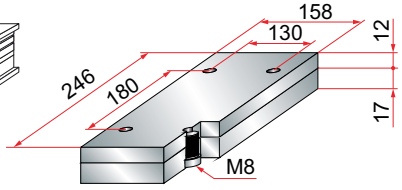
ESP-EU

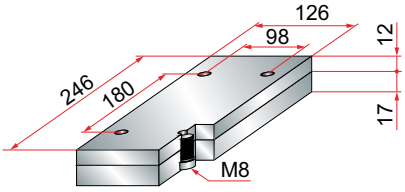


ESP-EU		
R	43	58
C	160	130
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

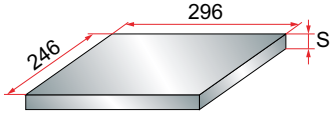




mat.: 1.1730
mat.: 1.2311

P PLATES

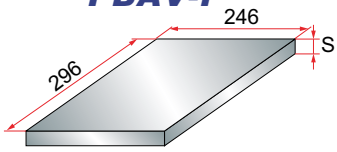
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

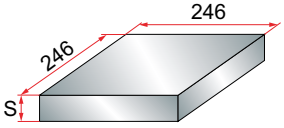
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

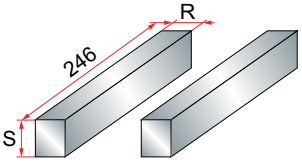
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
s	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º Entrega 3/4 días - Delivery 3/4 days

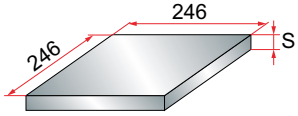
ESP-P



ESP-P		
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

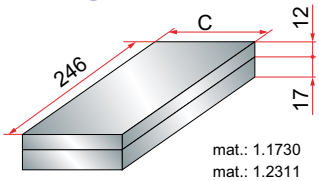
PS-P



	PS-P
S	27
	36

mat.: 1.1730

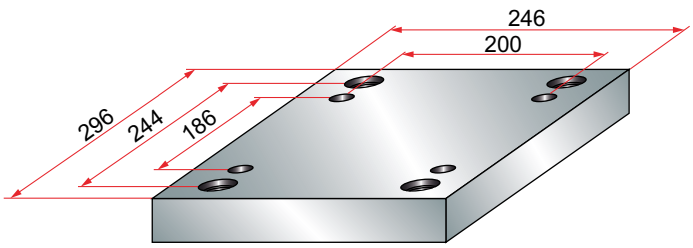
CPE-P

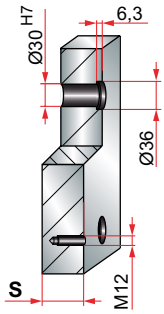


mat.: 1.1730
mat.: 1.2311

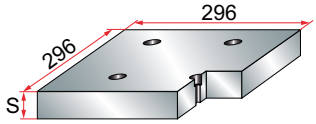
	CPE-P
C	126
	158

246.296





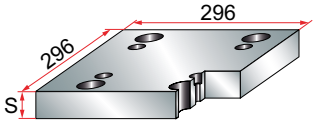
PBA



	PBA
S	27
	36

mat.: 1.1730

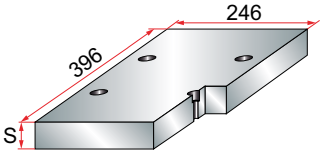
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

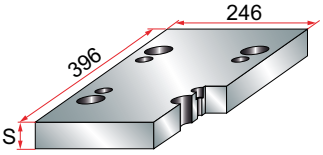
PBAV



	PBAV
S	27
	36

mat.: 1.1730

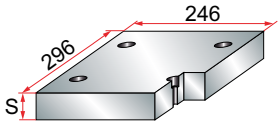
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

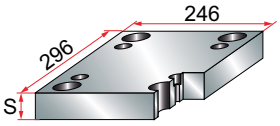
PBAS



	PBAV
S	27
	36

mat.: 1.1730

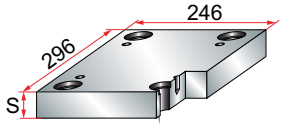
PBAS-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

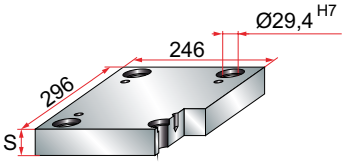
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86		*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156		*	*	°

° Entrega 3/4 días - Delivery 3/4 days

PCX

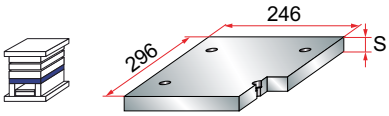


		Material			
		1.2311	1.2312	1.2344	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*		°
	76	*	*		°
	86	*	*		°
	96	*	*		°
	116	*	*		°
	136	*	*		°
	156	*	*		°

° Entrega 3/4 días - Delivery 3/4 days

246.296

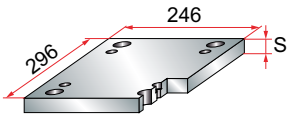
PS



	PS
S	27
	36

mat.: 1.1730

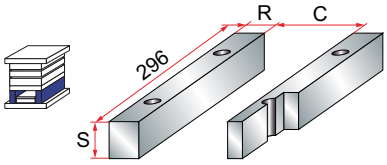
PS-EU



	PS-EU
S	27
	36

mat.: 1.1730

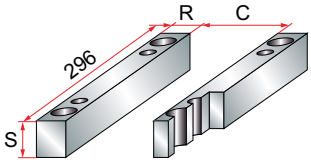
ESP



	ESP	
R	43	58
C	160	130
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

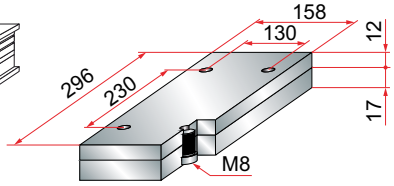
ESP-EU

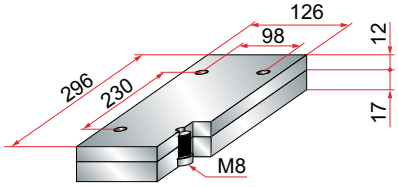


	ESP-EU	
R	43	58
C	160	130
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

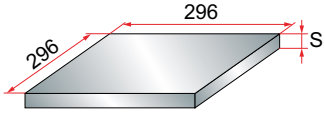




mat.: 1.1730
mat.: 1.2311

P PLATES

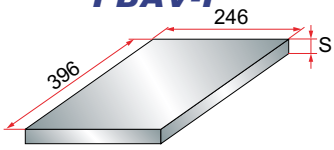
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

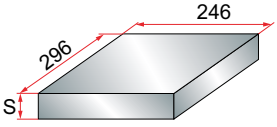
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

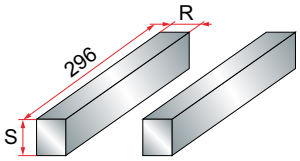
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

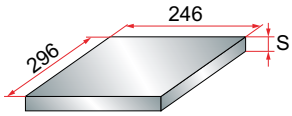
ESP-P



	ESP-P	
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

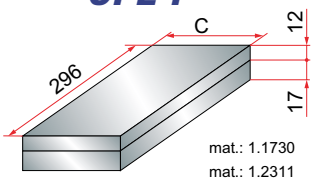
PS-P



	PS-P
S	27
	36

mat.: 1.1730

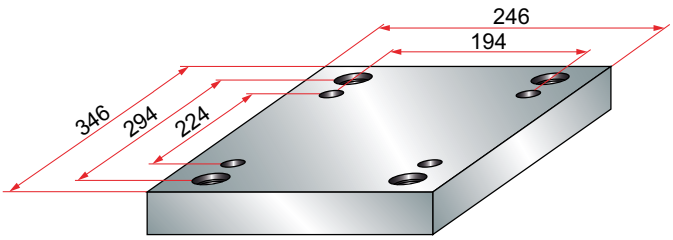
CPE-P

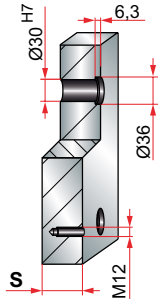


	CPE-P
C	126
	158

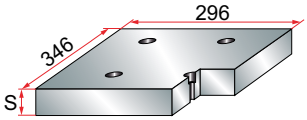
mat.: 1.1730
mat.: 1.2311

246.346





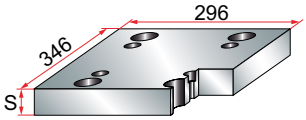
PBA



	PBA
S	27
	36

mat.: 1.1730

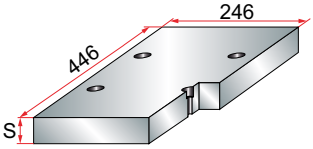
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

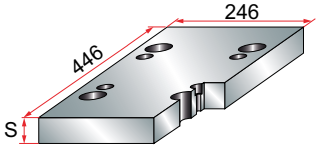
PBAV



	PBAV
S	27
	36

mat.: 1.1730

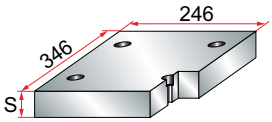
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

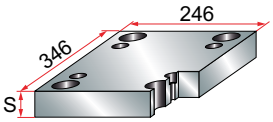
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

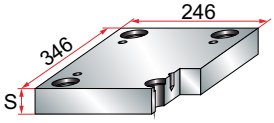
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

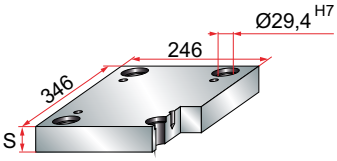
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

º Entrega 3/4 dias - Delivery 3/4 days

PCX

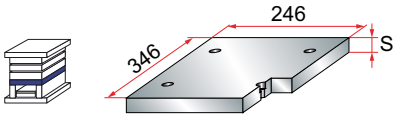


		Material			
		1.2311	1.2312	1.2344	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o
	156	*	*		o

º Entrega 3/4 dias - Delivery 3/4 days

246.346

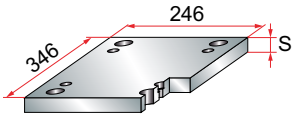
PS



	PS
S	27
	36
	46

mat.: 1.1730

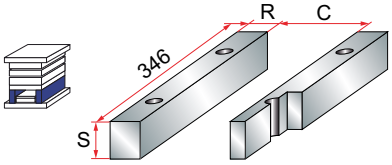
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

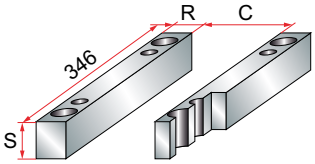
ESP



	ESP	
R	43	58
C	160	130
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

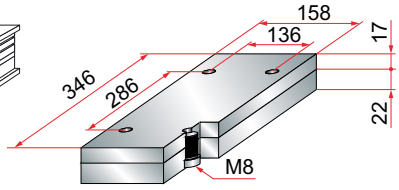
ESP-EU



	ESP-EU	
R	43	58
C	160	130
S	56	
	66	
	76	
	86	
	96	

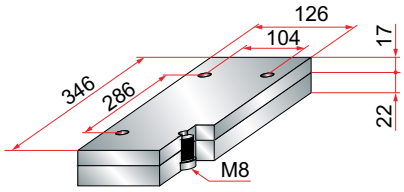
mat.: 1.1730

CPE



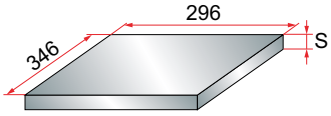
mat.: 1.1730

mat.: 1.2311



P PLATES

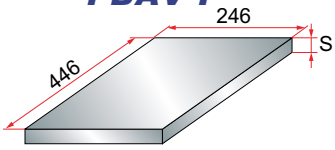
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

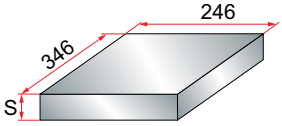
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

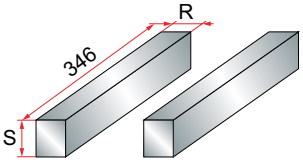
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

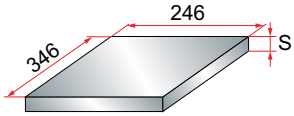
ESP-P



	ESP-P	
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

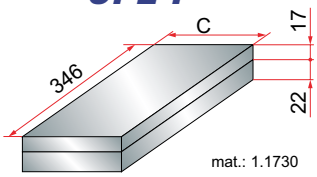
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

CPE-P

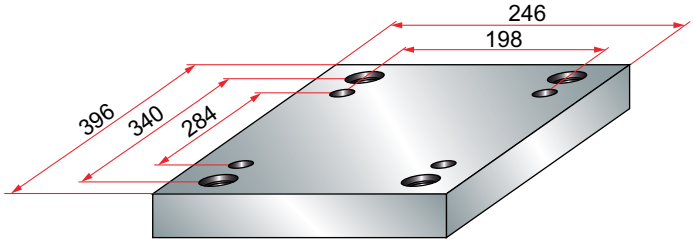


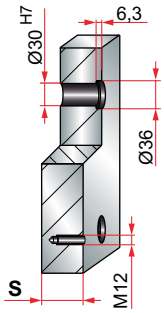
	CPE-P
C	126
	158

mat.: 1.1730

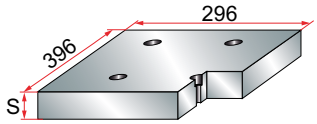
mat.: 1.2311

246.396





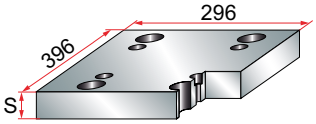
PBA



	PBA
S	27
	36

mat.: 1.1730

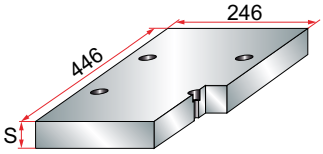
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

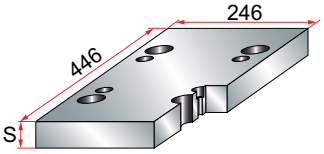
PBAV



	PBAV
S	27
	36

mat.: 1.1730

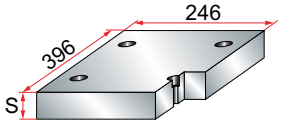
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

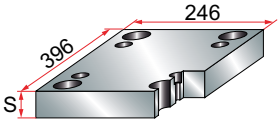
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

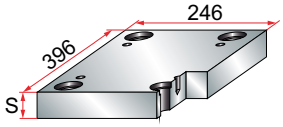
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

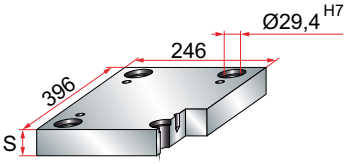
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

PCX

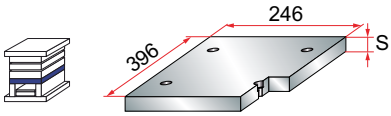


		Material			
		1.2311	1.2312	1.2344	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o
	156	*	*		o

° Entrega 3/4 dias - Delivery 3/4 days

246.396

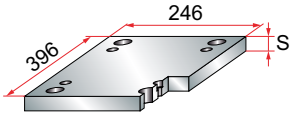
PS



	PS
S	27
	36
	46

mat.: 1.1730

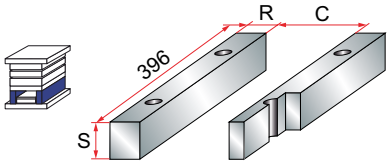
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

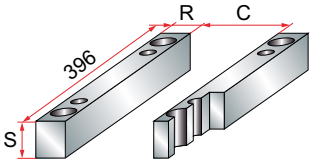
ESP



	ESP	
R	47	62
C	152	122
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

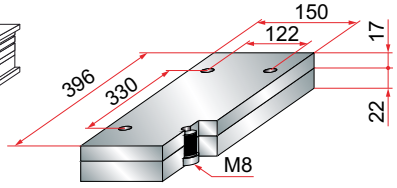
ESP-EU

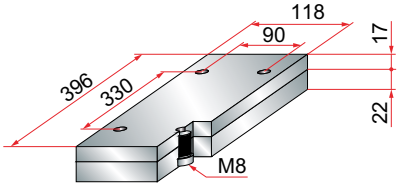


	ESP-EU	
R	47	62
C	152	122
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

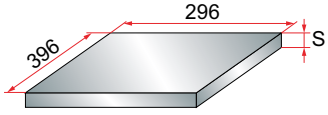




mat.: 1.1730
mat.: 1.2311

P PLATES

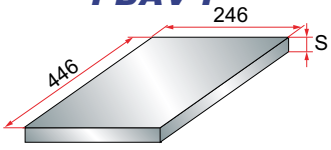
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

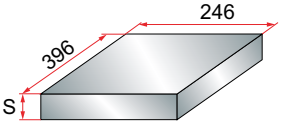
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

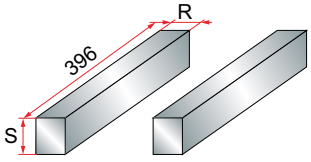
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	º
	36	*	*	*	º
	46	*	*	*	º
	56	*	*	*	º
	66	*	*	*	º
	76	*	*	*	º
	86	*	*	*	º
	96	*	*	*	º
	116	*	*	*	º
	136	*	*	*	º
	156	*	*	*	º

º Entrega 3/4 dias - Delivery 3/4 days

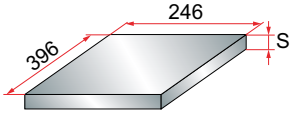
ESP-P



	ESP-P	
R	47	62
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

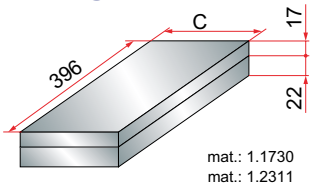
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

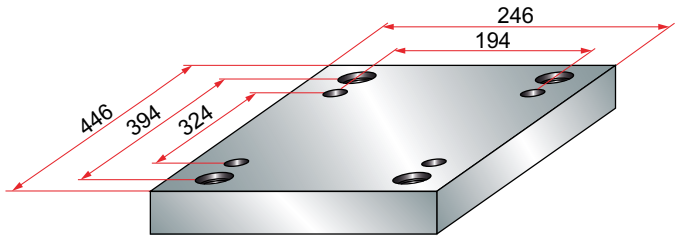
CPE-P

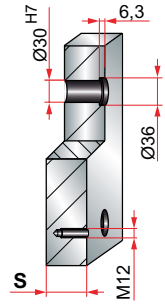


	CPE-P
C	118
	150

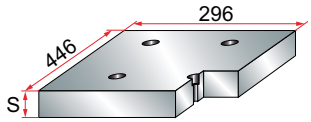
mat.: 1.1730
mat.: 1.2311

246.446





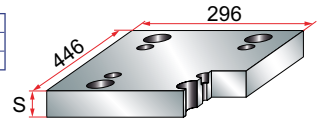
PBA



	PBA
S	27
	36

mat.: 1.1730

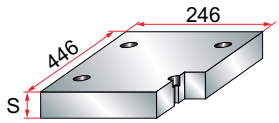
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

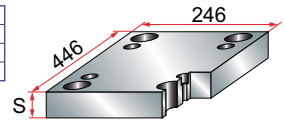
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

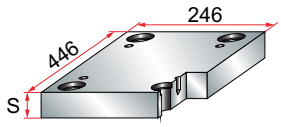
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

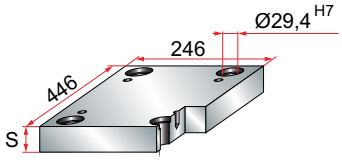
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86		*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156		*	*	°

° Entrega 3/4 días - Delivery 3/4 days

PCX

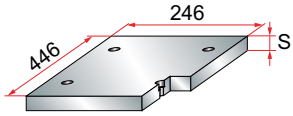


		Material			
		1.2311	1.2312	1.2344	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*		°
	66	*	*		°
	76	*	*		°
	86	*	*		°
	96	*	*		°
	116	*	*		°
	136	*	*		°
	156	*	*		°

° Entrega 3/4 días - Delivery 3/4 days

246.446

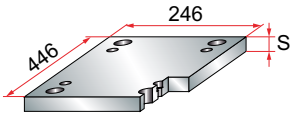
PS



	PS
S	27
	36
	46

mat.: 1.1730

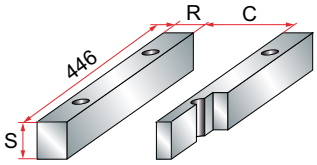
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

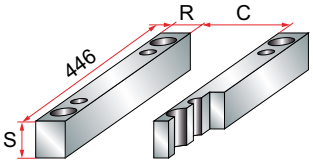
ESP



	ESP	
R	43	58
C	160	130
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

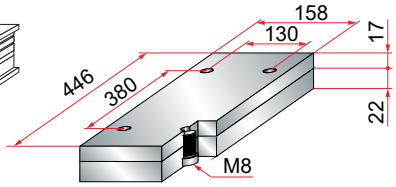
ESP-EU

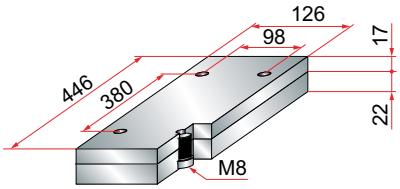


	ESP-EU	
R	43	58
C	160	130
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

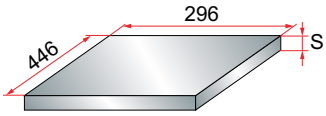




mat.: 1.1730
mat.: 1.2311

P PLATES

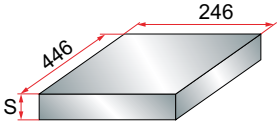
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

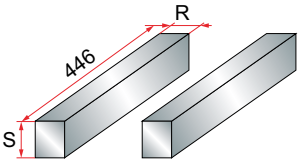
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	º
	36	*	*	*	º
	46	*	*	*	º
	56	*	*	*	º
	66	*	*	*	º
	76	*	*	*	º
	86	*	*	*	º
	96	*	*	*	º
	116	*	*	*	º
	136	*	*	*	º
	156	*	*	*	º

º *Entrega 3/4 días - Delivery 3/4 days*

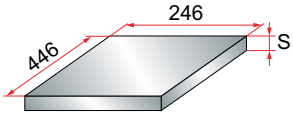
ESP-P



	ESP-P	
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

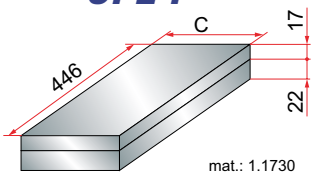
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

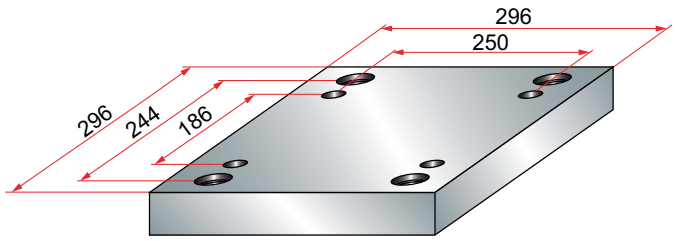
CPE-P

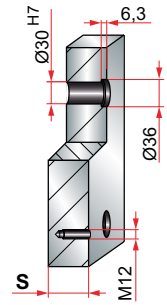


	CPE-P
C	126
	158

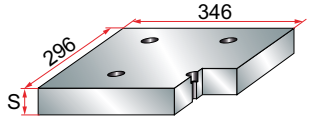
mat.: 1.1730
mat.: 1.2311

296.296





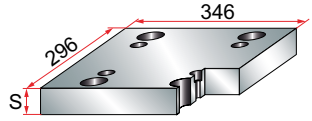
PBA



	PBA
S	27
	36

mat.: 1.1730

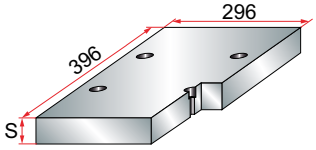
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

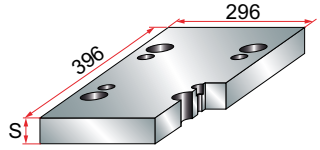
PBAV



	PBAV
S	27
	36

mat.: 1.1730

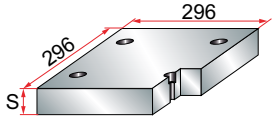
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

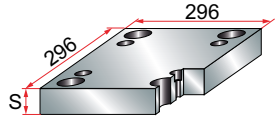
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

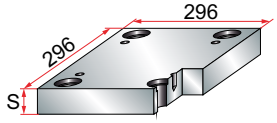
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

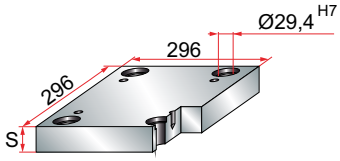
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

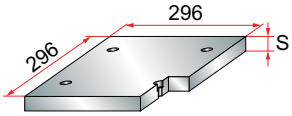


		Material			
		1.2311	1.2312	1.2344	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o
	156	*	*		o

° Entrega 3/4 días - Delivery 3/4 days

296.296

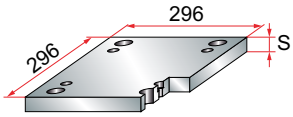
PS



	PS
S	27
	36
	46

mat.: 1.1730

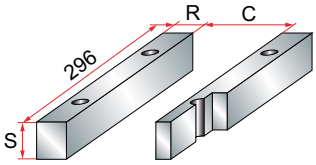
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

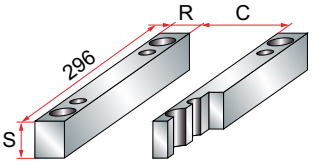
ESP



ESP		
R	43	58
C	210	180
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

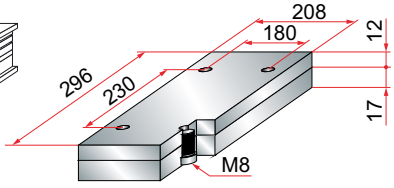
ESP-EU

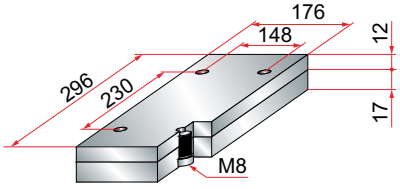


ESP-EU		
R	43	58
C	210	180
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

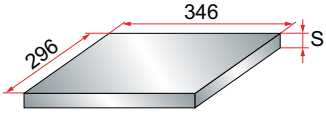




mat.: 1.1730
mat.: 1.2311

P PLATES

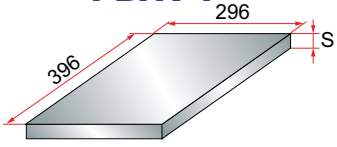
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

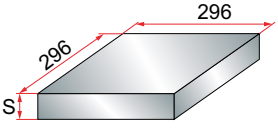
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

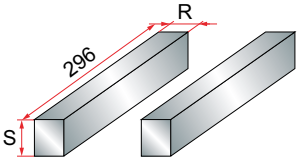
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

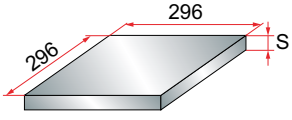
ESP-P



ESP-P		
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

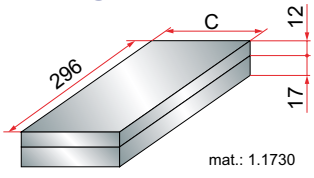
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

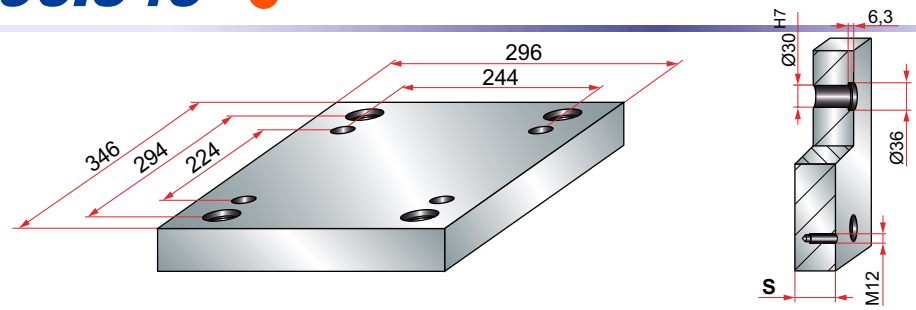
CPE-P



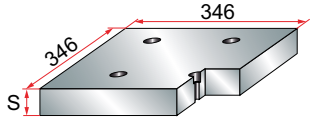
	CPE-P
C	176
	208

mat.: 1.1730
mat.: 1.2311

296.346



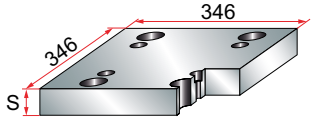
PBA



	PBA
S	27
	36

mat.: 1.1730

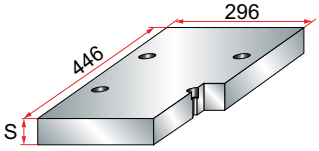
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

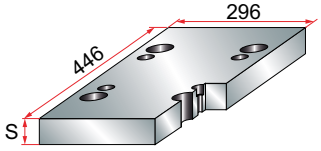
PBAV



	PBAV
S	27
	36

mat.: 1.1730

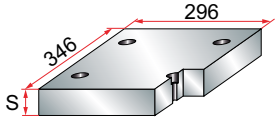
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

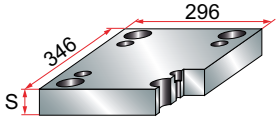
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

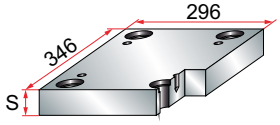
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

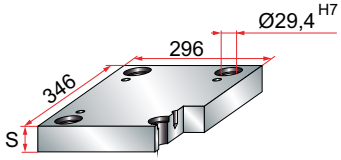
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

PCX

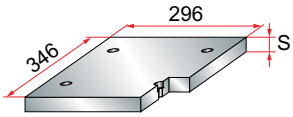


		Material			
		1.2311	1.2312	1.2344	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*		o
	66	*	*		o
	76	*	*		o
	86	*	*		o
	96	*	*		o
	116	*	*		o
	136	*	*		o
	156	*	*		o

° Entrega 3/4 dias - Delivery 3/4 days

296.346

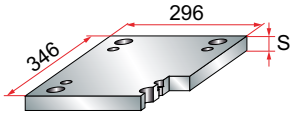
PS



	PS
S	27
	36
	46

mat.: 1.1730

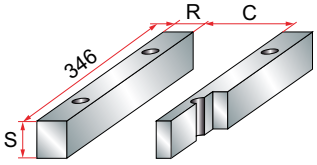
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

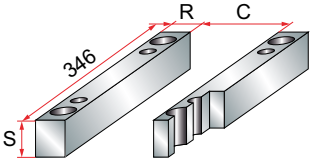
ESP



	ESP	
R	43	58
C	210	180
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

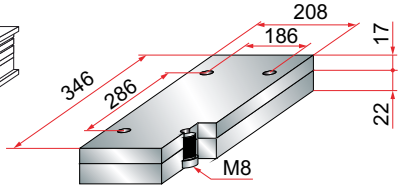
ESP-EU

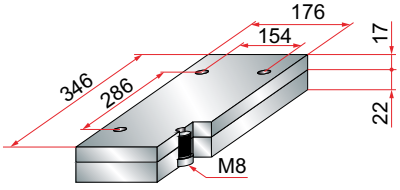


	ESP-EU	
R	43	58
C	210	180
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

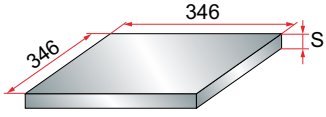




mat.: 1.1730
mat.: 1.2311

P PLATES

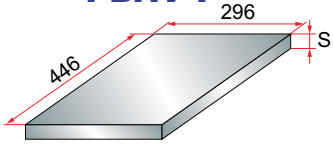
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

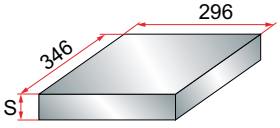
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

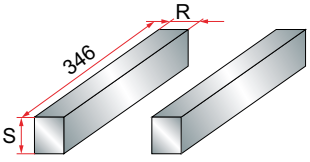
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	º
	36	*	*	*	º
	46	*	*	*	º
	56	*	*	*	º
	66	*	*	*	º
	76	*	*	*	º
	86	*	*	*	º
	96	*	*	*	º
	116	*	*	*	º
	136	*	*	*	º
	156	*	*	*	º

º Entrega 3/4 días - Delivery 3/4 days

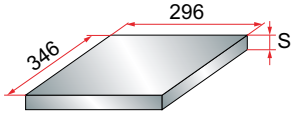
ESP-P



	ESP-P	
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

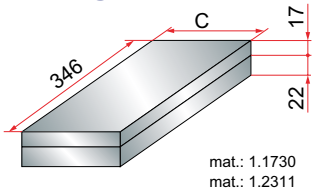
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

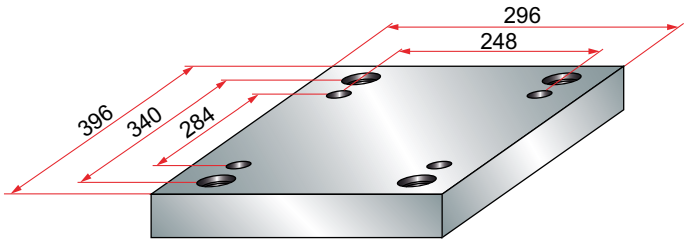
CPE-P

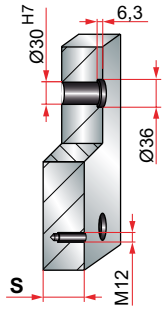


	CPE-P
C	176
	208

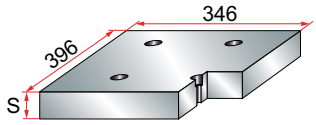
mat.: 1.1730
mat.: 1.2311

296.396





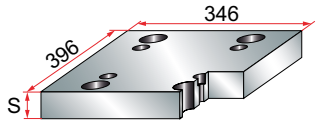
PBA



	PBA
S	27
	36

mat.: 1.1730

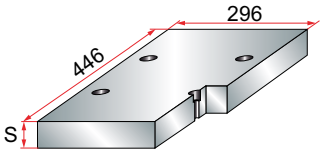
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

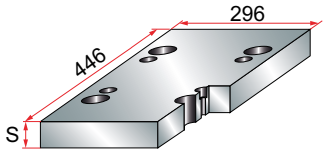
PBAV



	PBAV
S	27
	36

mat.: 1.1730

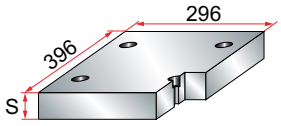
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

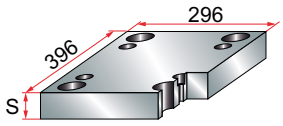
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

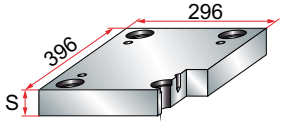
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

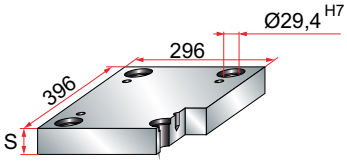
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

PCX

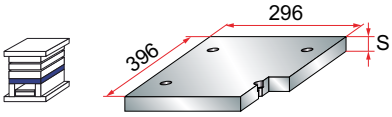


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

296.396

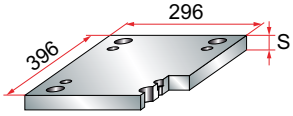
PS



	PS
S	27
	36
	46

mat.: 1.1730

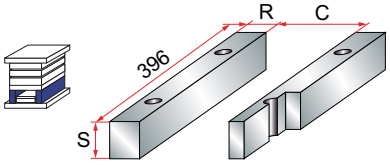
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

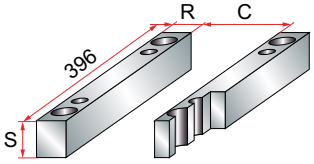
ESP



	ESP	
R	47	62
C	202	172
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

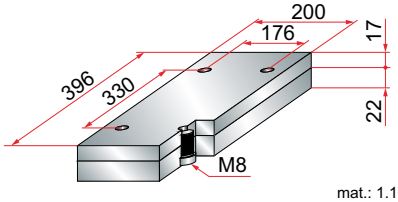
ESP-EU

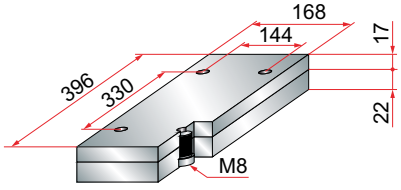


	ESP-EU	
R	47	62
C	202	172
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

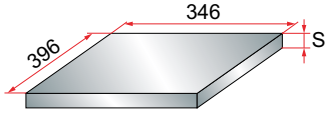




mat.: 1.1730

P PLATES

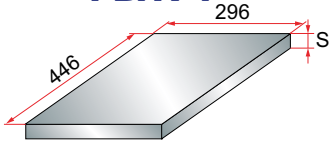
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

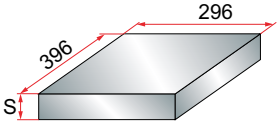
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

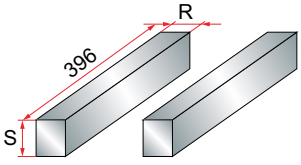
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º Entrega 3/4 dias - Delivery 3/4 days

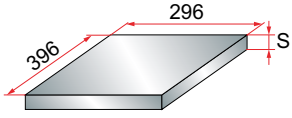
ESP-P



	ESP	
R	47	62
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

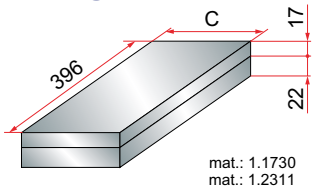
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

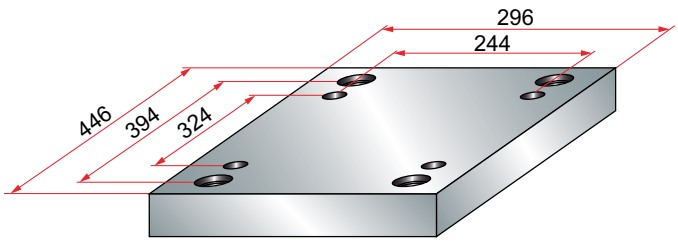
CPE-P

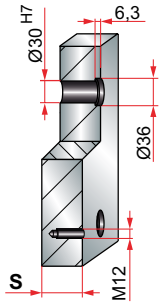


	CPE-P
C	168
	200

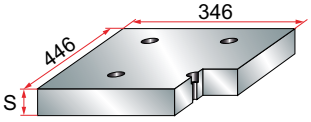
mat.: 1.1730
mat.: 1.2311

296.446





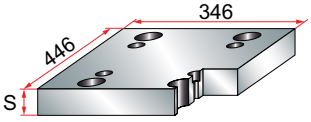
PBA



	PBA
S	27
	36

mat.: 1.1730

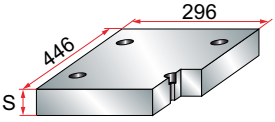
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

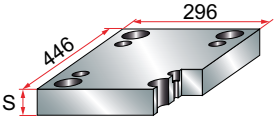
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

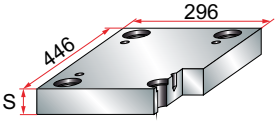
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

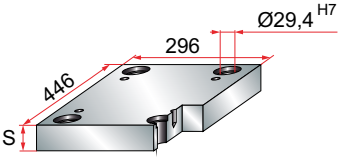
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

º *Entrega 3/4 días - Delivery 3/4 days*

PCX

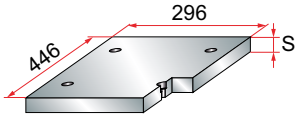


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

º *Entrega 3/4 días - Delivery 3/4 days*

296.446

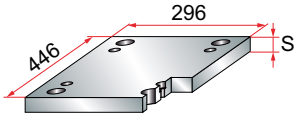
PS



	PS
S	27
	36
	46

mat.: 1.1730

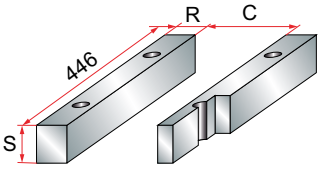
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

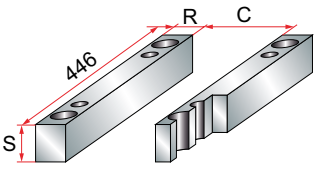
ESP



ESP		
R	43	58
C	210	180
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

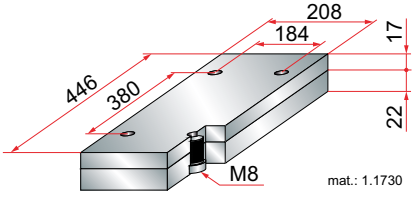
ESP-EU



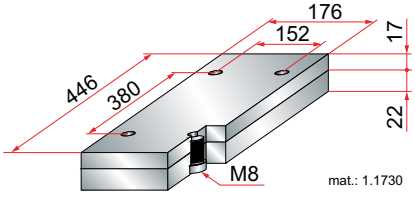
ESP-EU		
R	43	58
C	210	180
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE



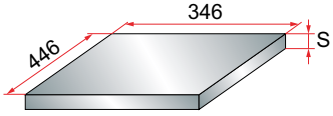
mat.: 1.1730



mat.: 1.1730

P PLATES

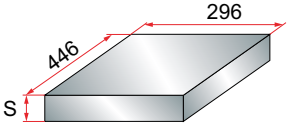
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

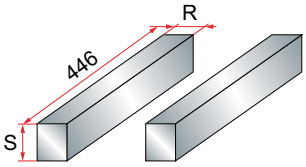
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

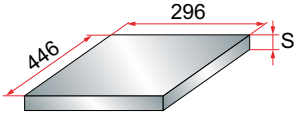
ESP-P



ESP-P		
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

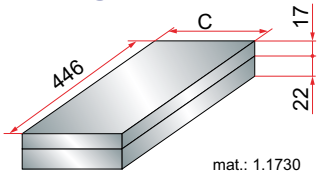
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

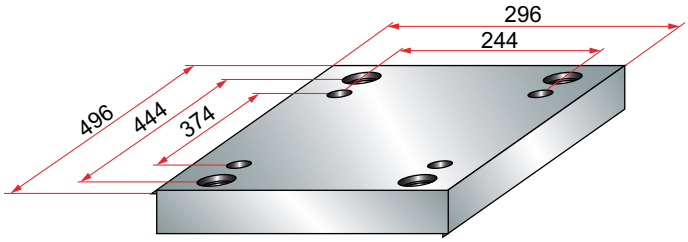
CPE-P

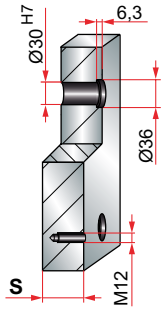


	CPE-P
C	176
	208

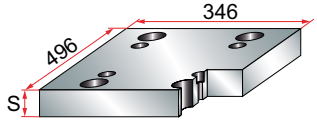
mat.: 1.1730
mat.: 1.2311

296.496





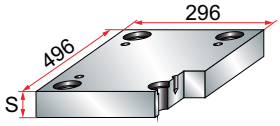
PBA-EU



	PBA-EU
S	27
	36
	46

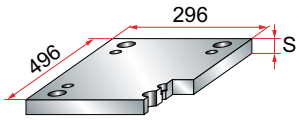
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*

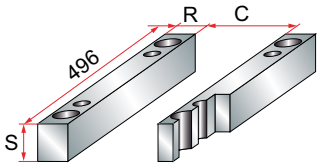
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

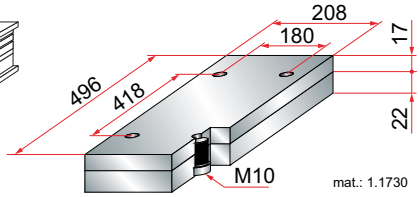
ESP-EU



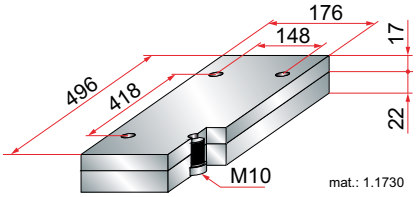
	ESP-EU	
R	43	58
C	210	180
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE



mat.: 1.1730

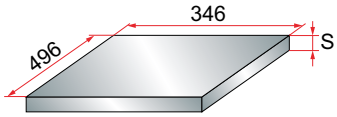


mat.: 1.1730

296.496

P PLATES

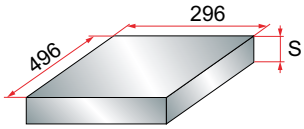
PBA-P



	PBA-P
S	27
	36
	46

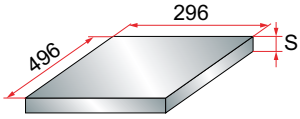
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*

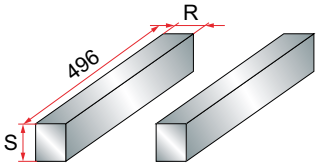
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

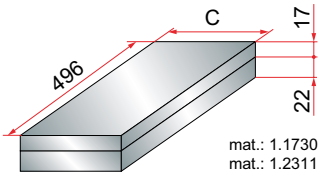
ESP-P



ESP-P		
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

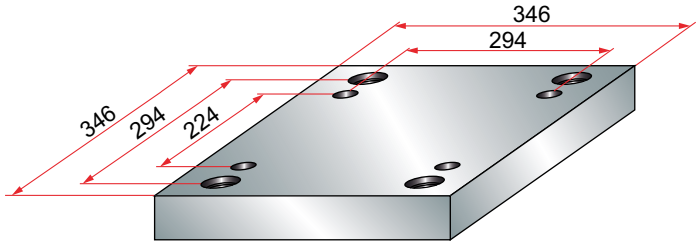
CPE-P

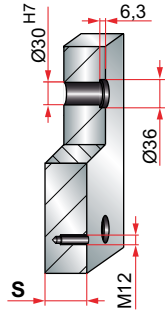


mat.: 1.1730
mat.: 1.2311

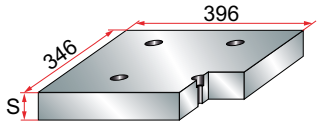
	CPE-P
C	176
	208

346.346





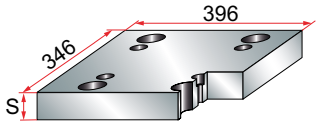
PBA



	PBA
S	27
	36

mat.: 1.1730

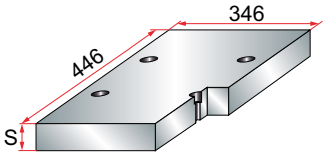
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

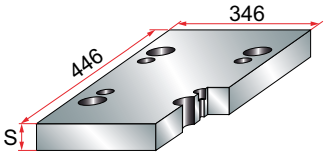
PBAV



	PBAV
S	27
	36

mat.: 1.1730

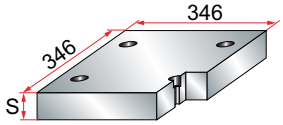
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

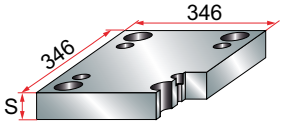
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

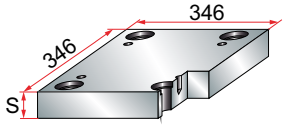
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

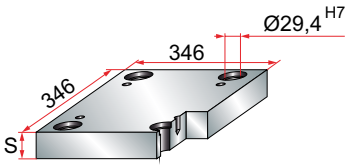
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

º Entrega 3/4 días - Delivery 3/4 days

PCX

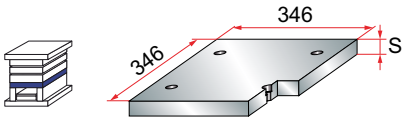


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

º Entrega 3/4 días - Delivery 3/4 days

346.346

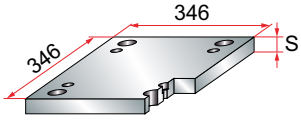
PS



	PS
S	27
	36
	46

mat.: 1.1730

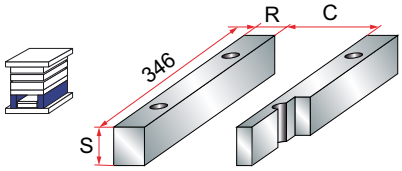
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

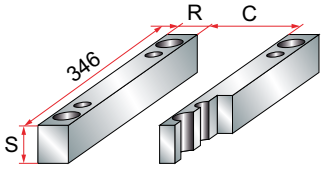
ESP



	ESP	
R	43	58
C	260	230
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

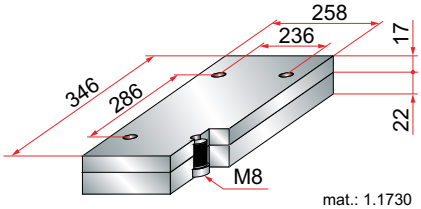
ESP-EU



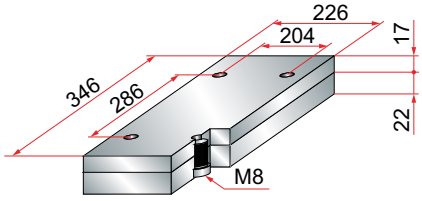
	ESP-EU	
R	43	58
C	260	230
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

CPE

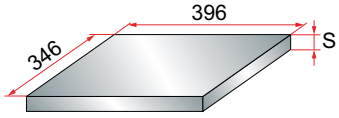


mat.: 1.1730
mat.: 1.2311



P PLATES

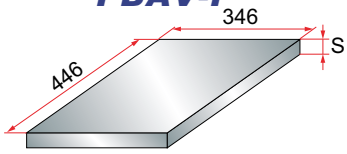
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

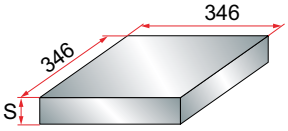
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

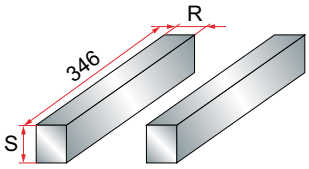
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

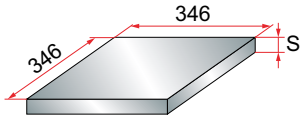
ESP-P



	ESP-P	
R	43	58
S	56	
	66	
	76	
	86	
	96	

mat.: 1.1730

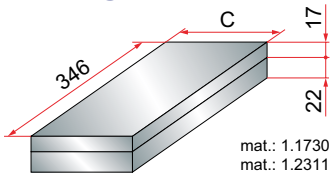
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

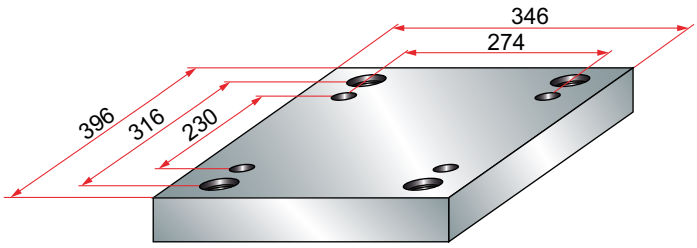
CPE-P

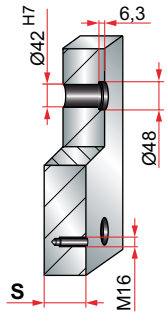


mat.: 1.1730
mat.: 1.2311

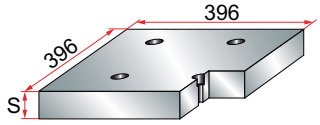
	CPE-P
C	226
	258

346.396





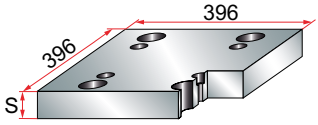
PBA



	PBA
S	27
	36

mat.: 1.1730

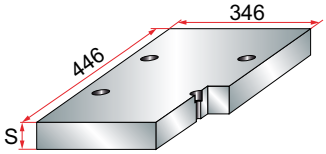
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

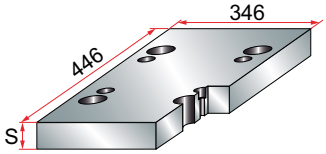
PBAV



	PBAV
S	27
	36

mat.: 1.1730

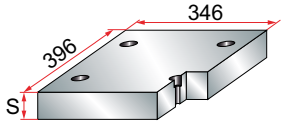
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

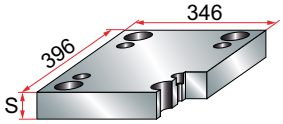
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

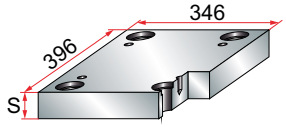
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

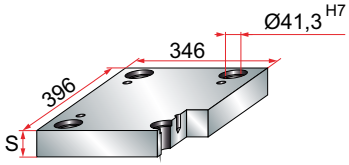
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

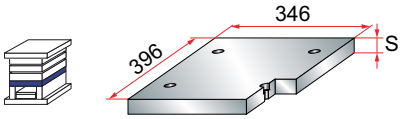


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

346.396

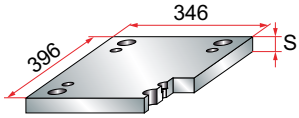
PS



	PS
S	27
	36
	46

mat.: 1.1730

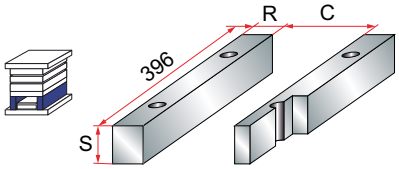
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

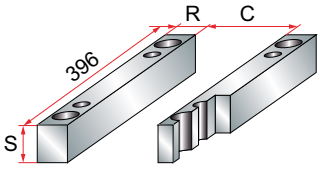
ESP



	ESP	
R	62	86
C	222	174
S	56	
	66	
	76	
	86	
	96	
	116	

mat.: 1.1730

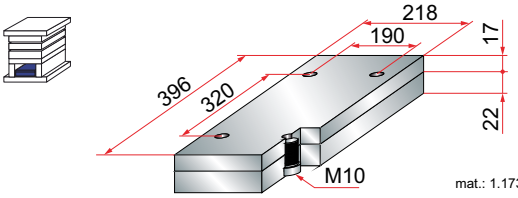
ESP-EU



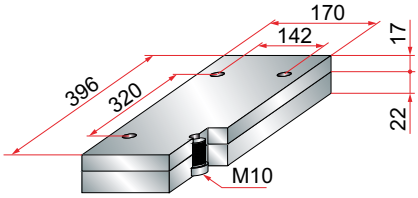
	ESP-EU	
R	62	86
C	222	174
S	56	
	66	
	76	
	86	
	96	
	116	

mat.: 1.1730

CPE

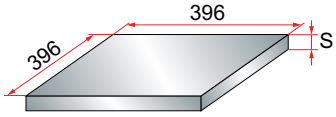


mat.: 1.1730



P PLATES

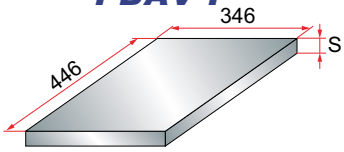
PBA-P



	PBA-P
S	27
	36

mat.: 1.1730

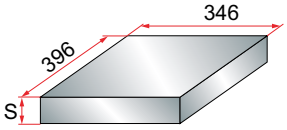
PBAV-P



	PBAV-P
S	27
	36

mat.: 1.1730

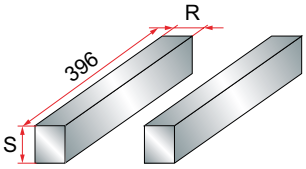
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

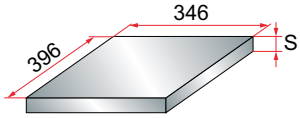
ESP-P



	ESP-P	
R	62	86
S	56	
	66	
	76	
	86	
	96	
	116	

mat.: 1.1730

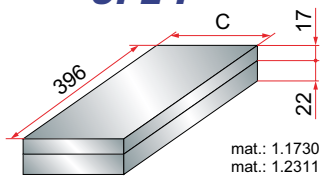
PS-P



	PS-P
S	27
	36
	46

mat.: 1.1730

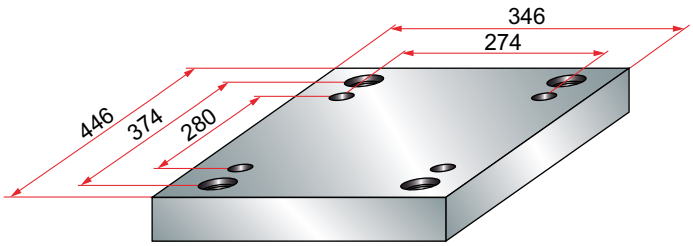
CPE-P

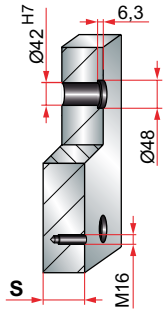


mat.: 1.1730
mat.: 1.2311

	CPE-P
C	170
	218

346.446





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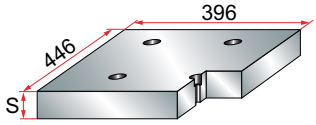
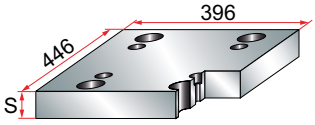


	PBA
S	27
	36

mat.: 1.1730

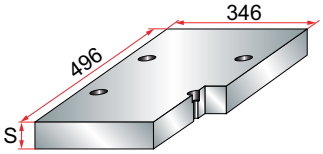
PBA-EU



	PBA-EU
S	27
	36

mat.: 1.1730

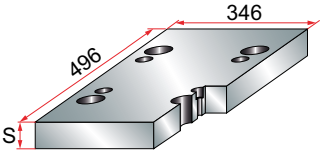
PBAV



	PBAV
S	27
	36

mat.: 1.1730

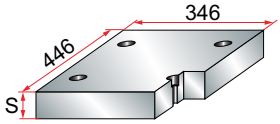
PBAV-EU



	PBAV-EU
S	27
	36

mat.: 1.1730

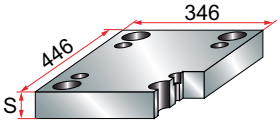
PBAS



	PBAS
S	27
	36
	46

mat.: 1.1730

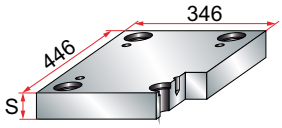
PBAS-EU



	PBAS-EU
S	27
	36
	46

mat.: 1.1730

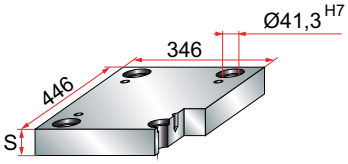
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

PCX

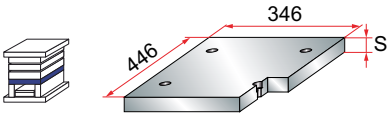


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

346.446

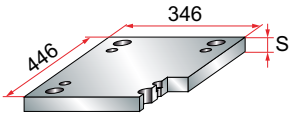
PS



	PS
S	27
	36
	46

mat.: 1.1730

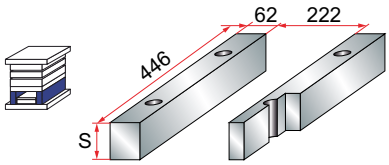
PS-EU



	PS-EU
S	27
	36
	46

mat.: 1.1730

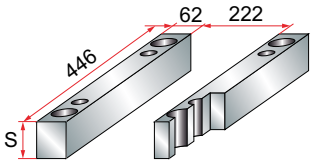
ESP



	ESP
S	56
	66
	76
	86
	96

mat.: 1.1730

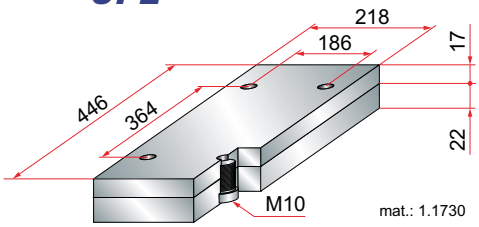
ESP-EU



	ESP-EU
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

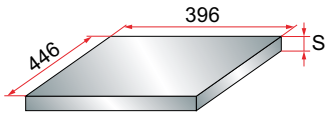
CPE



mat.: 1.1730

P PLATES

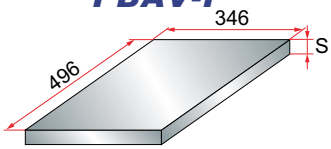
PBA-P



	PBA-P
S	27
	36
	46

mat.: 1.1730

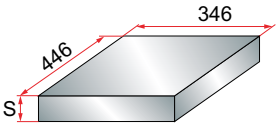
PBAV-P



	PBAV-P
S	27
	36
	46

mat.: 1.1730

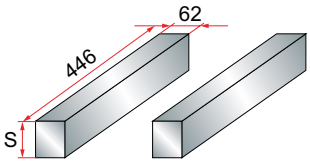
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º *Entrega 3/4 días - Delivery 3/4 days*

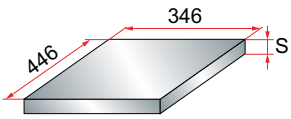
ESP-P



	ESP-P
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

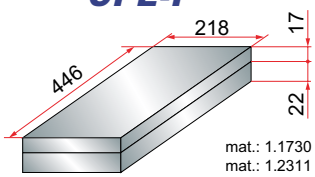
PS-P



	PS-P
S	27
	36
	46

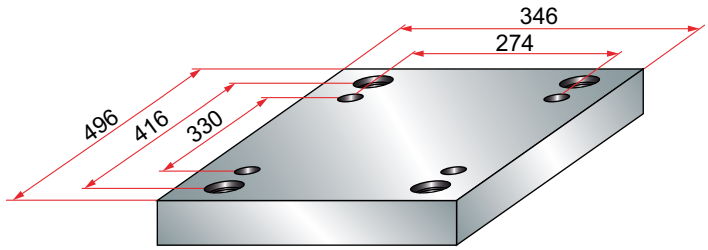
mat.: 1.1730

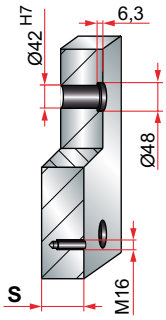
CPE-P



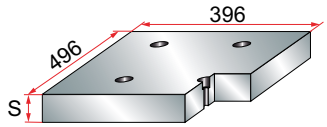
mat.: 1.1730
mat.: 1.2311

346.496





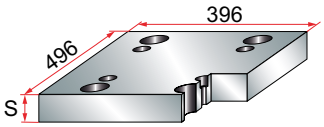
PBA



	PBA
S	27
	36
	46

mat.: 1.1730

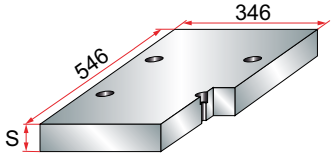
PBA-EU



	PBA-EU
S	27
	36
	46

mat.: 1.1730

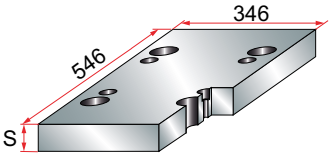
PBAV



	PBAV
S	27
	36
	46

mat.: 1.1730

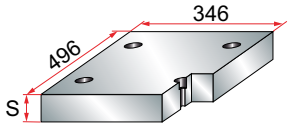
PBAV-EU



	PBAV-EU
S	27
	36
	46

mat.: 1.1730

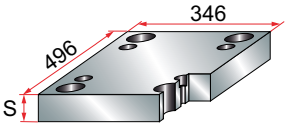
PBAS



	PBAS
S	36
	46

mat.: 1.1730

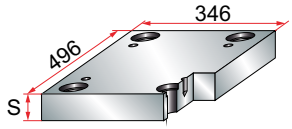
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

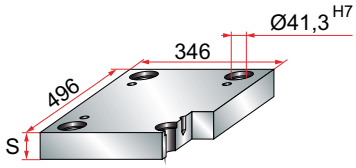
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

º Entrega 3/4 días - Delivery 3/4 days

PCX

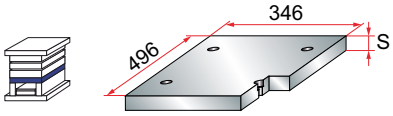


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

º Entrega 3/4 días - Delivery 3/4 days

346.496

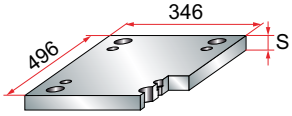
PS



	PS
S	36
	46

mat.: 1.1730

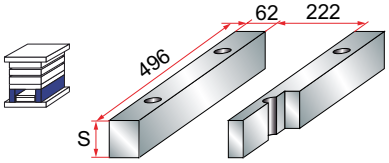
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

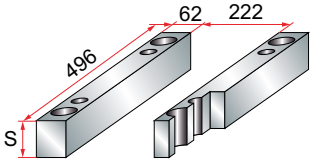
ESP



	ESP
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

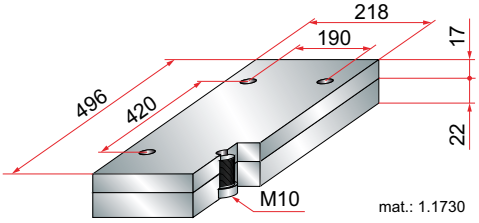
ESP-EU



	ESP-EU
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

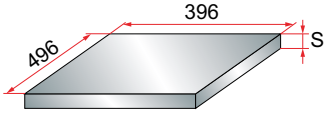
CPE



mat.: 1.1730

P PLATES

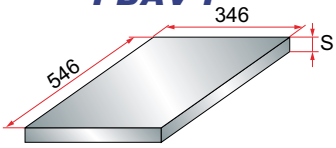
PBA-P



	PBA-P
S	27
	36
	46

mat.: 1.1730

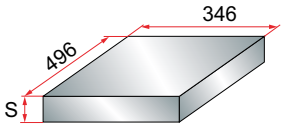
PBAV-P



	PBAV-P
S	27
	36
	46

mat.: 1.1730

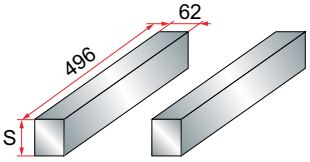
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º Entrega 3/4 días - Delivery 3/4 days

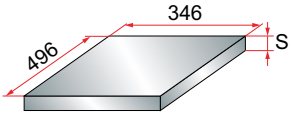
ESP-P



	ESP-P
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

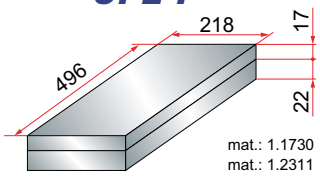
PS-P



	PS-P
S	36
	46

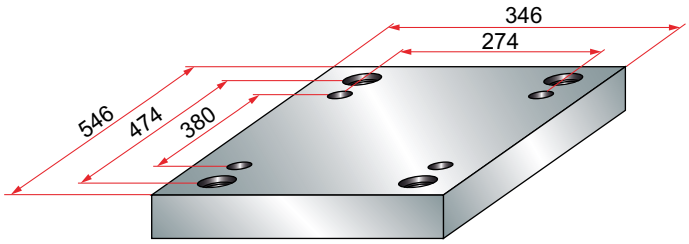
mat.: 1.1730

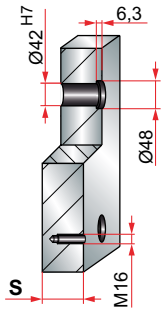
CPE-P



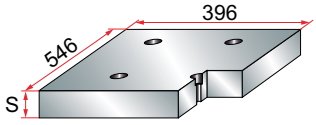
mat.: 1.1730
mat.: 1.2311

346.546





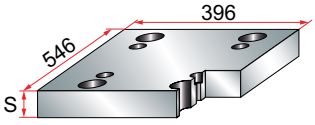
PBA



	PBA
S	36
	46

mat.: 1.1730

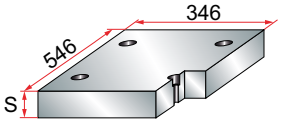
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

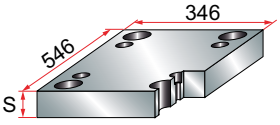
PBAS



	PBAS
S	36
	46

mat.: 1.1730

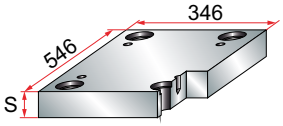
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

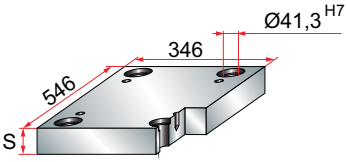
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

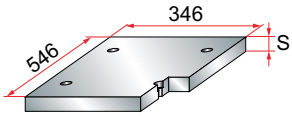


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

346.546

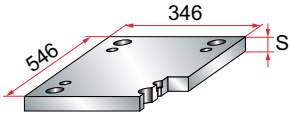
PS



	PS
S	36
	46

mat.: 1.1730

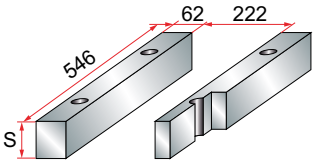
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

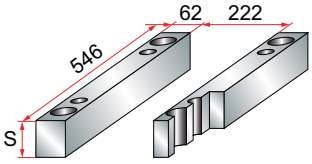
ESP



	ESP
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

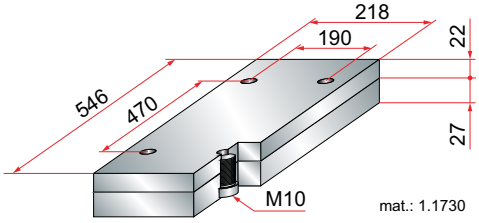
ESP-EU



	ESP-EU
S	56
	66
	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

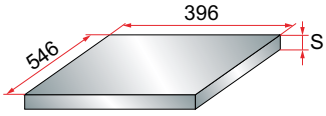
CPE



mat.: 1.1730

P PLATES

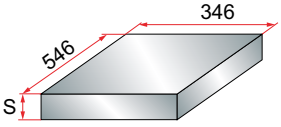
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

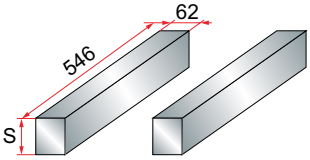
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º Entrega 3/4 dias - Delivery 3/4 days

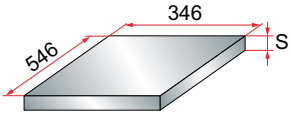
ESP-P



	ESP-P
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

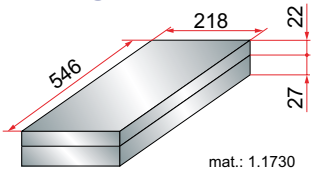
PS-P



	PS-P
S	36
	46

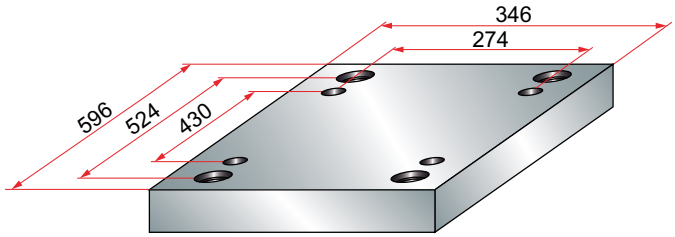
mat.: 1.1730

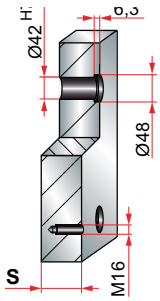
CPE-P



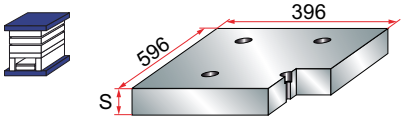
mat.: 1.1730
mat.: 1.2311

346.596





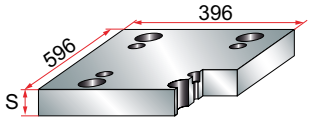
PBA



	PBA
S	36
	46

mat.: 1.1730

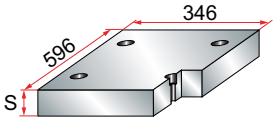
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

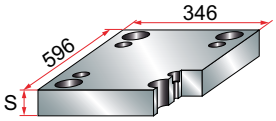
PBAS



	PBAS
S	36
	46

mat.: 1.1730

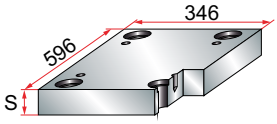
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

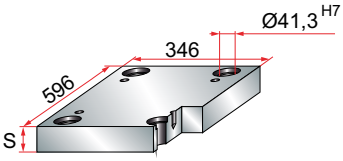
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

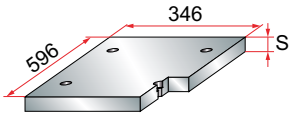


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

346.596

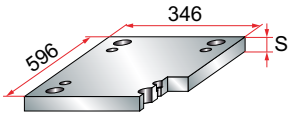
PS



	PS
S	36
	46

mat.: 1.1730

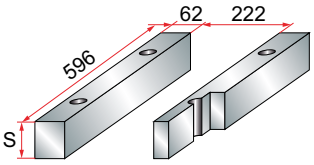
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

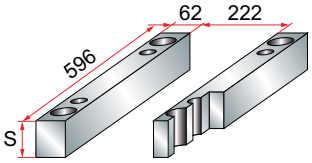
ESP



	ESP
S	76
	86
	96
	116

mat.: 1.1730

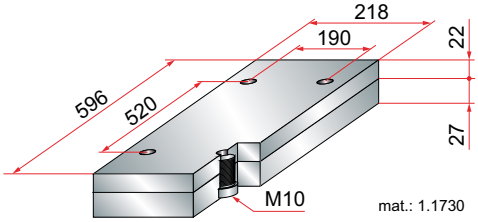
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

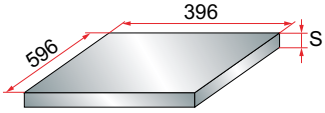
CPE



mat.: 1.1730

P PLATES

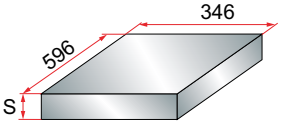
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

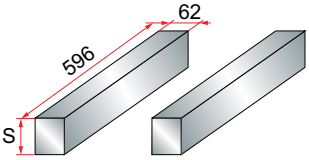
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

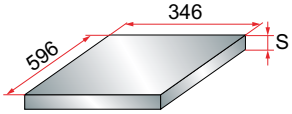
ESP-P



	ESP-P
S	76
	86
	96
	116
	136

mat.: 1.1730

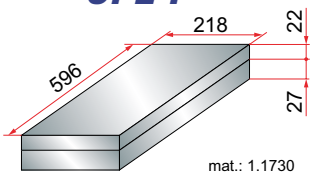
PS-P



	PS-P
S	36
	46

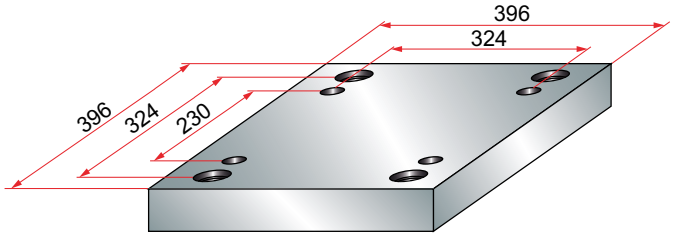
mat.: 1.1730

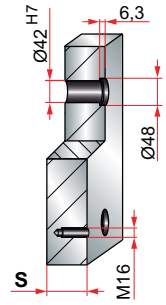
CPE-P



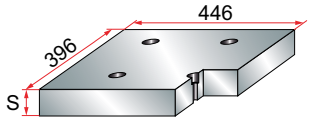
mat.: 1.1730
mat.: 1.2311

396.396





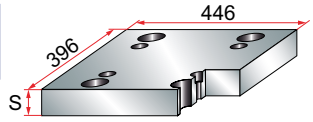
PBA



	PBA
S	27
	36
	46

mat.: 1.1730

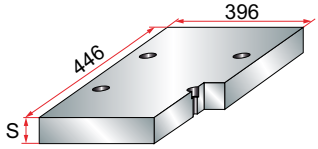
PBA-EU



	PBA-EU
S	27
	36
	46

mat.: 1.1730

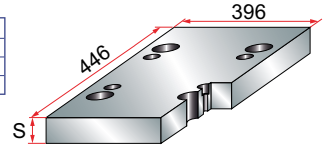
PBAV



	PBAV
S	27
	36
	46

mat.: 1.1730

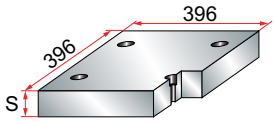
PBAV-EU



	PBAV-EU
S	27
	36
	46

mat.: 1.1730

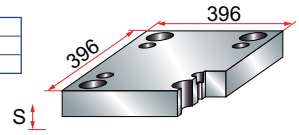
PBAS



	PBAS
S	36
	46

mat.: 1.1730

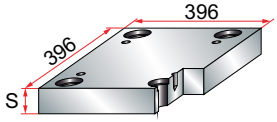
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

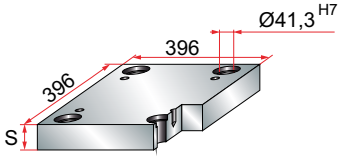
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86		*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156		*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

PCX

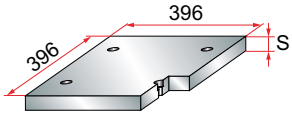


		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

396.396

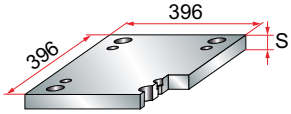
PS



	PS
S	36
	46

mat.: 1.1730

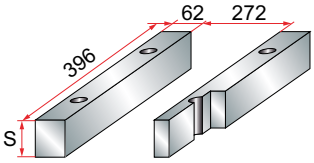
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

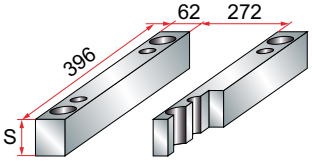
ESP



	ESP
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

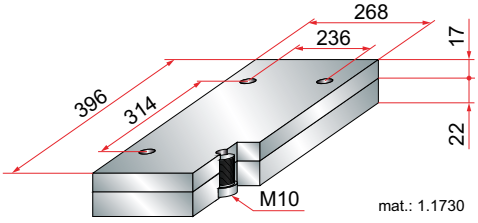
ESP-EU



	ESP-EU
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

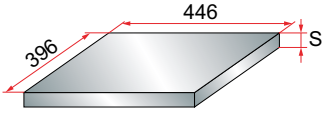
CPE



mat.: 1.1730

P PLATES

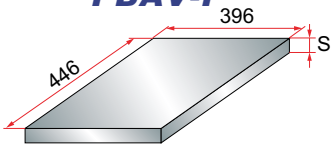
PBA-P



	PBA-P
S	27
	36
	46

mat.: 1.1730

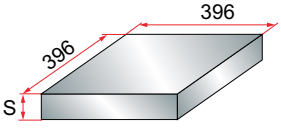
PBAV-P



	PBAV-P
S	27
	36
	46

mat.: 1.1730

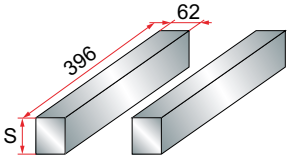
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	º
	36	*	*	*	º
	46	*	*	*	º
	56	*	*	*	º
	66	*	*	*	º
	76	*	*	*	º
	86	*	*	*	º
	96	*	*	*	º
	116	*	*	*	º
	136	*	*	*	º
	156	*	*	*	º

º Entrega 3/4 días - Delivery 3/4 days

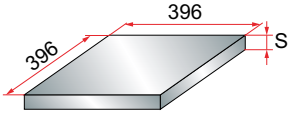
ESP-P



	ESP-P
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

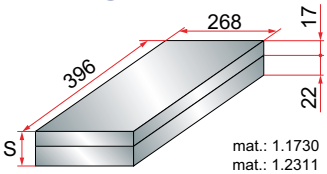
PS-P



	PS-P
S	36
	46

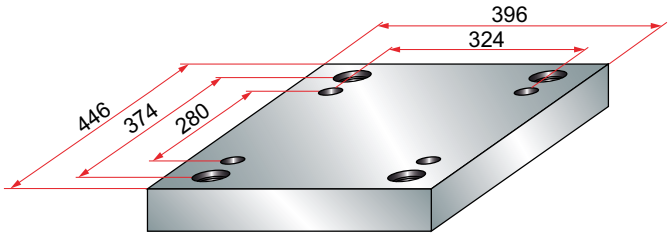
mat.: 1.1730

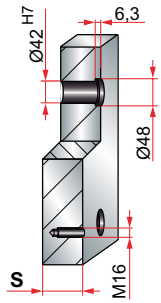
CPE-P



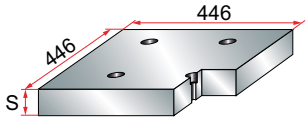
mat.: 1.1730
mat.: 1.2311

396.446





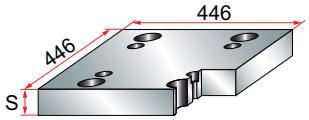
PBA



	PBA
S	27
	36
	46

mat.: 1.1730

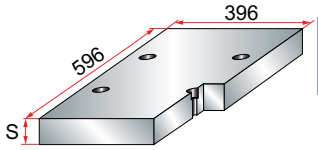
PBA-EU



	PBA-EU
S	27
	36
	46

mat.: 1.1730

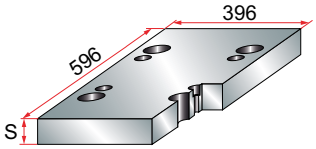
PBAV



	PBAV
S	27
	36
	46

mat.: 1.1730

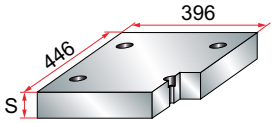
PBAV-EU



	PBAV-EU
S	27
	36
	46

mat.: 1.1730

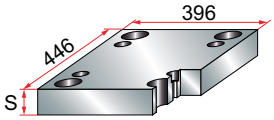
PBAS



	PBAS
S	36
	46

mat.: 1.1730

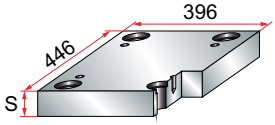
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

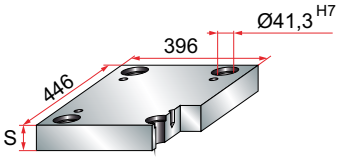
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

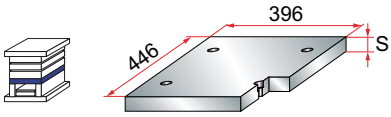


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

396.446

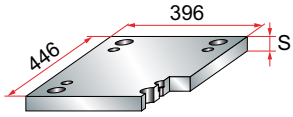
PS



	PS
S	36
	46

mat.: 1.1730

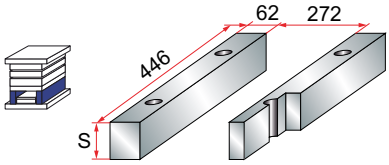
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

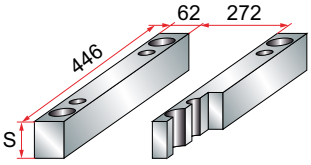
ESP



	ESP
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

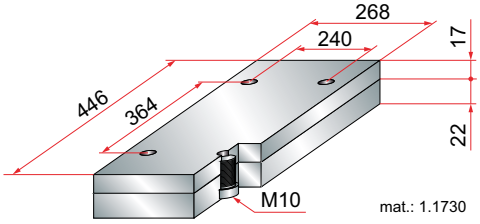
ESP-EU



	ESP-EU
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

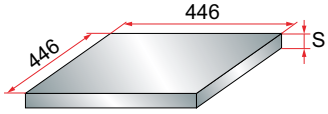
CPE



mat.: 1.1730

P PLATES

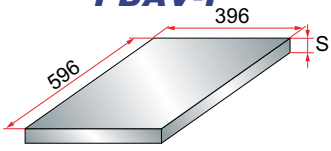
PBA-P



	PBA-P
S	27
	36
	46

mat.: 1.1730

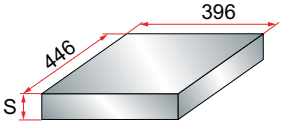
PBAV-P



	PBAV-P
S	27
	36
	46

mat.: 1.1730

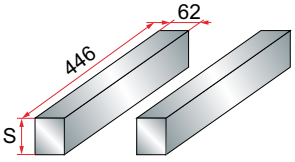
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

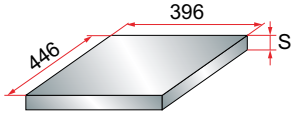
ESP-P



	ESP-P
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

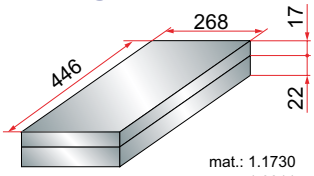
PS-P



	PS-P
S	36
	46

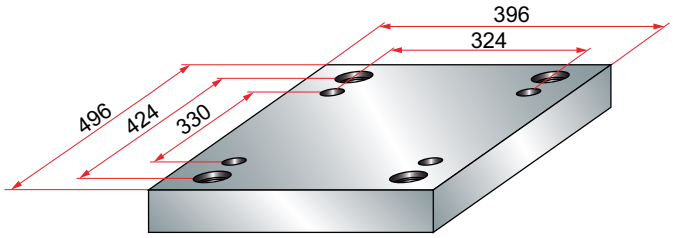
mat.: 1.1730

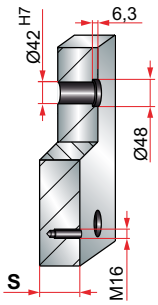
CPE-P



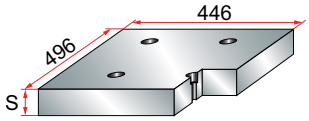
mat.: 1.1730
mat.: 1.2311

396.496





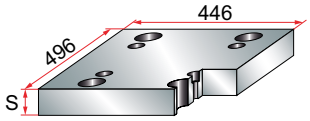
PBA



	PBA
S	36
	46

mat.: 1.1730

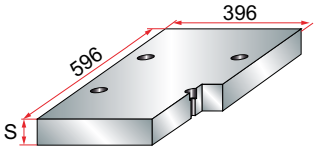
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

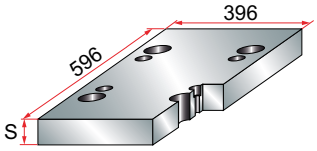
PBAV



	PBAV
S	36
	46

mat.: 1.1730

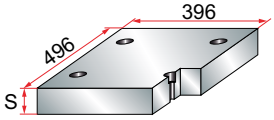
PBAV-EU



	PBAV-EU
S	36
	46

mat.: 1.1730

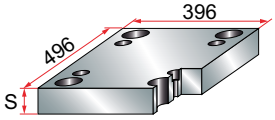
PBAS



	PBAS
S	36
	46

mat.: 1.1730

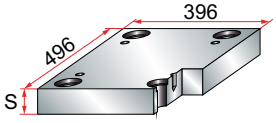
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

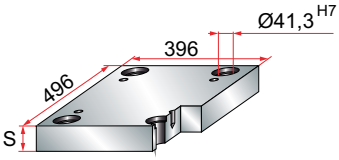
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

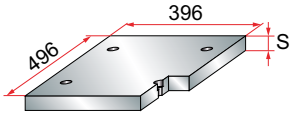


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

396.496

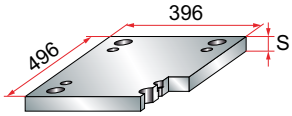
PS



	PS
S	36
	46

mat.: 1.1730

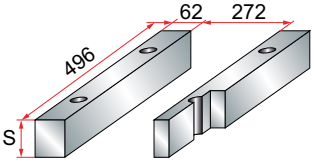
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

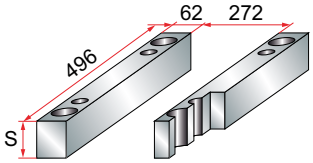
ESP



	ESP
S	76
	86
	96
	116

mat.: 1.1730

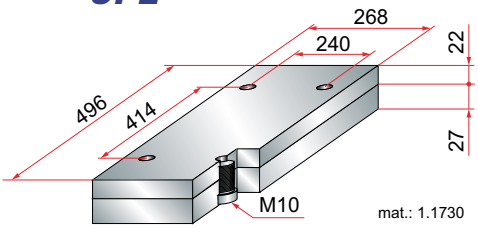
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136

mat.: 1.1730

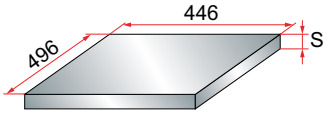
CPE



mat.: 1.1730

P PLATES

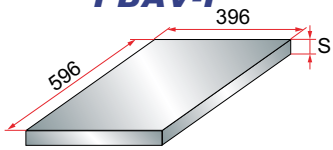
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

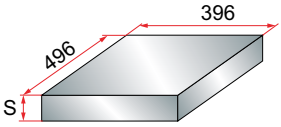
PBAV-P



	PBAV-P
S	36
	46

mat.: 1.1730

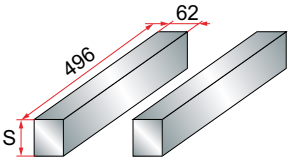
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

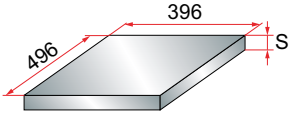
ESP-P



	ESP-P
S	76
	86
	96
	116
	136

mat.: 1.1730

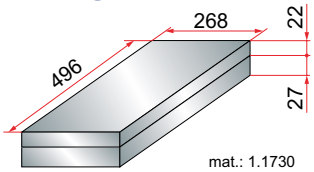
PS-P



	PS-P
S	36
	46

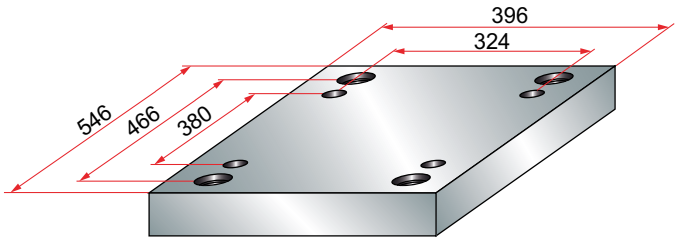
mat.: 1.1730

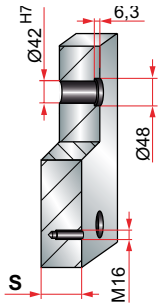
CPE-P



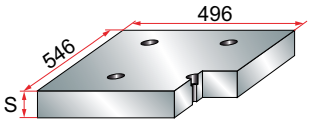
mat.: 1.1730
mat.: 1.2311

396.546





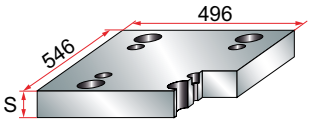
PBA



	PBA
S	36
	46

mat.: 1.1730

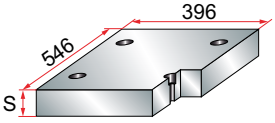
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

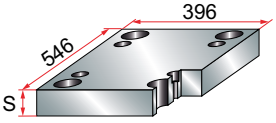
PBAS



	PBAS
S	36
	46

mat.: 1.1730

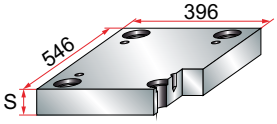
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

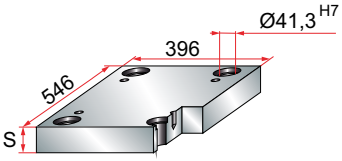
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

º Entrega 3/4 días - Delivery 3/4 days

PCX

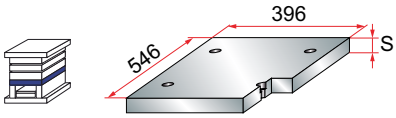


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

º Entrega 3/4 días - Delivery 3/4 days

396.546

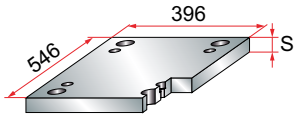
PS



	PS
S	36
	46

mat.: 1.1730

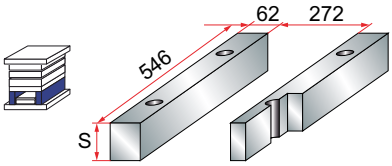
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

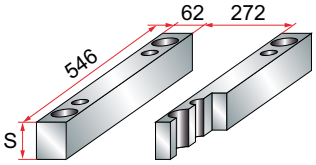
ESP



	ESP
S	76
	86
	96
	116

mat.: 1.1730

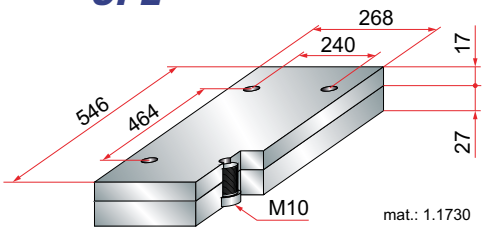
ESP-EU



	ESP-EU
S	76
	86
	96
	116

mat.: 1.1730

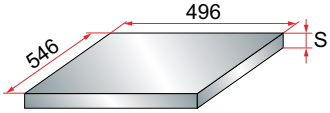
CPE



mat.: 1.1730

P PLATES

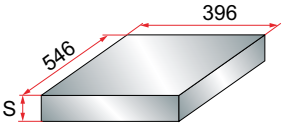
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

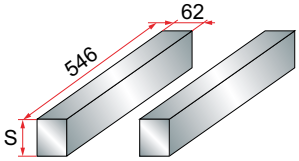
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

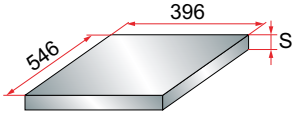
ESP-P



	ESP-P
S	76
	86
	96
	116

mat.: 1.1730

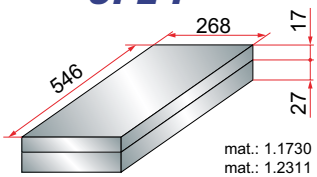
PS-P



	PS-P
S	36
	46

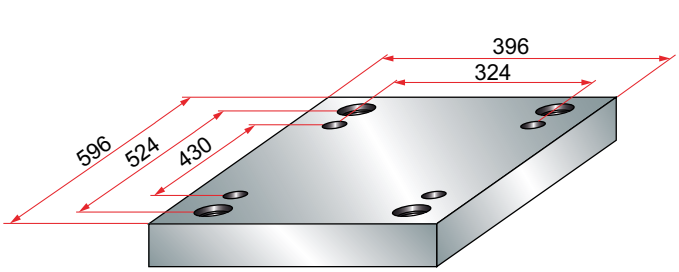
mat.: 1.1730

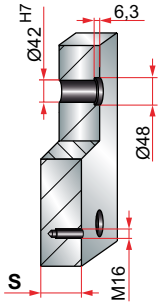
CPE-P



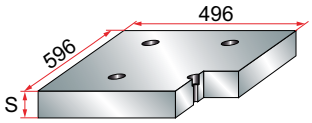
mat.: 1.1730
mat.: 1.2311

396.596





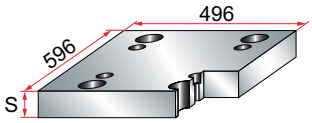
PBA



	PBA
S	36
	46

mat.: 1.1730

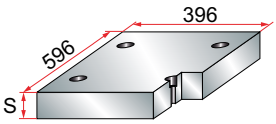
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

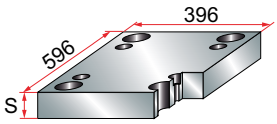
PBAS



	PBAS
S	36
	46
	56

mat.: 1.1730

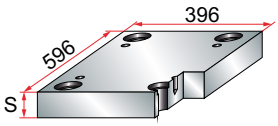
PBAS-EU



	PBAS-EU
S	36
	46
	56

mat.: 1.1730

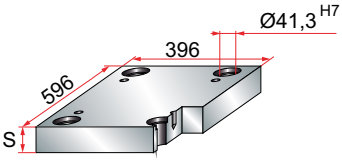
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

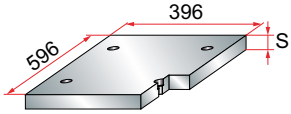


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

396.596

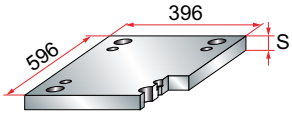
PS



	PS
S	36
	46
	56

mat.: 1.1730

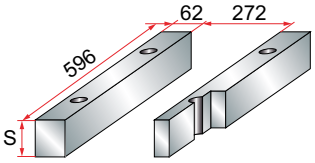
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

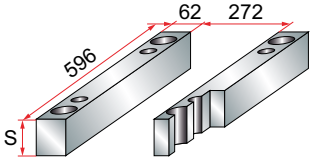
ESP



	ESP
S	76
	86
	96
	116
	136

mat.: 1.1730

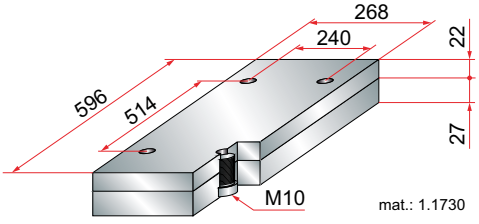
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

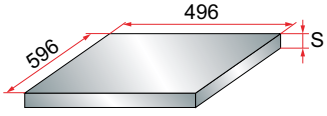
CPE



mat.: 1.1730

P PLATES

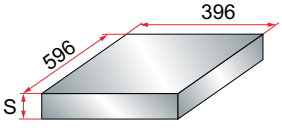
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

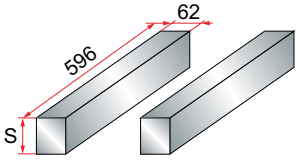
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 dias - Delivery 3/4 days

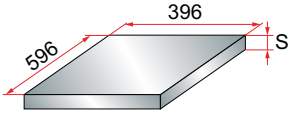
ESP-P



	ESP-P
S	76
	86
	96
	116
	136

mat.: 1.1730

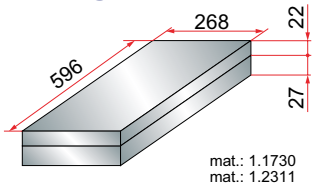
PS-P



	PS-P
S	36
	46
	56

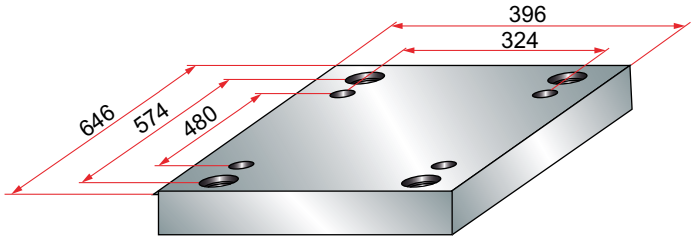
mat.: 1.1730

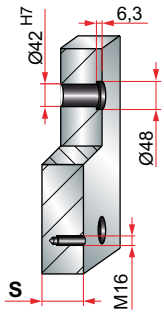
CPE-P



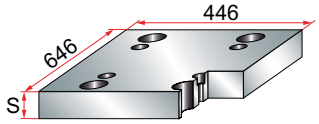
mat.: 1.1730
mat.: 1.2311

396.646





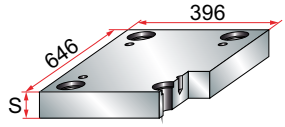
PBA-EU



	PBA-EU
S	36
	46

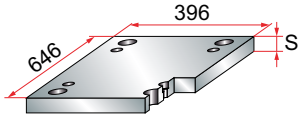
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

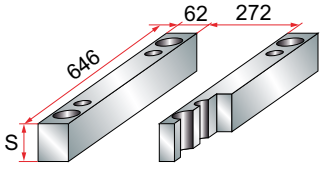
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

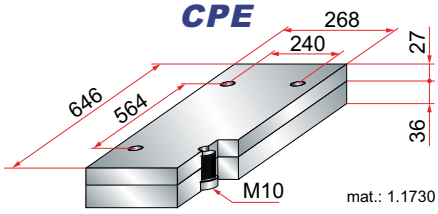
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156

mat.: 1.1730

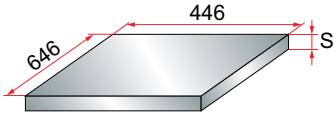
CPE



mat.: 1.1730

P PLATES

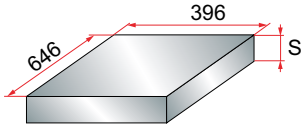
PBA-P



	PBA-P
S	36
	46

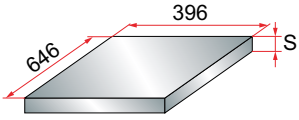
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

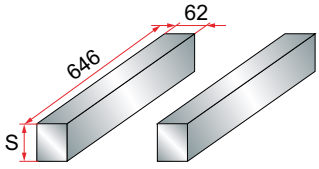
PS-P



	PS-P
S	46
	56

mat.: 1.1730

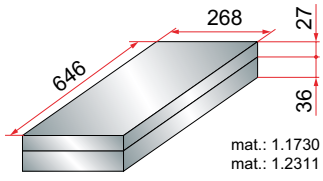
ESP-P



	ESP-P
S	76
	86
	96
	116
	136
	156

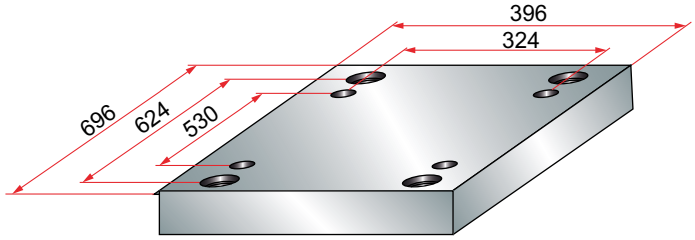
mat.: 1.1730

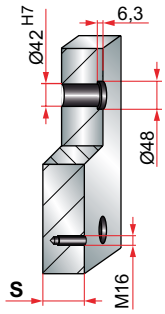
CPE-P



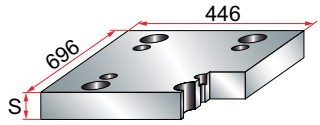
mat.: 1.1730
mat.: 1.2311

396.696





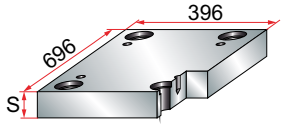
PBA-EU



	PBA-EU
S	36
	46

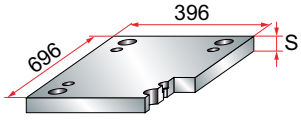
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

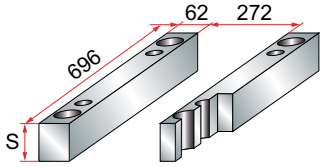
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

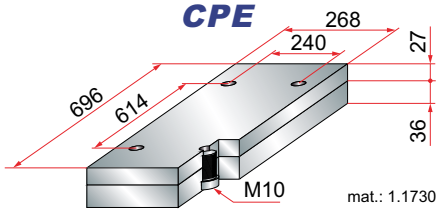
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156

mat.: 1.1730

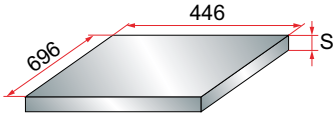
CPE



mat.: 1.1730

P PLATES

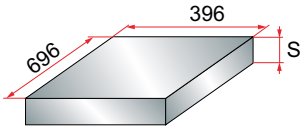
PBA-P



	PBA-EU
S	36
	46

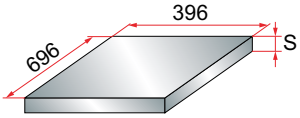
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

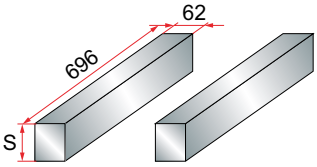
PS-P



	PS-EU
S	46
	56

mat.: 1.1730

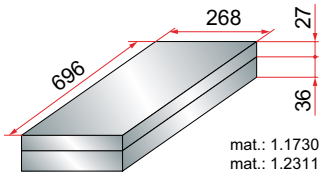
ESP-P



	ESP-EU
S	76
	86
	96
	116
	136
	156

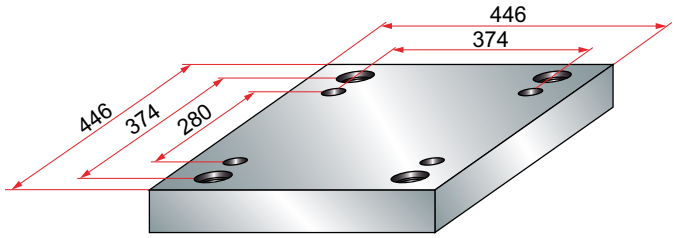
mat.: 1.1730

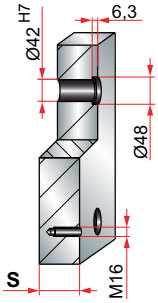
CPE-P



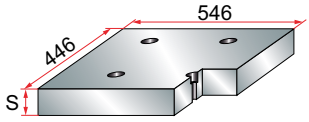
mat.: 1.1730
mat.: 1.2311

446.446





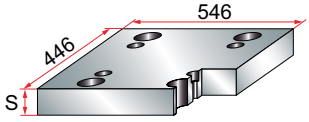
PBA



	PBA
S	36
	46

mat.: 1.1730

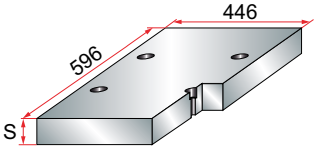
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

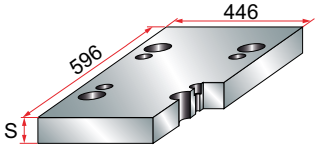
PBAV



	PBAV
S	36
	46

mat.: 1.1730

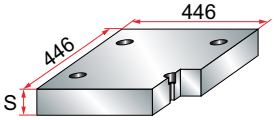
PBAV-EU



	PBAV-EU
S	36
	46

mat.: 1.1730

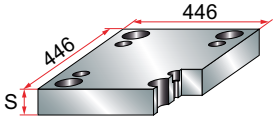
PBAS



	PBAS
S	36
	46

mat.: 1.1730

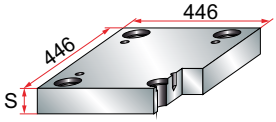
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

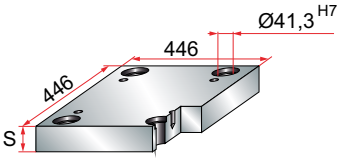
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

PCX

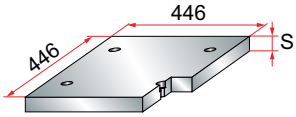


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

446.446

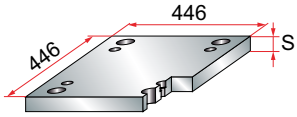
PS



	PS
S	36
	46

mat.: 1.1730

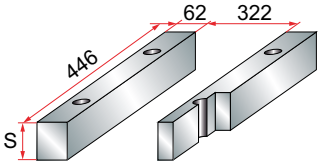
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

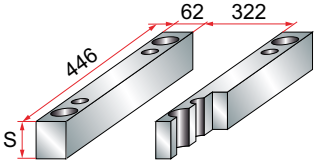
ESP



	ESP
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

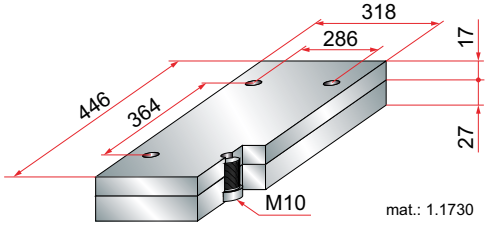
ESP-EU



	ESP-EU
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

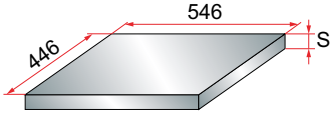
CPE



mat.: 1.1730

P PLATES

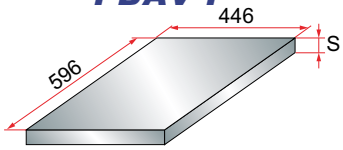
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

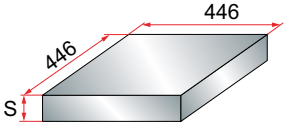
PBAV-P



	PBAV-P
S	36
	46

mat.: 1.1730

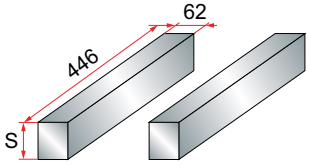
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º Entrega 3/4 dias - Delivery 3/4 days

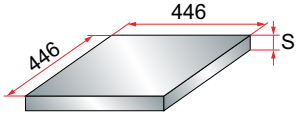
ESP-P



	ESP-P
S	56
	66
	76
	86
	96
	116

mat.: 1.1730

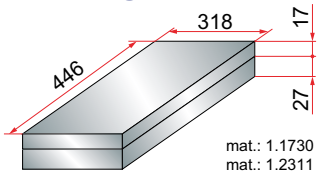
PS-P



	PS-P
S	36
	46

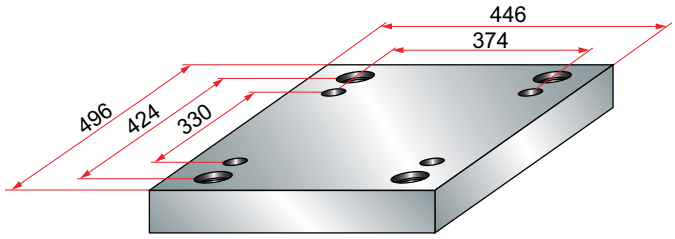
mat.: 1.1730

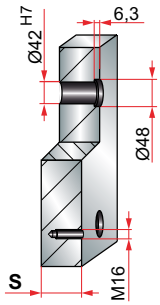
CPE-P



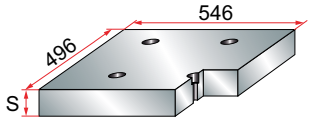
mat.: 1.1730
mat.: 1.2311

446.496





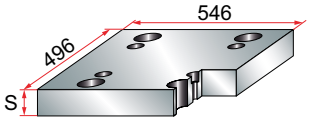
PBA



	PBA
S	36
	46

mat.: 1.1730

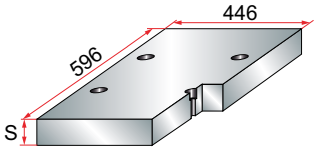
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

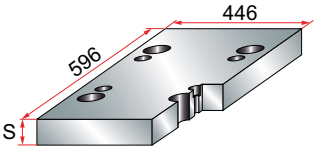
PBAV



	PBAV
S	36
	46

mat.: 1.1730

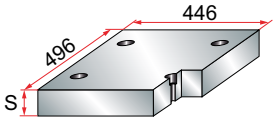
PBAV-EU



	PBAV-EU
S	36
	46

mat.: 1.1730

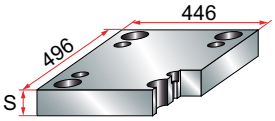
PBAS



	PBAS
S	36
	46

mat.: 1.1730

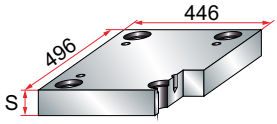
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

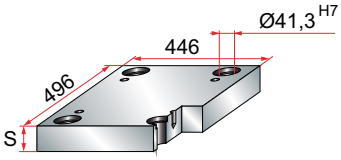
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

PCX

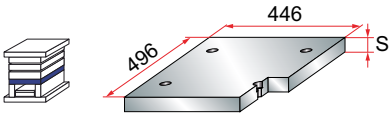


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 dias - Delivery 3/4 days

446.496

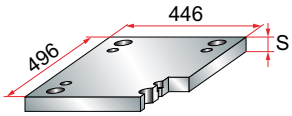
PS



	PS
S	36
	46

mat.: 1.1730

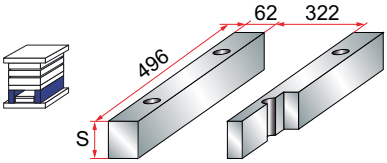
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

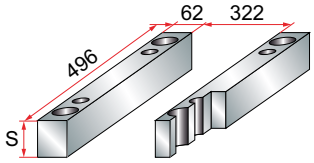
ESP



	ESP
S	76
	86
	96
	116
	136

mat.: 1.1730

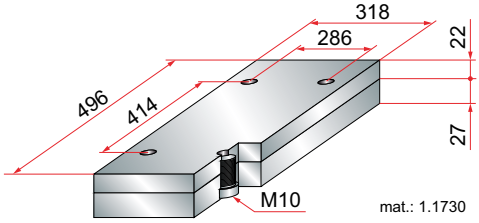
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136

mat.: 1.1730

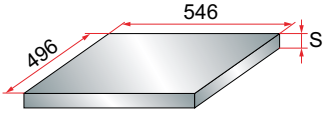
CPE



mat.: 1.1730

P PLATES

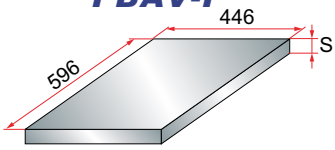
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

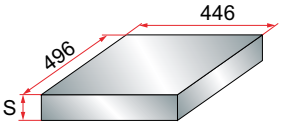
PBAV-P



	PBAV-P
S	36
	46

mat.: 1.1730

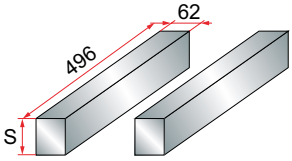
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

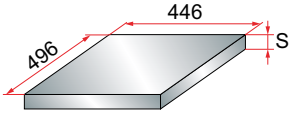
ESP-P



	ESP-P
S	76
	86
	96
	116
	136

mat.: 1.1730

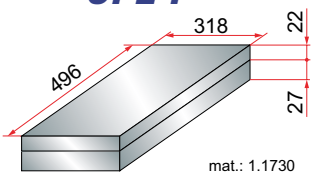
PS-P



	PS-P
S	36
	46

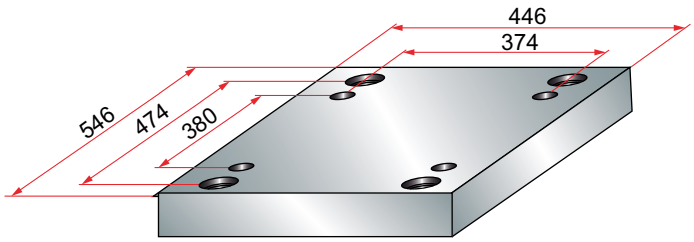
mat.: 1.1730

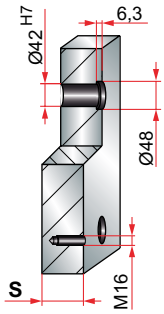
CPE-P



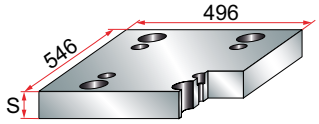
mat.: 1.1730
mat.: 1.2311

446.546





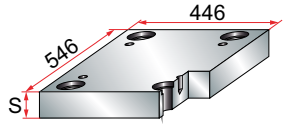
PBA-EU



	PBA-EU
S	27
	36
	46

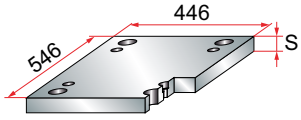
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*

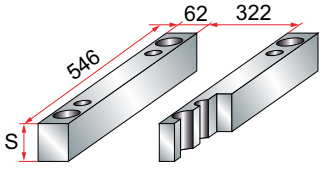
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

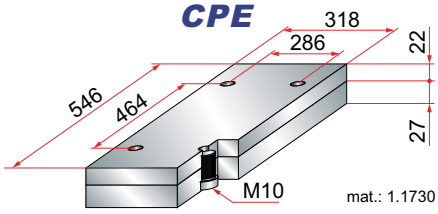
ESP-EU



	ESP-EU
S	56
	66
	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

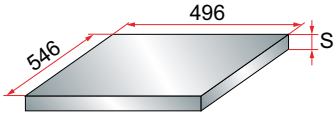
CPE



mat.: 1.1730

P PLATES

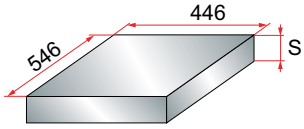
PBA-P



	PBA-P
S	27
	36
	46

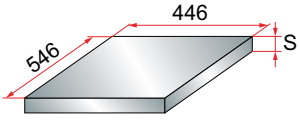
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*

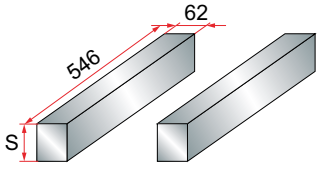
PS-P



	PS-P
S	36
	46

mat.: 1.1730

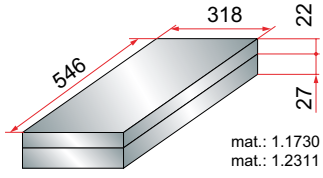
ESP-P



	ESP-P
S	76
	86
	96
	116
	136
	156
	176

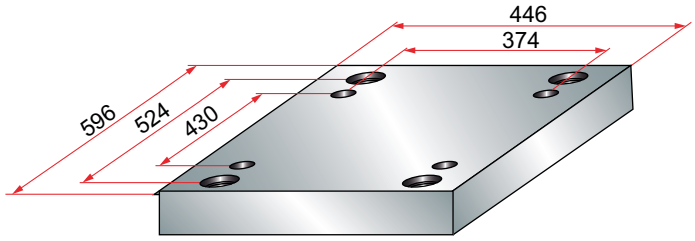
mat.: 1.1730

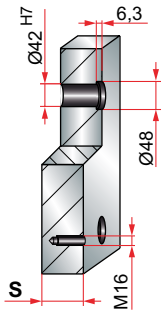
CPE-P



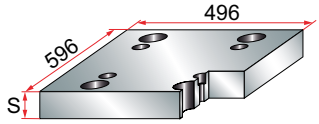
mat.: 1.1730
mat.: 1.2311

446.596





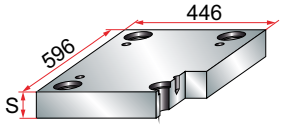
PBA-EU



	PBA-EU
S	36
	46

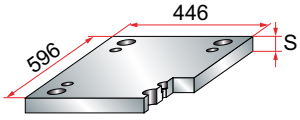
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*

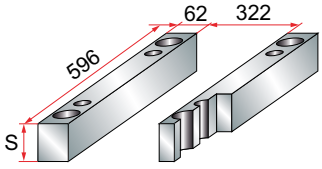
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

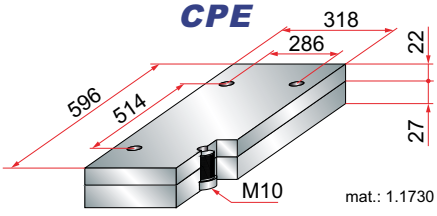
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

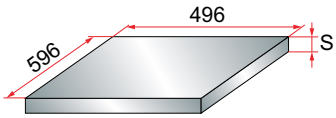
CPE



mat.: 1.1730

P PLATES

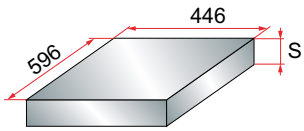
PBA-P



	PBA-P
S	36
	46

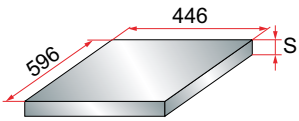
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*

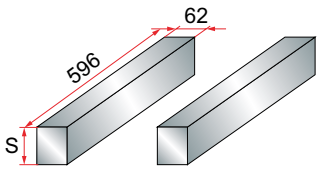
PS-P



	PS-P
S	36
	46

mat.: 1.1730

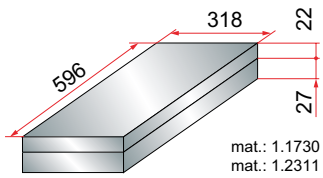
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

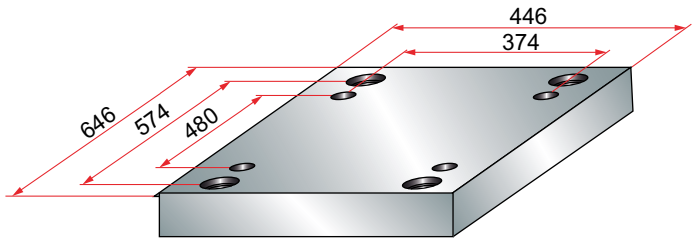
mat.: 1.1730

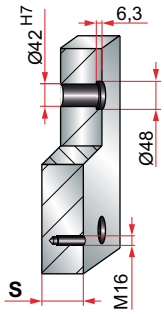
CPE-P



mat.: 1.1730
mat.: 1.2311

446.646





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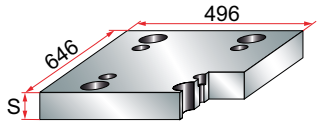
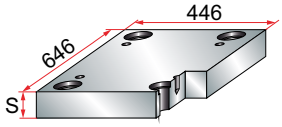


	PBA-EU
S	36
	46

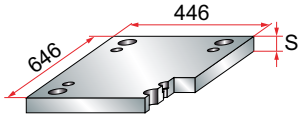
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

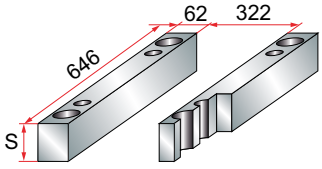
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

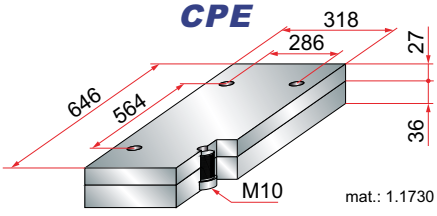
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

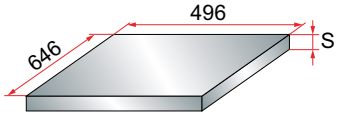
CPE



mat.: 1.1730

P PLATES

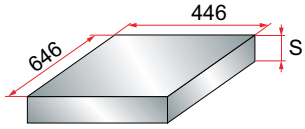
PBA-P



	PBA-P
S	36
	46

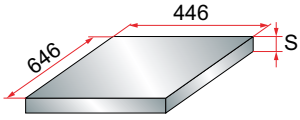
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

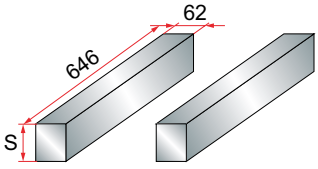
PS-P



	PS-P
S	46
	56

mat.: 1.1730

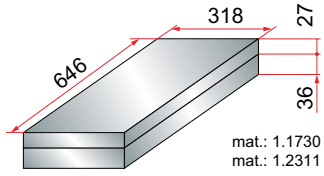
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

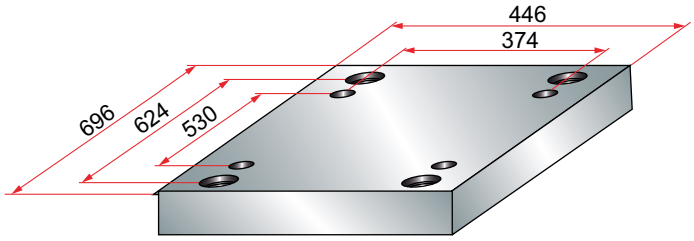
mat.: 1.1730

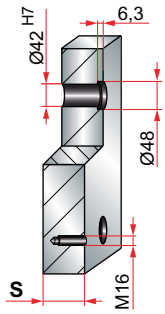
CPE-P



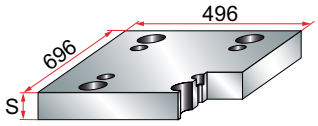
mat.: 1.1730
mat.: 1.2311

446.696





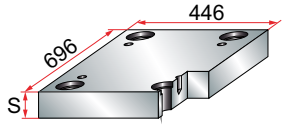
PBA-EU



	PBA-EU
S	36
	46

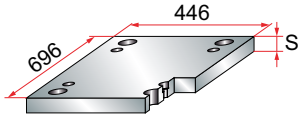
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

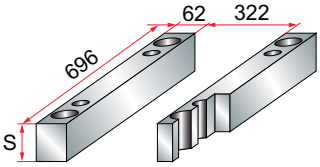
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

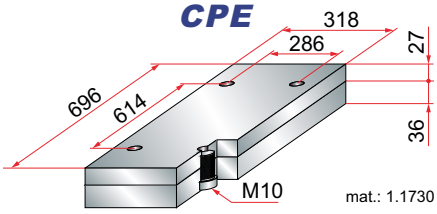
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

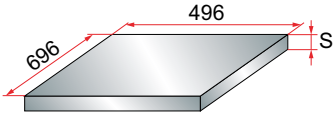
CPE



mat.: 1.1730

P PLATES

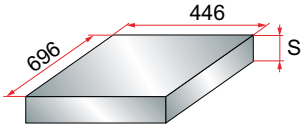
PBA-P



	PBA-P
S	36
	46

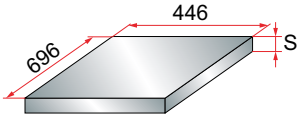
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

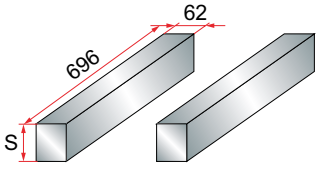
PS-P



	PS-P
S	46
	56

mat.: 1.1730

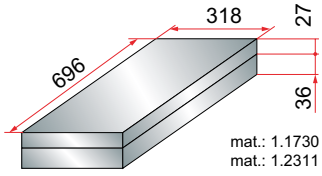
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

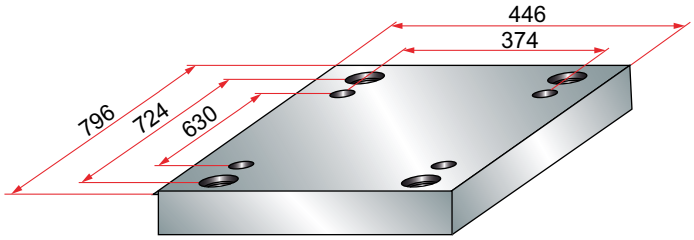
mat.: 1.1730

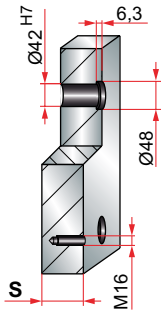
CPE-P



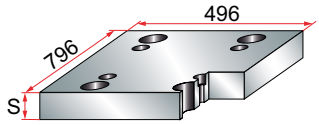
mat.: 1.1730
mat.: 1.2311

446.796





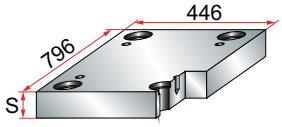
PBA-EU



	PBA-EU
S	46

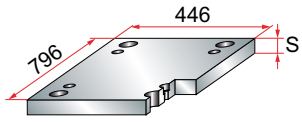
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

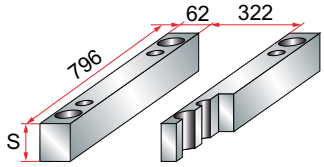
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

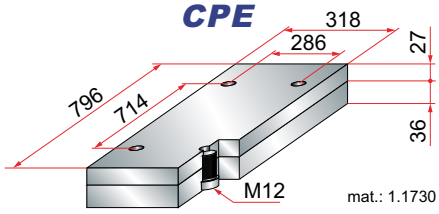
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

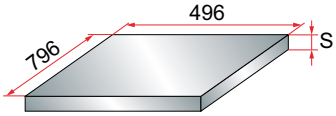
CPE



mat.: 1.1730

P PLATES

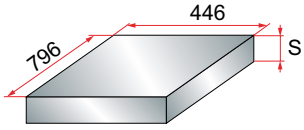
PBA-P



	PBA-P
S	46

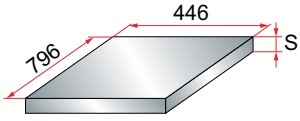
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

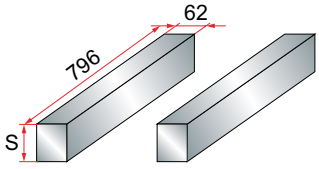
PS-P



	PS-P
S	46
	56

mat.: 1.1730

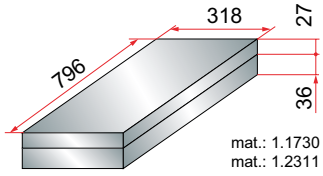
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

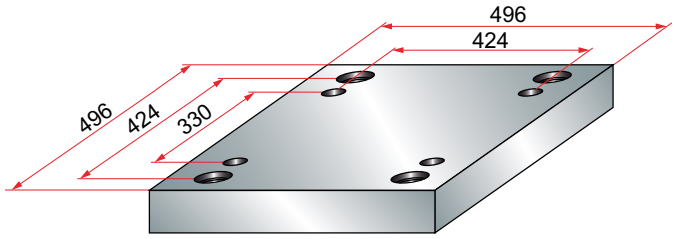
mat.: 1.1730

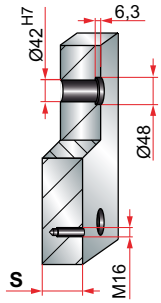
CPE-P



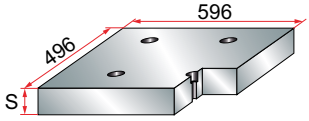
mat.: 1.1730
mat.: 1.2311

496.496





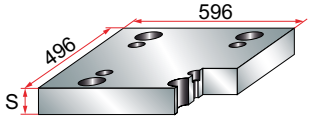
PBA



	PBA
S	36
	46

mat.: 1.1730

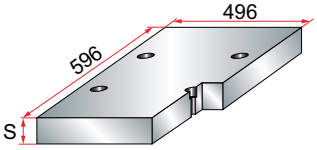
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

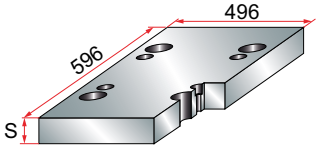
PBAV



	PBAV
S	36
	46

mat.: 1.1730

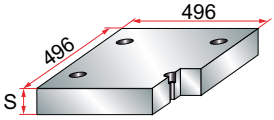
PBAV-EU



	PBAV-EU
S	36
	46

mat.: 1.1730

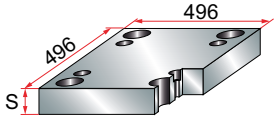
PBAS



	PBAS
S	36
	46

mat.: 1.1730

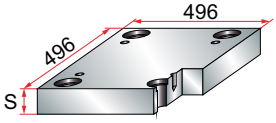
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

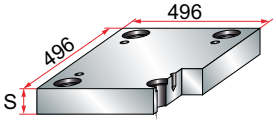
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

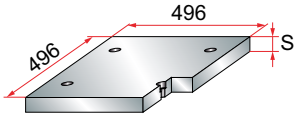


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

496.496

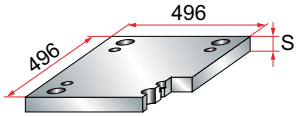
PS



	PS
S	36
	46

mat.: 1.1730

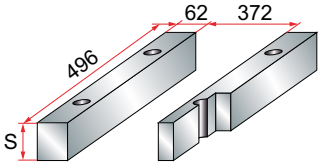
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

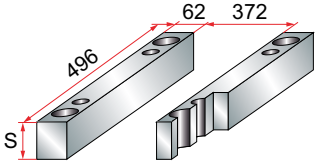
ESP



	ESP
S	56
	76
	86
	96
	116
	136

mat.: 1.1730

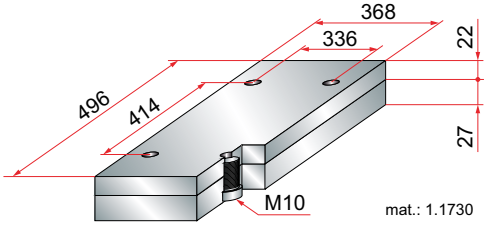
ESP-EU



	ESP-EU
S	56
	76
	86
	96
	116
	136

mat.: 1.1730

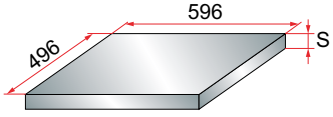
CPE



mat.: 1.1730

P PLATES

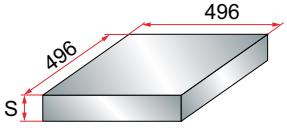
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

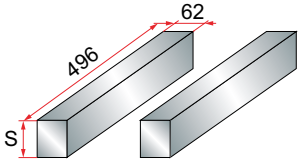
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	°
	36	*	*	*	°
	46	*	*	*	°
	56	*	*	*	°
	66	*	*	*	°
	76	*	*	*	°
	86	*	*	*	°
	96	*	*	*	°
	116	*	*	*	°
	136	*	*	*	°
	156	*	*	*	°

° Entrega 3/4 días - Delivery 3/4 days

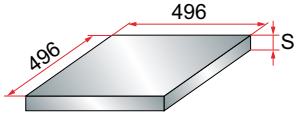
ESP-P



	ESP-P
S	56
	76
	86
	96
	116
	136

mat.: 1.1730

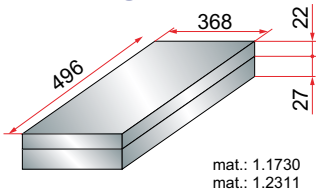
PS-P



	PS-P
S	36
	46

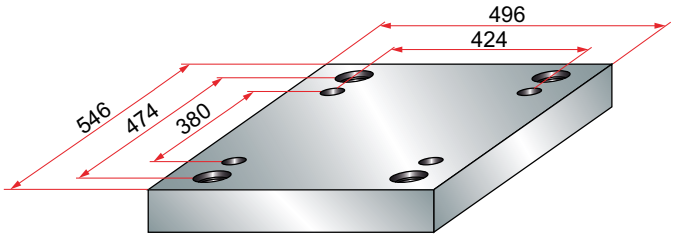
mat.: 1.1730

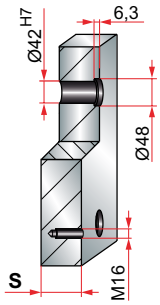
CPE-P



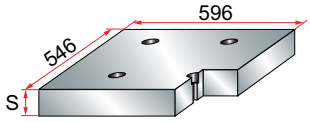
mat.: 1.1730
mat.: 1.2311

496.546





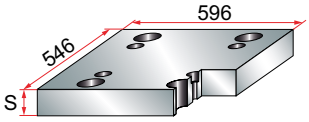
PBA



	PBA
S	36
	46

mat.: 1.1730

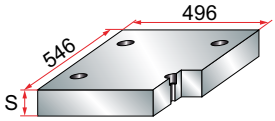
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

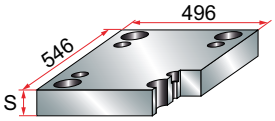
PBAS



	PBAS
S	36
	46

mat.: 1.1730

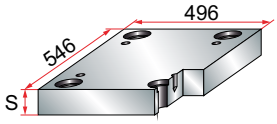
PBAS-EU



	PBAS-EU
S	36
	46

mat.: 1.1730

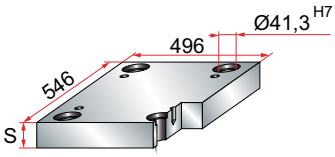
PC



		Material		
		1.2311	1.2312	1.2085
S	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o
	176	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

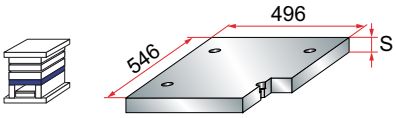


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

496.546

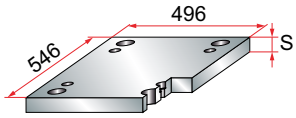
PS



	PS
S	36
	46

mat.: 1.1730

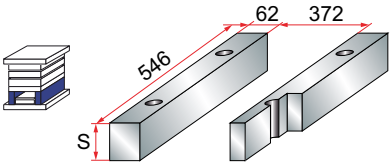
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

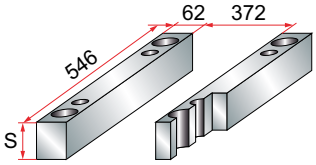
ESP



	ESP
S	76
	86
	96
	116
	136

mat.: 1.1730

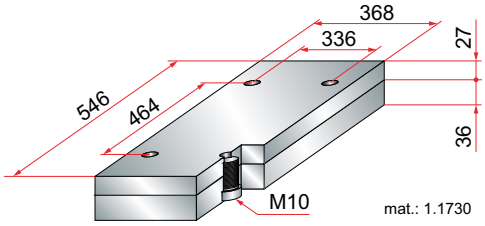
ESP-EU



	ESP-EU
S	56
	66
	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

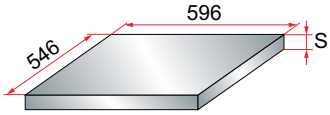
CPE



mat.: 1.1730

P PLATES

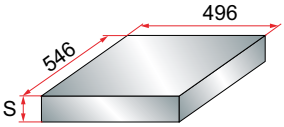
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

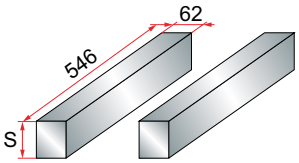
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º Entrega 3/4 dias - Delivery 3/4 days

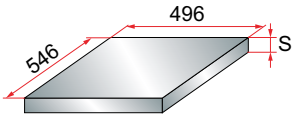
ESP-P



	ESP-P
S	76
	86
	96
	116
	136

mat.: 1.1730

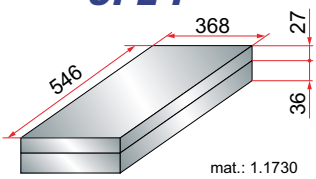
PS-P



	PS-P
S	36
	46

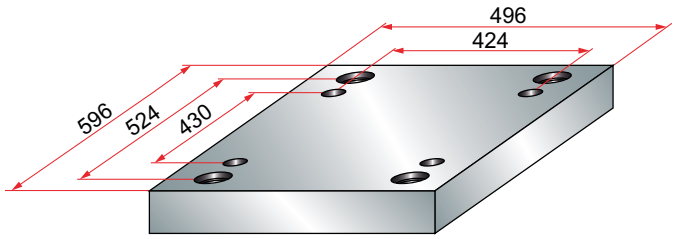
mat.: 1.1730

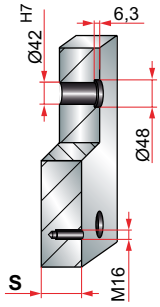
CPE-P



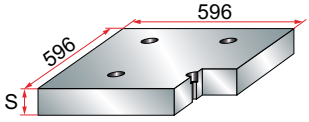
mat.: 1.1730
mat.: 1.2311

496.596





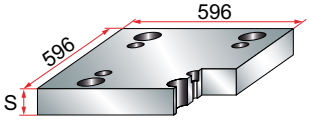
PBA



	PBA
S	36
	46

mat.: 1.1730

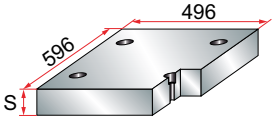
PBA-EU



	PBA-EU
S	36
	46

mat.: 1.1730

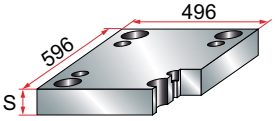
PBAS



	PBA
S	36
	46

mat.: 1.1730

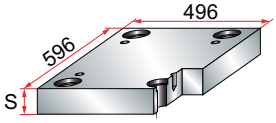
PBAS-EU



	PBA-EU
S	36
	46

mat.: 1.1730

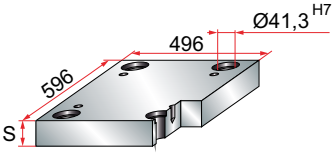
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

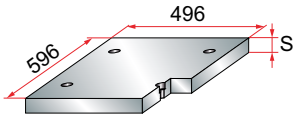


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

496.596

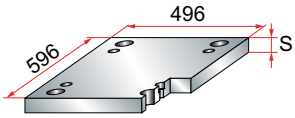
PS



	PS
S	36
	46

mat.: 1.1730

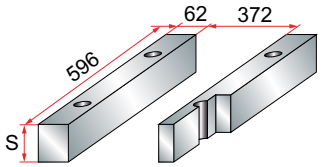
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

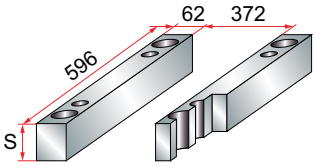
ESP



	ESP
S	76
	86
	96
	116
	136

mat.: 1.1730

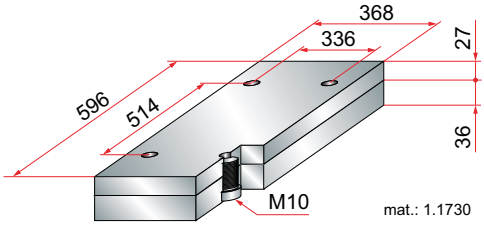
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

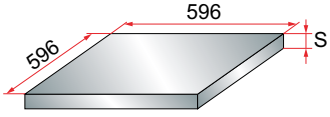
CPE



mat.: 1.1730

P PLATES

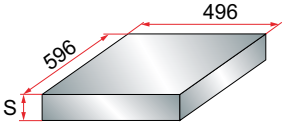
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

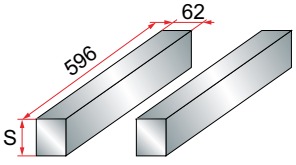
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º Entrega 3/4 días - Delivery 3/4 days

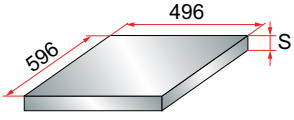
ESP-P



	ESP-P
S	76
	86
	96
	116
	136

mat.: 1.1730

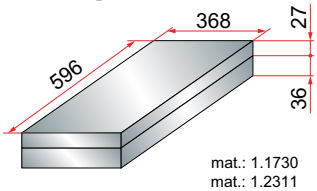
PS-P



	PS-P
S	36
	46

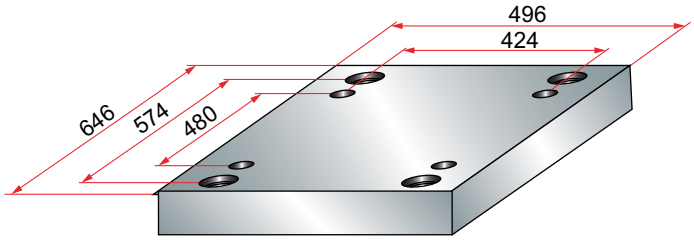
mat.: 1.1730

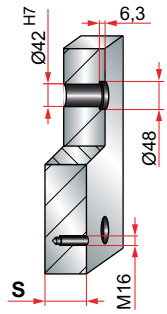
CPE-P



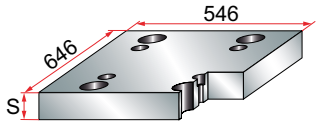
mat.: 1.1730
mat.: 1.2311

496.646





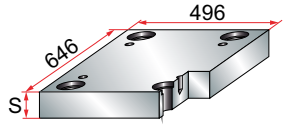
PBA-EU



	PBA-EU
S	46

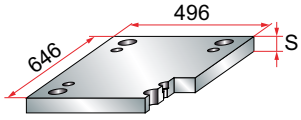
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

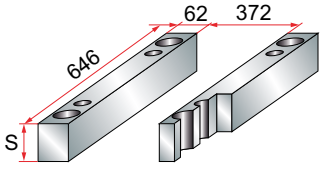
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

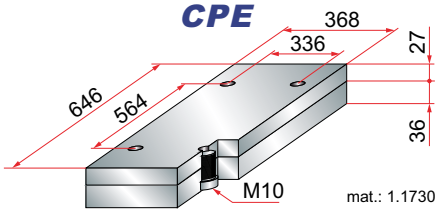
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

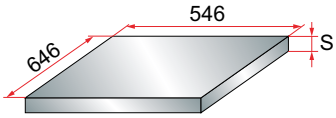
CPE



mat.: 1.1730

P PLATES

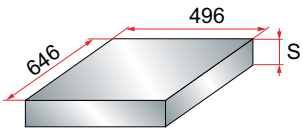
PBA-P



	PBA-P
S	46

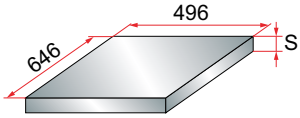
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

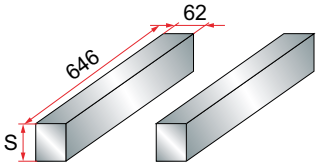
PS-P



	PS-P
S	46
	56

mat.: 1.1730

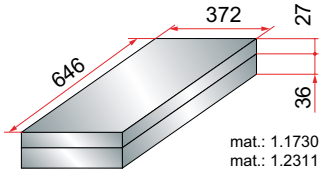
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

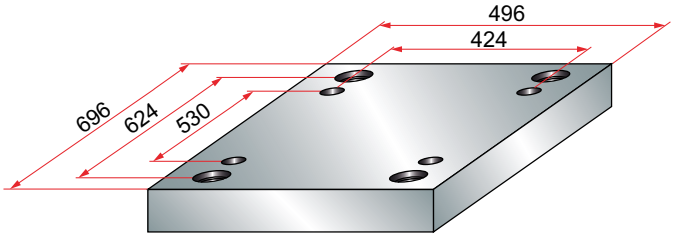
mat.: 1.1730

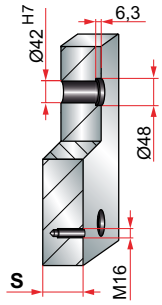
CPE-P



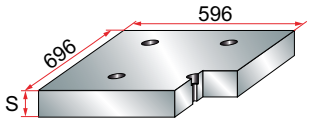
mat.: 1.1730
mat.: 1.2311

496.696





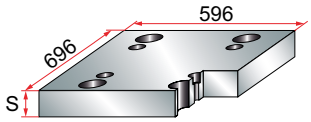
PBA



	PBA
S	46
	56

mat.: 1.1730

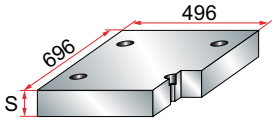
PBA-EU



	PBA-EU
S	46
	56

mat.: 1.1730

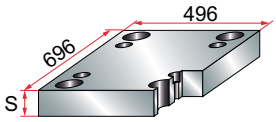
PBAS



	PBA
S	46
	56

mat.: 1.1730

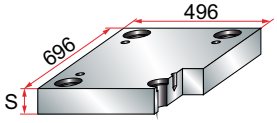
PBAS-EU



	PBA-EU
S	46
	56

mat.: 1.1730

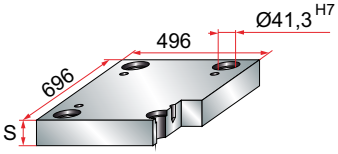
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o
	176	*	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

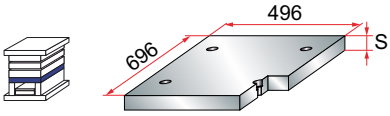


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

496.696

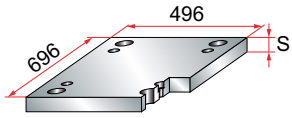
PS



	PS
S	46
	56

mat.: 1.1730

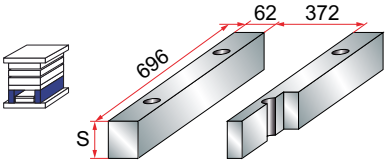
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

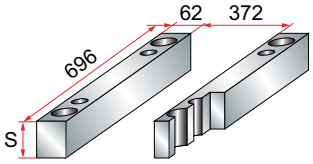
ESP



	ESP
S	76
	86
	96
	116
	136
	156

mat.: 1.1730

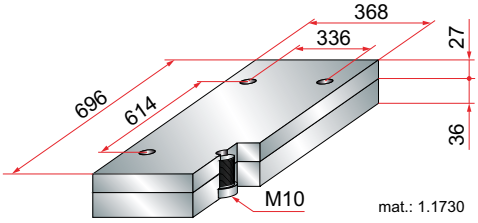
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

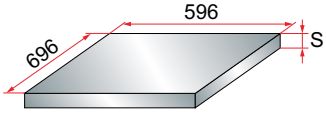
CPE



mat.: 1.1730

P PLATES

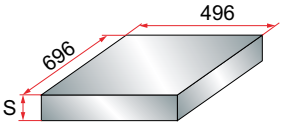
PBA-P



	PBA-P
S	46
	56

mat.: 1.1730

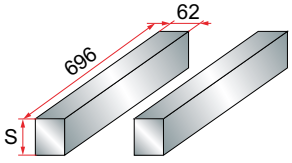
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o
	176	*	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

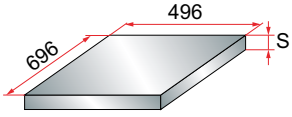
ESP-P



	ESP-P
S	76
	86
	96
	116
	136
	156

mat.: 1.1730

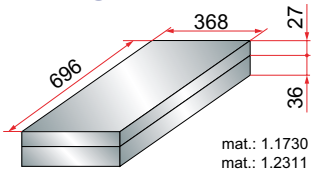
PS-P



	PS-P
S	46
	56

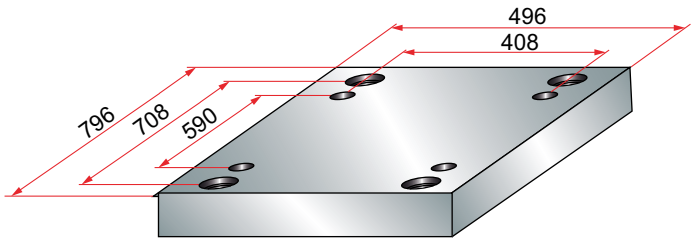
mat.: 1.1730

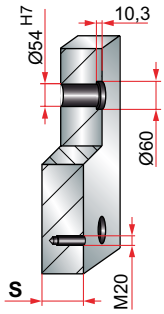
CPE-P



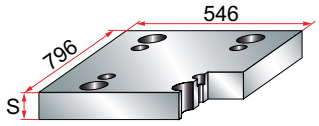
mat.: 1.1730
mat.: 1.2311

496.796





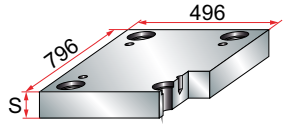
PBA-EU



	PBA-EU
S	46

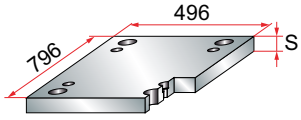
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

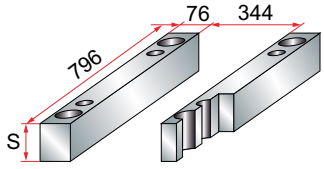
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

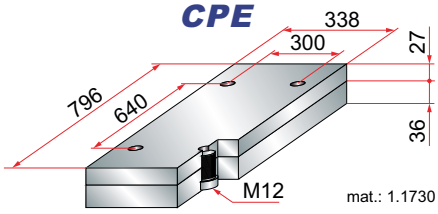
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

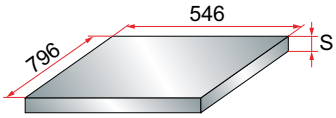
CPE



mat.: 1.1730

P PLATES

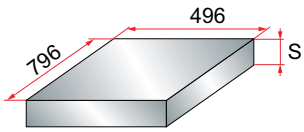
PBA-P



	PBA-P
S	46

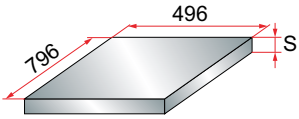
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

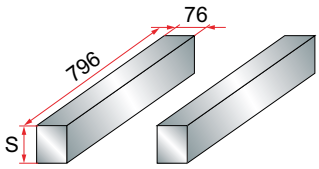
PS-P



	PS-P
S	56
	76

mat.: 1.1730

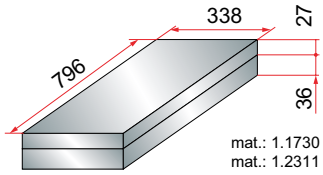
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

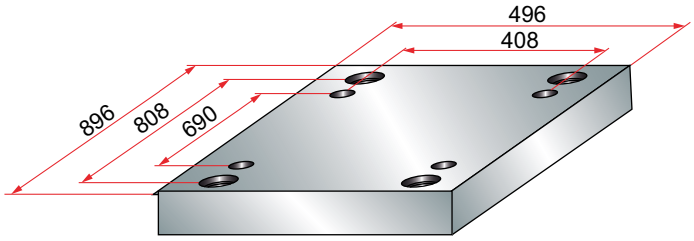
mat.: 1.1730

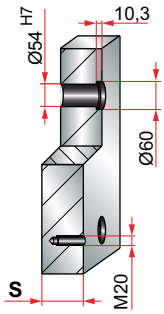
CPE-P



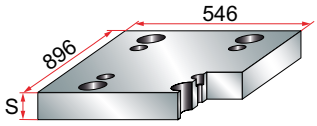
mat.: 1.1730
mat.: 1.2311

496.896





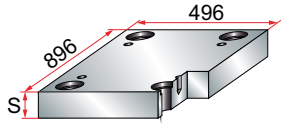
PBA-EU



	PBA-EU
S	46

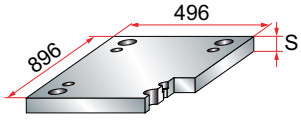
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

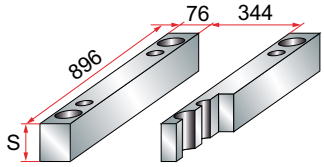
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

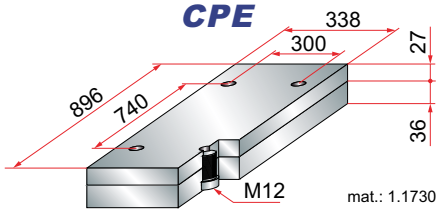
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

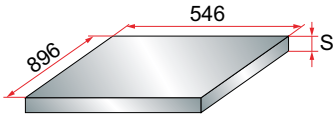
CPE



mat.: 1.1730

P PLATES

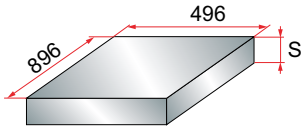
PBA-P



	PBA-P
S	46

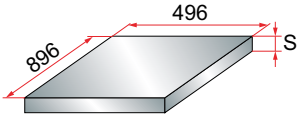
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

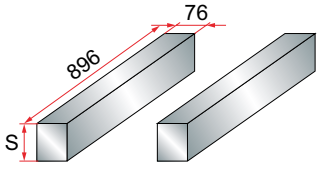
PS-P



	PS-P
S	56
	76

mat.: 1.1730

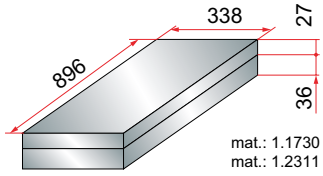
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

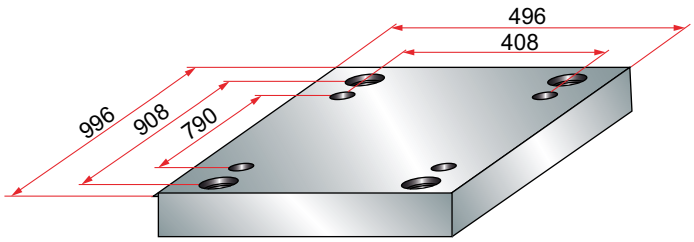
mat.: 1.1730

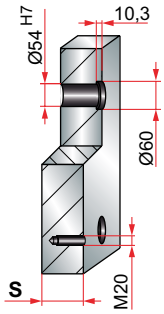
CPE-P



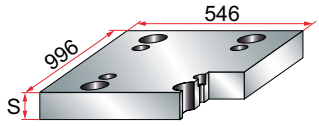
mat.: 1.1730
mat.: 1.2311

496.996





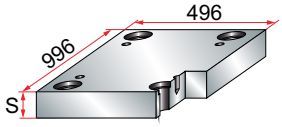
PBA-EU



	PBA-EU
S	46

mat.: 1.1730

PC



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S	36	*	*
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	56	*	*
	66	*	*
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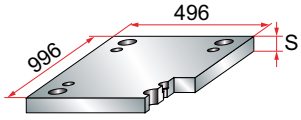
	176	*	*
	196	*	*

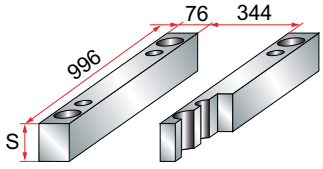
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
	96
	116
	136
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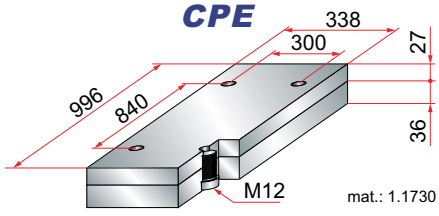
	176

mat.: 1.1730

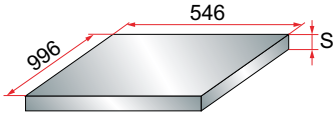
CPE



mat.: 1.1730

P PLATES

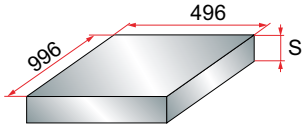
PBA-P



	PBA-P
S	46

mat.: 1.1730

PC-P



		Material	
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	46	*	*
	56	*	*
	66	*	*
	76	*	*
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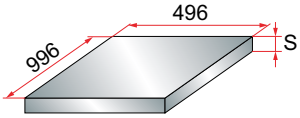
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

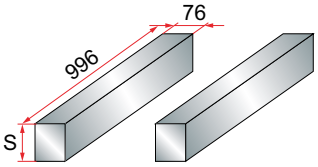
PS-P



	PS-P
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
S	86
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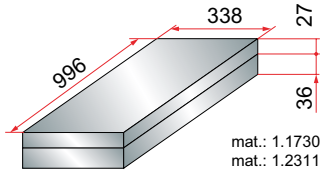
	116
	136
	156
	176

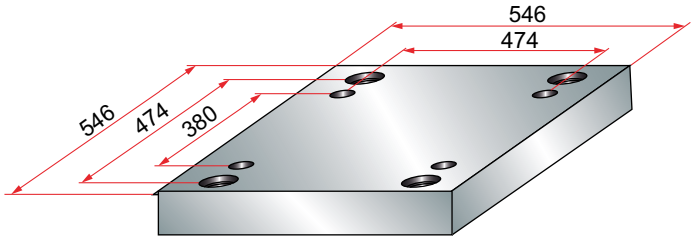
mat.: 1.1730

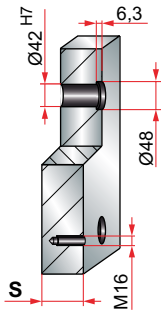
CPE-P



mat.: 1.1730
mat.: 1.2311

546.546





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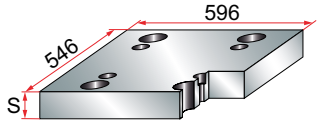
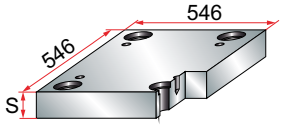


	PBA-EU
S	36
	46

mat.: 1.1730

PC



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	56	*	*
	66	*	*
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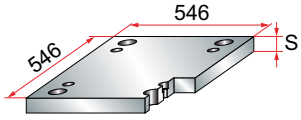
	116	*	*
	136	*	*
	156	*	*
	176	*	*

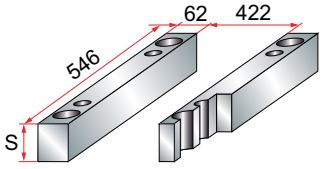
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

ESP-EU



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S	86
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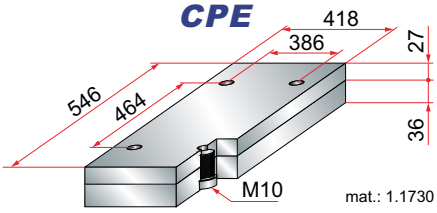
mat.: 1.1730

CPE



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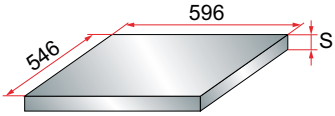
P PLATES

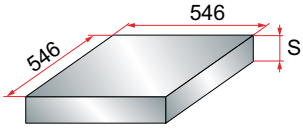
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

PC-P



		Material	
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	46	*	*
	56	*	*
	66	*	*
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	96	*	*
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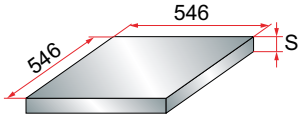
	156	*	*
	176	*	*

PS-P



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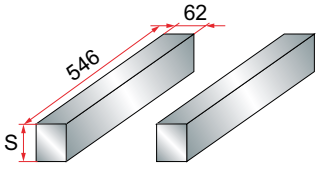
mat.: 1.1730

ESP-P



	ESP-P
S	86
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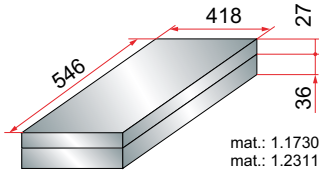
mat.: 1.1730

CPE-P



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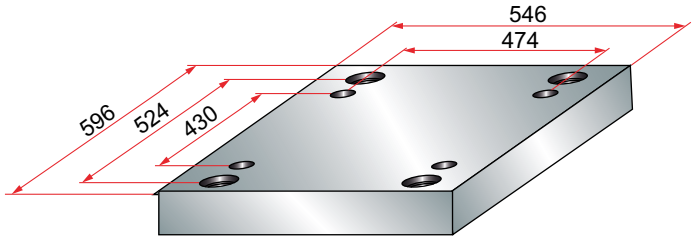
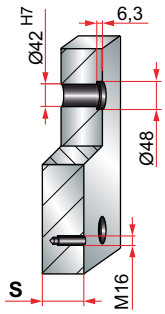
mat.: 1.2311

546.596





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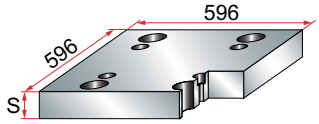
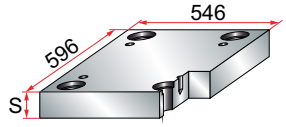


	PBA-EU
S	36
	46

mat.: 1.1730

PC



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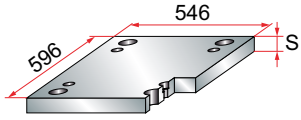
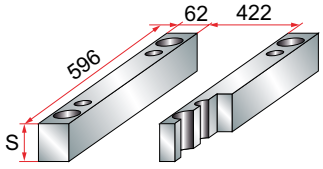
PS-EU



	PS-EU
S	36
	46

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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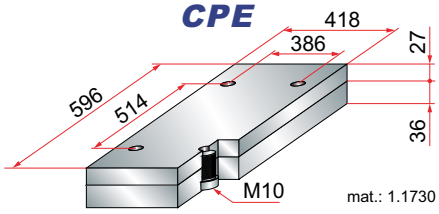
mat.: 1.1730

CPE



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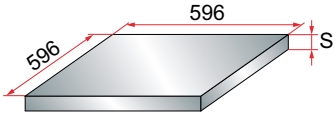
P PLATES

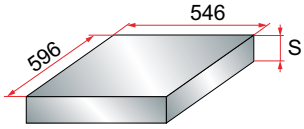
PBA-P



	PBA-P
S	36
	46

mat.: 1.1730

PC-P



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	156	*	*
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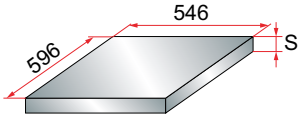
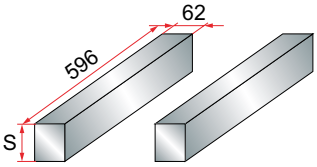
PS-P



	PS-P
S	36
	46

mat.: 1.1730

ESP-P



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S	86
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	116
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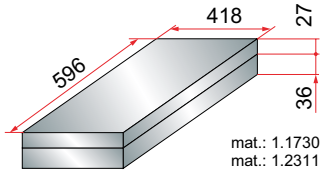
mat.: 1.1730

CPE-P



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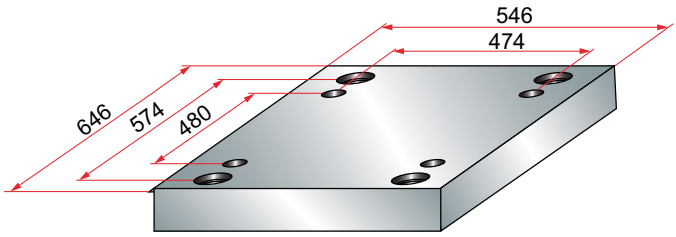
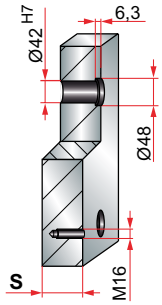
mat.: 1.2311

546.646





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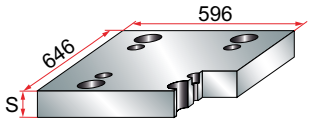
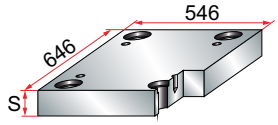


	PBA-EU
S	46

mat.: 1.1730

PC



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	136	*	*
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	176	*	*
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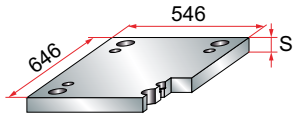
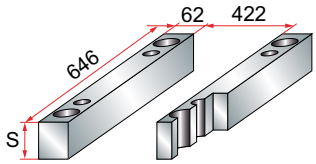
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156
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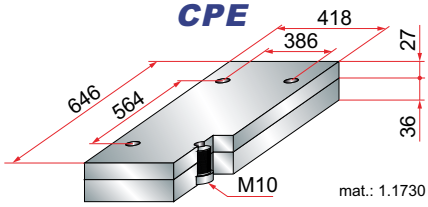
mat.: 1.1730

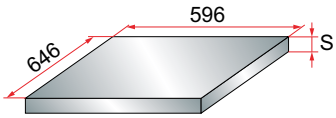
CPE



mat.: 1.1730

P PLATES

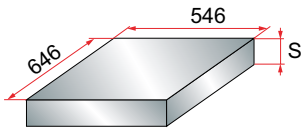
PBA-P



	PBA-P
S	46

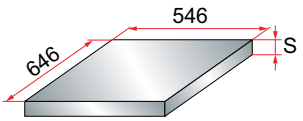
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

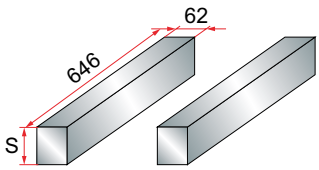
PS-P



	PS-P
S	56
	76

mat.: 1.1730

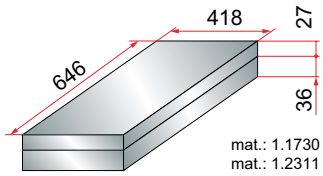
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

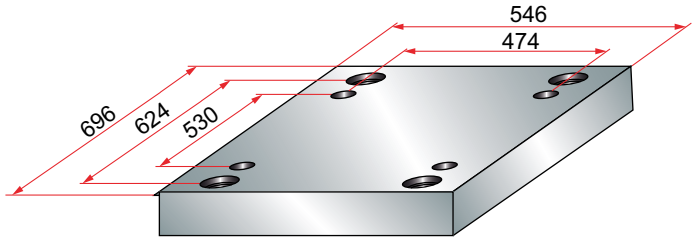
mat.: 1.1730

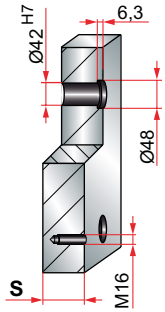
CPE-P



mat.: 1.1730
mat.: 1.2311

546.696





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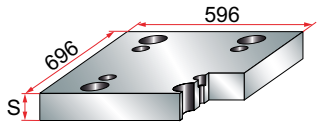
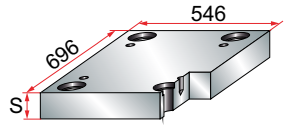


	PBA-EU
S	46

mat.: 1.1730

PC



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	76	*	*
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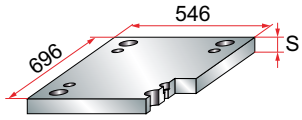
	176	*	*
	196	*	*

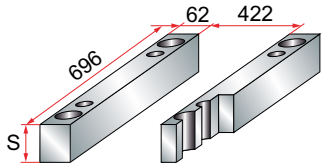
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	76
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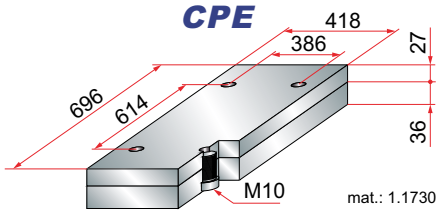
mat.: 1.1730

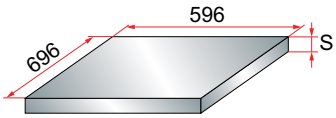
CPE



mat.: 1.1730

P PLATES

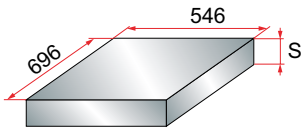
PBA-P



	PBA-P
S	46

mat.: 1.1730

PC-P



		Material	
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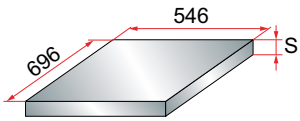
	136	*	*
	156	*	*
	176	*	*
	196	*	*

PS-P



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	76

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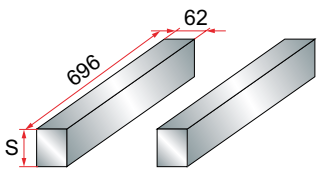
ESP-P



	ESP-P
S	86
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	136
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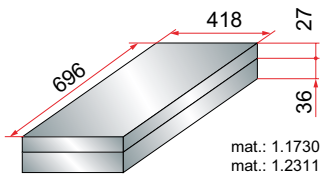
	176

mat.: 1.1730

CPE-P



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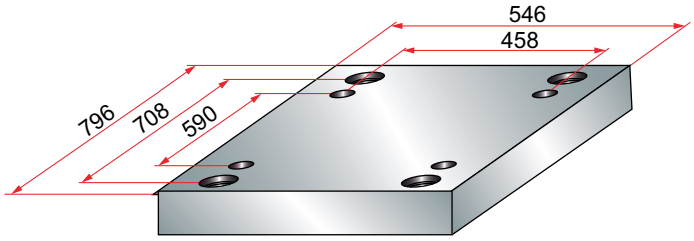
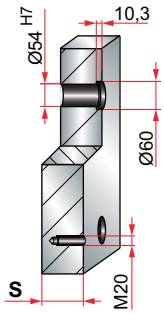
mat.: 1.2311

546.796





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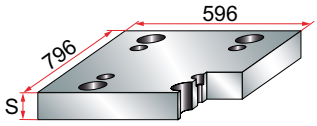
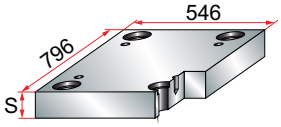


	PBA-EU
S	46

mat.: 1.1730

PC



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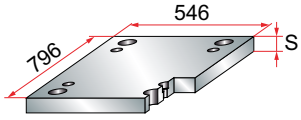
PS-EU



	PS-EU
S	56
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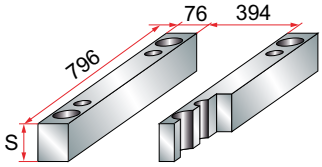
mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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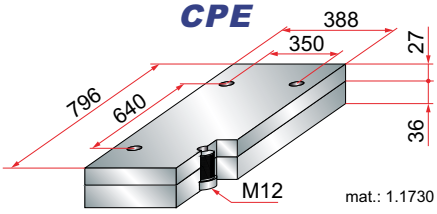
mat.: 1.1730

CPE



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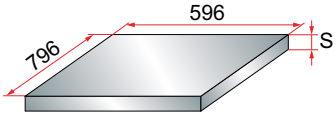
P PLATES

PBA-P



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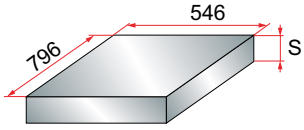
S	46

mat.: 1.1730

PC-P



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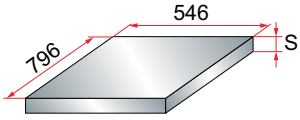
	176	*	*
	196	*	*

PS-P



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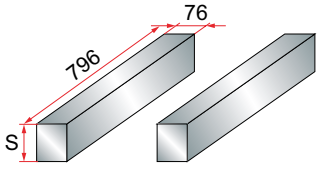
	76

mat.: 1.1730

ESP-P



	ESP-P
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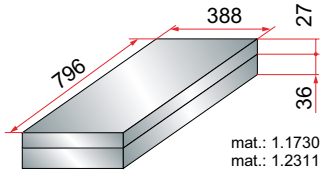
mat.: 1.1730

CPE-P



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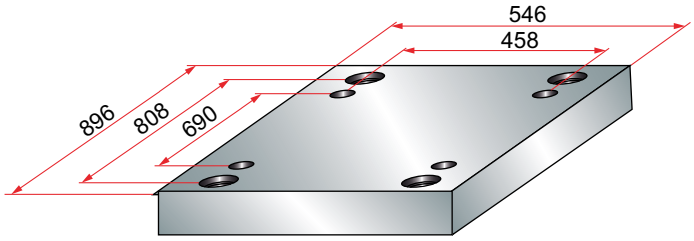

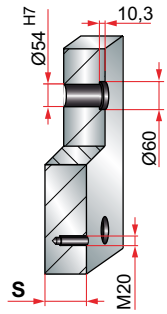

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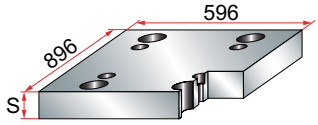
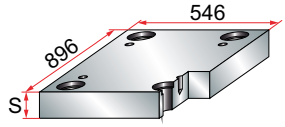


	PBA-EU
S	46

mat.: 1.1730

PC



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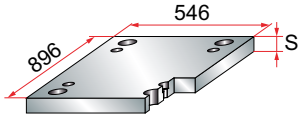
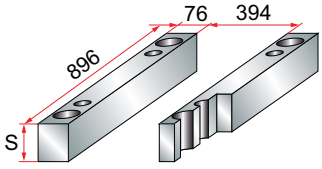
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



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S	86
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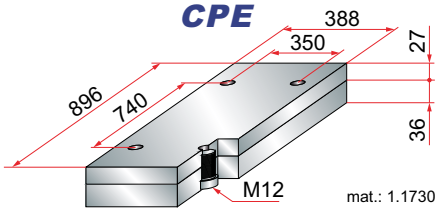
mat.: 1.1730

CPE



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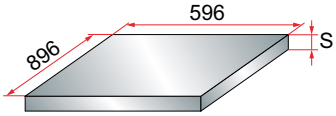
P PLATES

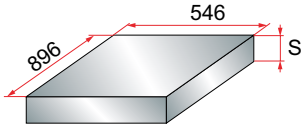
PBA-P



	PBA-P
S	46

mat.: 1.1730

PC-P



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	176	*	*
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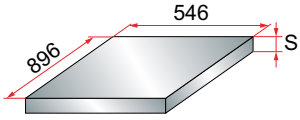
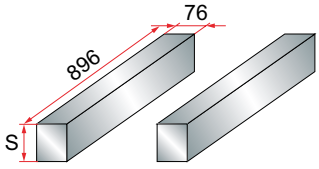
PS-P



	PS-P
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
S	86
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	136
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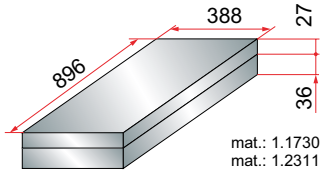
mat.: 1.1730

CPE-P



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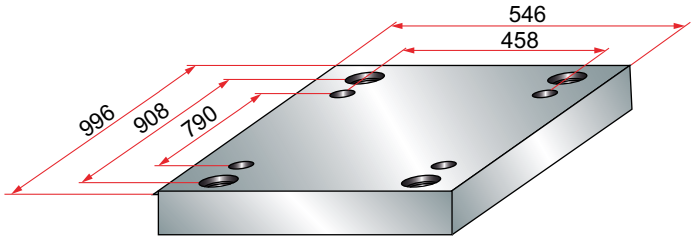
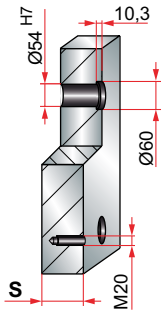
mat.: 1.2311

546.996





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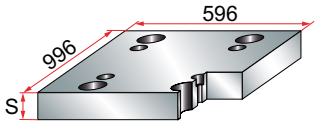
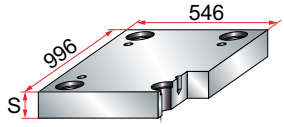


	PBA-EU
S	46

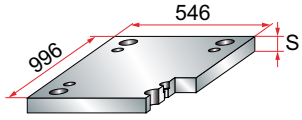
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

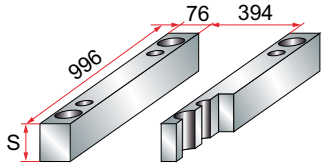
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

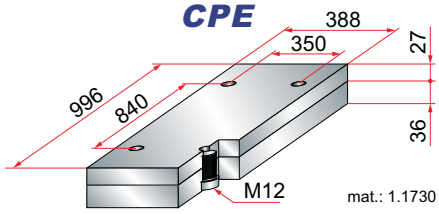
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

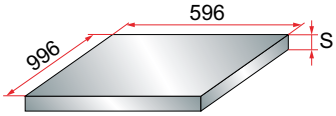
CPE



mat.: 1.1730

P PLATES

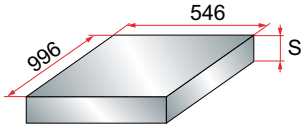
PBA-P



	PBA-P
S	46

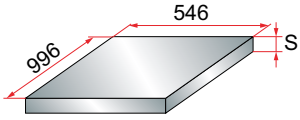
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

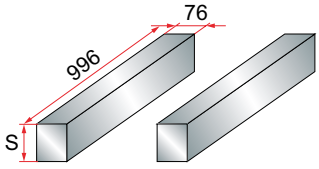
PS-P



	PS-P
S	56
	76

mat.: 1.1730

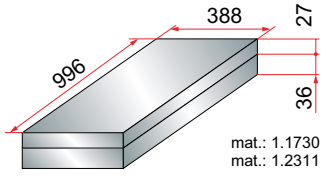
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

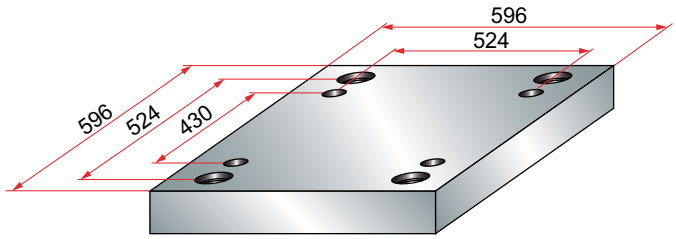
mat.: 1.1730

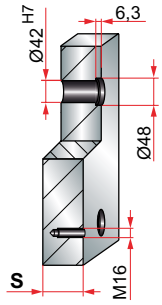
CPE-P



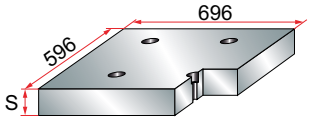
mat.: 1.1730
mat.: 1.2311

596.596





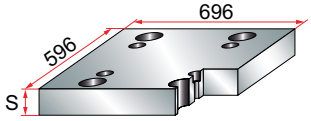
PBA



	PBA
S	46
	56

mat.: 1.1730

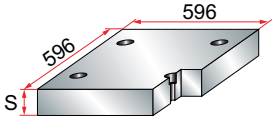
PBA-EU



	PBA-EU
S	46
	56

mat.: 1.1730

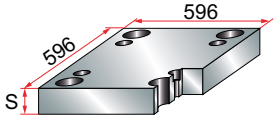
PBAS



	PBAS
S	46
	56

mat.: 1.1730

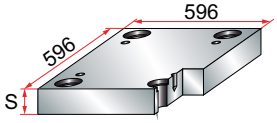
PBAS-EU



	PBAS-EU
S	46
	56

mat.: 1.1730

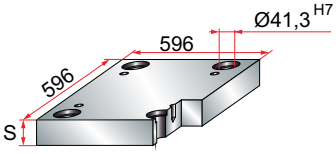
PC



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86		*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156		*	*	o

° Entrega 3/4 días - Delivery 3/4 days

PCX

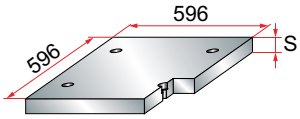


		Material		
		1.2311	1.2312	1.2085
S	27	*	*	o
	36	*	*	o
	46	*	*	o
	56	*	*	o
	66	*	*	o
	76	*	*	o
	86	*	*	o
	96	*	*	o
	116	*	*	o
	136	*	*	o
	156	*	*	o

° Entrega 3/4 días - Delivery 3/4 days

596.596

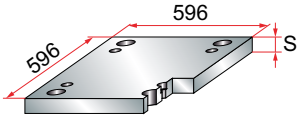
PS



	PS
S	46
	56

mat.: 1.1730

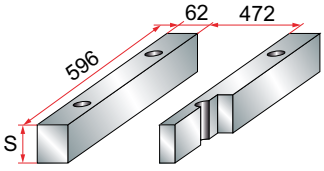
PS-EU



	PS-EU
S	46
	56

mat.: 1.1730

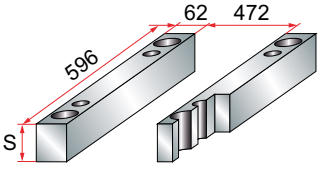
ESP



	ESP
S	76
	86
	96
	116
	136
	156

mat.: 1.1730

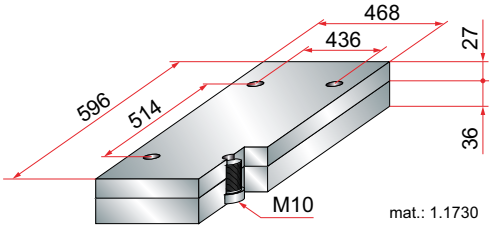
ESP-EU



	ESP-EU
S	76
	86
	96
	116
	136
	156
	176

mat.: 1.1730

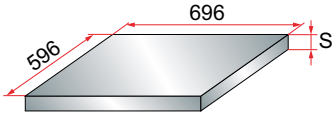
CPE



mat.: 1.1730

P PLATES

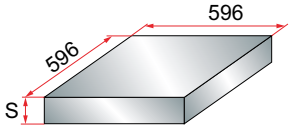
PBA-P



	PBA-P
S	46
	56

mat.: 1.1730

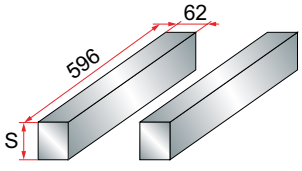
PC-P



		Material			
		1.1730	1.2311	1.2312	1.2085
S	27	*	*	*	o
	36	*	*	*	o
	46	*	*	*	o
	56	*	*	*	o
	66	*	*	*	o
	76	*	*	*	o
	86	*	*	*	o
	96	*	*	*	o
	116	*	*	*	o
	136	*	*	*	o
	156	*	*	*	o

º Entrega 3/4 días - Delivery 3/4 days

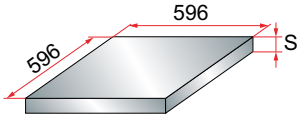
ESP-P



	ESP-P
S	76
	86
	96
	116
	136
	156

mat.: 1.1730

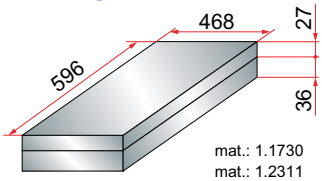
PS-P



	PS-P
S	46
	56

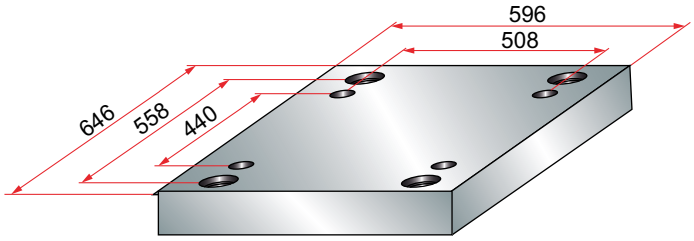
mat.: 1.1730

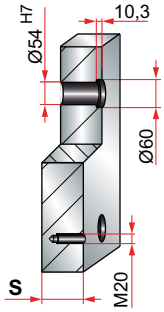
CPE-P



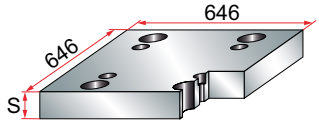
mat.: 1.1730
mat.: 1.2311

596.646





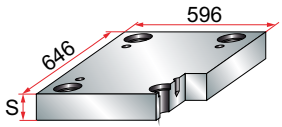
PBA-EU



	PBA-EU
S	46

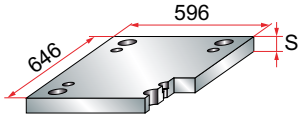
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

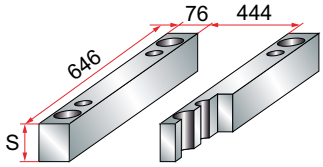
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

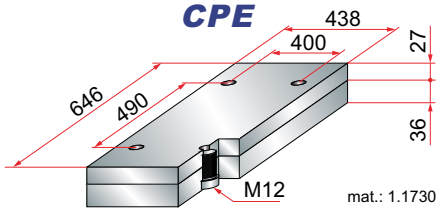
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

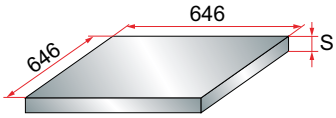
CPE



mat.: 1.1730

P PLATES

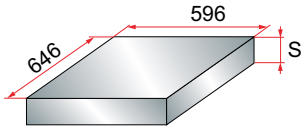
PBA-P



	PBA-P
S	46

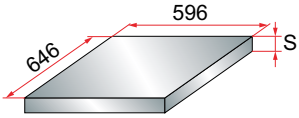
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

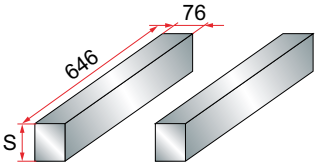
PS-P



	PS-P
S	56
	76

mat.: 1.1730

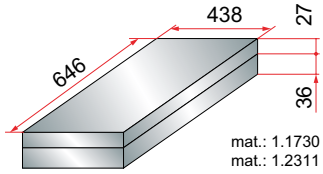
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

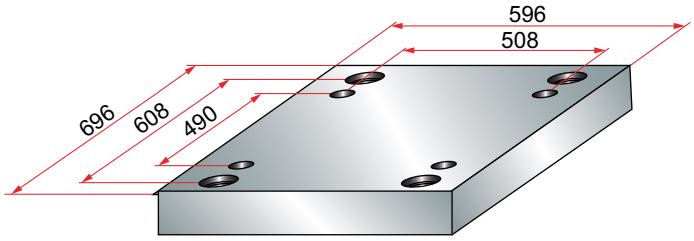
mat.: 1.1730

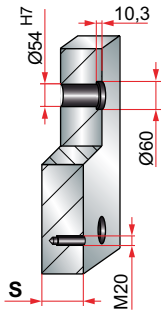
CPE-P



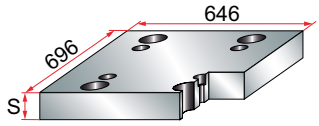
mat.: 1.1730
mat.: 1.2311

596.696





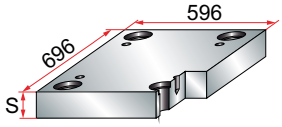
PBA-EU



	PBA-EU
S	46

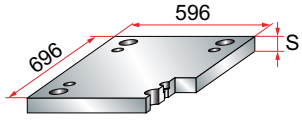
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

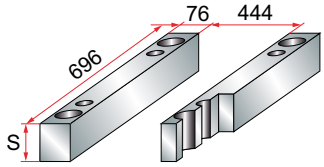
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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	116
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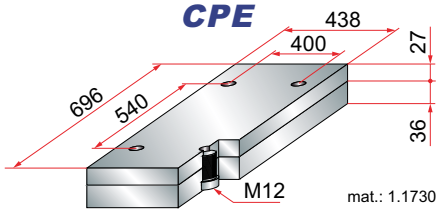
	156
	176

mat.: 1.1730

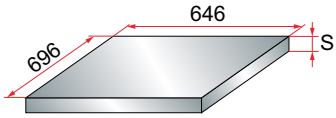
CPE



mat.: 1.1730

P PLATES

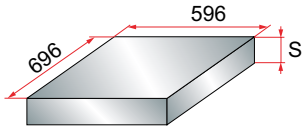
PBA-P



	PBA-P
S	46

mat.: 1.1730

PC-P



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S	36	*	*
	46	*	*
	56	*	*
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	76	*	*
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	116	*	*
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	176	*	*
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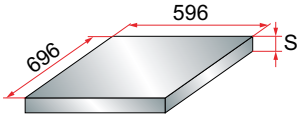
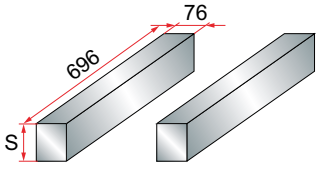
PS-P



	PS-P
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
S	86
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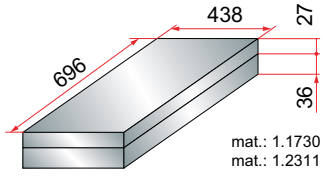
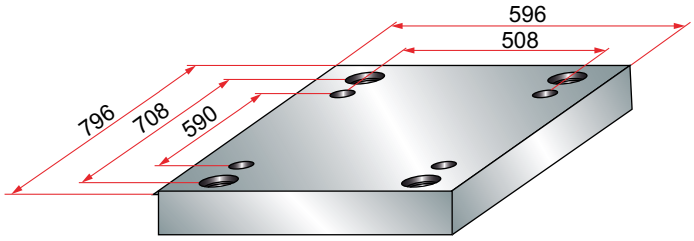
mat.: 1.1730

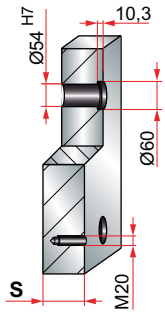
CPE-P



mat.: 1.1730
mat.: 1.2311

596.796





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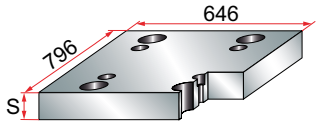

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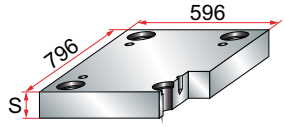
S	46

mat.: 1.1730

PC



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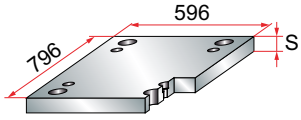
	156	*	*
	176	*	*
	196	*	*

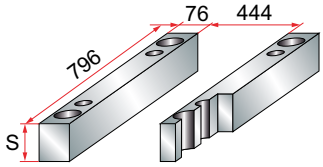
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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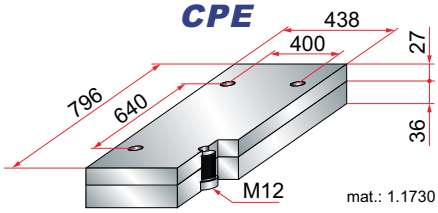
mat.: 1.1730

CPE

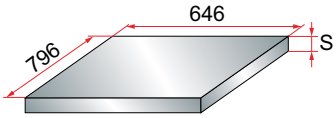


mat.: 1.1730

596.796

P PLATES

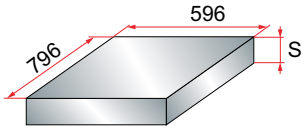
PBA-P



	PBA-P
S	46

mat.: 1.1730

PC-P



		Material	
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	76	*	*
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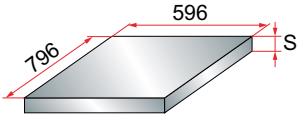
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

PS-P



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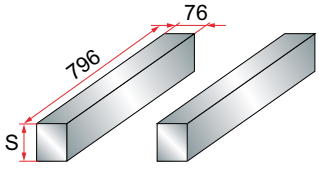
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
S	86
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	116
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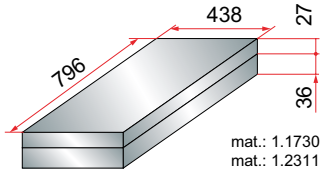
	156
	176

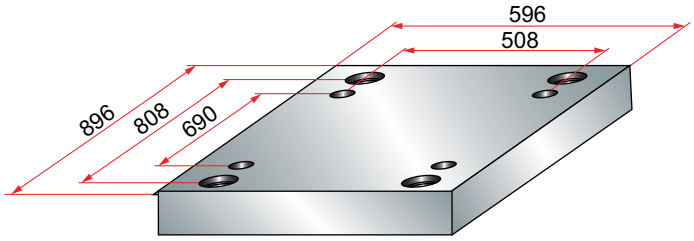
mat.: 1.1730

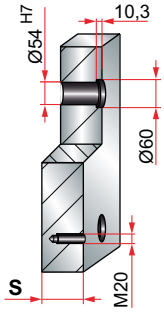
CPE-P



mat.: 1.1730
mat.: 1.2311

596.896





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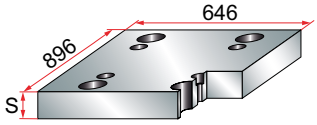

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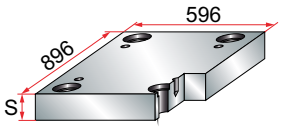
S	46

mat.: 1.1730

PC



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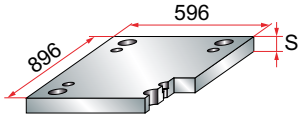
	176	*	*
	196	*	*

PS-EU



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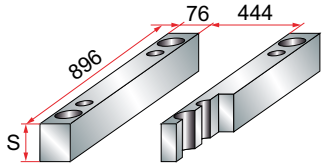
mat.: 1.1730

ESP-EU



	ESP-EU
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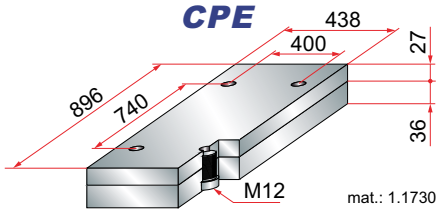
CPE



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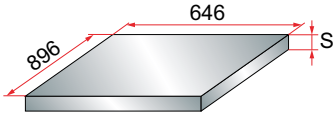
P PLATES

PBA-P



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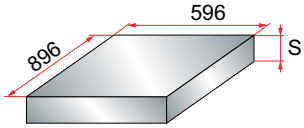
S	46

mat.: 1.1730

PC-P



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	176	*	*
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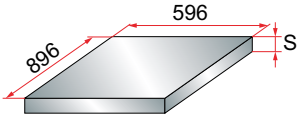
PS-P



	PS-P
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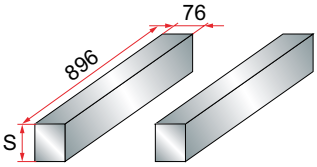
mat.: 1.1730

ESP-P



	ESP-P
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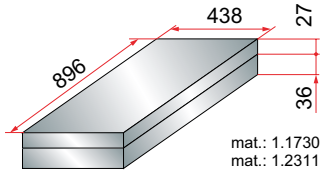
mat.: 1.1730

CPE-P



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mat.: 1.2311

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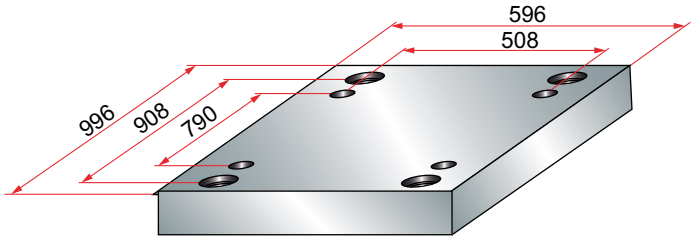

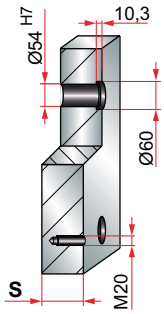

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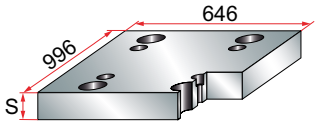

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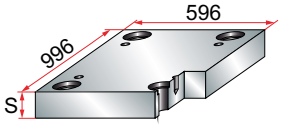
S	46

mat.: 1.1730

PC



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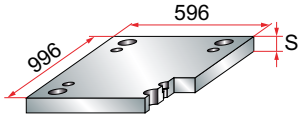
PS-EU



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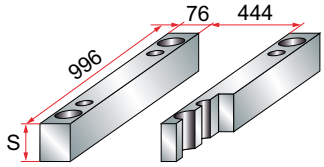
	76

mat.: 1.1730

ESP-EU



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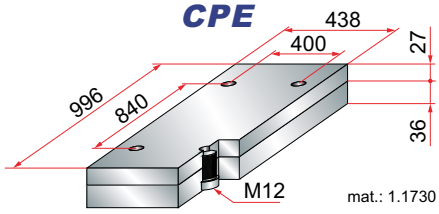
mat.: 1.1730

CPE



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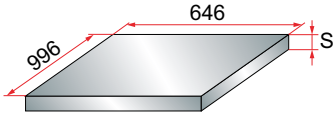
P PLATES

PBA-P



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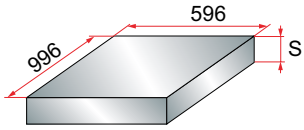
S	46

mat.: 1.1730

PC-P



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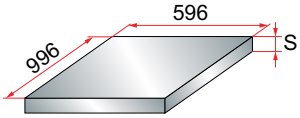
	196	*	*

PS-P



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S	56
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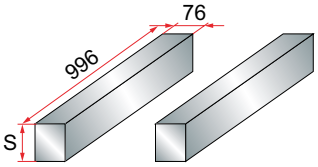
mat.: 1.1730

ESP-P



	ESP-P
S	86
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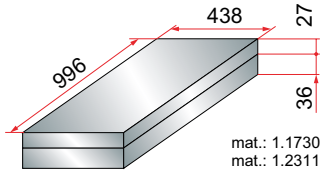
mat.: 1.1730

CPE-P



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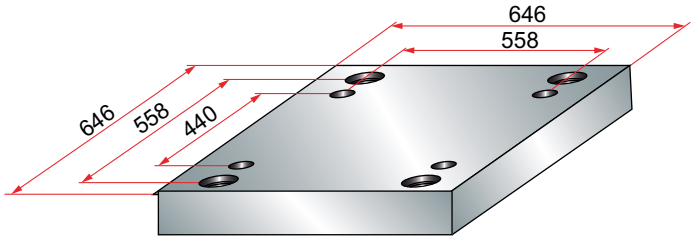
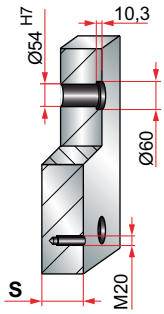
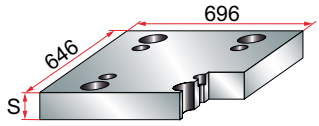
mat.: 1.2311

646.646





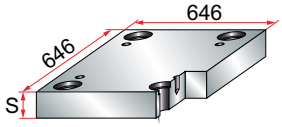
PBA-EU



	PBA-EU
S	46

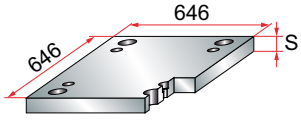
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

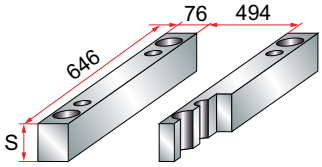
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

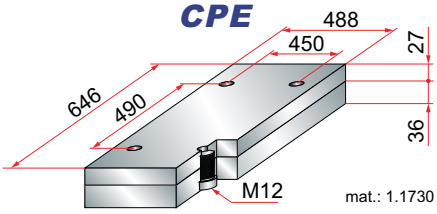
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

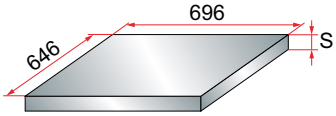
CPE



mat.: 1.1730

P PLATES

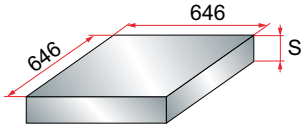
PBA-P



	PBA-P
S	46

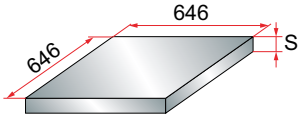
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

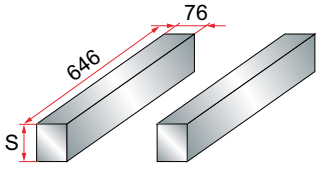
PS-P



	PS-P
S	56
	76

mat.: 1.1730

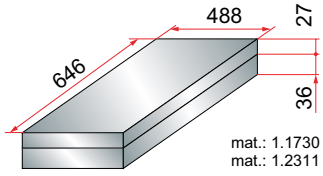
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

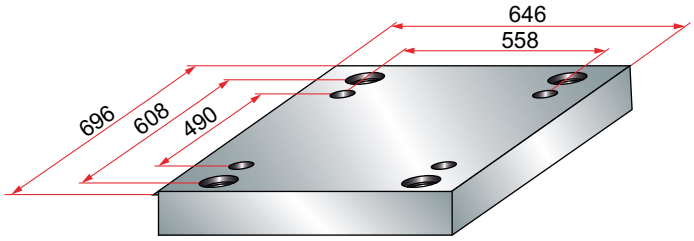
mat.: 1.1730

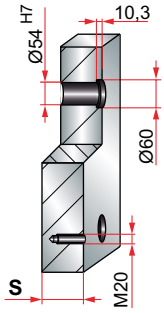
CPE-P



mat.: 1.1730
mat.: 1.2311

646.696





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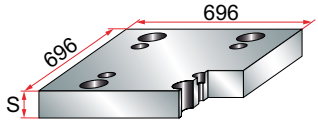
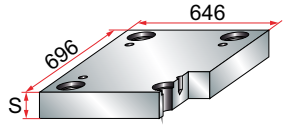


	PBA-EU
S	46

mat.: 1.1730

PC



		Material	
		1.1730	1.2311
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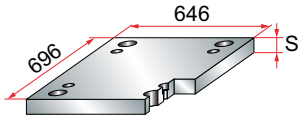
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

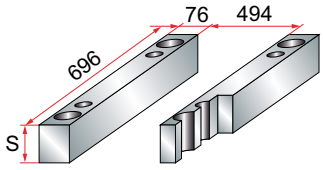
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

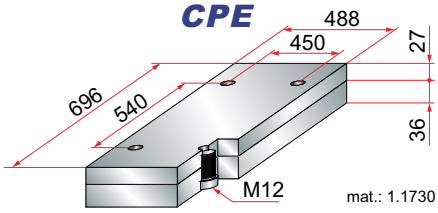
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

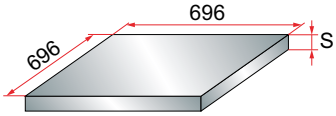
CPE



mat.: 1.1730

P PLATES

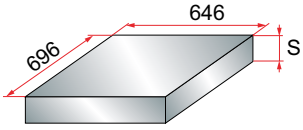
PBA-P



	PBA-P
S	46

mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
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	46	*	*
	56	*	*
	66	*	*
	76	*	*
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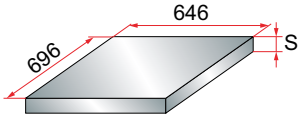
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

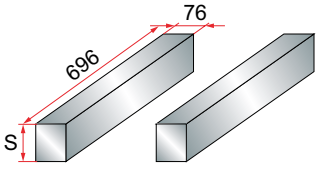
PS-P



	PS-P
S	56
	76

mat.: 1.1730

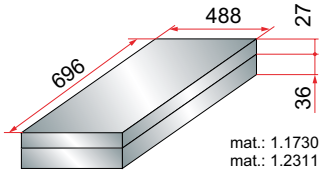
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

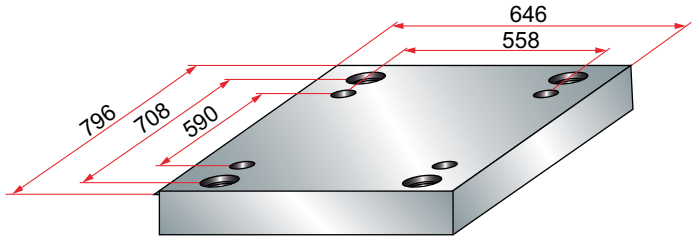
mat.: 1.1730

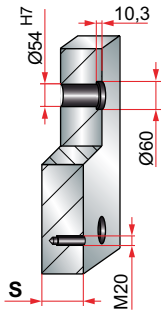
CPE-P



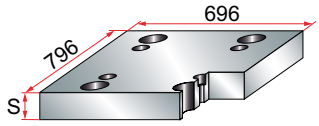
mat.: 1.1730
mat.: 1.2311

646.796





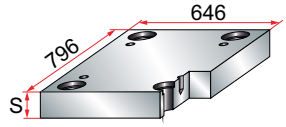
PBA-EU



	PBA-EU
S	46

mat.: 1.1730

PC



		Material	
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	56	*	*
	66	*	*
	76	*	*
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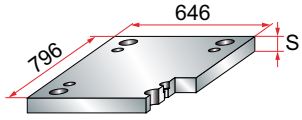
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

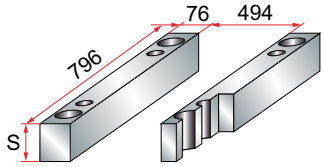
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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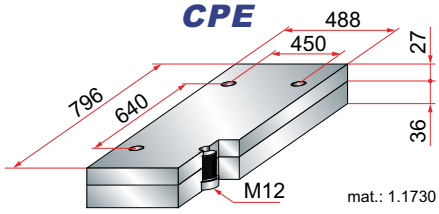
mat.: 1.1730

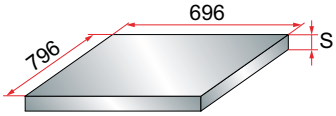
CPE



mat.: 1.1730

P PLATES

PBA-P



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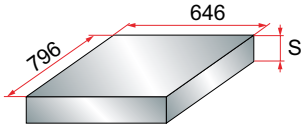
S	46

mat.: 1.1730

PC-P



		Material	
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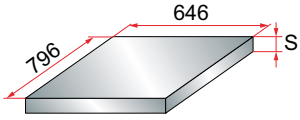
	156	*	*
	176	*	*
	196	*	*

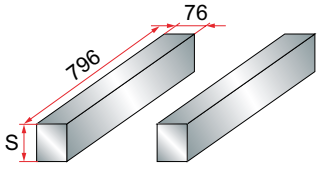
PS-P



	PS-P
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
S	86
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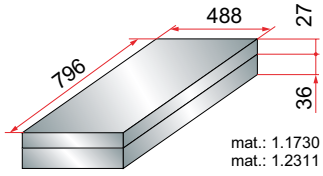
	116
	136
	156
	176

mat.: 1.1730

CPE-P



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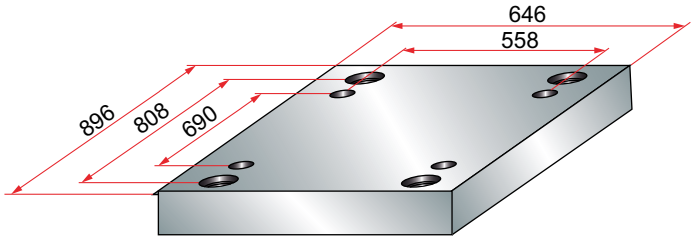
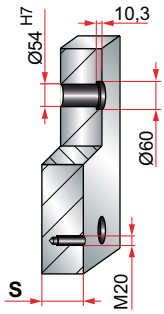
mat.: 1.2311

646.896





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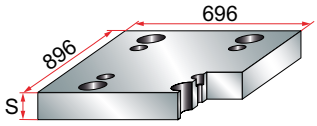

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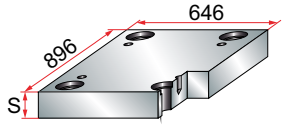
S	46

mat.: 1.1730

PC



		Material	
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	176	*	*
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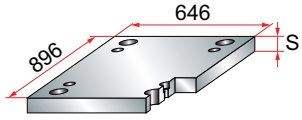
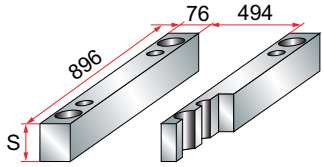
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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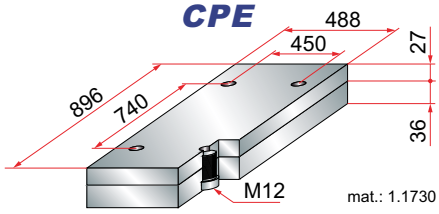
	156
	176

mat.: 1.1730

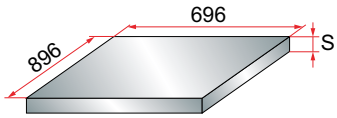
CPE



mat.: 1.1730

P PLATES

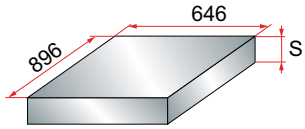
PBA-P



	PBA-P
S	46

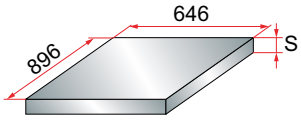
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

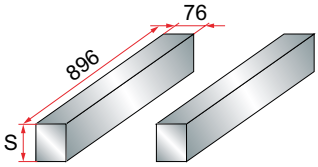
PS-P



	PS-P
S	56
	76

mat.: 1.1730

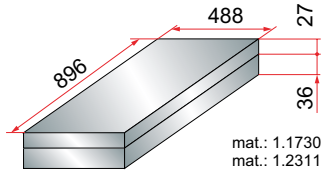
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

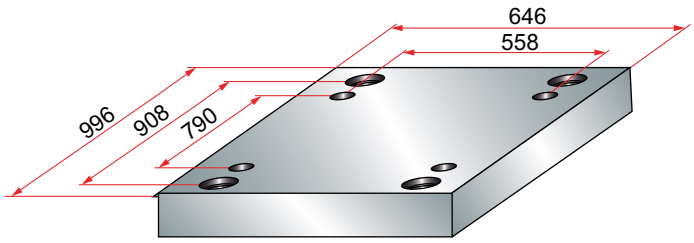
mat.: 1.1730

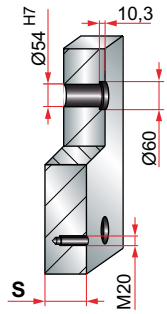
CPE-P



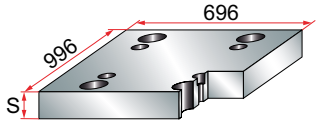
mat.: 1.1730
mat.: 1.2311

646.996





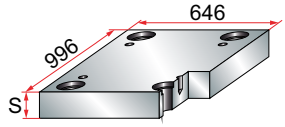
PBA-EU



	PBA-EU
S	46

mat.: 1.1730

PC



		Material	
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S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
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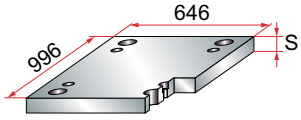
	136	*	*
	156	*	*
	176	*	*
	196	*	*

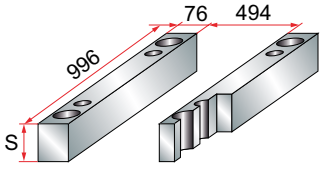
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

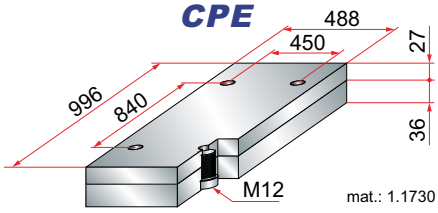
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

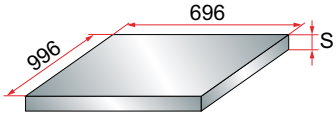
CPE



mat.: 1.1730

P PLATES

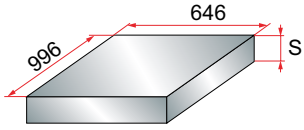
PBA-P



	PBA-P
S	46

mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
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	56	*	*
	66	*	*
	76	*	*
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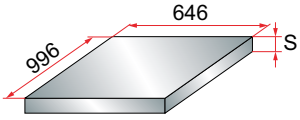
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

PS-P



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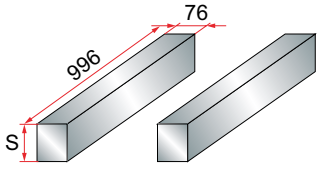
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
S	86
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	116
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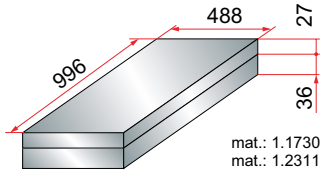
	156
	176

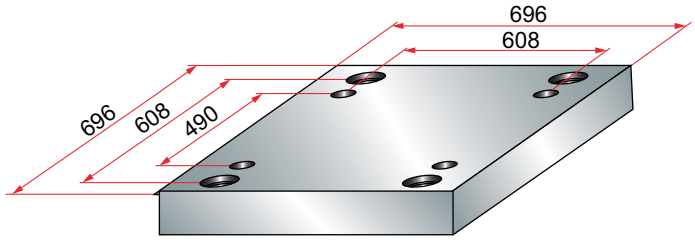
mat.: 1.1730

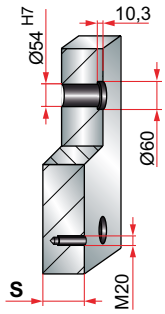
CPE-P



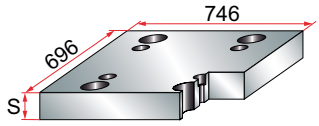
mat.: 1.1730
mat.: 1.2311

696.696





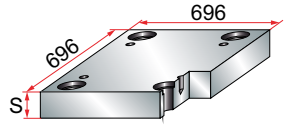
PBA-EU



	PBA-EU
S	46

mat.: 1.1730

PC



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	76	*	*
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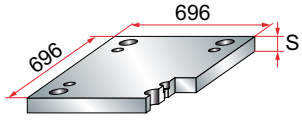
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

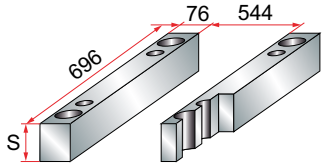
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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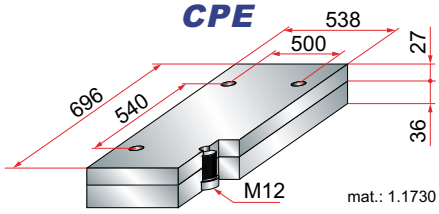
mat.: 1.1730

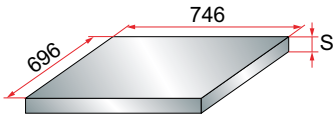
CPE



mat.: 1.1730

P PLATES

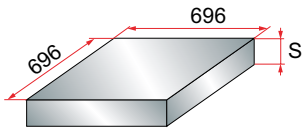
PBA-P



	PBA-P
S	46

mat.: 1.1730

PC-P



		Material	
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S	36	*	*
	46	*	*
	56	*	*
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	76	*	*
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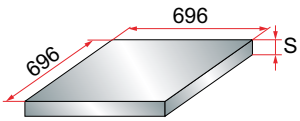
	176	*	*
	196	*	*

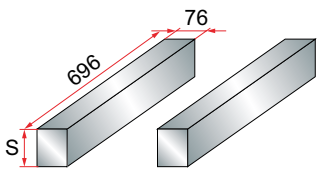
PS-P



	PS-P
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
S	86
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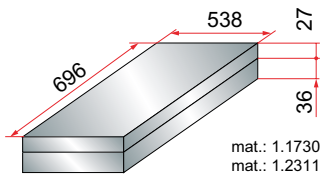
mat.: 1.1730

CPE-P



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mat.: 1.2311

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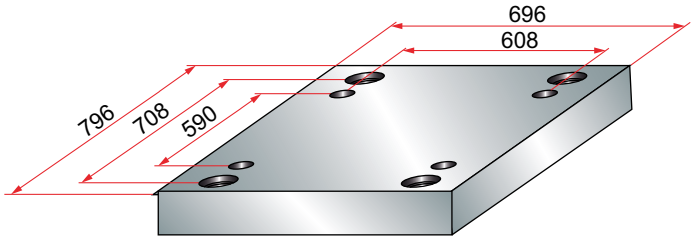

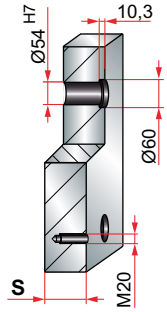

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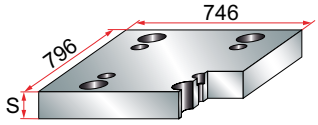
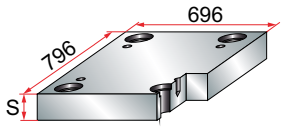


	PBA-EU
S	46

mat.: 1.1730

PC



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	76	*	*
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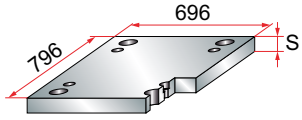
	176	*	*
	196	*	*

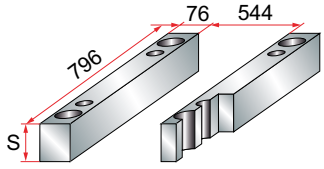
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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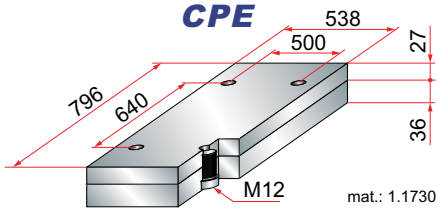
mat.: 1.1730

CPE



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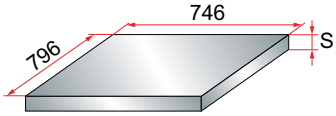
P PLATES

PBA-P



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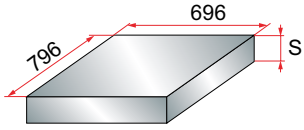
S	46

mat.: 1.1730

PC-P



		Material	
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	76	*	*
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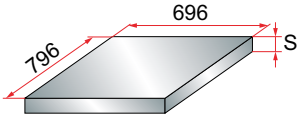
	136	*	*
	156	*	*
	176	*	*
	196	*	*

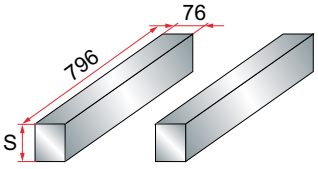
PS-P



	PS-P
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
S	86
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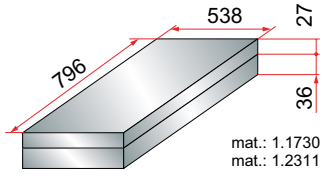
mat.: 1.1730

CPE-P



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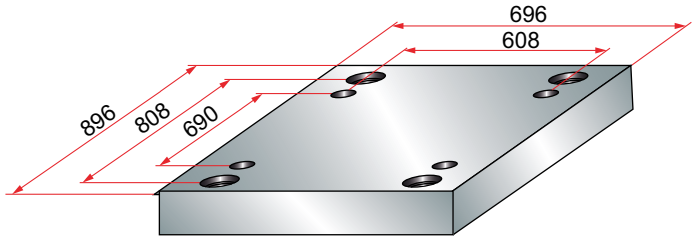
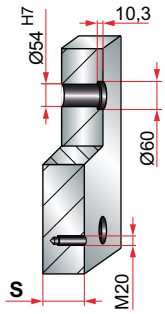
696.896





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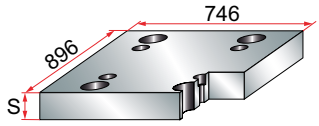
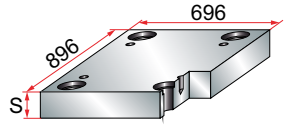


	PBA-EU
S	46

mat.: 1.1730

PC



		Material	
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	136	*	*
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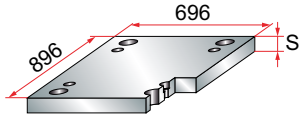
	176	*	*
	196	*	*

PS-EU



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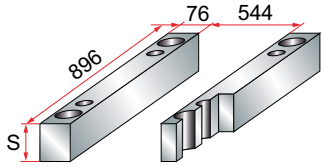
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
	96
	116
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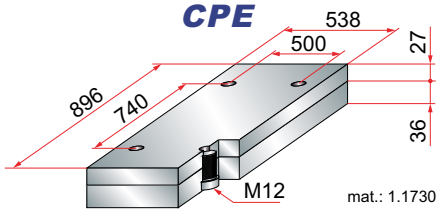
mat.: 1.1730

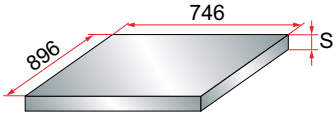
CPE



mat.: 1.1730

P PLATES

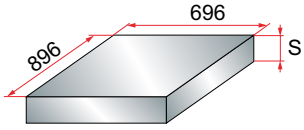
PBA-P



	PBA-P
S	46

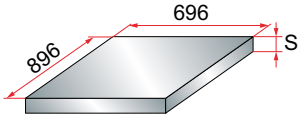
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

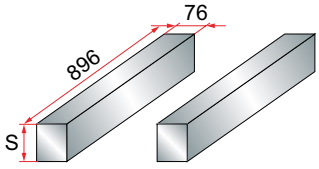
PS-P



	PS-P
S	56
	76

mat.: 1.1730

ESP-P



	ESP-P
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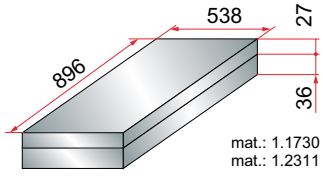
	116
	136
	156
	176

mat.: 1.1730

CPE-P



mat.: 1.1730
mat.: 1.2311

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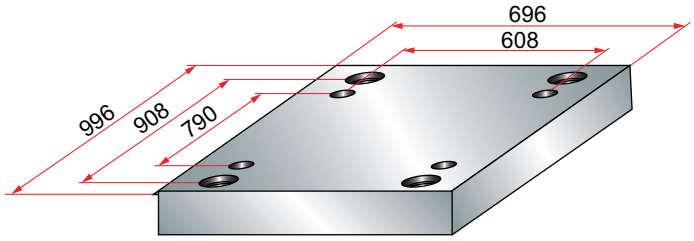

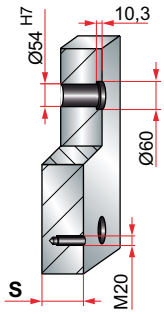

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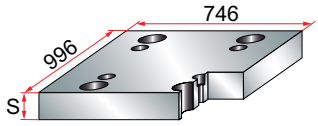
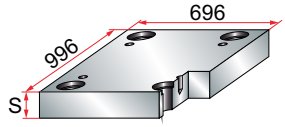


	PBA-EU
S	46

mat.: 1.1730

PC



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	176	*	*
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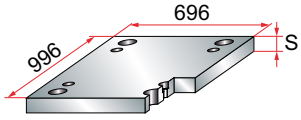
PS-EU



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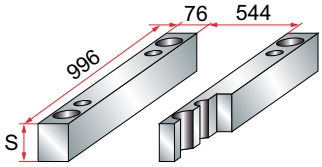
S	56
	76

mat.: 1.1730

ESP-EU



	ESP-EU
S	86
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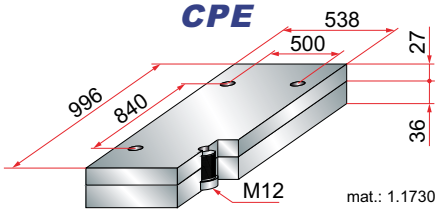
mat.: 1.1730

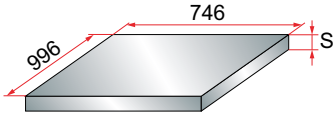
CPE



mat.: 1.1730

P PLATES

PBA-P



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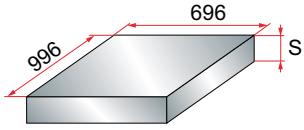
S	46

mat.: 1.1730

PC-P



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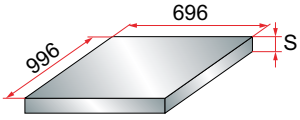
	136	*	*
	156	*	*
	176	*	*
	196	*	*

PS-P



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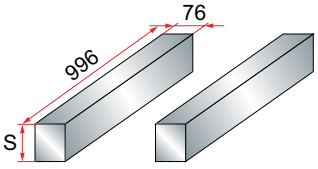
	76

mat.: 1.1730

ESP-P



	ESP-P
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	116
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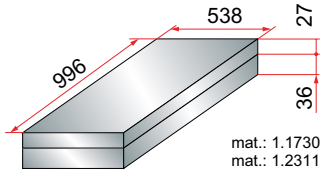
	176

mat.: 1.1730

CPE-P



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mat.: 1.2311

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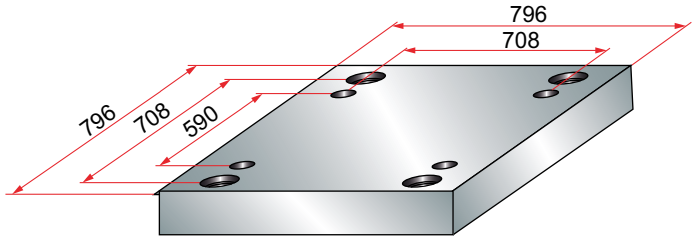

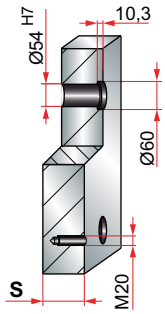

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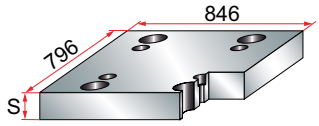

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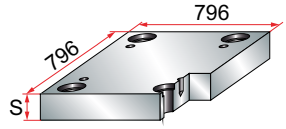
S	46

mat.: 1.1730

PC



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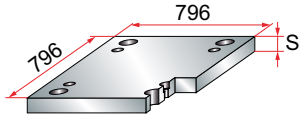
PS-EU



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S	56
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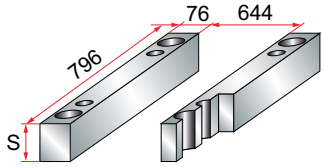
mat.: 1.1730

ESP-EU



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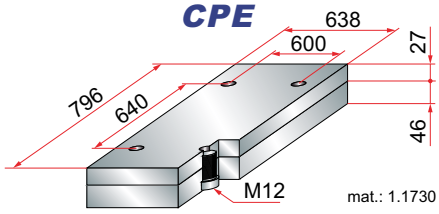
CPE



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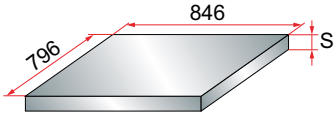
P PLATES

PBA-P



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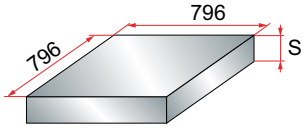
S	46

mat.: 1.1730

PC-P



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	76	*	*
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	136	*	*
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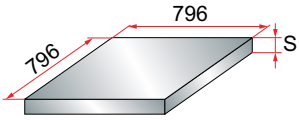
	176	*	*
	196	*	*

PS-P



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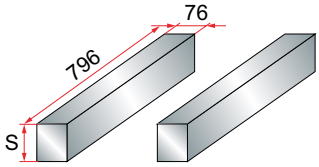
	76

mat.: 1.1730

ESP-P



	ESP-P
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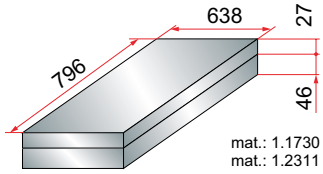
CPE-P



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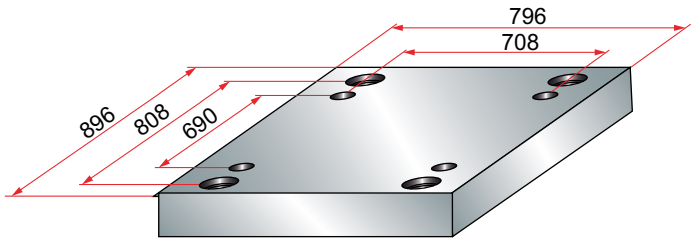

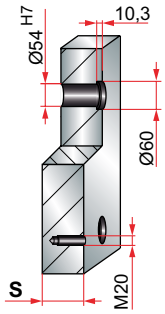

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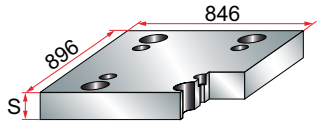
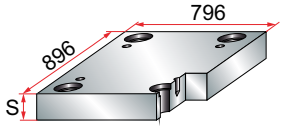


	PBA-EU
S	46

mat.: 1.1730

PC



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	176	*	*
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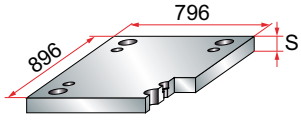
PS-EU



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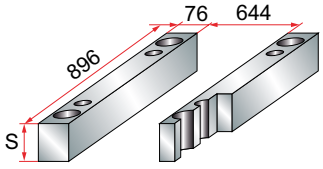
S	56
	76

mat.: 1.1730

ESP-EU



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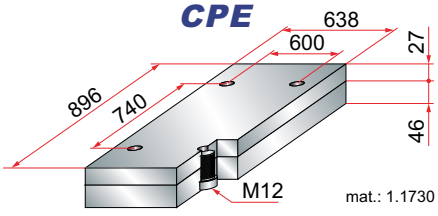

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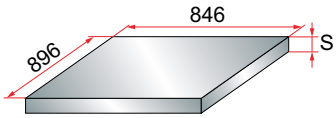
P PLATES

PBA-P



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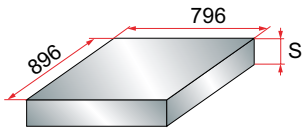
S	46

mat.: 1.1730

PC-P



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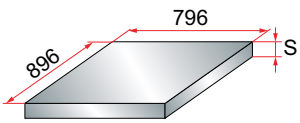
PS-P



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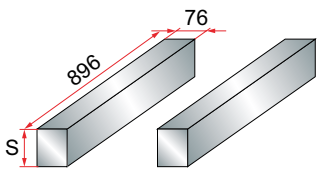
S	56
	76

mat.: 1.1730

ESP-P



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S	86
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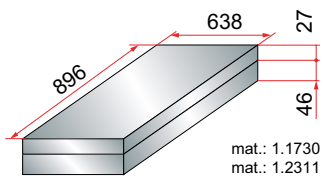
mat.: 1.1730

CPE-P



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mat.: 1.2311

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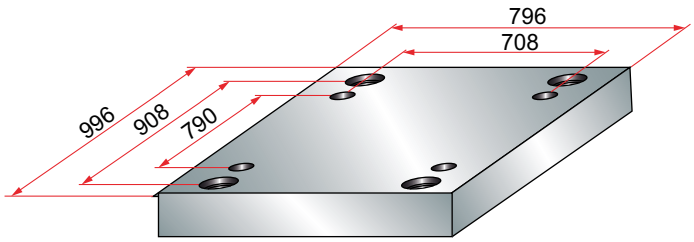

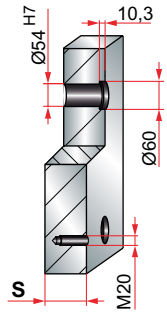

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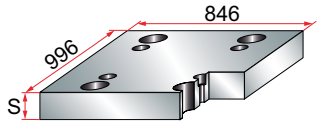
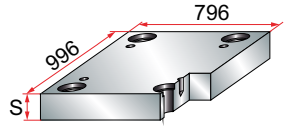


	PBA-EU
S	46

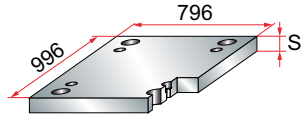
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

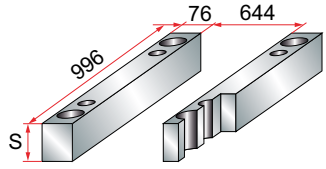
PS-EU



	PS-EU
S	56
	76

mat.: 1.1730

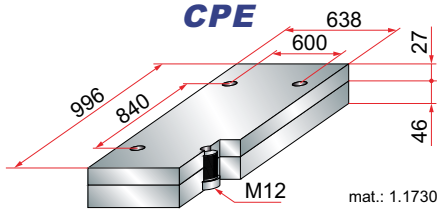
ESP-EU



	ESP-EU
S	86
	96
	116
	136
	156
	176

mat.: 1.1730

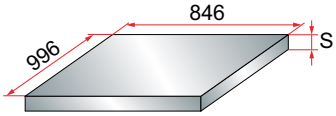
CPE



mat.: 1.1730

P PLATES

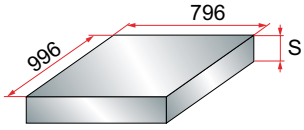
PBA-P



	PBA-P
S	46

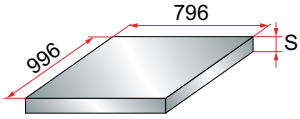
mat.: 1.1730

PC-P



		Material	
		1.1730	1.2311
S	46	*	*
	56	*	*
	66	*	*
	76	*	*
	86	*	*
	96	*	*
	116	*	*
	136	*	*
	156	*	*
	176	*	*
	196	*	*

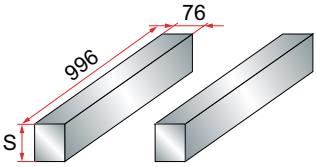
PS-P



	PS-P
S	56
	76

mat.: 1.1730

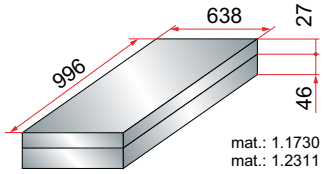
ESP-P



	ESP-P
S	86
	96
	116
	136
	156
	176

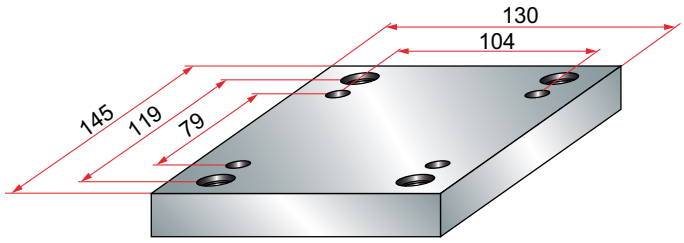
mat.: 1.1730

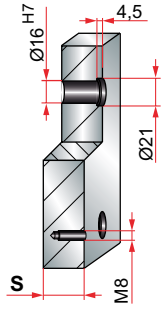
CPE-P



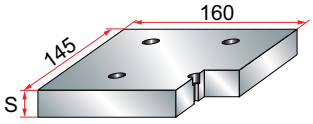
mat.: 1.1730
mat.: 1.2311

130.145





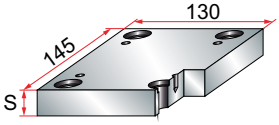
PBA



	PBA
S	18
	27

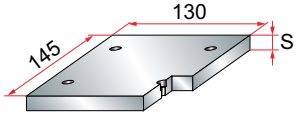
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	22	*	*
	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*

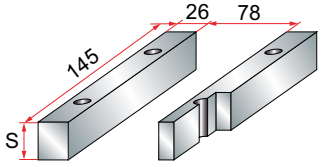
PS



	PS
S	18
	27

mat.: 1.1730

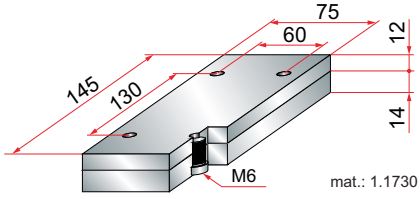
ESP



	ESP
S	50
	60
	70

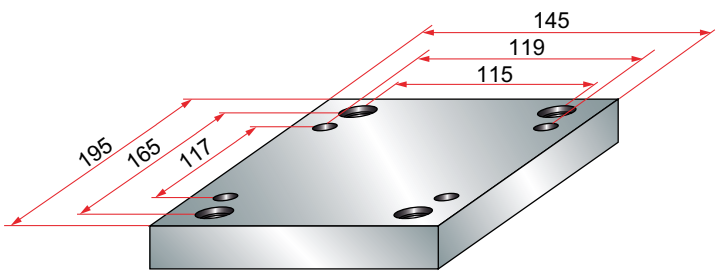
mat.: 1.1730

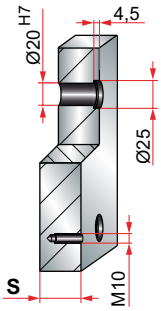
CPE



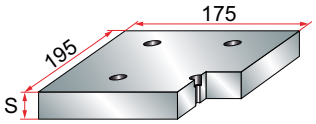
mat.: 1.1730

145.195





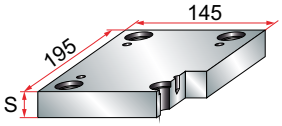
PBA



	PBA
S	22
	27

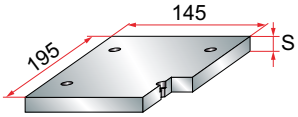
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	22	*	*
	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*

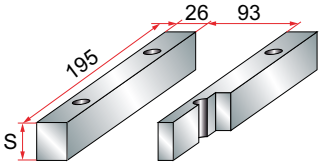
PS



	PS
S	22
	27

mat.: 1.1730

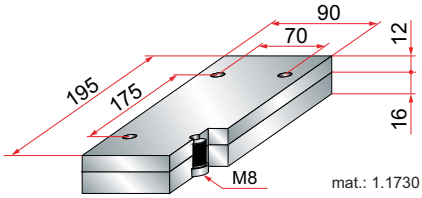
ESP



	ESP
S	50
	60
	70

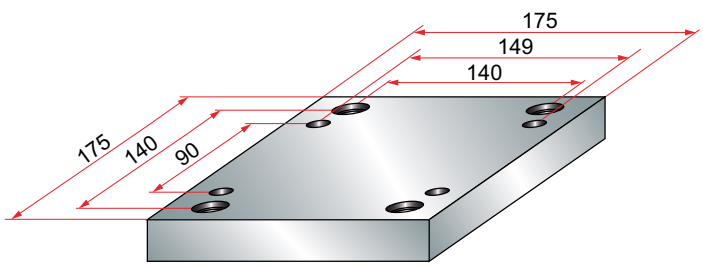
mat.: 1.1730

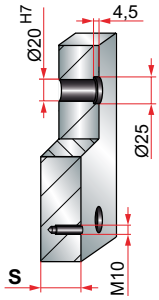
CPE



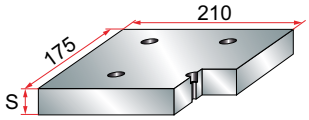
mat.: 1.1730

175.175





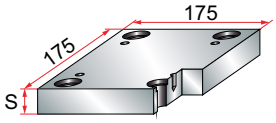
PBA



	PBA
S	22
	27

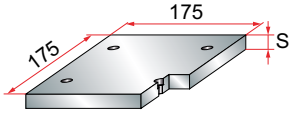
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	22	*	*
	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*

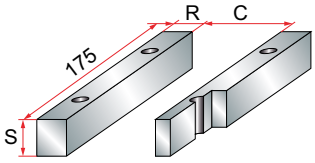
PS



	PS
S	22
	27

mat.: 1.1730

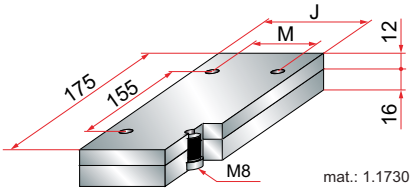
ESP



	ESP	
R	26	36
S	50	50
	70	70
	90	90
C	123	103

mat.: 1.1730

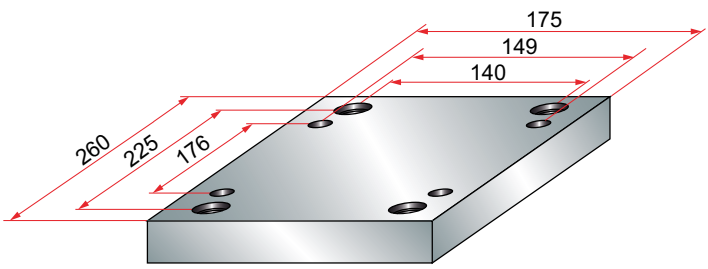
CPE

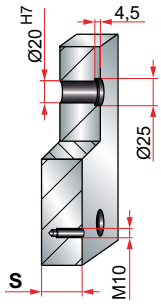


J	120	100
M	100	80

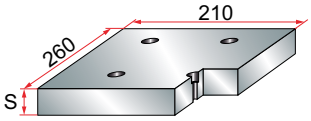
mat.: 1.1730

175.260





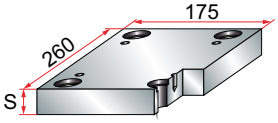
PBA



	PBA
S	22
	32

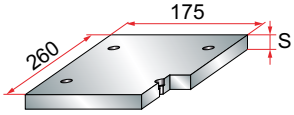
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	22	*	*
	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*

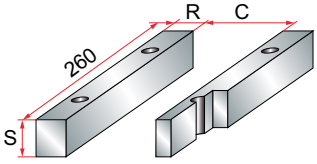
PS



	PS
S	22
	32

mat.: 1.1730

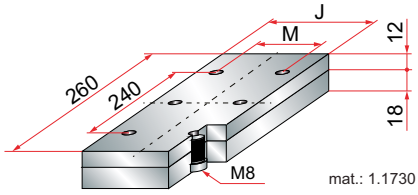
ESP



	ESP	
R	26	36
S	50	50
	70	70
	90	90
C	123	103

mat.: 1.1730

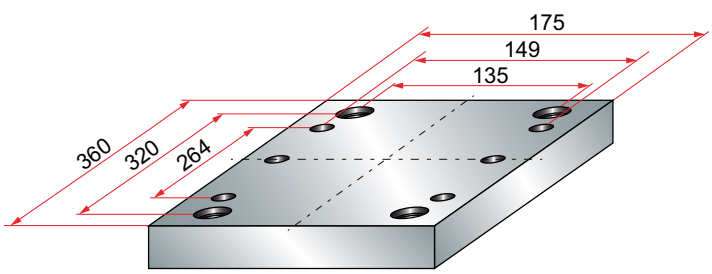
CPE

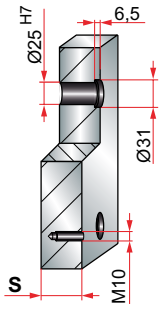


J	122	102
M	105	85

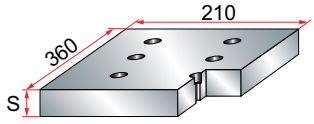
mat.: 1.1730

175.360





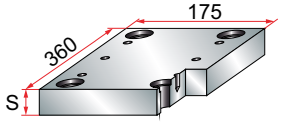
PBA



	PBA
S	22
	32

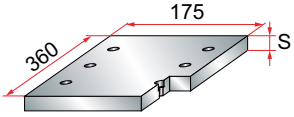
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	22	*	*
	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*

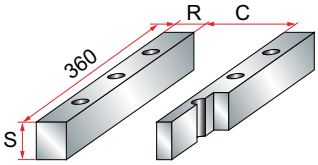
PS



	PS
S	22
	32

mat.: 1.1730

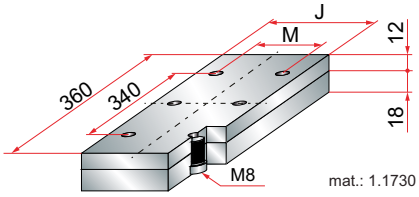
ESP



	ESP	
R	26	36
S	60	60
	70	70
	90	90
C	123	103

mat.: 1.1730

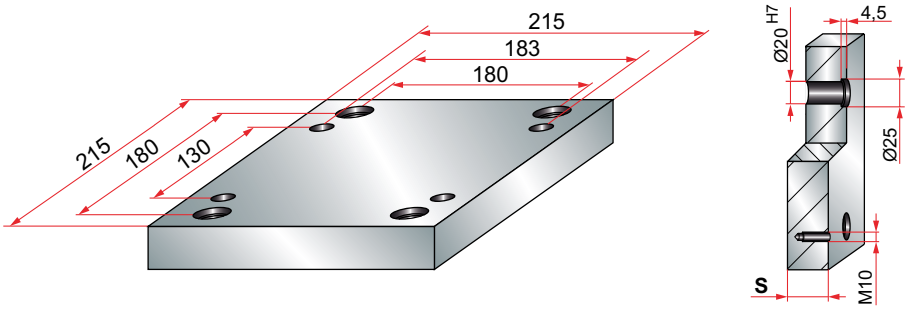
CPE



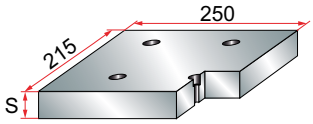
mat.: 1.1730

J	122	102
M	105	85

215.215



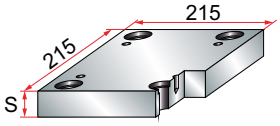
PBA



	PBA
S	22
	32

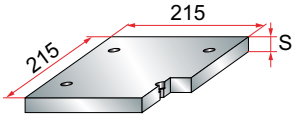
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	22	*	*
	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*

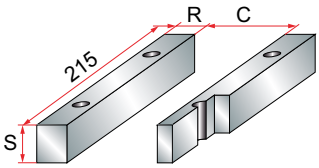
PS



	PS
S	22
	32

mat.: 1.1730

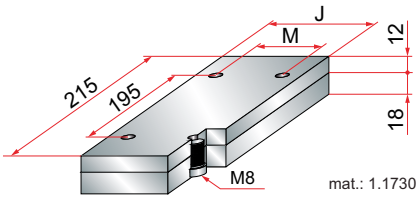
ESP



	ESP	
R	32	42
S	50	50
	70	70
	90	90
C	151	131

mat.: 1.1730

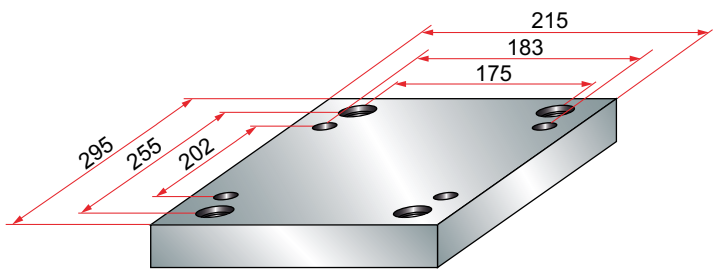
CPE

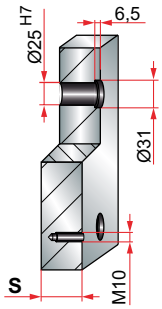


J	148	128
M	128	108

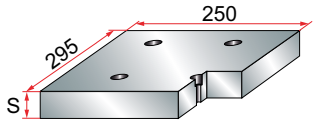
mat.: 1.1730

215.295





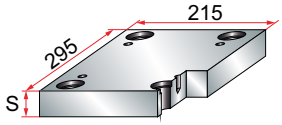
PBA



	PBA
S	22
	32

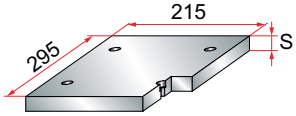
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	22	*	*
	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*

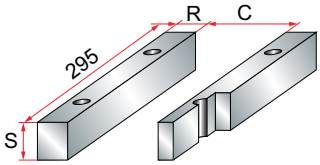
PS



	PS
S	22
	32

mat.: 1.1730

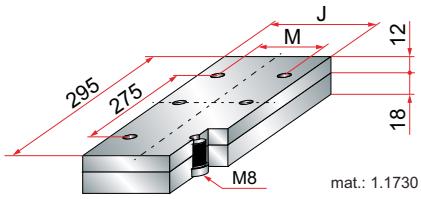
ESP



	ESP	
R	32	42
S	60	60
	70	70
	90	90
C	151	131

mat.: 1.1730

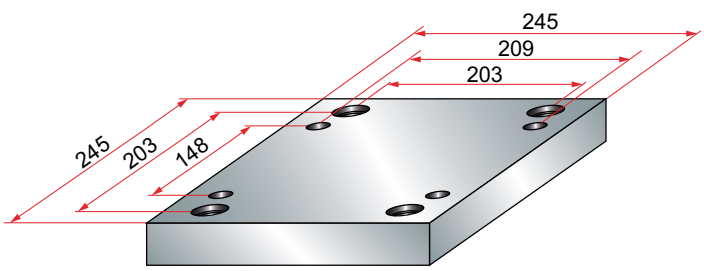
CPE

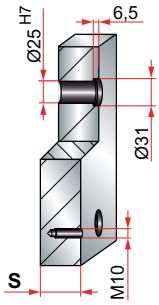


mat.: 1.1730

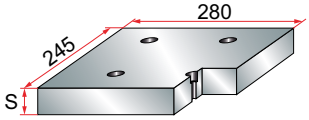
J	148	128
M	128	108

245.245





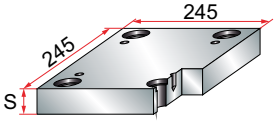
PBA



	PBA
S	22
	32

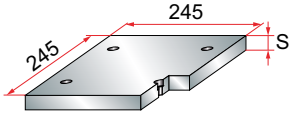
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*
	116	*	*

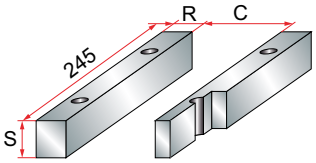
PS



	PS
S	22
	32

mat.: 1.1730

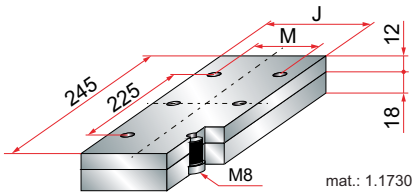
ESP



	ESP	
R	36	46
S	60	60
	70	70
	90	90
C	173	153

mat.: 1.1730

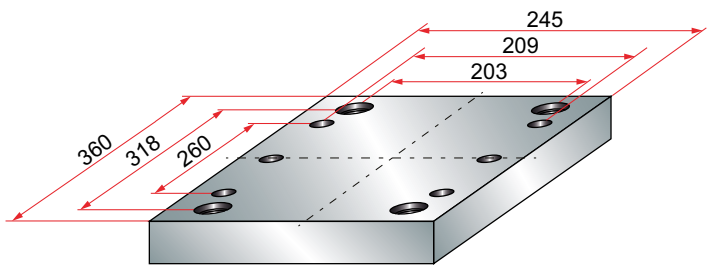
CPE

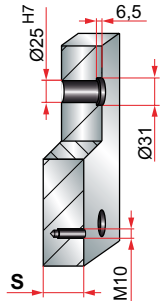


J	170	150
M	150	130

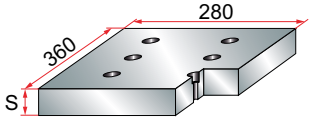
mat.: 1.1730

245.360





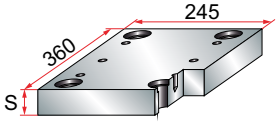
PBA



	PBA
S	22
	32

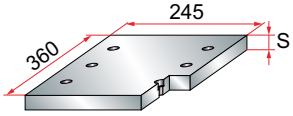
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*
	116	*	*

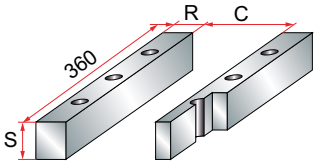
PS



	PS
S	22
	32

mat.: 1.1730

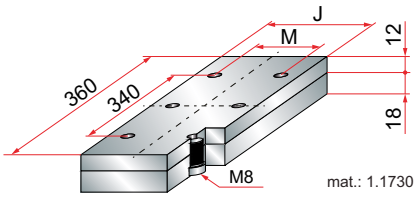
ESP



	ESP	
R	36	46
S	60	60
	70	70
	90	90
C	173	153

mat.: 1.1730

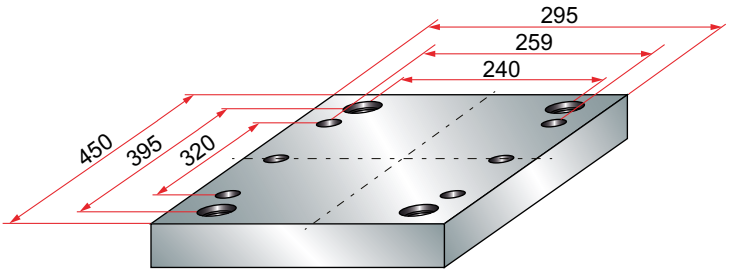
CPE

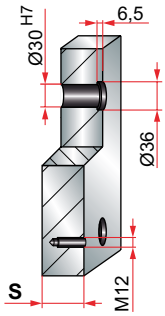


mat.: 1.1730

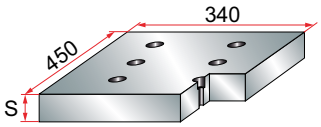
J	170	150
M	150	130

295.450





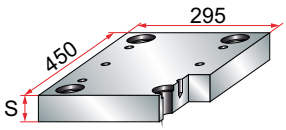
PBA



	PBA
S	27
	42

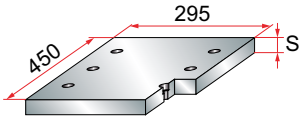
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	27	*	*
	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*
	116	*	*

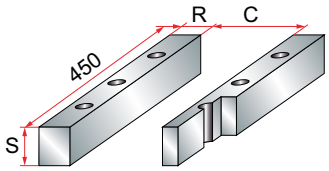
PS



	PS
S	27
	42

mat.: 1.1730

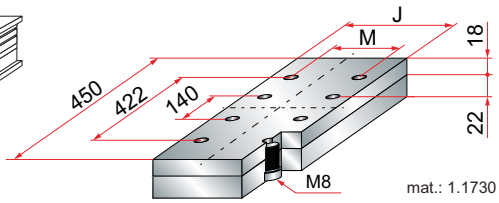
ESP



	ESP	
R	36	48
S	70	70
	90	90
	110	110
C	223	199

mat.: 1.1730

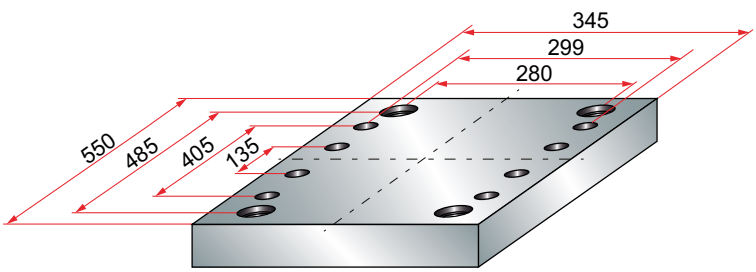
CPE

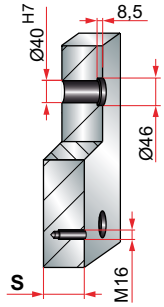


J	220	196
M	192	168

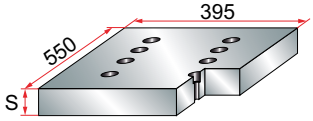
mat.: 1.1730

345.550





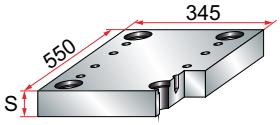
PBA



	PBA
S	32
	42

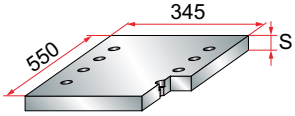
mat.: 1.1730

PC



		Material	
		1.1730	1.2311
S	36	*	*
	46	*	*
	56	*	*
	66	*	*
	76	*	*
	96	*	*
	116	*	*

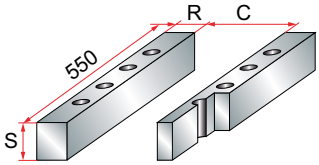
PS



	PS
S	32
	42

mat.: 1.1730

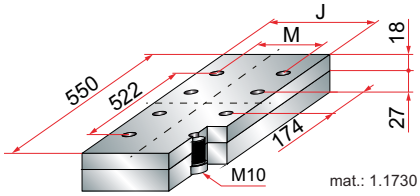
ESP



	ESP	
R	46	66
S	70	70
	90	90
	110	110
C	253	213

mat.: 1.1730

CPE



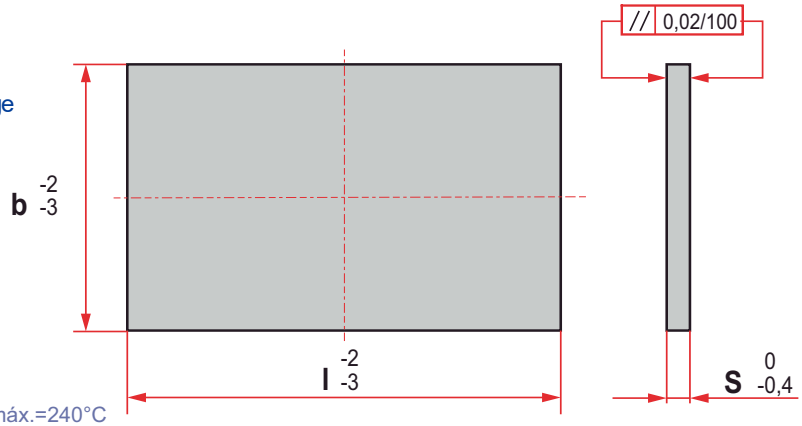
mat.: 1.1730

J	248	208
M	220	180

BR1011

E 1405, Z 1212

Thermal insulation board
Placa aislante
Płyta termoizolacyjna
Placa isolante
Plaque d´isolation calorifuge



λ = 0,28 P= 330 N/mm² T máx.=240°C

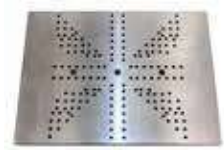
b	l	S	REF.
206	156	6	BR1011/6x156x206
	196		BR1011/6x196x206
196	246		BR1011/6x196x246
254			BR1011/6x254x246
246	196		BR1011/6x196x246
	296		BR1011/6x246x296
	346		BR1011/6x246x346
	396		BR1011/6x246x396
296	246		BR1011/6x296x246
	296		BR1011/6x296x296
	346		BR1011/6x296x346
	396		BR1011/6x296x396
	446		BR1011/6x296x446
346	296		BR1011/6x346x296
		8	BR1011/8x346x296
	346	6	BR1011/6x346x346
		8	BR1011/8x346x346
	396	6	BR1011/6x346x396
		8	BR1011/8x346x396
	446	6	BR1011/6x346x446
		8	BR1011/8x346x446

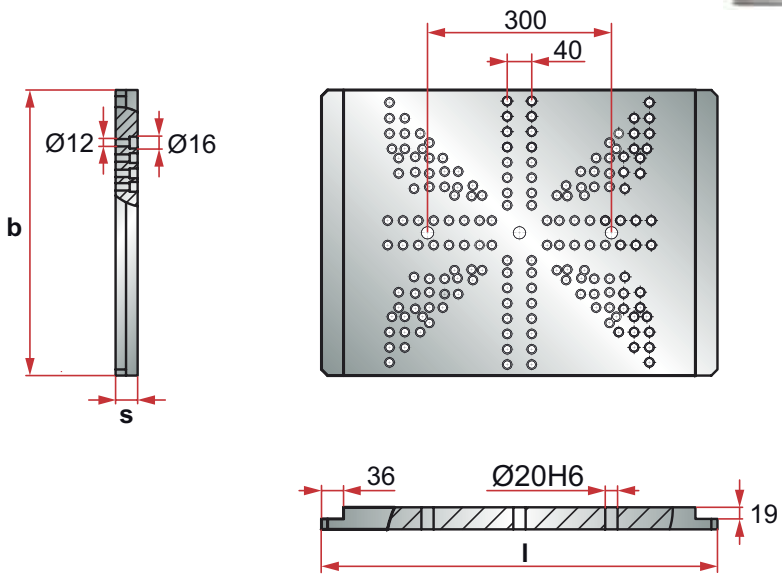
b	l	S	REF.
396	346	6	BR1011/6x396x346
		8	BR1011/8x396x346
	396		BR1011/8x396x396
			BR1011/8x396x396
	446		BR1011/8x396x446
	496		BR1011/8x396x496
	546		BR1011/8x396x546
	596		BR1011/8x396x596
446	396	6	BR1011/6x446x396
		8	BR1011/8x446x396
	446		BR1011/8x446x446
	496		BR1011/8x446x496
496	546		BR1011/8x496x546
	596		BR1011/8x496x596
546	446		BR1011/8x546x446
	496		BR1011/8x546x496
596			BR1011/8x596x496
	596		BR1011/8x596x596
	696		BR1011/8x596x696
696	596		BR1011/8x696x596

-Machining under drawing available upon request
-Mecanizados especiales según plano cliente
-Obróbka płyt możliwa na specjalne zamówienie
-Usinagem especial de acordo com o plano do cliente
-Usinage spécial selon dessin du client

BRCP01

Clamping plate
Placa de fijación
System mocujący
Placa base
Plaque debordante



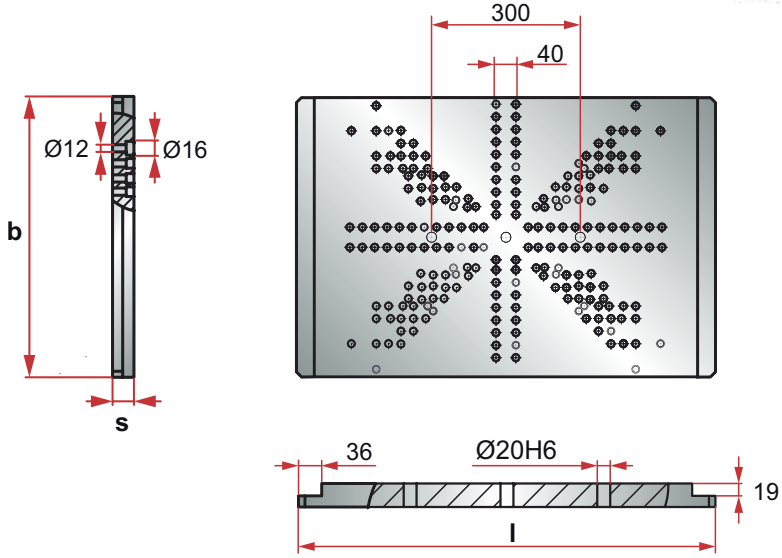


b	l	s	REF.
466	646	36	**BRCP01**

Mould Sizes	Mould Sizes
156x156	296x346
156x196	296x396
156x246	296x446
196x196	346x346
190x246	346x396
196x296	346x446
196x346	346x496
196x396	396x396
246x246	396x446
246x296	396x496
246x396	446x446
246x396	446x496
246x446	496x496
296x296	-

BRCP02

Clamping plate
Placa de fijación
System mocujący
Placa base
Plaque debordante



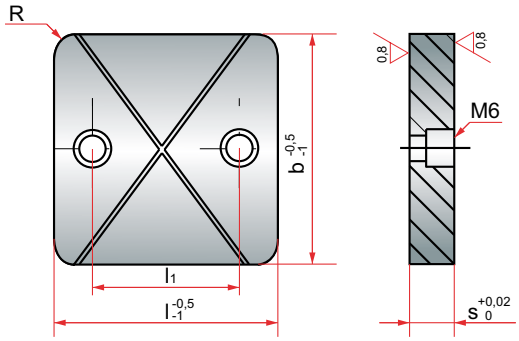
b	l	s	REF.
556	800	46	**BRCP02**

Mould Sizes	Mould Sizes
156x156	346x396
156x196	346x446
156x246	346x496
196x196	346x546
190x246	346x596
196x296	396x396
196x346	396x446
196x396	396x496
246x246	396x546
246x296	396x596
246x396	446x446
246x396	446x496
246x446	496x496
296x296	496x546
296x346	496x596
296x396	496x696
296x446	596x596
346x346	-

BR2680

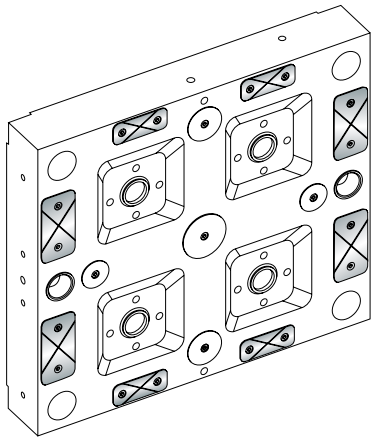
E 2680

Rectangular shim
Placa de presión
Podkładka regulacyjna prostokątna
Chapa de pressão rectangular
Plaquette d´ajustage rectangulaire



Mat. : 12842 ≈ 58 HRC.

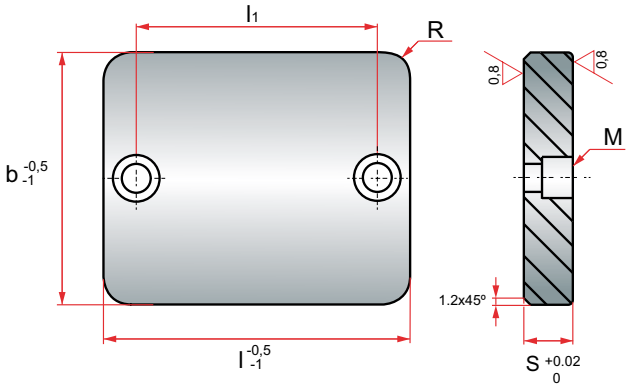
R	M	s	l1	b	l	REF.
8	M6	10,1	24	**32**	**40**	**BR2680/32x040**
			40		**64**	**BR2680/32x064**
			32	**40**	**50**	**BR2680/40x050**
			52		**80**	**BR2680/40x080**
			40	**50**	**64**	**BR2680/50x064**
			64		**100**	**BR2680/50x100**
			52	**64**	**80**	**BR2680/64x080**
			80		**125**	**BR2680/64x125**



BR2680E

E 2680

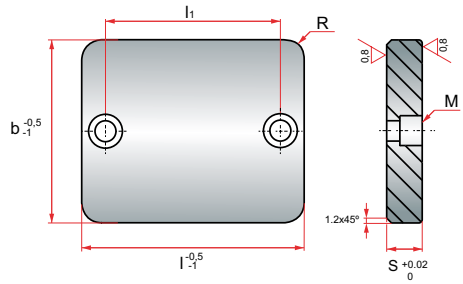
Rectangular shim
Placa de presión
Podkładka regulacyjna prostokątna
Chapa de pressão rectangular
Plaquette d´ajustage rectangulaire



Mat. : 12842 ≈ 58 HRC.

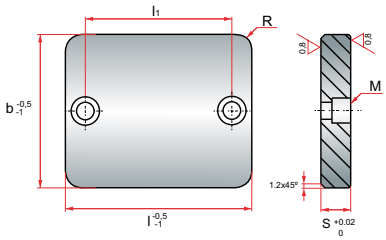
R	M	l1	b	l	S	REF.
8	M 5	16	**20**	**32**	8,1	**BR2680E- 20- 32- 8.1**
					10,1	**BR2680E- 20- 32-10.1**
					12,1	**BR2680E- 20- 32-12.1**
		24		**40**	8,1	**BR2680E- 20- 40- 8.1**
					10,1	**BR2680E- 20- 40-10.1**
					12,1	**BR2680E- 20- 40-12.1**
		40		**64**	8,1	**BR2680E- 20- 64- 8.1**
					10,1	**BR2680E- 20- 64-10.1**
					12,1	**BR2680E- 20- 64-12.1**
		16	**25**	**32**	8,1	**BR2680E- 25- 32- 8.1**
					10,1	**BR2680E- 25- 32-10.1**
					12,1	**BR2680E- 25- 32-12.1**
		24		**40**	8,1	**BR2680E- 25- 40- 8.1**
					10,1	**BR2680E- 25- 40-10.1**
					12,1	**BR2680E- 25- 40-12.1**
		40		**64**	8,1	**BR2680E- 25- 64- 8.1**
					10,1	**BR2680E- 25- 64-10.1**
					12,1	**BR2680E- 25- 64-12.1**
		24	**32**	**40**	8,1	**BR2680E- 32- 40- 8.1**
	M 6				10,1	**BR2680E- 32- 40-10.1**
					12,1	**BR2680E- 32- 40-12.1**
	M 5	40		**64**	8,1	**BR2680E- 32- 64- 8.1**
	M 6				10,1	**BR2680E- 32- 64-10.1**
					12,1	**BR2680E- 32- 64-12.1**

BR2680E

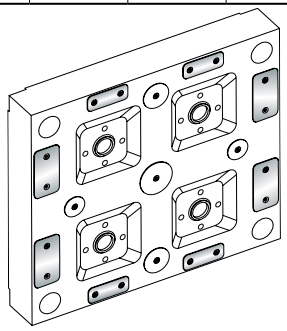


R	M	l1	b	l	S	REF.
8	M 5	52	**32**	**80**	**8,1**	**BR2680E- 32- 80- 8.1**
	M 6				**10,1**	**BR2680E- 32- 80-10.1**
					12,1	**BR2680E- 32- 80-12.1**
	M 5	64		**100**	**8,1**	**BR2680E- 32-100- 8.1**
	M 6				**10,1**	**BR2680E- 32-100-10.1**
					12,1	**BR2680E- 32-100-12.1**
	M 5	32	**40**	**50**	**8,1**	**BR2680E- 40- 50- 8.1**
	M 6				**10,1**	**BR2680E- 40- 50-10.1**
					12,1	**BR2680E- 40- 50-12.1**
	M 5	52		**80**	**8,1**	**BR2680E- 40- 80- 8.1**
	M 6				**10,1**	**BR2680E- 40- 80-10.1**
					12,1	**BR2680E- 40- 80-12.1**
	M 5	64		**100**	**8,1**	**BR2680E- 40-100- 8.1**
	M 6				**10,1**	**BR2680E- 40-100-10.1**
					12,1	**BR2680E- 40-100-12.1**
	M 5	80		**125**	**8,1**	**BR2680E- 40-125- 8.1**
	M 6				**10,1**	**BR2680E- 40-125-10.1**
					12,1	**BR2680E- 40-125-12.1**
	M 5	40	**50**	**64**	**8,1**	**BR2680E- 50- 64- 8.1**
	M 6				**10,1**	**BR2680E- 50- 64-10.1**
					12,1	**BR2680E- 50- 64-12.1**
	M 5	64		**100**	**8,1**	**BR2680E- 50-100- 8.1**
	M 6				**10,1**	**BR2680E- 50-100-10.1**
					12,1	**BR2680E- 50-100-12.1**
	M 5	80		**125**	**8,1**	**BR2680E- 50-125- 8.1**
	M 6				**10,1**	**BR2680E- 50-125-10.1**
					12,1	**BR2680E- 50-125-12.1**
	M 5	100		**160**	**8,1**	**BR2680E- 50-160- 8.1**
	M 6				**10,1**	**BR2680E- 50-160-10.1**
					12,1	**BR2680E- 50-160-12.1**

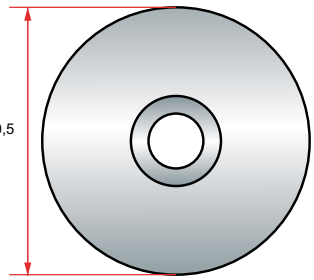
BR2680E

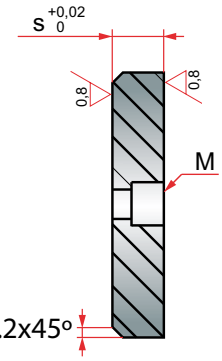


R	M	l1	b	l	S	REF.
8	M 5	52	**64**	**80**	**8,1**	**BR2680E- 64- 80- 8.1**
	M 6				**10,1**	**BR2680E- 64- 80-10.1**
					12,1	**BR2680E- 64- 80-12.1**
	M 5	64		**100**	**8,1**	**BR2680E- 64-100- 8.1**
	M 6				**10,1**	**BR2680E- 64-100-10.1**
					12,1	**BR2680E- 64-100-12.1**
	M 5	80		**125**	**8,1**	**BR2680E- 64-125- 8.1**
	M 6				**10,1**	**BR2680E- 64-125-10.1**
					12,1	**BR2680E- 64-125-12.1**
	M 5	100		**160**	**8,1**	**BR2680E- 64-160- 8.1**
	M 6				**10,1**	**BR2680E- 64-160-10.1**
					12,1	**BR2680E- 64-160-12.1**
	M 6	52	**80**	**80**	**10,1**	**BR2680E- 80- 80-10.1**
	M8				**12,1**	**BR2680E- 80- 80-12.1**
	M6	64		**100**	**10,1**	**BR2680E- 80-100-10.1**
	M8				**12,1**	**BR2680E- 80-100-12.1**
	M6	80		**125**	**10,1**	**BR2680E- 80-125-10.1**
	M8				**12,1**	**BR2680E- 80-125-12.1**
	M6	100		**160**	**10,1**	**BR2680E- 80-160-10.1**
	M8				**12,1**	**BR2680E- 80-160-12.1**
		64	**100**	**100**	**12,1**	**BR2680E-100-100-12.1**
		80		**125**	**12,1**	**BR2680E-100-125-12.1**
		100		**160**	**12,1**	**BR2680E-100-160-12.1**
		130		**200**	**12,1**	**BR2680E-100-200-12.1**
		80	**125**	**125**	**12,1**	**BR2680E-125-125-12.1**
		100		**160**	**12,1**	**BR2680E-125-160-12.1**



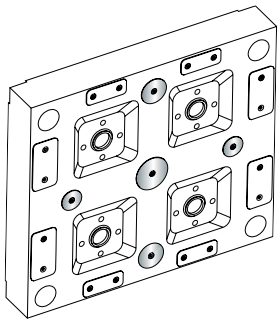
Circular shim
Arandela de presión
Podkładka regulacyjna okrągła
Arruela de pressão
Plaquette d´ajustage circulaire



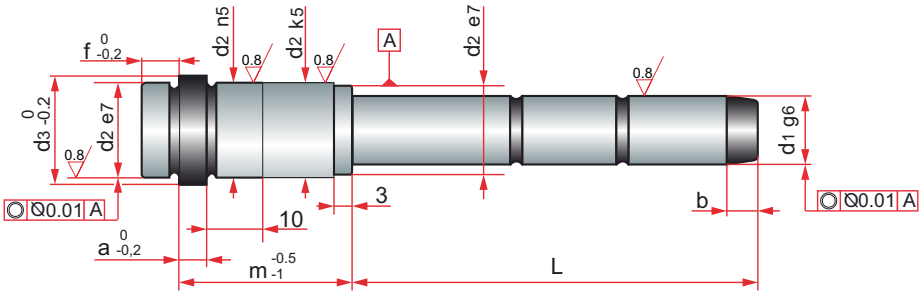


Mat. : 12842 ≈ 58 HRC.

M	d1	S	REF.
M4	20	8,1	BR2682-20- 8.1
		10,1	BR2682-20-10.1
		12,1	BR2682-20-12.1
M5	25	8,1	BR2682-25- 8.1
		10,1	BR2682-25-10.1
		12,1	BR2682-25-12.1
	32	8,1	BR2682-32- 8.1
M6		10,1	BR2682-32-10.1
		12,1	BR2682-32-12.1
M5	40	8,1	BR2682-40- 8.1
M6		10,1	BR2682-40-10.1
		12,1	BR2682-40-12.1
M5	50	8,1	BR2682-50- 8.1
M6		10,1	BR2682-50-10.1
		12,1	BR2682-50-12.1
M5	64	8,1	BR2682-64- 8.1
M6		10,1	BR2682-64-10.1
		12,1	BR2682-64-12.1
	80	10,1	BR2682-80-10.1
M8		12,1	BR2682-80-12.1

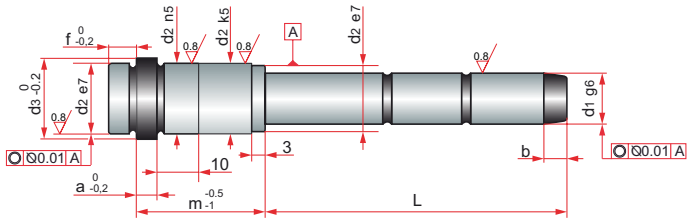


Guide pillar with centering collar BR00
Guía con centrador BR00
Słup prowadzący
Guia principal com centrador BR00
Colonne de guidage epaulee avec plot de centrage BR00

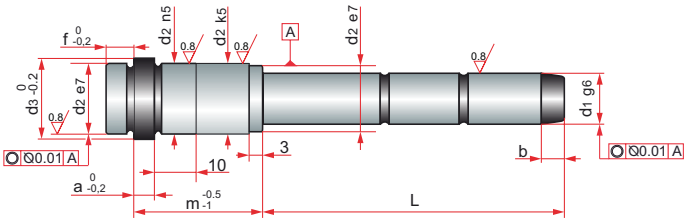


Hardness: 58 ± 2 HRC.

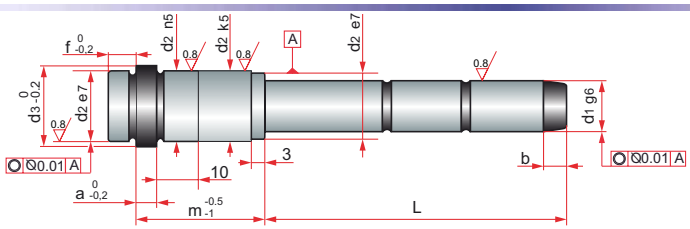
a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
3	4	3	16	14	**10**	**12**	**25**	**BR00/10x012x025**	**-**	**-**
							35	**BR00/10x012x035**		
							55	**BR00/10x012x055**		
						17	**25**	**BR00/10x017x025**		
							35	**BR00/10x017x035**		
							55	**BR00/10x017x055**		
						22	**25**	**BR00/10x022x025**		
							35	**BR00/10x022x035**		
							55	**BR00/10x022x055**		
						27	**25**	**BR00/10x027x025**		
							35	**BR00/10x027x035**		
							55	**BR00/10x027x055**		
							75	**BR00/10x027x075**		
						36	**25**	**BR00/10x036x025**		
							35	**BR00/10x036x035**		
							55	**BR00/10x036x055**		
							75	**BR00/10x036x075**		
						46	**35**	**BR00/10x046x035**		
							55	**BR00/10x046x055**		
							75	**BR00/10x046x075**		
						56	**35**	**BR00/10x056x035**		
							55	**BR00/10x056x055**		
							75	**BR00/10x056x075**		
6	7	9	25	20	**14**	**17**	**35**	**BR00/14x017x035**	**15**	**BR00/15x017x035**
							55	**BR00/14x017x055**		**BR00/15x017x055**



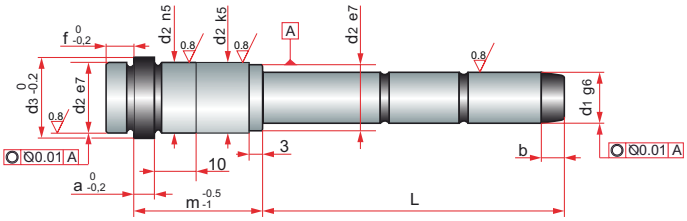
a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
6	7	9	25	20	**14**	**17**	**75**	**BR00/14x017x075**	**15**	**BR00/15x017x075**
							95	**BR00/14x017x095**		**BR00/15x017x095**
						22	**30**	**BR00/14x022x030**		**BR00/15x022x030**
							50	**BR00/14x022x050**		**BR00/15x022x050**
							70	**BR00/14x022x070**		**BR00/15x022x070**
							90	**BR00/14x022x090**		**BR00/15x022x090**
							115	**BR00/14x022x115**		**BR00/15x022x115**
							125	**BR00/14x022x125**		**BR00/15x022x125**
							155	**BR00/14x022x155**		**BR00/15x022x155**
						27	**30**	**BR00/14x027x030**		**BR00/15x027x030**
							45	**BR00/14x027x045**		**BR00/15x027x045**
							65	**BR00/14x027x065**		**BR00/15x027x065**
							85	**BR00/14x027x085**		**BR00/15x027x085**
							105	**BR00/14x027x105**		**BR00/15x027x105**
							125	**BR00/14x027x125**		**BR00/15x027x125**
							145	**BR00/14x027x145**		**BR00/15x027x145**
							165	**BR00/14x027x165**		**BR00/15x027x165**
						36	**35**	**BR00/14x036x035**		**BR00/15x036x035**
							45	**BR00/14x036x045**		**BR00/15x036x045**
							55	**BR00/14x036x055**		**BR00/15x036x055**
							65	**BR00/14x036x065**		**BR00/15x036x065**
							75	**BR00/14x036x075**		**BR00/15x036x075**
							95	**BR00/14x036x095**		**BR00/15x036x095**
							125	**BR00/14x036x125**		**BR00/15x036x125**
							155	**BR00/14x036x155**		**BR00/15x036x155**
						46	**35**	**BR00/14x046x035**		**BR00/15x046x035**
							45	**BR00/14x046x045**		**BR00/15x046x045**
							65	**BR00/14x046x065**		**BR00/15x046x065**
							85	**BR00/14x046x085**		**BR00/15x046x085**
							105	**BR00/14x046x105**		**BR00/15x046x105**
							125	**BR00/14x046x125**		**BR00/15x046x125**
							145	**BR00/14x046x145**		**BR00/15x046x145**
						56	**35**	**BR00/14x056x035**		**BR00/15x056x035**



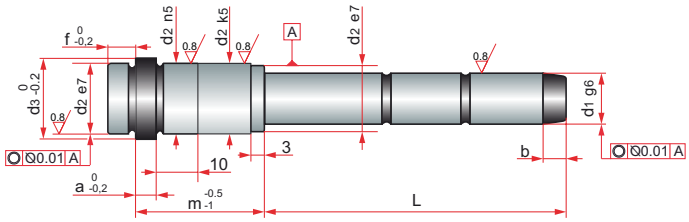
a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
6	7	9	25	20	**14**	**56**	**55**	**BR00/14x056x055**	**15**	**BR00/15x056x055**
							75	**BR00/14x056x075**		**BR00/15x056x075**
							95	**BR00/14x056x095**		**BR00/15x056x095**
							135	**BR00/14x056x135**		**BR00/15x056x135**
						66	**55**	**BR00/14x066x055**		**BR00/15x066x055**
							65	**BR00/14x066x065**		**BR00/15x066x065**
							95	**BR00/14x066x095**		**BR00/15x066x095**
							125	**BR00/14x066x125**		**BR00/15x066x125**
						76	**55**	**BR00/14x076x055**		**BR00/15x076x055**
							95	**BR00/14x076x095**		**BR00/15x076x095**
							105	**BR00/14x076x105**		**BR00/15x076x105**
						86	**55**	**BR00/14x086x055**		**BR00/15x086x055**
							75	**BR00/14x086x075**		**BR00/15x086x075**
							95	**BR00/14x086x095**		**BR00/15x086x095**
							115	**BR00/14x086x115**		**BR00/15x086x115**
						96	**55**	**BR00/14x096x055**		**BR00/15x096x055**
							95	**BR00/14x096x095**		**BR00/15x096x095**
						116	**75**	**BR00/14x116x075**		**BR00/15x116x075**
			31	26	**18**	**22**	**35**	**BR00/18x022x035**	**20**	**BR00/20x022x035**
							45	**BR00/18x022x045**		**BR00/20x022x045**
							65	**BR00/18x022x065**		**BR00/20x022x065**
							85	**BR00/18x022x085**		**BR00/20x022x085**
							115	**BR00/18x022x115**		**BR00/20x022x115**
						27	**35**	**BR00/18x027x035**		**BR00/20x027x035**
							45	**BR00/18x027x045**		**BR00/20x027x045**
							65	**BR00/18x027x065**		**BR00/20x027x065**
							75	**BR00/18x027x075**		**BR00/20x027x075**
							85	**BR00/18x027x085**		**BR00/20x027x085**
							105	**BR00/18x027x105**		**BR00/20x027x105**
							125	**BR00/18x027x125**		**BR00/20x027x125**
						36	**35**	**BR00/18x036x035**		**BR00/20x036x035**
							45	**BR00/18x036x045**		**BR00/20x036x045**
							55	**BR00/18x036x055**		**BR00/20x036x055**



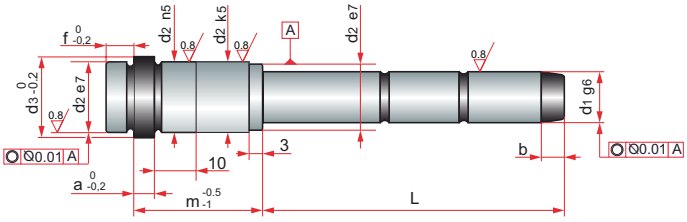
a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
6	7	9	31	26	18	36	65	BR00/18x036x065	20	BR00/20x036x065
							75	BR00/18x036x075		BR00/20x036x075
							95	BR00/18x036x095		BR00/20x036x095
							115	BR00/18x036x115		BR00/20x036x115
							135	BR00/18x036x135		BR00/20x036x135
						46	35	BR00/18x046x035		BR00/20x046x035
							45	BR00/18x046x045		BR00/20x046x045
							65	BR00/18x046x065		BR00/20x046x065
							85	BR00/18x046x085		BR00/20x046x085
							105	BR00/18x046x105		BR00/20x046x105
							135	BR00/18x046x135		BR00/20x046x135
						56	35	BR00/18x056x035		BR00/20x056x035
							55	BR00/18x056x055		BR00/20x056x055
							75	BR00/18x056x075		BR00/20x056x075
							85	BR00/18x056x085		BR00/20x056x085
							95	BR00/18x056x095		BR00/20x056x095
							155	BR00/18x056x155		BR00/20x056x155
						66	35	BR00/18x066x035		BR00/20x066x035
							55	BR00/18x066x055		BR00/20x066x055
							75	BR00/18x066x075		BR00/20x066x075
							95	BR00/18x066x095		BR00/20x066x095
							145	BR00/18x066x145		BR00/20x066x145
						76	55	BR00/18x076x055		BR00/20x076x055
							75	BR00/18x076x075		BR00/20x076x075
							95	BR00/18x076x095		BR00/20x076x095
							135	BR00/18x076x135		BR00/20x076x135
						86	55	BR00/18x086x055		BR00/20x086x055
							75	BR00/18x086x075		BR00/20x086x075
							95	BR00/18x086x095		BR00/20x086x095
							115	BR00/18x086x115		BR00/20x086x115
							155	BR00/18x086x155		BR00/20x086x155
						96	55	BR00/18x096x055		BR00/20x096x055
							95	BR00/18x096x095		BR00/20x096x095



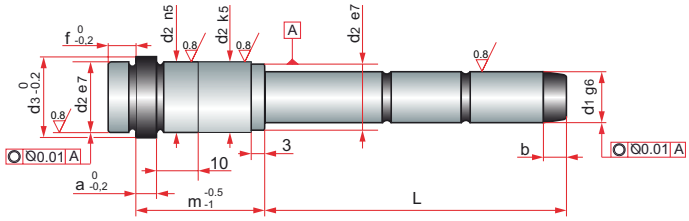
a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
6	7	9	31	26	18	116	75	BR00/18x116x075	20	BR00/20x116x075
							115	BR00/18x116x115		BR00/20x116x115
			35	30	22	22	35	BR00/22x022x035	24	BR00/24x022x035
							55	BR00/22x022x055		BR00/24x022x055
							75	BR00/22x022x075		BR00/24x022x075
							105	BR00/22x022x105		BR00/24x022x105
							130	BR00/22x022x130		BR00/24x022x130
						27	35	BR00/22x027x035		BR00/24x027x035
							45	BR00/22x027x045		BR00/24x027x045
							65	BR00/22x027x065		BR00/24x027x065
							85	BR00/22x027x085		BR00/24x027x085
							105	BR00/22x027x105		BR00/24x027x105
							125	BR00/22x027x125		BR00/24x027x125
							165	BR00/22x027x165		BR00/24x027x165
						36	35	BR00/22x036x035		BR00/24x036x035
							55	BR00/22x036x055		BR00/24x036x055
							75	BR00/22x036x075		BR00/24x036x075
							95	BR00/22x036x095		BR00/24x036x095
							115	BR00/22x036x115		BR00/24x036x115
							135	BR00/22x036x135		BR00/24x036x135
							165	BR00/22x036x165		BR00/24x036x165
							205	BR00/22x036x205		BR00/24x036x205
						46	35	BR00/22x046x035		BR00/24x046x035
							45	BR00/22x046x045		BR00/24x046x045
							65	BR00/22x046x065		BR00/24x046x065
							85	BR00/22x046x085		BR00/24x046x085
							105	BR00/22x046x105		BR00/24x046x105
							125	BR00/22x046x125		BR00/24x046x125
							165	BR00/22x046x165		BR00/24x046x165
							205	BR00/22x046x205		BR00/24x046x205
						56	35	BR00/22x056x035		BR00/24x056x035
							55	BR00/22x056x055		BR00/24x056x055
							75	BR00/22x056x075		BR00/24x056x075



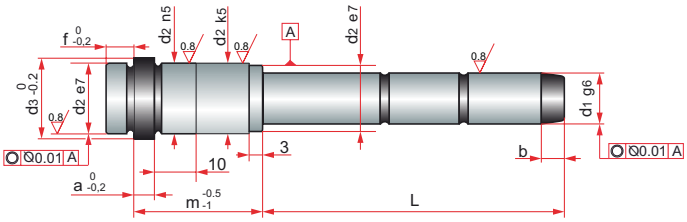
a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
6	7	9	35	30	22	56	95	BR00/22x056x095	24	BR00/24x056x095
							115	BR00/22x056x115		BR00/24x056x115
							165	BR00/22x056x165		BR00/24x056x165
							205	BR00/22x056x205		BR00/24x056x205
						66	35	BR00/22x066x035		BR00/24x066x035
							55	BR00/22x066x055		BR00/24x066x055
							75	BR00/22x066x075		BR00/24x066x075
							95	BR00/22x066x095		BR00/24x066x095
							155	BR00/22x066x155		BR00/24x066x155
							205	BR00/22x066x205		BR00/24x066x205
						76	55	BR00/22x076x055		BR00/24x076x055
							75	BR00/22x076x075		BR00/24x076x075
							95	BR00/22x076x095		BR00/24x076x095
							115	BR00/22x076x115		BR00/24x076x115
							145	BR00/22x076x145		BR00/24x076x145
							165	BR00/22x076x165		BR00/24x076x165
							205	BR00/22x076x205		BR00/24x076x205
						86	55	BR00/22x086x055		BR00/24x086x055
							75	BR00/22x086x075		BR00/24x086x075
							95	BR00/22x086x095		BR00/24x086x095
							115	BR00/22x086x115		BR00/24x086x115
							155	BR00/22x086x155		BR00/24x086x155
							205	BR00/22x086x205		BR00/24x086x205
						96	55	BR00/22x096x055		BR00/24x096x055
							75	BR00/22x096x075		BR00/24x096x075
							95	BR00/22x096x095		BR00/24x096x095
							125	BR00/22x096x125		BR00/24x096x125
							155	BR00/22x096x155		BR00/24x096x155
							205	BR00/22x096x205		BR00/24x096x205
						116	75	BR00/22x116x075		BR00/24x116x075
							115	BR00/22x116x115		BR00/24x116x115
							155	BR00/22x116x155		BR00/24x116x155
							205	BR00/22x116x205		BR00/24x116x205



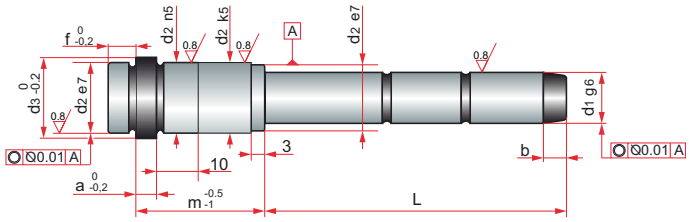
a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
6	7	9	35	30	22	136	95	BR00/22x136x095	24	BR00/24x136x095
							135	BR00/22x136x135		BR00/24x136x135
							155	BR00/22x136x155		BR00/24x136x155
							205	BR00/22x136x205		BR00/24x136x205
			47	42	30	27	45	BR00/30x027x045	32	BR00/32x027x045
							65	BR00/30x027x065		BR00/32x027x065
							105	BR00/30x027x105		BR00/32x027x105
						36	55	BR00/30x036x055		BR00/32x036x055
							75	BR00/30x036x075		BR00/32x036x075
							95	BR00/30x036x095		BR00/32x036x095
							115	BR00/30x036x115		BR00/32x036x115
						46	45	BR00/30x046x045		BR00/32x046x045
							55	BR00/30x046x055		BR00/32x046x055
							65	BR00/30x046x065		BR00/32x046x065
							85	BR00/30x046x085		BR00/32x046x085
							105	BR00/30x046x105		BR00/32x046x105
						56	55	BR00/30x056x055		BR00/32x056x055
							75	BR00/30x056x075		BR00/32x056x075
							95	BR00/30x056x095		BR00/32x056x095
							115	BR00/30x056x115		BR00/32x056x115
							135	BR00/30x056x135		BR00/32x056x135
							205	BR00/30x056x205		BR00/32x056x205
						66	55	BR00/30x066x055		BR00/32x066x055
							75	BR00/30x066x075		BR00/32x066x075
							95	BR00/30x066x095		BR00/32x066x095
							115	BR00/30x066x115		BR00/32x066x115
							135	BR00/30x066x135		BR00/32x066x135
							205	BR00/30x066x205		BR00/32x066x205
						76	55	BR00/30x076x055		BR00/32x076x055
							75	BR00/30x076x075		BR00/32x076x075
							95	BR00/30x076x095		BR00/32x076x095
							115	BR00/30x076x115		BR00/32x076x115
							155	BR00/30x076x155		BR00/32x076x155



a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
6	7	9	47	42	30	76	205	BR00/30x076x205	32	BR00/32x076x205
						86	55	BR00/30x086x055		BR00/32x086x055
							75	BR00/30x086x075		BR00/32x086x075
							95	BR00/30x086x095		BR00/32x086x095
							115	BR00/30x086x115		BR00/32x086x115
							135	BR00/30x086x135		BR00/32x086x135
							155	BR00/30x086x155		BR00/32x086x155
							205	BR00/30x086x205		BR00/32x086x205
						96	55	BR00/30x096x055		BR00/32x096x055
							75	BR00/30x096x075		BR00/32x096x075
							95	BR00/30x096x095		BR00/32x096x095
							115	BR00/30x096x115		BR00/32x096x115
							135	BR00/30x096x135		BR00/32x096x135
							155	BR00/30x096x155		BR00/32x096x155
							205	BR00/30x096x205		BR00/32x096x205
						116	75	BR00/30x116x075		BR00/32x116x075
							115	BR00/30x116x115		BR00/32x116x115
							155	BR00/30x116x155		BR00/32x116x155
							205	BR00/30x116x205		BR00/32x116x205
						136	95	BR00/30x136x095		BR00/32x136x095
							115	BR00/30x136x115		BR00/32x136x115
							155	BR00/30x136x155		BR00/32x136x155
							205	BR00/30x136x205		BR00/32x136x205
						156	115	BR00/30x156x115		BR00/32x156x115
							155	BR00/30x156x155		BR00/32x156x155
							205	BR00/30x156x205		BR00/32x156x205
						176	115	BR00/30x176x115		BR00/32x176x115
							155	BR00/30x176x155		BR00/32x176x155
							195	BR00/30x176x195		BR00/32x176x195
						196	115	BR00/30x196x115		BR00/32x196x115
							155	BR00/30x196x155		BR00/32x196x155
							195	BR00/30x196x195		BR00/32x196x195

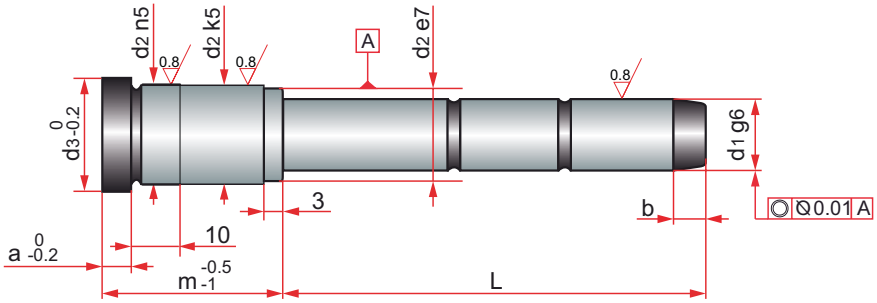


a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
10	10	12	59	54	**40**	**36**	**75**	**BR00/40x036x075**	**42**	**BR00/42x036x075**
							95	**BR00/40x036x095**		**BR00/42x036x095**
							115	**BR00/40x036x115**		**BR00/42x036x115**
							155	**BR00/40x036x155**		**BR00/42x036x155**
						46	**75**	**BR00/40x046x075**		**BR00/42x046x075**
							95	**BR00/40x046x095**		**BR00/42x046x095**
							115	**BR00/40x046x115**		**BR00/42x046x115**
							155	**BR00/40x046x155**		**BR00/42x046x155**
						56	**75**	**BR00/40x056x075**		**BR00/42x056x075**
							95	**BR00/40x056x095**		**BR00/42x056x095**
							115	**BR00/40x056x115**		**BR00/42x056x115**
							155	**BR00/40x056x155**		**BR00/42x056x155**
							195	**BR00/40x056x195**		**BR00/42x056x195**
						66	**75**	**BR00/40x066x075**		**BR00/42x066x075**
							95	**BR00/40x066x095**		**BR00/42x066x095**
							115	**BR00/40x066x115**		**BR00/42x066x115**
							155	**BR00/40x066x155**		**BR00/42x066x155**
						76	**75**	**BR00/40x076x075**		**BR00/42x076x075**
							95	**BR00/40x076x095**		**BR00/42x076x095**
							115	**BR00/40x076x115**		**BR00/42x076x115**
							155	**BR00/40x076x155**		**BR00/42x076x155**
						86	**75**	**BR00/40x086x075**		**BR00/42x086x075**
							95	**BR00/40x086x095**		**BR00/42x086x095**
							115	**BR00/40x086x115**		**BR00/42x086x115**
							155	**BR00/40x086x155**		**BR00/42x086x155**
						96	**75**	**BR00/40x096x075**		**BR00/42x096x075**
							95	**BR00/40x096x095**		**BR00/42x096x095**
							115	**BR00/40x096x115**		**BR00/42x096x115**
							155	**BR00/40x096x155**		**BR00/42x096x155**
							195	**BR00/40x096x195**		**BR00/42x096x195**
						116	**75**	**BR00/40x116x075**		**BR00/42x116x075**
							95	**BR00/40x116x095**		**BR00/42x116x095**



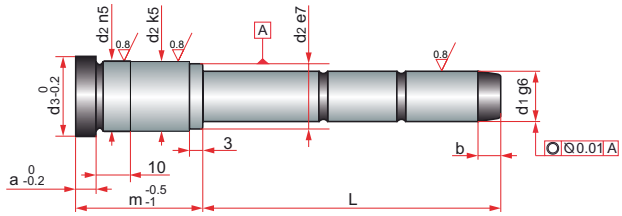
a	b	f	d_3	d_2	d_1	m	L	REF.	d_1	REF.
10	10	12	59	54	**40**	**116**	**115**	**BR00/40x116x115**	**42**	**BR00/42x116x115**
							155	**BR00/40x116x155**		**BR00/42x116x155**
							195	**BR00/40x116x195**		**BR00/42x116x195**
						136	**95**	**BR00/40x136x095**		**BR00/42x136x095**
							115	**BR00/40x136x115**		**BR00/42x136x115**
							135	**BR00/40x136x135**		**BR00/42x136x135**
							155	**BR00/40x136x155**		**BR00/42x136x155**
							195	**BR00/40x136x195**		**BR00/42x136x195**
						156	**115**	**BR00/40x156x115**		**BR00/42x156x115**
							135	**BR00/40x156x135**		**BR00/42x156x135**
							155	**BR00/40x156x155**		**BR00/42x156x155**
							195	**BR00/40x156x195**		**BR00/42x156x195**
						176	**115**	**BR00/40x176x115**		**BR00/42x176x115**
							155	**BR00/40x176x155**		**BR00/42x176x155**
							195	**BR00/40x176x195**		**BR00/42x176x195**
							235	**BR00/40x176x235**		**BR00/42x176x235**
						196	**115**	**BR00/40x196x115**		**BR00/42x196x115**
							155	**BR00/40x196x155**		**BR00/42x196x155**
							195	**BR00/40x196x195**		**BR00/42x196x195**
							235	**BR00/40x196x235**		**BR00/42x196x235**
						216	**195**	**BR00/40x216x195**		**BR00/42x216x195**
							215	**BR00/40x216x215**		**BR00/42x216x215**
						236	**205**	**BR00/40x236x205**		**BR00/42x236x205**
							235	**BR00/40x236x235**		**BR00/42x236x235**
						246	**215**	**BR00/40x246x215**		**BR00/42x246x215**
							245	**BR00/40x246x245**		**BR00/42x246x245**
						256	**215**	**BR00/40x256x215**		**BR00/42x256x215**
							255	**BR00/40x256x255**		**BR00/42x256x255**

Guide pillar without centering collar BR03
Guía de doble diámetro BR03
Słup prowadzący
Guia principal sem centrador BR03
Colonne de guidage epaulee monobloc type BR03

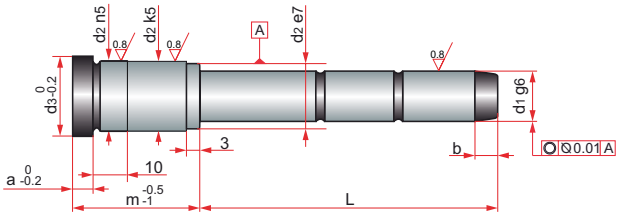


Hardness: 58 ± 2 HRC.

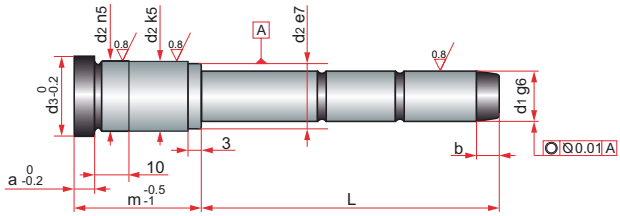
a	b	d3	d2	d1	m	L	REF.	d1	REF.
3	4	16	14	**10**	**12**	**25**	**BR03/10x012x025**	-	-
						35	**BR03/10x012x035**		
						55	**BR03/10x012x055**		
					17	**25**	**BR03/10x017x025**		
						30	**BR03/10x017x030**		
						35	**BR03/10x017x035**		
						55	**BR03/10x017x055**		
					22	**25**	**BR03/10x022x025**		
						35	**BR03/10x022x035**		
						55	**BR03/10x022x055**		
					27	**35**	**BR03/10x027x035**		
						50	**BR03/10x027x050**		
						55	**BR03/10x027x055**		
						75	**BR03/10x027x075**		
					36	**35**	**BR03/10x036x035**		
						45	**BR03/10x036x045**		
						55	**BR03/10x036x055**		
						75	**BR03/10x036x075**		
					46	**35**	**BR03/10x046x035**		
						55	**BR03/10x046x055**		
						75	**BR03/10x046x075**		
					56	**35**	**BR03/10x056x035**		
						55	**BR03/10x056x055**		
						75	**BR03/10x056x075**		
6	7	25	20	**14**	**22**	**20**	**BR03/14x022x020**	**15**	**BR03/15x022x020**



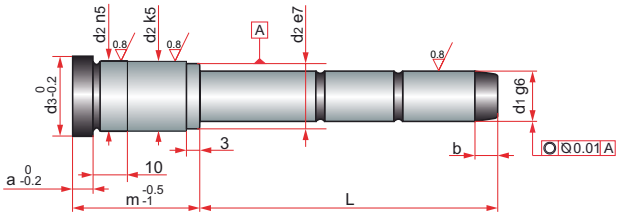
a	b	d3	d2	d1	m	L	REF.	d1	REF.
6	7	25	20	**14**	**22**	**35**	**BR03/14x022x035**	**15**	**BR03/15x022x035**
						45	**BR03/14x022x045**		**BR03/15x022x045**
						55	**BR03/14x022x055**		**BR03/15x022x055**
						65	**BR03/14x022x065**		**BR03/15x022x065**
						90	**BR03/14x022x090**		**BR03/15x022x090**
					27	**20**	**BR03/14x027x020**		**BR03/15x027x020**
						35	**BR03/14x027x035**		**BR03/15x027x035**
						45	**BR03/14x027x045**		**BR03/15x027x045**
						55	**BR03/14x027x055**		**BR03/15x027x055**
						65	**BR03/14x027x065**		**BR03/15x027x065**
						85	**BR03/14x027x085**		**BR03/15x027x085**
						115	**BR03/14x027x115**		**BR03/15x027x115**
						135	**BR03/14x027x135**		**BR03/15x027x135**
					36	**20**	**BR03/14x036x020**		**BR03/15x036x020**
						35	**BR03/14x036x035**		**BR03/15x036x035**
						45	**BR03/14x036x045**		**BR03/15x036x045**
						55	**BR03/14x036x055**		**BR03/15x036x055**
						65	**BR03/14x036x065**		**BR03/15x036x065**
						95	**BR03/14x036x095**		**BR03/15x036x095**
						115	**BR03/14x036x115**		**BR03/15x036x115**
						135	**BR03/14x036x135**		**BR03/15x036x135**
					46	**20**	**BR03/14x046x020**		**BR03/15x046x020**
						35	**BR03/14x046x035**		**BR03/15x046x035**
						45	**BR03/14x046x045**		**BR03/15x046x045**
						65	**BR03/14x046x065**		**BR03/15x046x065**
						85	**BR03/14x046x085**		**BR03/15x046x085**
						105	**BR03/14x046x105**		**BR03/15x046x105**
						135	**BR03/14x046x135**		**BR03/15x046x135**
					56	**20**	**BR03/14x056x020**		**BR03/15x056x020**
						35	**BR03/14x056x035**		**BR03/15x056x035**
						55	**BR03/14x056x055**		**BR03/15x056x055**
						75	**BR03/14x056x075**		**BR03/15x056x075**



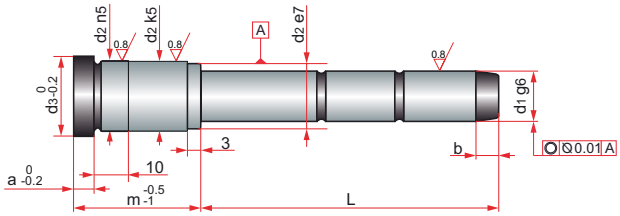
a	b	d3	d2	d1	m	L	REF.	d1	REF.
6	7	25	20	**14**	**56**	**95**	**BR03/14x056x095**	**15**	**BR03/15x056x095**
						115	**BR03/14x056x115**		**BR03/15x056x115**
						135	**BR03/14x056x135**		**BR03/15x056x135**
					66	**25**	**BR03/14x066x025**		**BR03/15x066x025**
						35	**BR03/14x066x035**		**BR03/15x066x035**
						55	**BR03/14x066x055**		**BR03/15x066x055**
						65	**BR03/14x066x065**		**BR03/15x066x065**
						95	**BR03/14x066x095**		**BR03/15x066x095**
						135	**BR03/14x066x135**		**BR03/15x066x135**
					76	**35**	**BR03/14x076x035**		**BR03/15x076x035**
						55	**BR03/14x076x055**		**BR03/15x076x055**
						75	**BR03/14x076x075**		**BR03/15x076x075**
						95	**BR03/14x076x095**		**BR03/15x076x095**
						115	**BR03/14x076x115**		**BR03/15x076x115**
						135	**BR03/14x076x135**		**BR03/15x076x135**
					86	**55**	**BR03/14x086x055**		**BR03/15x086x055**
						75	**BR03/14x086x075**		**BR03/15x086x075**
						95	**BR03/14x086x095**		**BR03/15x086x095**
						115	**BR03/14x086x115**		**BR03/15x086x115**
					96	**35**	**BR03/14x096x035**		**BR03/15x096x035**
						55	**BR03/14x096x055**		**BR03/15x096x055**
						75	**BR03/14x096x075**		**BR03/15x096x075**
						115	**BR03/14x096x115**		**BR03/15x096x115**
						135	**BR03/14x096x135**		**BR03/15x096x135**
		31	26	**18**	**22**	**20**	**BR03/18x022x020**	**20**	**BR03/20x022x020**
						35	**BR03/18x022x035**		**BR03/20x022x035**
						45	**BR03/18x022x045**		**BR03/20x022x045**
						55	**BR03/18x022x055**		**BR03/20x022x055**
						65	**BR03/18x022x065**		**BR03/20x022x065**
						85	**BR03/18x022x085**		**BR03/20x022x085**
					27	**20**	**BR03/18x027x020**		**BR03/20x027x020**
						35	**BR03/18x027x035**		**BR03/20x027x035**



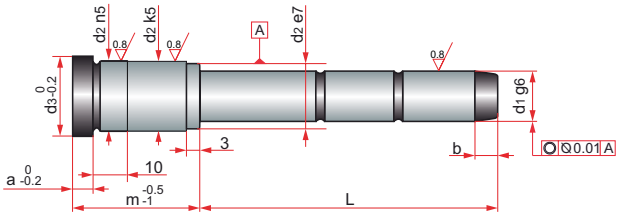
a	b	d3	d2	d1	m	L	REF.	d1	REF.
6	7	31	26	**18**	**27**	**45**	**BR03/18x027x045**	**20**	**BR03/20x027x045**
						55	**BR03/18x027x055**		**BR03/20x027x055**
						65	**BR03/18x027x065**		**BR03/20x027x065**
						85	**BR03/18x027x085**		**BR03/20x027x085**
						105	**BR03/18x027x105**		**BR03/20x027x105**
						135	**BR03/18x027x135**		**BR03/20x027x135**
					36	**20**	**BR03/18x036x020**		**BR03/20x036x020**
						35	**BR03/18x036x035**		**BR03/20x036x035**
						45	**BR03/18x036x045**		**BR03/20x036x045**
						55	**BR03/18x036x055**		**BR03/20x036x055**
						65	**BR03/18x036x065**		**BR03/20x036x065**
						75	**BR03/18x036x075**		**BR03/20x036x075**
						95	**BR03/18x036x095**		**BR03/20x036x095**
						115	**BR03/18x036x115**		**BR03/20x036x115**
						135	**BR03/18x036x135**		**BR03/20x036x135**
					46	**20**	**BR03/18x046x020**		**BR03/20x046x020**
						45	**BR03/18x046x045**		**BR03/20x046x045**
						65	**BR03/18x046x065**		**BR03/20x046x065**
						85	**BR03/18x046x085**		**BR03/20x046x085**
						105	**BR03/18x046x105**		**BR03/20x046x105**
						135	**BR03/18x046x135**		**BR03/20x046x135**
					56	**20**	**BR03/18x056x020**		**BR03/20x056x020**
						35	**BR03/18x056x035**		**BR03/20x056x035**
						55	**BR03/18x056x055**		**BR03/20x056x055**
						75	**BR03/18x056x075**		**BR03/20x056x075**
						95	**BR03/18x056x095**		**BR03/20x056x095**
						115	**BR03/18x056x115**		**BR03/20x056x115**
						135	**BR03/18x056x135**		**BR03/20x056x135**
					66	**35**	**BR03/18x066x035**		**BR03/20x066x035**
						55	**BR03/18x066x055**		**BR03/20x066x055**
						75	**BR03/18x066x075**		**BR03/20x066x075**
						95	**BR03/18x066x095**		**BR03/20x066x095**



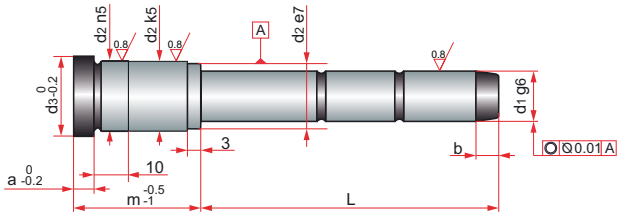
a	b	d3	d2	d1	m	L	REF.	d1	REF.
6	7	31	26	18	66	115	BR03/18x066x115	20	BR03/20x066x115
						135	BR03/18x066x135		BR03/20x066x135
					76	35	BR03/18x076x035		BR03/20x076x035
						55	BR03/18x076x055		BR03/20x076x055
						75	BR03/18x076x075		BR03/20x076x075
						95	BR03/18x076x095		BR03/20x076x095
						115	BR03/18x076x115		BR03/20x076x115
						135	BR03/18x076x135		BR03/20x076x135
					86	55	BR03/18x086x055		BR03/20x086x055
						75	BR03/18x086x075		BR03/20x086x075
						95	BR03/18x086x095		BR03/20x086x095
						115	BR03/18x086x115		BR03/20x086x115
						135	BR03/18x086x135		BR03/20x086x135
					96	55	BR03/18x096x055		BR03/20x096x055
						95	BR03/18x096x095		BR03/20x096x095
					116	75	BR03/18x116x075		BR03/20x116x075
						115	BR03/18x116x115		BR03/20x116x115
						135	BR03/18x116x135		BR03/20x116x135
		35	30	22	27	25	BR03/22x027x025	24	BR03/24x027x025
						35	BR03/22x027x035		BR03/24x027x035
						45	BR03/22x027x045		BR03/24x027x045
						65	BR03/22x027x065		BR03/24x027x065
						75	BR03/22x027x075		BR03/24x027x075
						85	BR03/22x027x085		BR03/24x027x085
						105	BR03/22x027x105		BR03/24x027x105
						125	BR03/22x027x125		BR03/24x027x125
					36	25	BR03/22x036x025		BR03/24x036x025
						35	BR03/22x036x035		BR03/24x036x035
						45	BR03/22x036x045		BR03/24x036x045
						55	BR03/22x036x055		BR03/24x036x055
						75	BR03/22x036x075		BR03/24x036x075
						95	BR03/22x036x095		BR03/24x036x095



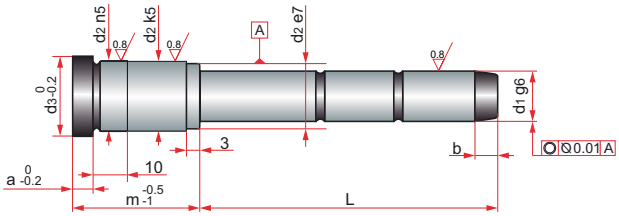
a	b	d3	d2	d1	m	L	REF.	d1	REF.
6	7	35	30	**22**	**36**	**115**	**BR03/22x036x115**	**24**	**BR03/24x036x115**
						155	**BR03/22x036x155**		**BR03/24x036x155**
						205	**BR03/22x036x205**		**BR03/24x036x205**
					46	**25**	**BR03/22x046x025**		**BR03/24x046x025**
						35	**BR03/22x046x035**		**BR03/24x046x035**
						45	**BR03/22x046x045**		**BR03/24x046x045**
						65	**BR03/22x046x065**		**BR03/24x046x065**
						75	**BR03/22x046x075**		**BR03/24x046x075**
						85	**BR03/22x046x085**		**BR03/24x046x085**
						105	**BR03/22x046x105**		**BR03/24x046x105**
						125	**BR03/22x046x125**		**BR03/24x046x125**
						155	**BR03/22x046x155**		**BR03/24x046x155**
						205	**BR03/22x046x205**		**BR03/24x046x205**
					56	**25**	**BR03/22x056x025**		**BR03/24x056x025**
						45	**BR03/22x056x045**		**BR03/24x056x045**
						55	**BR03/22x056x055**		**BR03/24x056x055**
						75	**BR03/22x056x075**		**BR03/24x056x075**
						95	**BR03/22x056x095**		**BR03/24x056x095**
						115	**BR03/22x056x115**		**BR03/24x056x115**
						155	**BR03/22x056x155**		**BR03/24x056x155**
						205	**BR03/22x056x205**		**BR03/24x056x205**
					66	**35**	**BR03/22x066x035**		**BR03/24x066x035**
						55	**BR03/22x066x055**		**BR03/24x066x055**
						75	**BR03/22x066x075**		**BR03/24x066x075**
						95	**BR03/22x066x095**		**BR03/24x066x095**
						155	**BR03/22x066x155**		**BR03/24x066x155**
						205	**BR03/22x066x205**		**BR03/24x066x205**
					76	**25**	**BR03/22x076x025**		**BR03/24x076x025**
						45	**BR03/22x076x045**		**BR03/24x076x045**
						55	**BR03/22x076x055**		**BR03/24x076x055**
						75	**BR03/22x076x075**		**BR03/24x076x075**
						95	**BR03/22x076x095**		**BR03/24x076x095**



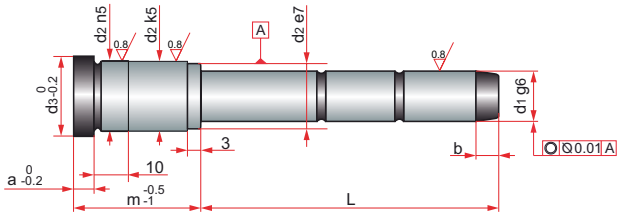
a	b	d3	d2	d1	m	L	REF.	d1	REF.
6	7	35	30	22	76	115	BR03/22x076x115	24	BR03/24x076x115
						155	BR03/22x076x155		BR03/24x076x155
						205	BR03/22x076x205		BR03/24x076x205
					86	55	BR03/22x086x055		BR03/24x086x055
						75	BR03/22x086x075		BR03/24x086x075
						95	BR03/22x086x095		BR03/24x086x095
						115	BR03/22x086x115		BR03/24x086x115
						155	BR03/22x086x155		BR03/24x086x155
						205	BR03/22x086x205		BR03/24x086x205
					96	55	BR03/22x096x055		BR03/24x096x055
						75	BR03/22x096x075		BR03/24x096x075
						95	BR03/22x096x095		BR03/24x096x095
						155	BR03/22x096x155		BR03/24x096x155
						205	BR03/22x096x205		BR03/24x096x205
					116	75	BR03/22x116x075		BR03/24x116x075
						95	BR03/22x116x095		BR03/24x116x095
						115	BR03/22x116x115		BR03/24x116x115
						155	BR03/22x116x155		BR03/24x116x155
						205	BR03/22x116x205		BR03/24x116x205
					136	75	BR03/22x136x075		BR03/24x136x075
						95	BR03/22x136x095		BR03/24x136x095
						135	BR03/22x136x135		BR03/24x136x135
						155	BR03/22x136x155		BR03/24x136x155
						205	BR03/22x136x205		BR03/24x136x205
		47	42	30	27	35	BR03/30x027x035	32	BR03/32x027x035
						45	BR03/30x027x045		BR03/32x027x045
						65	BR03/30x027x065		BR03/32x027x065
						105	BR03/30x027x105		BR03/32x027x105
					36	35	BR03/30x036x035		BR03/32x036x035
						55	BR03/30x036x055		BR03/32x036x055
						75	BR03/30x036x075		BR03/32x036x075
						95	BR03/30x036x095		BR03/32x036x095



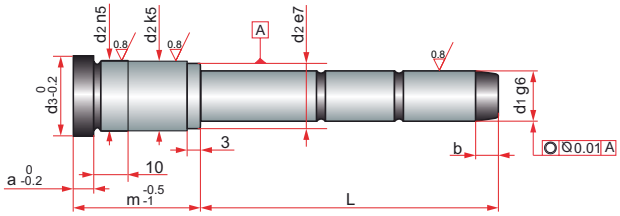
a	b	d3	d2	d1	m	L	REF.	d1	REF.
6	7	47	42	30	36	115	BR03/30x036x115	32	BR03/32x036x115
						135	BR03/30x036x135		BR03/32x036x135
						205	BR03/30x036x205		BR03/32x036x205
					46	45	BR03/30x046x045		BR03/32x046x045
						75	BR03/30x046x075		BR03/32x046x075
						85	BR03/30x046x085		BR03/32x046x085
						105	BR03/30x046x105		BR03/32x046x105
						125	BR03/30x046x125		BR03/32x046x125
						135	BR03/30x046x135		BR03/32x046x135
						205	BR03/30x046x205		BR03/32x046x205
					56	35	BR03/30x056x035		BR03/32x056x035
						55	BR03/30x056x055		BR03/32x056x055
						75	BR03/30x056x075		BR03/32x056x075
						95	BR03/30x056x095		BR03/32x056x095
						115	BR03/30x056x115		BR03/32x056x115
						135	BR03/30x056x135		BR03/32x056x135
						205	BR03/30x056x205		BR03/32x056x205
					66	35	BR03/30x066x035		BR03/32x066x035
						55	BR03/30x066x055		BR03/32x066x055
						75	BR03/30x066x075		BR03/32x066x075
						95	BR03/30x066x095		BR03/32x066x095
						115	BR03/30x066x115		BR03/32x066x115
						135	BR03/30x066x135		BR03/32x066x135
						205	BR03/30x066x205		BR03/32x066x205
					76	35	BR03/30x076x035		BR03/32x076x035
						55	BR03/30x076x055		BR03/32x076x055
						75	BR03/30x076x075		BR03/32x076x075
						95	BR03/30x076x095		BR03/32x076x095
						115	BR03/30x076x115		BR03/32x076x115
						155	BR03/30x076x155		BR03/32x076x155
						205	BR03/30x076x205		BR03/32x076x205
					86	55	BR03/30x086x055		BR03/32x086x055



a	b	d3	d2	d1	m	L	REF.	d1	REF.
6	7	47	42	**30**	**86**	**75**	**BR03/30x086x075**	**32**	**BR03/32x086x075**
						95	**BR03/30x086x095**		**BR03/32x086x095**
						115	**BR03/30x086x115**		**BR03/32x086x115**
						155	**BR03/30x086x155**		**BR03/32x086x155**
						205	**BR03/30x086x205**		**BR03/32x086x205**
					96	**55**	**BR03/30x096x055**		**BR03/32x096x055**
						75	**BR03/30x096x075**		**BR03/32x096x075**
						95	**BR03/30x096x095**		**BR03/32x096x095**
						115	**BR03/30x096x115**		**BR03/32x096x115**
						155	**BR03/30x096x155**		**BR03/32x096x155**
						205	**BR03/30x096x205**		**BR03/32x096x205**
					116	**45**	**BR03/30x116x045**		**BR03/32x116x045**
						75	**BR03/30x116x075**		**BR03/32x116x075**
						115	**BR03/30x116x115**		**BR03/32x116x115**
						155	**BR03/30x116x155**		**BR03/32x116x155**
						205	**BR03/30x116x205**		**BR03/32x116x205**
					136	**95**	**BR03/30x136x095**		**BR03/32x136x095**
						115	**BR03/30x136x115**		**BR03/32x136x115**
						155	**BR03/30x136x155**		**BR03/32x136x155**
						205	**BR03/30x136x205**		**BR03/32x136x205**
					156	**115**	**BR03/30x156x115**		**BR03/32x156x115**
						155	**BR03/30x156x155**		**BR03/32x156x155**
						205	**BR03/30x156x205**		**BR03/32x156x205**
10	10	59	54	**40**	**36**	**75**	**BR03/40x036x075**	**42**	**BR03/42x036x075**
						95	**BR03/40x036x095**		**BR03/42x036x095**
						115	**BR03/40x036x115**		**BR03/42x036x115**
						155	**BR03/40x036x155**		**BR03/42x036x155**
					46	**75**	**BR03/40x046x075**		**BR03/42x046x075**
						95	**BR03/40x046x095**		**BR03/42x046x095**
						115	**BR03/40x046x115**		**BR03/42x046x115**
						155	**BR03/40x046x155**		**BR03/42x046x155**
					56	**75**	**BR03/40x056x075**		**BR03/42x056x075**

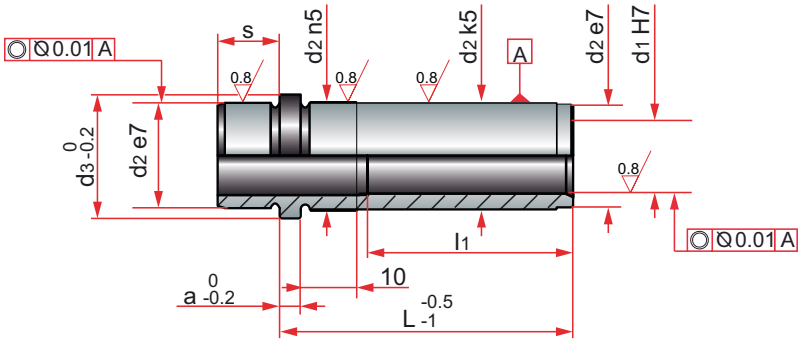


a	b	d3	d2	d1	m	L	REF.	d1	REF.
10	10	59	54	**40**	**56**	**95**	**BR03/40x056x095**	**42**	**BR03/42x056x095**
						115	**BR03/40x056x115**		**BR03/42x056x115**
						155	**BR03/40x056x155**		**BR03/42x056x155**
					66	**75**	**BR03/40x066x075**		**BR03/42x066x075**
						95	**BR03/40x066x095**		**BR03/42x066x095**
						115	**BR03/40x066x115**		**BR03/42x066x115**
						155	**BR03/40x 66x155**		**BR03/42x066x155**
					76	**75**	**BR03/40x076x075**		**BR03/42x076x075**
						95	**BR03/40x076x095**		**BR03/42x076x095**
						115	**BR03/40x076x115**		**BR03/42x076x115**
						155	**BR03/40x076x155**		**BR03/42x076x155**
					86	**75**	**BR03/40x086x075**		**BR03/42x086x075**
						95	**BR03/40x086x095**		**BR03/42x086x095**
						115	**BR03/40x086x115**		**BR03/42x086x115**
						155	**BR03/40x086x155**		**BR03/42x086x155**
					96	**75**	**BR03/40x096x075**		**BR03/42x096x075**
						95	**BR03/40x096x095**		**BR03/42x096x095**
						115	**BR03/40x096x115**		**BR03/42x096x115**
						155	**BR03/40x096x155**		**BR03/42x096x155**
					116	**75**	**BR03/40x116x075**		**BR03/42x116x075**
						95	**BR03/40x116x095**		**BR03/42x116x095**
						115	**BR03/40x116x115**		**BR03/42x116x115**
						155	**BR03/40x116x155**		**BR03/42x116x155**
					136	**95**	**BR03/40x136x095**		**BR03/42x136x095**
						115	**BR03/40x136x115**		**BR03/42x136x115**
						135	**BR03/40x136x135**		**BR03/42x136x135**
						155	**BR03/40x136x155**		**BR03/42x136x155**
						195	**BR03/40x136x195**		**BR03/42x136x195**
					156	**115**	**BR03/40x156x115**		**BR03/42x156x115**
						135	**BR03/40x156x135**		**BR03/42x156x135**
						155	**BR03/40x156x155**		**BR03/42x156x155**
						195	**BR03/40x156x195**		**BR03/42x156x195**



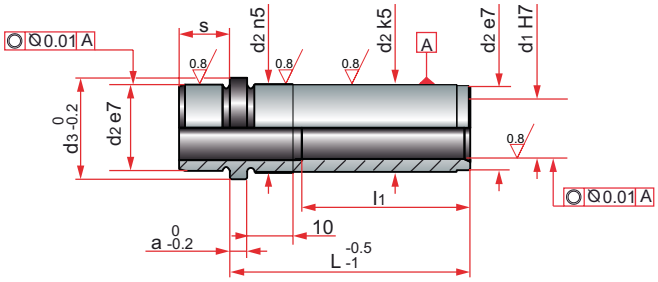
a	b	d3	d2	d1	m	L	REF.	d1	REF.
10	10	59	54	**40**	**176**	**115**	**BR03/40x176x115**	**42**	**BR03/42x176x115**
						155	**BR03/40x176x155**		**BR03/42x176x155**
						195	**BR03/40x176x195**		**BR03/42x176x195**
					196	**115**	**BR03/40x196x115**		**BR03/42x196x115**
						155	**BR03/40x196x155**		**BR03/42x196x155**
						195	**BR03/40x196x195**		**BR03/42x196x195**
					216	**195**	**BR03/40x216x195**		**BR03/42x216x195**
						215	**BR03/40x216x215**		**BR03/42x216x215**
					236	**205**	**BR03/40x236x205**		**BR03/42x236x205**
						235	**BR03/40x236x235**		**BR03/42x236x235**
					246	**215**	**BR03/40x246x215**		**BR03/42x246x215**
						245	**BR03/40x246x245**		**BR03/42x246x245**
					256	**215**	**BR03/40x256x215**		**BR03/42x256x215**
						255	**BR03/40x256x255**		**BR03/42x256x255**

Special tailed leader pin bushing BR10
Casquillo guía con centrador BR10
Tuleja prowadząca z kołnierzem centrującym BR10
Casquilho dois corpos cementado BR10
Bague de guidage epaulee type BR10

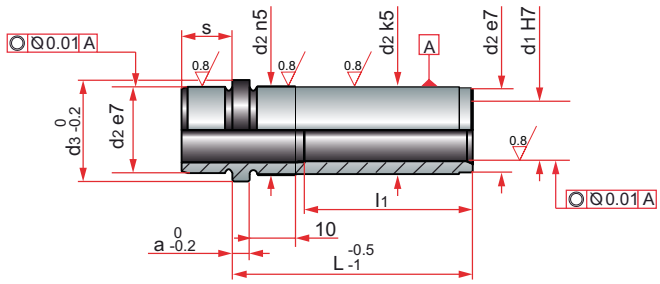


Hardness: 58 ± 2 HRC.

l1	a	s	d3	d2	d1	L	REF.	d1	REF.
15	3	3	16	14	**10**	12	**BR10/10x012**	-	-
20						17	**BR10/10x017**		
25						22	**BR10/10x022**		
30						27	**BR10/10x027**		
39						36	**BR10/10x036**		
46						46	**BR10/10x046**		
						56	**BR10/10x056**		
26	6	9	25	20	**14**	17	**BR10/14x017**	**15**	**BR10/15x017**
31						22	**BR10/14x022**		**BR10/15x022**
36						27	**BR10/14x027**		**BR10/15x027**
45						36	**BR10/14x036**		**BR10/15x036**
55						46	**BR10/14x046**		**BR10/15x046**
56						56	**BR10/14x056**		**BR10/15x056**
						66	**BR10/14x066**		**BR10/15x066**
						76	**BR10/14x076**		**BR10/15x076**
						86	**BR10/14x086**		**BR10/15x086**
						96	**BR10/14x096**		**BR10/15x096**
31			31	26	**18**	22	**BR10/18x022**	**20**	**BR10/20x022**
36						27	**BR10/18x027**		**BR10/20x027**
45						36	**BR10/18x036**		**BR10/20x036**
55						46	**BR10/18x046**		**BR10/20x046**
65						56	**BR10/18x056**		**BR10/20x056**
75						66	**BR10/18x066**		**BR10/20x066**
76						76	**BR10/18x076**		**BR10/20x076**
						86	**BR10/18x086**		**BR10/20x086**

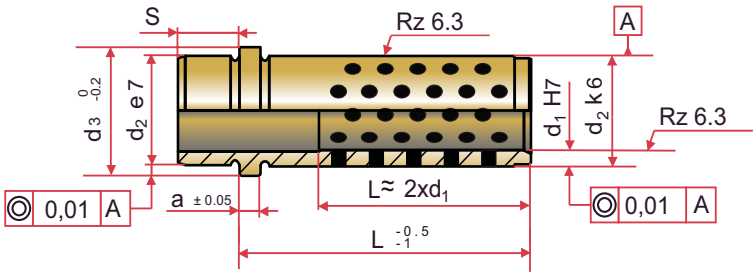


l1	a	s	d3	d2	d1	L	REF.	d1	REF.
76	6	9	31	26	**18**	96	**BR10/18x096**	**20**	**BR10/20x096**
						116	**BR10/18x116**		**BR10/20x116**
31			35	30	**22**	22	**BR10/22x022**	**24**	**BR10/24x022**
36						27	**BR10/22x027**		**BR10/24x027**
45						36	**BR10/22x036**		**BR10/24x036**
55						46	**BR10/22x046**		**BR10/24x046**
65						56	**BR10/22x056**		**BR10/24x056**
75						66	**BR10/22x066**		**BR10/24x066**
85						76	**BR10/22x076**		**BR10/24x076**
95						86	**BR10/22x086**		**BR10/24x086**
105						96	**BR10/22x096**		**BR10/24x096**
96						116	**BR10/22x116**		**BR10/24x116**
						136	**BR10/22x136**		**BR10/24x136**
						156	**BR10/22x156**		**BR10/24x156**
36			47	42	**30**	27	**BR10/30x027**	**32**	**BR10/32x027**
45						36	**BR10/30x036**		**BR10/32x036**
55						46	**BR10/30x046**		**BR10/32x046**
65						56	**BR10/30x056**		**BR10/32x056**
75						66	**BR10/30x066**		**BR10/32x066**
85						76	**BR10/30x076**		**BR10/32x076**
95						86	**BR10/30x086**		**BR10/32x086**
105						96	**BR10/30x096**		**BR10/32x096**
125						116	**BR10/30x116**		**BR10/32x116**
116						136	**BR10/30x136**		**BR10/32x136**
						156	**BR10/30x156**		**BR10/32x156**
						176	**BR10/30x176**		**BR10/32x176**
						196	**BR10/30x196**		**BR10/32x196**



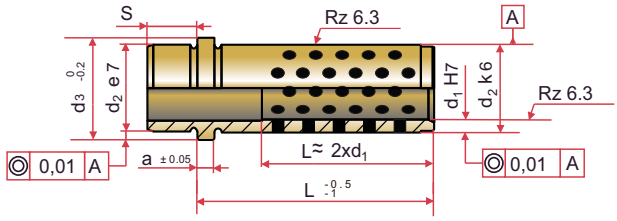
l1	a	s	d3	d2	d1	L	REF.	d1	REF.
48	10	12	59	54	**40**	36	**BR10/40x036**	**42**	**BR10/42x036**
58						46	**BR10/40x046**		**BR10/42x046**
68						56	**BR10/40x056**		**BR10/42x056**
78						66	**BR10/40x066**		**BR10/42x066**
88						76	**BR10/40x076**		**BR10/42x076**
98						86	**BR10/40x086**		**BR10/42x086**
108						96	**BR10/40x096**		**BR10/42x096**
116						116	**BR10/40x116**		**BR10/42x116**
						136	**BR10/40x136**		**BR10/42x136**
						156	**BR10/40x156**		**BR10/42x156**
						176	**BR10/40x176**		**BR10/42x176**
						196	**BR10/40x196**		**BR10/42x196**
						216	**BR10/40x216**		**BR10/42x216**
						236	**BR10/40x236**		**BR10/42x236**
						246	**BR10/40x246**		**BR10/42x246**
						256	**BR10/40x256**		**BR10/42x256**

Tailed oilless bush BR10W
Casquillo autolubricado con centrador BR10W
Tuleja prowadząca z kołnierzem centrującym samosmarująca BR10W
Casquilho dois corpos bronze alumínio com grafite BR10W
Bague bronze a collerette avec plot de centrage avec inserts graphite type BR10W.



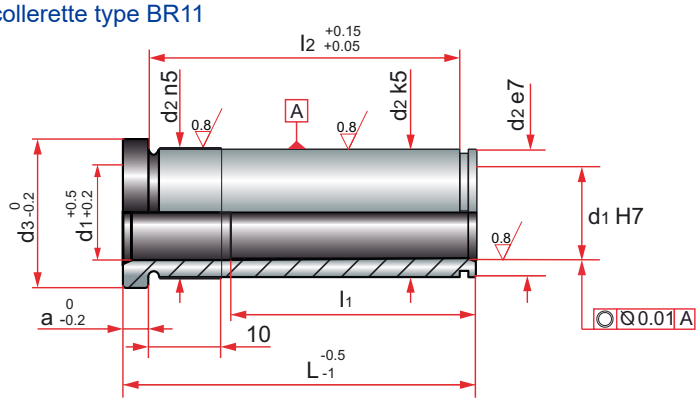
Mat. : Aluminium bronze + graphite inserts.

a	S	d3	d2	d1	L	REF.	d1	REF.
3	5	16	14	**9**	**12**	**BR10W/09x012**	**10**	**BR10W/10x012**
					17	**BR10W/09x017**		**BR10W/10x017**
					22	**BR10W/09x022**		**BR10W/10x022**
					27	**BR10W/09x027**		**BR10W/10x027**
					36	**BR10W/09x036**		**BR10W/10x036**
					46	**BR10W/09x046**		**BR10W/10x046**
6	8	25	20	**14**	**17**	**BR10W/14x017**	**15**	**BR11W/15x017**
					22	**BR10W/14x022**		**BR10W/15x022**
					27	**BR10W/14x027**		**BR10W/15x027**
					36	**BR10W14x036**		**BR10W15x036**
					46	**BR10W/14x046**		**BR10W/15x046**
					56	**BR10W/14x056**		**BR10W/15x056**
		31	26	**18**	**17**	**BR10W/18x017**	**20**	**BR10W/20x017**
					22	**BR10W/18x022**		**BR10W/20x022**
					27	**BR10W/18x027**		**BR10W/20x027**
					36	**BR10W/18x036**		**BR10W/20x036**
					46	**BR10W/18x046**		**BR10W/20x046**
					56	**BR10W/18x056**		**BR10W/20x056**
					66	**BR10W/18x066**		**BR10W/20x066**
					76	**BR10W/18x076**		**BR10W/20x076**
		35	30	**22**	**22**	**BR10W/22x022**	**24**	**BR10W/24x022**
					27	**BR10W/22x027**		**BR10W/24x027**
					36	**BR10W/22x036**		**BR10W/24x036**
					46	**BR10W/22x046**		**BR10W/24x046**
					56	**BR10W/22x056**		**BR10W/24x056**



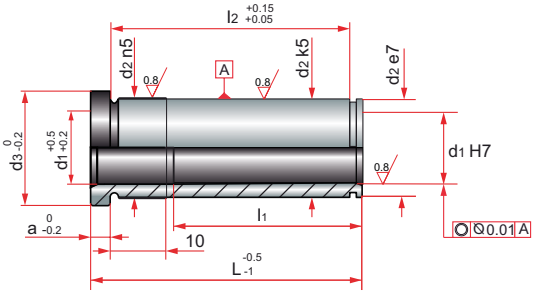
a	S	d3	d2	d1	L	REF.	d1	REF.
6	8	35	30	**22**	**66**	**BR10W/22x066**	**24**	**BR10W/24x066**
					76	**BR10W/22x076**		**BR10W/24x076**
					86	**BR10W/22x086**		**BR10W/24x086**
					96	**BR10W/22x096**		**BR10W/24x096**
					116	**BR10W/22x116**		**BR10W/24x116**
		47	42	**30**	**27**	**BR10W/30x027**	**32**	**BR10W/32x027**
					36	**BR10W/30x036**		**BR10W/32x036**
					46	**BR10W/30x046**		**BR10W/32x046**
					56	**BR10W/30x056**		**BR10W/32x056**
					66	**BR10W/30x066**		**BR10W/32x066**
					76	**BR10W/30x076**		**BR10W/32x076**
					86	**BR10W/30x086**		**BR10W/32x086**
					96	**BR10W/30x096**		**BR10W/32x096**
					116	**BR10W/30x116**		**BR10W/32x116**
					136	**BR10W/30x136**		**BR10W/32x136**
10	10	60	54	**40**	**56**	**BR10W/40x056**	**42**	**BR10W/42x056**
					76	**BR10W/40x076**		**BR10W/42x076**
					96	**BR10W/40x096**		**BR10W/42x096**
					116	**BR10W/40x116**		**BR10W/42x116**
					136	**BR10W/40x136**		**BR10W/42x136**
					156	**BR10W/40x156**		**BR10W/42x156**

Headed leader pin bushing BR11
Casquillo guía con valona BR11
Tuleja prowadząca bez kołnierza centrującego BR11
Casquilho cementado BR11
Bague de guidage a collerette type BR11

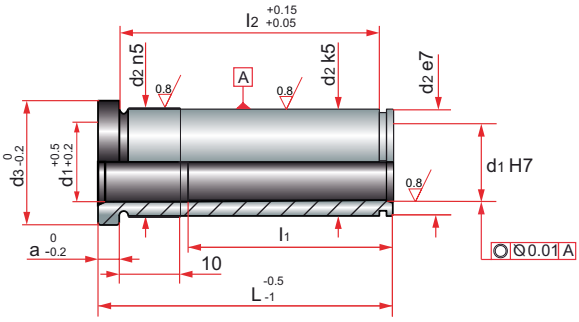


Hardness: 58 ± 2 HRC.

l1	a	d3	d2	l2	d1	L	REF.	d1	REF.
-	3	16	14	5,5	**10**	**12**	**BR11/10x012**	-	-
				10,5		**17**	**BR11/10x017**		
				15,5		**22**	**BR11/10x022**		
				20,5		**27**	**BR11/10x027**		
				29,5		**36**	**BR11/10x036**		
				39,5		**46**	**BR11/10x046**		
				49,5		**56**	**BR11/10x056**		
	6	23	18	7	**12**	**17**	**BR11/12x017**		
				12		**22**	**BR11/12x022**		
				17		**27**	**BR11/12x027**		
				26		**36**	**BR11/12x036**		
				36		**46**	**BR11/12x046**		
				46		**56**	**BR11/12x056**		
		25	20	7	**14**	**17**	**BR11/14x017**	**15**	**BR11/15x017**
				12		**22**	**BR11/14x022**		**BR11/15x022**
				17		**27**	**BR11/14x027**		**BR11/15x027**
				26		**36**	**BR11/14x036**		**BR11/15x036**
				36		**46**	**BR11/14x046**		**BR11/15x046**
				46		**56**	**BR11/14x056**		**BR11/15x056**
56				56		**66**	**BR11/14x066**		**BR11/15x066**
				66		**76**	**BR11/14x076**		**BR11/15x076**
				76		**86**	**BR11/14x086**		**BR11/15x086**
				86		**96**	**BR11/14x096**		**BR11/15x096**
-		31	26	12	**18**	**22**	**BR11/18x022**	**20**	**BR11/20x022**
				17		**27**	**BR11/18x027**		**BR11/20x027**

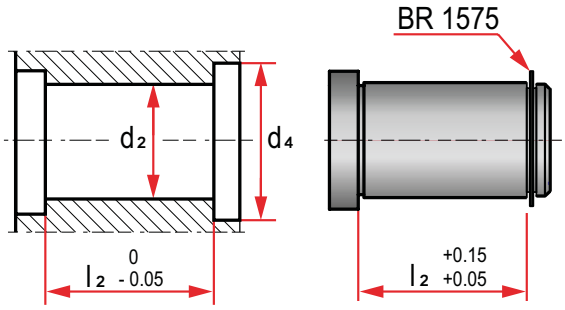


l1	a	d3	d2	l2	d1	L	REF.	d1	REF.
-	6	31	26	26	**18**	**36**	**BR11/18x036**	**20**	**BR11/20x036**
				36		**46**	**BR11/18x046**		**BR11/20x046**
				46		**56**	**BR11/18x056**		**BR11/20x056**
				56		**66**	**BR11/18x066**		**BR11/20x066**
				66		**76**	**BR11/18x076**		**BR11/20x076**
76				76		**86**	**BR11/18x086**		**BR11/20x086**
				86		**96**	**BR11/18x096**		**BR11/20x096**
				106		**116**	**BR11/18x116**		**BR11/20x116**
-		35	30	11	**22**	**22**	**BR11/22x022**	**24**	**BR11/24x022**
				16		**27**	**BR11/22x027**		**BR11/24x027**
				25		**36**	**BR11/22x036**		**BR11/24x036**
				35		**46**	**BR11/22x046**		**BR11/24x046**
				45		**56**	**BR11/22x056**		**BR11/24x056**
				55		**66**	**BR11/22x066**		**BR11/24x066**
				65		**76**	**BR11/22x076**		**BR11/24x076**
				75		**86**	**BR11/22x086**		**BR11/24x086**
				85		**96**	**BR11/22x096**		**BR11/24x096**
96				105		**116**	**BR11/22x116**		**BR11/24x116**
				125		**136**	**BR11/22x136**		**BR11/24x136**
-		47	42	14	**30**	**27**	**BR11/30x027**	**32**	**BR11/32x027**
				23		**36**	**BR11/30x036**		**BR11/32x036**
				33		**46**	**BR11/30x046**		**BR11/32x046**
				43		**56**	**BR11/30x056**		**BR11/32x056**
				53		**66**	**BR11/30x066**		**BR11/32x066**
				63		**76**	**BR11/30x076**		**BR11/32x076**
				73		**86**	**BR11/30x086**		**BR11/32x086**
				83		**96**	**BR11/30x096**		**BR11/32x096**
				103		**116**	**BR11/30x116**		**BR11/32x116**
116				123		**136**	**BR11/30x136**		**BR11/32x136**
				143		**156**	**BR11/30x156**		**BR11/32x156**
				163		**176**	**BR11/30x176**		**BR11/32x176**



l1	a	d3	d2	l2	d1	L	REF.	d1	REF.
-	10	59	54	18	**40**	**36**	**BR11/40x036**	**42**	**BR11/42x036**
				28		**46**	**BR11/40x046**		**BR11/42x046**
				38		**56**	**BR11/40x056**		**BR11/42x056**
				48		**66**	**BR11/40x066**		**BR11/42x066**
				58		**76**	**BR11/40x076**		**BR11/42x076**
				68		**86**	**BR11/40x086**		**BR11/42x086**
				78		**96**	**BR11/40x096**		**BR11/42x096**
				98		**116**	**BR11/40x116**		**BR11/42x116**
116				118		**136**	**BR11/40x136**		**BR11/42x136**
				138		**156**	**BR11/40x156**		**BR11/42x156**
				158		**176**	**BR11/40x176**		**BR11/42x176**
				178		**196**	**BR11/40x196**		**BR11/42x196**
				198		**216**	**BR11/40x216**		**BR11/42x216**
				218		**236**	**BR11/40x236**		**BR11/42x236**
				228		**246**	**BR11/40x246**		**BR11/42x246**
				238		256	**BR11/40x256**		**BR11/42x256**

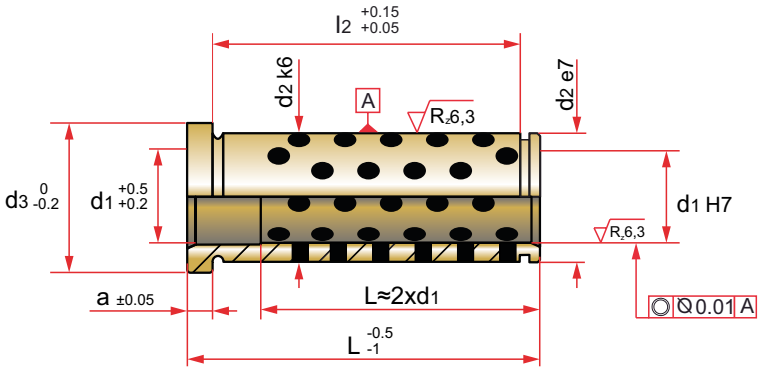
d_2	d_4	REF.
14	22,0	**BR1575-14**
18	26,8	**BR1575-18**
20	29,0	**BR1575-20**
26	35,5	**BR1575-26**
30	40,5	**BR1575-30**
42	55,7	**BR1575-42**
54	69,2	**BR1575-54**
66	82,4	**BR1575-64**



BR11W

E 1115, Z 11W

Tailed oilless bush BR11W
Casquillo autolubricado con valona BR11W
Tuleja prowadząca bez kołnierza centrującego BR11W
Casquilho bronze alumínio com grafite BR11W
Bague bronze a collerette avec inserts graphite BR11W

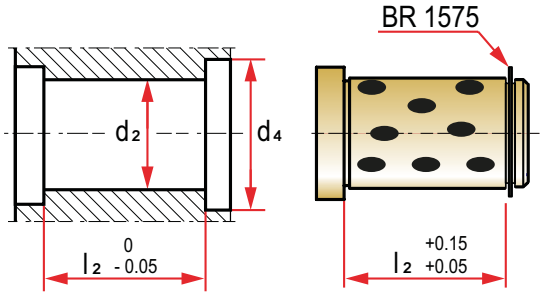


Mat. : Aluminium bronze + graphite inserts.

a	d3	d2	d1	l2	L	REF.	d1	REF.
3	16	14	**9**	5,5	**12**	**BR11W/09x012**	**10**	**BR11W/10x012**
				10,5	**17**	**BR11W/09x017**		**BR11W/10x017**
				15,5	**22**	**BR11W/09x022**		**BR11W/10x022**
				20,5	**27**	**BR11W/09x027**		**BR11W/10x027**
				29,5	**36**	**BR11W/09x036**		**BR11W/10x036**
				39,5	**46**	**BR11W/09x046**		**BR11W/10x046**
				49,5	**56**	**BR11W/09x056**		**BR11W/10x056**
6	23	18	**12**	7	**17**	**BR11W/12x017**	**-**	
				12	**22**	**BR11W/12x022**		
				17	**27**	**BR11W/12x027**		
				26	**36**	**BR11W/12x036**		
				36	**46**	**BR11W/12x046**		
				46	**56**	**BR11W/12x056**		
	25	20	**14**	7	**17**	**BR11W/14x017**	**15**	**BR11W/15x017**
				12	**22**	**BR11W/14x022**		**BR11W/15x022**
				17	**27**	**BR11W/14x027**		**BR11W/15x027**
				26	**36**	**BR11W14x036**		**BR11W15x036**
				36	**46**	**BR11W/14x046**		**BR11W/15x046**
				46	**56**	**BR11W/14x056**		**BR11W/15x056**
	27	22	**16**	7	**17**	**BR11W/16x017**	**-**	**-**
				12	**22**	**BR11W/16x022**		
				17	**27**	**BR11W/16x027**		
				26	**36**	**BR11W/16x036**		
				36	**46**	**BR11W/16x046**		
				46	**56**	**BR11W/16x056**		

a	d3	d2	d1	l2	L	REF.	d1	REF.
6	31	26	**18**	7	**17**	**BR11W/18x017**	**20**	**BR11W/20x017**
				12	**22**	**BR11W/18x022**		**BR11W/20x022**
				17	**27**	**BR11W/18x027**		**BR11W/20x027**
				26	**36**	**BR11W/18x036**		**BR11W/20x036**
				36	**46**	**BR11W/18x046**		**BR11W/20x046**
				46	**56**	**BR11W/18x056**		**BR11W/20x056**
				56	**66**	**BR11W/18x066**		**BR11W/20x066**
	35	30	**22**	11	**22**	**BR11W/22x022**	**24**	**BR11W/24x022**
				16	**27**	**BR11W/22x027**		**BR11W/24x027**
				25	**36**	**BR11W/22x036**		**BR11W/24x036**
				35	**46**	**BR11W/22x046**		**BR11W/24x046**
				45	**56**	**BR11W/22x056**		**BR11W/24x056**
				55	**66**	**BR11W/22x066**		**BR11W/24x066**
				65	**76**	**BR11W/22x076**		**BR11W/24x076**
				75	**86**	**BR11W/22x086**		**BR11W/24x086**
	47	42	**30**	14	**27**	**BR11W/30x027**	**32**	**BR11W/32x027**
				23	**36**	**BR11W/30x036**		**BR11W/32x036**
				33	**46**	**BR11W/30x046**		**BR11W/32x046**
				43	**56**	**BR11W/30x056**		**BR11W/32x056**
				53	**66**	**BR11W/30x066**		**BR11W/32x066**
				63	**76**	**BR11W/30x076**		**BR11W/32x076**
				73	**86**	**BR11W/30x086**		**BR11W/32x086**
				83	**96**	**BR11W/30x096**		**BR11W/32x096**
				103	**116**	**BR11W/30x116**		**BR11W/32x116**
10	60	54	**40**	28	**46**	**BR11W/40x046**	**42**	**BR11W/42x046**
				38	**56**	**BR11W/40x056**		**BR11W/42x056**
				48	**66**	**BR11W/40x066**		**BR11W/42x066**
				58	**76**	**BR11W/40x076**		**BR11W/42x076**
				68	**86**	**BR11W/40x086**		**BR11W/42x086**
				78	**96**	**BR11W/40x096**		**BR11W/42x096**
				98	**116**	**BR11W/40x116**		**BR11W/42x116**
				118	**136**	**BR11W/40x136**		**BR11W/42x136**

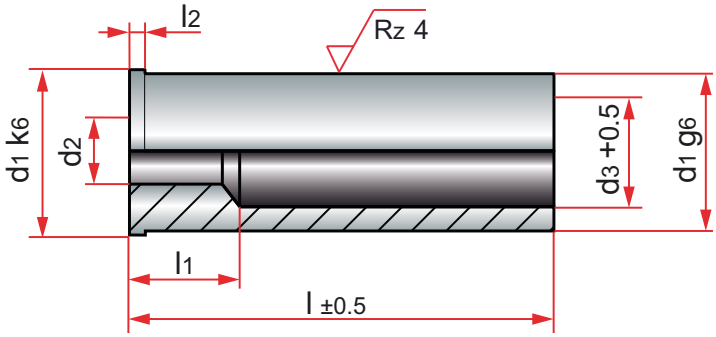
d_2	d_4	REF.
14	22,0	**BR1575-14**
18	26,8	**BR1575-18**
20	29,0	**BR1575-20**
26	35,5	**BR1575-26**
30	40,5	**BR1575-30**
42	55,7	**BR1575-42**
54	69,2	**BR1575-54**
66	82,4	**BR1575-64**



BR20

E 1160, Z 20

Plate alignment bush
Casquillo centrador
Tuleja centrująca
Casquilho de centragem
Douille de centrage lisse



Mat.: 1.7131 58 ± 2 HRC.

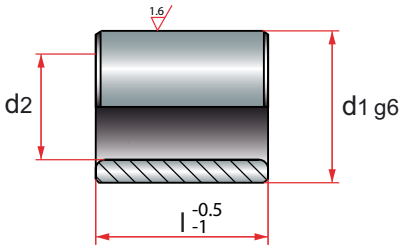
l_1	l_2	d_3	d_2	d_1	l	REF.
13	2	16	M12	**20**	**60**	**BR20-20x060**
					80	**BR20-20x080**
					100	**BR20-20x100**
					120	**BR20-20x120**
	2,5	21		**26**	**40**	**BR20-26x040**
					60	**BR20-26x060**
					80	**BR20-26x080**
					100	**BR20-26x100**
					120	**BR20-26x120**
					140	**BR20-26x140**
		25		**30**	**40**	**BR20-30x040**
					60	**BR20-30x060**
					80	**BR20-30x080**
					100	**BR20-30x100**
					120	**BR20-30x120**
					140	**BR20-30x140**
					160	**BR20-30x160**
					180	**BR20-30x180**
					200	**BR20-30x200**
	4,5	33		**42**	**60**	**BR20-42x060**
					80	**BR20-42x080**
					100	**BR20-42x100**

l_1	l_2	d_3	d_2	d_1	l	REF.
13	4,5	33	M12	**42**	**120**	**BR20-42x120**
					140	**BR20-42x140**
					160	**BR20-42x160**
					180	**BR20-42x180**
					200	**BR20-42x200**
					220	**BR20-42x220**
18	4,5	43		**54**	**60**	**BR20-54x060**
					80	**BR20-54x080**
					100	**BR20-54x100**
					120	**BR20-54x120**
					160	**BR20-54x160**
					180	**BR20-54x180**
					200	**BR20-54x200**
					220	**BR20-54x220**
					240	**BR20-54x240**
					260	**BR20-54x260**
					280	**BR20-54x280**
					300	**BR20-54x300**
					320	**BR20-54x320**
					340	**BR20-54x340**
					360	**BR20-54x360**
					380	**BR20-54x380**

BR1170

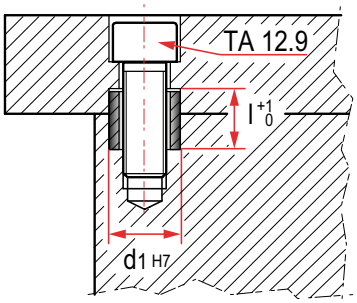
E 1170

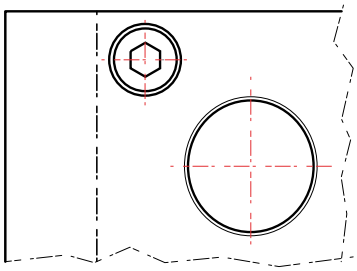
Centring bush with one fi tting diameter
Casquillo de centraje con un diámetro de ajuste
Tulejka centrująca z jedną średnicą pasowaną
Casquilho de centragem curto
Manchon de centrage



Mat.: 1.7131 58 ± 2 HRC.

d2	l	d1	REF.
6	10	**10**	**BR1170-10**
7	11	**12**	**BR1170-12**
9	12	**14**	**BR1170-14**
11	14	**16**	**BR1170-16**
13	16	**20**	**BR1170-20**
16	18	**26**	**BR1170-26**
18	20	**30**	**BR1170-30**
22		**36**	**BR1170-36**
26		**42**	**BR1170-42**
32		**54**	**BR1170-54**

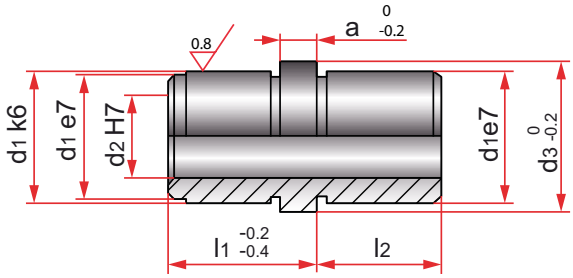


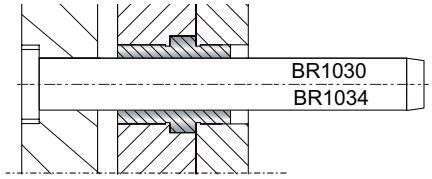


BR7128

E 11202

Guide bush for ejector set
Casquillo para paquete de expulsion
Tuleja prowadząca do pakietu wypychaczy
Casquilho para guias de extração
Douille de guidage pour batterie d`ejection





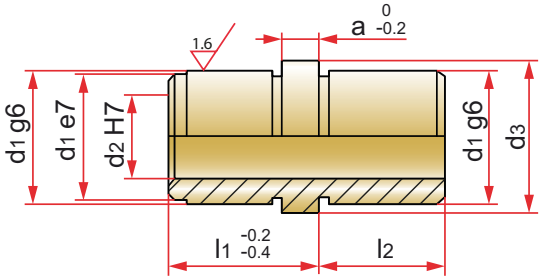
Hardness: 58 ± 2 HRC.

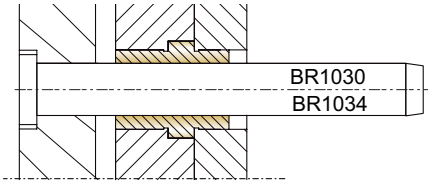
a	d_1	d_2	d_3	l_2	l_1	REF.
6	16	**12**	19	**9**	**17**	**BR7128-12-09x17**
				12		**BR7128-12-12x17**
	18	**14**	21			**BR7128-14-12x17**
					22	**BR7128-14-12x22**
				17		**BR7128-14-17x22**
	24	**18**	27	**12**	**17**	**BR7128-18-12x17**
					22	**BR7128-18-12x22**
				17		**BR7128-18-17x22**
					27	**BR7128-18-17x27**
				22		**BR7128-18-22x27**
	26	**20**	29	**17**	**22**	**BR7128-20-17x22**
				22	**27**	**BR7128-20-22x27**
	28	**22**	31	**17**	**22**	**BR7128-22-17x22**
				22	**27**	**BR7128-22-22x27**
	30	**24**	33	**17**	**22**	**BR7128-24-17x22**
					27	**BR7128-24-17x27**
				22		**BR7128-24-22x27**
				27	**36**	**BR7128-24-27x36**
	38	**30**	41	**22**	**27**	**BR7128-30-22x27**
				27	**36**	**BR7128-30-27x36**
					46	**BR7128-30-27x46**
				36		**BR7128-30-36x46**
	48	**40**	51			**BR7128-40-36x46**

BR1120

E 1120

Brass guide bush for ejector set
Casquillo para paquete de expulsion,latón
Tuleja prowadząca do pakietu wypychaczy, mosiądz
Casquilho em latão para guias de extração
Douille de guidage pour batterie d'éjection, laiton





Mat. 2.0598 - ≈ 200 HB - t max. 200º

a	d1	d3	d2	l2	l1	REF.
3	14	16	10	5	10	BR1120-10-05-10
6		17		9	12	BR1120-10-09-12
					17	BR1120-10-09-17
3		16		10	10	BR1120-10-10-10
6	16	19	12	9	17	BR1120-12-09-17
				12		BR1120-12-12-17
	18	21	14			BR1120-14-12-17
					22	BR1120-14-12-22
				17		BR1120-14-17-22
	24	27	18	12	17	BR1120-18-12-17
					22	BR1120-18-12-22
				17		BR1120-18-17-22
					27	BR1120-18-17-27
				22		BR1120-18-22-27
	26	29	20	17	22	BR1120-20-17-22
				22	27	BR1120-20-22-27
	28	31	22	17	22	BR1120-22-17-22
				22	27	BR1120-22-22-27
	30	33	24	17	22	BR1120-24-17-22
					27	BR1120-24-17-27
				22		BR1120-24-22-27
				27	36	BR1120-24-27-36
	38	41	30	22	27	BR1120-30-22-27
				27	36	BR1120-30-27-36
					46	BR1120-30-27-46
				36		BR1120-30-36-46
	48	51	40			BR1120-40-36-46

BR13W

Z 13W

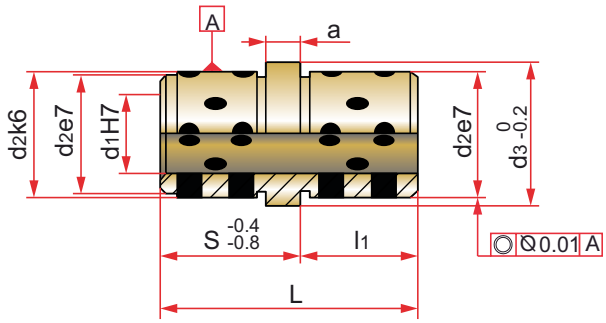
Tailed oilles bush BR13W

Casquillo autolubricado con centrador BR13W

Tuleja prowadząca z kołnierzem centrującym samosmarująca BR13W

Casquilho dois corpos bronze alumínio com grafite BR13W

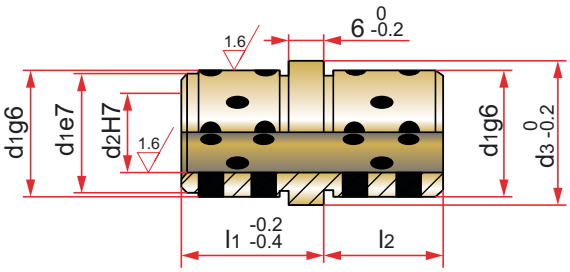
Bague bronze a collerette avec plot de centrage avec inserts graphite BR13W



Mat. : Aluminium bronze + graphite inserts.

a	d3	l1	d2	L	s	d1	REF.	d1	REF.
6	25	9	20	26	**17**	**14**	**BR13W/14x17**	**15**	**BR13W/15x17**
	31	17	26	39	**22**	**18**	**BR13W/18x22**	**20**	**BR13W/20x22**
	35	22	30	49	**27**	**22**	**BR13W/22x27**	**24**	**BR13W/24x27**
	47	27	42	63	**36**	**30**	**BR13W/30x36**	**32**	**BR13W/32x36**

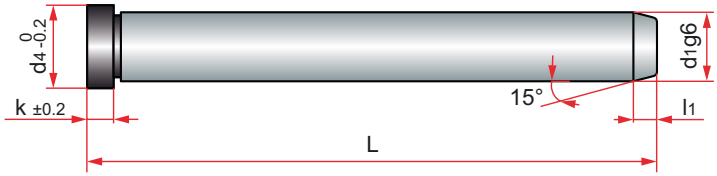
Tailed oilles bush
Casquillo autolubricado con centrador
Tuleja prowadząca z kołnierzem centrującym samosmarująca
Casquilho dois corpos bronze alumínio com grafite
Bague bronze a collerette avec plot de centrage avec inserts graphite



Mat. : Aluminium bronze + graphite inserts.

d_1	d_3	d_2	l_2	l_1	Descripción
14	17	**10**	**9**	**12**	**BR1125-10X09-12**
				17	**BR1125-10X09-17**
16	19	**12**			**BR1125-12X09-17**
			12		**BR1125-12X12-17**
18	21	**14**			**BR1125-14X12-17**
				22	**BR1125-14X12-22**
			17		**BR1125-14X17-22**
24	27	**18**	**12**	**17**	**BR1125-18X12-17**
				22	**BR1125-18X12-22**
			17		**BR1125-18X17-22**
				27	**BR1125-18X17-27**
			22		**BR1125-18X22-27**
26	29	**20**	**17**	**22**	**BR1125-20X17-22**
			22	**27**	**BR1125-20X22-27**
28	31	**22**	**17**	**22**	**BR1125-22X17-22**
			22	**27**	**BR1125-22X22-27**
30	33	**24**	**17**	**22**	**BR1125-24X17-22**
				27	**BR1125-24X17-27**
			22		**BR1125-24X22-27**
			27	**36**	**BR1125-24X27-36**
38	41	**30**	**22**	**27**	**BR1125-30X22-27**
			27	**36**	**BR1125-30X27-36**
				46	**BR1125-30X27-46**
			36		**BR1125-30X36-46**
48	51	**40**			**BR1125-40X36-46**

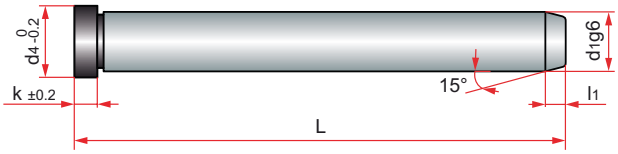
Angle pin
Guía corredera
Słup skośny
Guia inclinada
Doigt de demoulage



Hardness: 58 ± 2 HRC.

L1	k	d4	d1	L	REF.
4	3	10	8	40	BR01-08x040
				60	BR01-08x060
				80	BR01-08x080
				100	BR01-08x100
				120	BR01-08x120
		12	9	40	BR01-09x040
				60	BR01-09x060
				80	BR01-09x080
				100	BR01-09x100
				120	BR01-09x120
			10	40	BR01-10x040
				60	BR01-10x060
				80	BR01-10x080
				100	BR01-10x100
				120	BR01-10x120
				160	BR01-10x160
7	6	16	12	40	BR01-12x040
				60	BR01-12x060
				80	BR01-12x080
				100	BR01-12x100
				120	BR01-12x120
				140	BR01-12x140
				160	BR01-12x160
	8	18	14	60	BR01-14x060
				80	BR01-14x080

L1	k	d4	d1	L	REF.
7	8	18	14	100	BR01-14x100
				120	BR01-14x120
				125	BR01-14x125
				140	BR01-14x140
				160	BR01-14x160
				180	BR01-14x180
			15	60	BR01-15x060
				80	BR01-15x080
				100	BR01-15x100
				120	BR01-15x120
				140	BR01-15x140
				160	BR01-15x160
				180	BR01-15x180
		20	16	40	BR01-16x040
				60	BR01-16x060
				80	BR01-16x080
				100	BR01-16x100
				120	BR01-16x120
				140	BR01-16x140
				150	BR01-16x150
				160	BR01-16x160
				180	BR01-16x180
				200	BR01-16x200
		22	18	60	BR01-18x060
				80	BR01-18x080



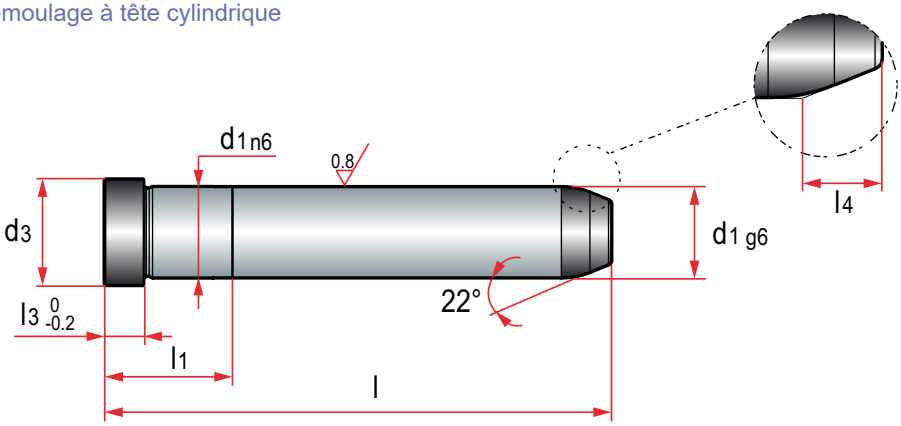
L1	k	d4	d1	L	REF.
7	8	22	18	100	BR01-18x100
				120	BR01-18x120
				140	BR01-18x140
				160	BR01-18x160
				180	BR01-18x180
				200	BR01-18x200
				240	BR01-18x240
		24	20	60	BR01-20x060
				80	BR01-20x080
				100	BR01-20x100
				120	BR01-20x120
				140	BR01-20x140
				160	BR01-20x160
				180	BR01-20x180
				200	BR01-20x200
				240	BR01-20x240
	15	26	22	80	BR01-22x080
				100	BR01-22x100
				120	BR01-22x120
				140	BR01-22x140
				160	BR01-22x160
				180	BR01-22x180
				200	BR01-22x200
				220	BR01-22x220

L1	k	d4	d1	L	REF.
7	15	26	22	240	BR01-22x240
				300	BR01-22x300
		28	24	80	BR01-24x080
				100	BR01-24x100
				120	BR01-24x120
				140	BR01-24x140
				160	BR01-24x160
				180	BR01-24x180
				200	BR01-24x200
				220	BR01-24x220
				240	BR01-24x240
				300	BR01-24x300
		36	30	120	BR01-30x120
				160	BR01-30x160
				200	BR01-30x200
				240	BR01-30x240
				300	BR01-30x300
				360	BR01-30x360
			32	120	BR01-32x120
				160	BR01-32x160
				200	BR01-32x200
				240	BR01-32x240
				300	BR01-32x300
				360	BR01-32x360

BR1030

E1030

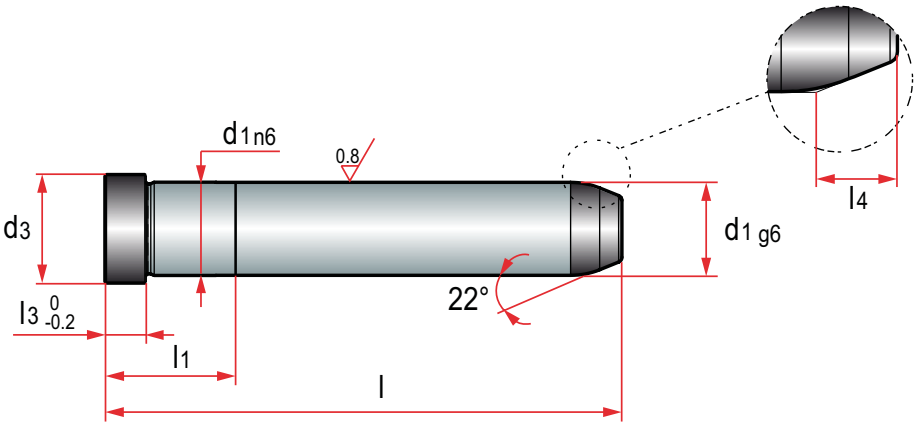
Inclined pin with cylindrical collar
Guía corredera cabeza cilindrica
Słup skośny z kołnierzem oporowym cylindrycznym
Guia inclinada com cabeça cilíndrica
Doigt de démoulage à tête cylindrique



Mat.: 1.7131 - 58 ± 2 HRC.

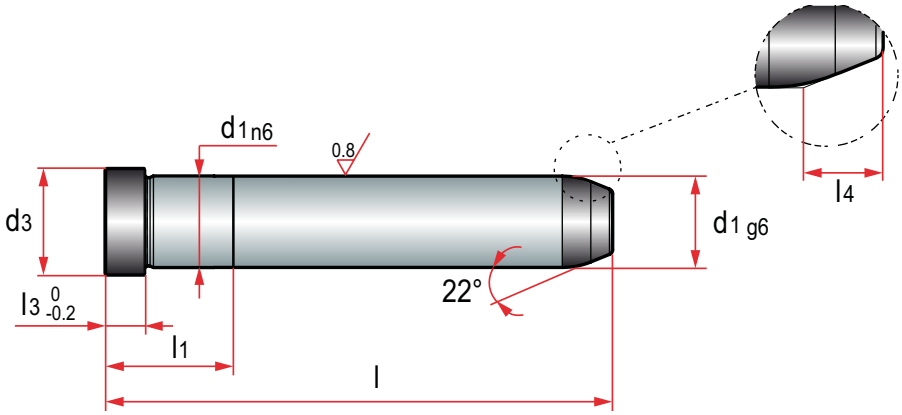
l1	l3	l4	d3	d1	l	REF.
12	3	4	11	9	40	BR1030- 9 x 40
					60	BR1030- 9 x 60
					70	BR1030- 9 x 70
					80	BR1030- 9 x 80
					90	BR1030- 9 x 90
					100	BR1030- 9 x 100
					120	BR1030- 9 x 120
			12	10	40	BR1030-10 x 40
					50	BR1030-10 x 50
					60	BR1030-10 x 60
					70	BR1030-10 x 70
					80	BR1030-10 x 80
					90	BR1030-10 x 90
					100	BR1030-10 x 100
					120	BR1030-10 x 120
					140	BR1030-10 x 140
					160	BR1030-10 x 160
17	6	5	15	12	50	BR1030-12 x 50
					60	BR1030-12 x 60
					70	BR1030-12 x 70
					80	BR1030-12 x 80
					90	BR1030-12 x 90
					100	BR1030-12 x 100
					110	BR1030-12 x 110
					120	BR1030-12 x 120

l1	l3	l4	d3	d1	l	REF.
17	6	5	15	12	140	BR1030-12 x 140
					160	BR1030-12 x 160
					180	BR1030-12 x 180
					200	BR1030-12 x 200
22	8		17	14	60	BR1030-14 x 60
					70	BR1030-14 x 70
					80	BR1030-14 x 80
					90	BR1030-14 x 90
					100	BR1030-14 x 100
					110	BR1030-14 x 110
					120	BR1030-14 x 120
					140	BR1030-14 x 140
					160	BR1030-14 x 160
					180	BR1030-14 x 180
					200	BR1030-14 x 200
					220	BR1030-14 x 220
			19	16	50	BR1030-16 x 50
					60	BR1030-16 x 60
					70	BR1030-16 x 70
					80	BR1030-16 x 80
					90	BR1030-16 x 90
					100	BR1030-16 x 100
					110	BR1030-16 x 110
					120	BR1030-16 x 120
					140	BR1030-16 x 140



l1	l3	l4	d3	d1	l	REF.
22	8	5	19	16	160	BR1030-16 x 160
					180	BR1030-16 x 180
					200	BR1030-16 x 200
					220	BR1030-16 x 220
					240	BR1030-16 x 240
					260	BR1030-16 x 260
		7	21	18	60	BR1030-18 x 60
					70	BR1030-18 x 70
					80	BR1030-18 x 80
					90	BR1030-18 x 90
					100	BR1030-18 x 100
					110	BR1030-18 x 110
					120	BR1030-18 x 120
					140	BR1030-18 x 140
					160	BR1030-18 x 160
					180	BR1030-18 x 180
					200	BR1030-18 x 200
					220	BR1030-18 x 220
					240	BR1030-18 x 240
					260	BR1030-18 x 260
					280	BR1030-18 x 280
			23	20	70	BR1030-20 x 70
					80	BR1030-20 x 80
					90	BR1030-20 x 90
					100	BR1030-20 x 100

l1	l3	l4	d3	d1	l	REF.
22	8	7	23	20	110	BR1030-20 x 110
					120	BR1030-20 x 120
					140	BR1030-20 x 140
					160	BR1030-20 x 160
					180	BR1030-20 x 180
					200	BR1030-20 x 200
					220	BR1030-20 x 220
					240	BR1030-20 x 240
					260	BR1030-20 x 260
					280	BR1030-20 x 280
					300	BR1030-20 x 300
					320	BR1030-20 x 320
27	10		25	22	80	BR1030-22 x 80
					100	BR1030-22 x 100
					120	BR1030-22 x 120
					140	BR1030-22 x 140
					160	BR1030-22 x 160
					180	BR1030-22 x 180
					200	BR1030-22 x 200
					220	BR1030-22 x 220
					240	BR1030-22 x 240
					260	BR1030-22 x 260
					280	BR1030-22 x 280
					300	BR1030-22 x 300
					320	BR1030-22 x 320



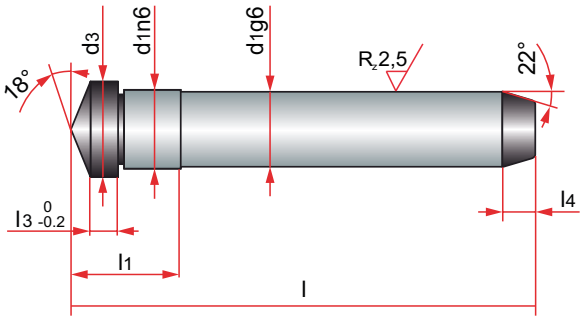
l1	l3	l4	d3	d1	l	REF.
27	10	7	27	**24**	**80**	**BR1030-24 x 80**
					100	**BR1030-24 x 100**
					120	**BR1030-24 x 120**
					140	**BR1030-24 x 140**
					160	**BR1030-24 x 160**
					180	**BR1030-24 x 180**
					200	**BR1030-24 x 200**
					220	**BR1030-24 x 220**
					240	**BR1030-24 x 240**
					260	**BR1030-24 x 260**
					280	**BR1030-24 x 280**
					300	**BR1030-24 x 300**
					320	**BR1030-24 x 320**
					360	**BR1030-24 x 360**
36			35	**30**	**100**	**BR1030-30 x 100**
					120	**BR1030-30 x 120**
					140	**BR1030-30 x 140**
					160	**BR1030-30 x 160**
					180	**BR1030-30 x 180**
					200	**BR1030-30 x 200**
					220	**BR1030-30 x 220**
					240	**BR1030-30 x 240**
					260	**BR1030-30 x 260**
					280	**BR1030-30 x 280**
					300	**BR1030-30 x 300**
					320	**BR1030-30 x 320**

l1	l3	l4	d3	d1	l	REF.
36	10	7	35	**30**	**360**	**BR1030-30 x 360**
					400	**BR1030-30 x 400**
					440	**BR1030-30 x 440**
				32	**100**	**BR1030-32 x 100**
					120	**BR1030-32 x 120**
					140	**BR1030-32 x 140**
					160	**BR1030-32 x 160**
					180	**BR1030-32 x 180**
					200	**BR1030-32 x 200**
					220	**BR1030-32 x 220**
					240	**BR1030-32 x 240**
					280	**BR1030-32 x 280**
					320	**BR1030-32 x 320**
					360	**BR1030-32 x 360**
					400	**BR1030-32 x 400**
			45	**40**	**140**	**BR1030-40 x 140**
					160	**BR1030-40 x 160**
					180	**BR1030-40 x 180**
					200	**BR1030-40 x 200**
					220	**BR1030-40 x 220**
					250	**BR1030-40 x 250**
					280	**BR1030-40 x 280**
					320	**BR1030-40 x 320**
					360	**BR1030-40 x 360**
					400	**BR1030-40 x 400**
					440	**BR1030-40 x 440**

BR1032

E 1032

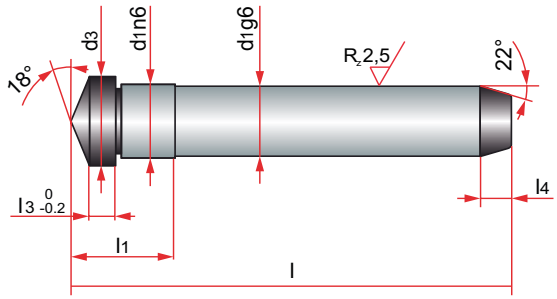
Inclined pin with tapered collar
Guía con cabeza inclinada
Słup skośny z kołnierzem stożkowym
Guia inclinada
Doigt de démoulage à tête cônique



Hardness: 58 ± 2 HRC.

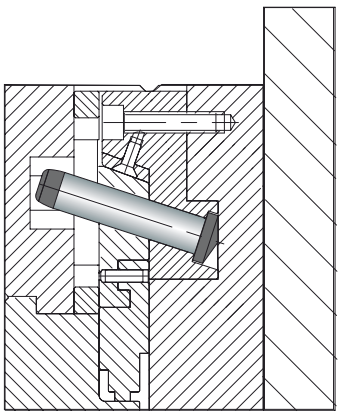
l 1	l 3	l 4	d 3	d 1	l	REF.
13	2	4	12	**10**	60	**BR1032-10x060**
					70	**BR1032-10x070**
					80	**BR1032-10x080**
					90	**BR1032-10x090**
					100	**BR1032-10x100**
					120	**BR1032-10x120**
17	3	5	15	**12**	60	**BR1032-12x060**
					80	**BR1032-12x080**
					100	**BR1032-12x100**
					120	**BR1032-12x120**
					140	**BR1032-12x140**
					160	**BR1032-12x160**
22			17	**14**	60	**BR1032-14x060**
					80	**BR1032-14x080**
					100	**BR1032-14x100**
					120	**BR1032-14x120**
					140	**BR1032-14x140**
					160	**BR1032-14x160**
			19	**16**	60	**BR1032-16x060**
					80	**BR1032-16x080**
					100	**BR1032-16x100**
					120	**BR1032-16x120**
					140	**BR1032-16x140**
					160	**BR1032-16x160**
					180	**BR1032-16x180**

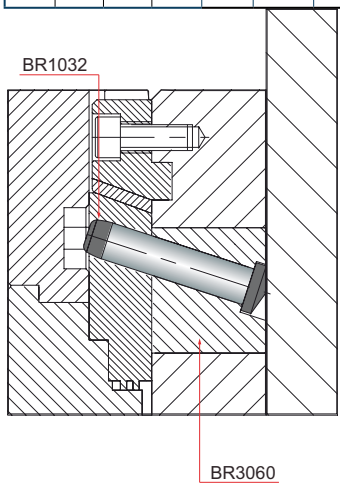
l 1	l 3	l 4	d 3	d 1	l	REF.
22	3	5	19	**16**	200	**BR1032-16x200**
		7	21	**18**	60	**BR1032-18x060**
					80	**BR1032-18x080**
					100	**BR1032-18x100**
					120	**BR1032-18x120**
					140	**BR1032-18x140**
					160	**BR1032-18x160**
					180	**BR1032-18x180**
					200	**BR1032-18x200**
					220	**BR1032-18x220**
	4		23	**20**	80	**BR1032-20x080**
					100	**BR1032-20x100**
					120	**BR1032-20x120**
					140	**BR1032-20x140**
					160	**BR1032-20x160**
					180	**BR1032-20x180**
					200	**BR1032-20x200**
					220	**BR1032-20x220**
					240	**BR1032-20x240**
			25	**22**	60	**BR1032-22x060**
					80	**BR1032-22x080**
					100	**BR1032-22x100**
					120	**BR1032-22x120**
					140	**BR1032-22x140**
					160	**BR1032-22x160**



l 1	l 3	l 4	d 3	d 1	l	REF.
22	4	7	25	**22**	180	**BR1032-22x180**
					200	**BR1032-22x200**
					220	**BR1032-22x220**
					240	**BR1032-22x240**
27			27	**24**	80	**BR1032-24x080**
					100	**BR1032-24x100**
					120	**BR1032-24x120**
					140	**BR1032-24x140**
					160	**BR1032-24x160**
					180	**BR1032-24x180**
					200	**BR1032-24x200**
					220	**BR1032-24x220**
					240	**BR1032-24x240**

l 1	l 3	l 4	d 3	d 1	l	REF.
27	4	7	27	**24**	280	**BR1032-24x280**
36	5		35	**30**	100	**BR1032-30x100**
					120	**BR1032-30x120**
					140	**BR1032-30x140**
					160	**BR1032-30x160**
					180	**BR1032-30x180**
					200	**BR1032-30x200**
					220	**BR1032-30x220**
					240	**BR1032-30x240**
					260	**BR1032-30x260**
					280	**BR1032-30x280**
					320	**BR1032-30x320**
					360	**BR1032-30x360**

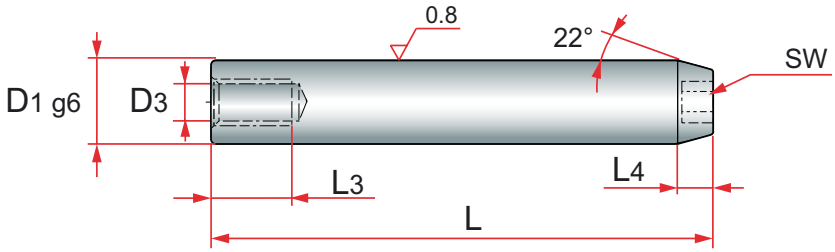




BR1034

E1034

Inclined pin without collar
Guia inclinada sin cabeza
Skośny trzpień bez kołnierza oporowego
Guia inclinada sem cabeça
Doigt de démoulage sans tête



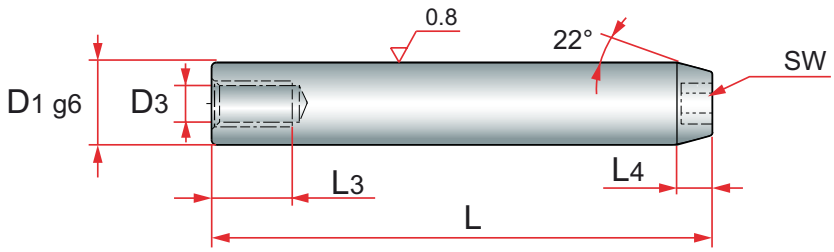
Mat. : 1.7131 58-60 HRC

SW	L4	D3	L3	D1	L	REF.
4	4	M6	16	10	60	BR1034-10x060
					70	BR1034-10x070
					80	BR1034-10x080
					90	BR1034-10x090
					100	BR1034-10x100
					120	BR1034-10x120
					140	BR1034-10x140
5	5			12	60	BR1034-12x060
					80	BR1034-12x080
					100	BR1034-12x100
					120	BR1034-12x120
					140	BR1034-12x140
					160	BR1034-12x160
					180	BR1034-12x180
				14	60	BR1034-14x060
					80	BR1034-14x080
					100	BR1034-14x100
					120	BR1034-14x120
					140	BR1034-14x140
					160	BR1034-14x160
					180	BR1034-14x180
					200	BR1034-14x200

SW	L4	D3	L3	D1	L	REF.
6	5	M8	25	16	60	BR1034-16x060
					80	BR1034-16x080
					100	BR1034-16x100
					120	BR1034-16x120
					140	BR1034-16x140
					160	BR1034-16x160
					180	BR1034-16x180
					200	BR1034-16x200
					220	BR1034-16x220
					240	BR1034-16x240
				18	60	BR1034-18x060
					80	BR1034-18x080
					100	BR1034-18x100
					120	BR1034-18x120
					140	BR1034-18x140
					160	BR1034-18x160
					180	BR1034-18x180
					200	BR1034-18x200
					220	BR1034-18x220
					240	BR1034-18x240
					260	BR1034-18x260

BR1034

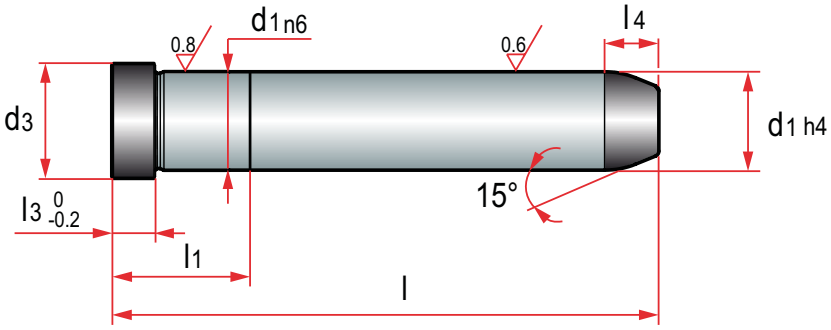
E1034



SW	L4	D3	L3	D1	L	REF.
8	7	M10	30	20	80	BR1034-20x080
					100	BR1034-20x100
					120	BR1034-20x120
					140	BR1034-20x140
					160	BR1034-20x160
					180	BR1034-20x180
					200	BR1034-20x200
					220	BR1034-20x220
					240	BR1034-20x240
					260	BR1034-20x260
					280	BR1034-20x280
				22	60	BR1034-22x060
					80	BR1034-22x080
					100	BR1034-22x100
					120	BR1034-22x120
					140	BR1034-22x140
					160	BR1034-22x160
					180	BR1034-22x180
					200	BR1034-22x200
					220	BR1034-22x220
					240	BR1034-22x240
					260	BR1034-22x260

SW	L4	D3	L3	D1	L	REF.
8	7	M12	35	24	80	BR1034-24x080
					100	BR1034-24x100
					120	BR1034-24x120
					140	BR1034-24x140
					160	BR1034-24x160
					180	BR1034-24x180
					200	BR1034-24x200
					220	BR1034-24x220
					240	BR1034-24x240
					280	BR1034-24x280
		M16	45	30	100	BR1034-30x100
					120	BR1034-30x120
					140	BR1034-30x140
					160	BR1034-30x160
					180	BR1034-30x180
					200	BR1034-30x200
					220	BR1034-30x220
					240	BR1034-30x240
					260	BR1034-30x260

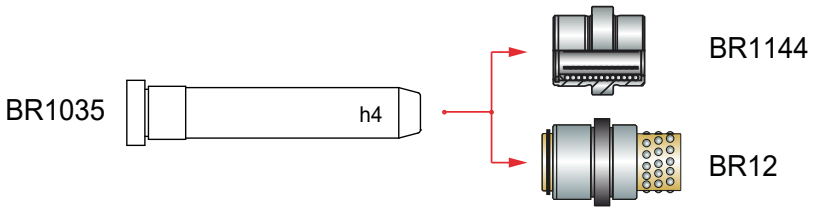
Guide bolt with collar, for ball guiding unit
Guía con valona para unidad de guiado de bolas
Trzpień prowadzący z kołnierzem, zespół prowadzący - kulkowy
Guia com cabeça para casquilhos de esferas
Colonne avec tête pour guidage à billes



Mat.: 1.7131 - 58 ± 2 HRC.

l1	l3	l4	d3	d1	l	REF.
12	3	4	12	10	60	BR1035/10 x 60
					80	BR1035/10 x 80
					100	BR1035/10 x 100
					120	BR1035/10 x 120
					140	BR1035/10 x 140
					160	BR1035/10 x 160
17	4		15	12	80	BR1035/12 x 80
					100	BR1035/12 x 100
					120	BR1035/12 x 120
					140	BR1035/12 x 140
					160	BR1035/12 x 160
					180	BR1035/12 x 180
22	6	5	21	18	80	BR1035/18 x 80
					100	BR1035/18 x 100
					120	BR1035/18 x 120
					140	BR1035/18 x 140
					160	BR1035/18 x 160
					180	BR1035/18 x 180

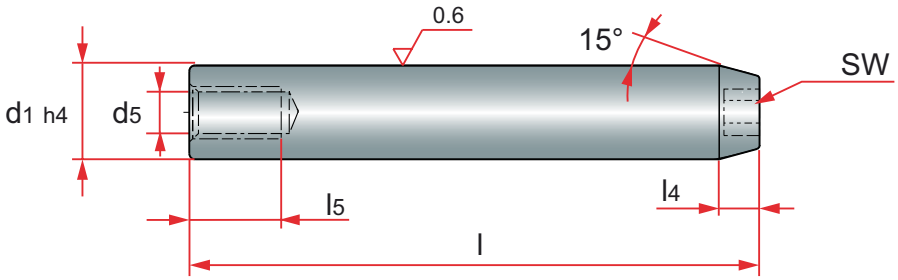
l1	l3	l4	d3	d1	l	REF.
22	6	5	21	18	200	BR1035/18 x 200
					250	BR1035/18 x 250
27		6	27	24	100	BR1035/24 x 100
					120	BR1035/24 x 120
					140	BR1035/24 x 140
					160	BR1035/24 x 160
					180	BR1035/24 x 180
					200	BR1035/24 x 200
					250	BR1035/24 x 250
					280	BR1035/24 x 280
36		7	35	30	120	BR1035/30 x 120
					140	BR1035/30 x 140
					160	BR1035/30 x 160
					180	BR1035/30 x 180
					200	BR1035/30 x 200
					250	BR1035/30 x 250
					280	BR1035/30 x 280
					320	BR1035/30 x 320



BR1040

E1040

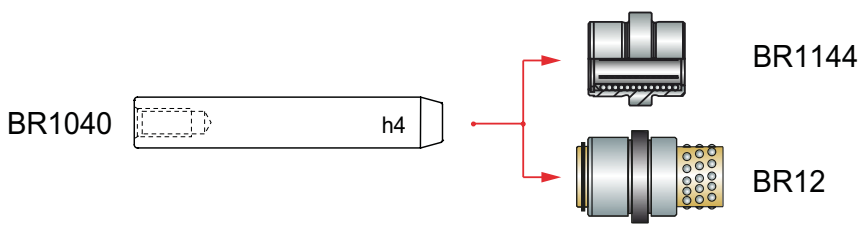
Guide bolt without collar, for ball guiding unit
Guía sin valona para casquillos de bolas
Trzpień prowadzący bez kołnierza, zespół prowadzący - kulkowy
Guia sem cabeça para casquilhos de esferas
Colonne sans tête pour guidage à billes



Mat.: 1.7131 - 58 ± 2 HRC.

SW	l4	d5	l5	d1	l	REF.
4	4	M6	16	**10**	**60**	**BR1040-10 x 60**
					80	**BR1040-10 x 80**
					100	**BR1040-10 x 100**
					120	**BR1040-10 x 120**
					140	**BR1040-10 x 140**
					160	**BR1040-10 x 160**
5		M8	17	**12**	**80**	**BR1040-12 x 80**
					100	**BR1040-12 x 100**
					120	**BR1040-12 x 120**
					140	**BR1040-12 x 140**
					160	**BR1040-12 x 160**
					180	**BR1040-12 x 180**
6	5	M10	20	**18**	**80**	**BR1040-18 x 80**
					100	**BR1040-18 x 100**
					120	**BR1040-18 x 120**
					140	**BR1040-18 x 140**
					160	**BR1040-18 x 160**
					180	**BR1040-18 x 180**

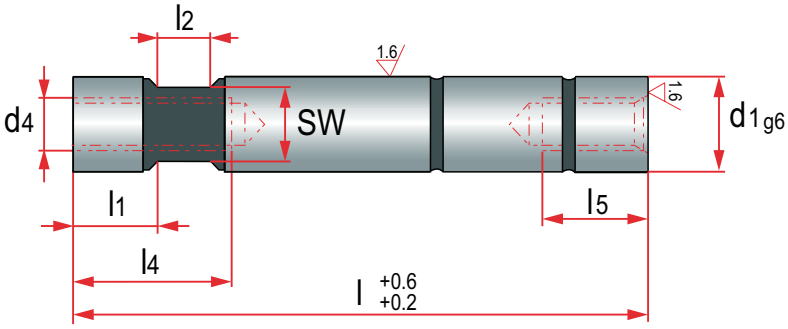
SW	l4	d5	l5	d1	l	REF.
6	5	M10	20	**18**	**200**	**BR1040-18 x 200**
8	6	M12	25	**24**	**100**	**BR1040-24 x 100**
					120	**BR1040-24 x 120**
					140	**BR1040-24 x 140**
					160	**BR1040-24 x 160**
					180	**BR1040-24 x 180**
					200	**BR1040-24 x 200**
					220	**BR1040-24 x 220**
					250	**BR1040-24 x 250**
	7	M16	30	**30**	**120**	**BR1040-30 x 120**
					140	**BR1040-30 x 140**
					160	**BR1040-30 x 160**
					180	**BR1040-30 x 180**
					200	**BR1040-30 x 200**
					220	**BR1040-30 x 220**
					250	**BR1040-30 x 250**
					280	**BR1040-30 x 280**



BR1050E

E1050

Guide bolt for pusher guide
Guía para expulsor central
Trzpień prowadzący płyty wypychaczy
Haste
Queue de démoulage



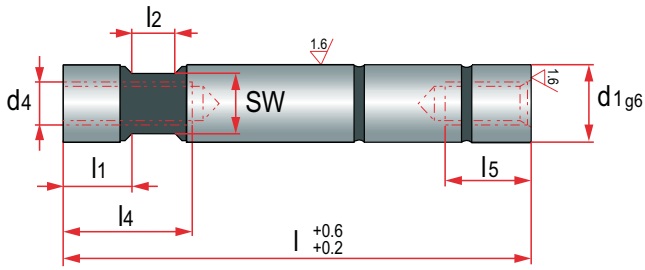
Mat.: 1.7131 - 58 ± 2 HRC.

SW	l1	l2	l4	l5	d4	d1	l	REF.
8	12	8	16	9	M6	10	60	BR1050E-06-10x060
							80	BR1050E-06-10x080
							100	BR1050E-06-10x100
							120	BR1050E-06-10x120
							140	BR1050E-06-10x140
							160	BR1050E-06-10x160
12	14		25	17	M8	14	60	BR1050E-08-14x060
							80	BR1050E-08-14x080
							100	BR1050E-08-14x100
							120	BR1050E-08-14x120
							140	BR1050E-08-14x140
							160	BR1050E-08-14x160
							180	BR1050E-08-14x180
							200	BR1050E-08-14x200
							300	BR1050E-08-14x300
14	16		30	20	M10	18	70	BR1050E-10-18x070
							80	BR1050E-10-18x080
							100	BR1050E-10-18x100
							120	BR1050E-10-18x120

SW	l1	l2	l4	l5	d4	d1	l	REF.
14	16	8	30	20	M10	18	140	BR1050E-10-18x140
							160	BR1050E-10-18x160
							180	BR1050E-10-18x180
							200	BR1050E-10-18x200
							220	BR1050E-10-18x220
							240	BR1050E-10-18x240
							340	BR1050E-10-18x340
					M12		70	BR1050E-12-18x070
							80	BR1050E-12-18x080
							100	BR1050E-12-18x100
							120	BR1050E-12-18x120
							140	BR1050E-12-18x140
							160	BR1050E-12-18x160
							180	BR1050E-12-18x180
							200	BR1050E-12-18x200
							220	BR1050E-12-18x220
							240	BR1050E-12-18x240
							340	BR1050E-12-18x340
17	18	10				20	70	BR1050E-12-20x070

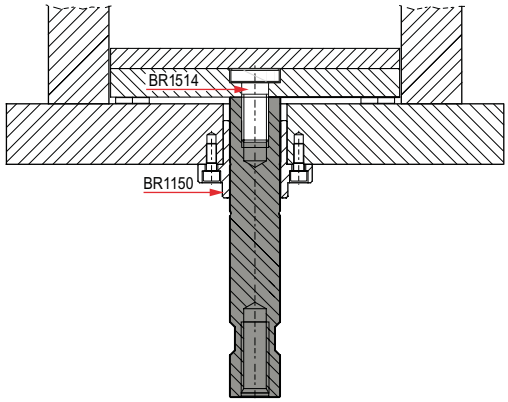
BR1050E

E1050



SW	l1	l2	l4	l5	d4	d1	l	REF.
17	18	10	30	20	M12	**20**	**80**	**BR1050E-12-20x080**
							100	**BR1050E-12-20x100**
							120	**BR1050E-12-20x120**
							140	**BR1050E-12-20x140**
							160	**BR1050E-12-20x160**
							180	**BR1050E-12-20x180**
							200	**BR1050E-12-20x200**
							220	**BR1050E-12-20x220**
							240	**BR1050E-12-20x240**
							340	**BR1050E-12-20x340**
19	22	12	35	25	M12	**24**	**70**	**BR1050E-12-24x070**
							80	**BR1050E-12-24x080**
							100	**BR1050E-12-24x100**
							120	**BR1050E-12-24x120**
							140	**BR1050E-12-24x140**
							160	**BR1050E-12-24x160**
							180	**BR1050E-12-24x180**
							200	**BR1050E-12-24x200**
							220	**BR1050E-12-24x220**
							240	**BR1050E-12-24x240**
							260	**BR1050E-12-24x260**

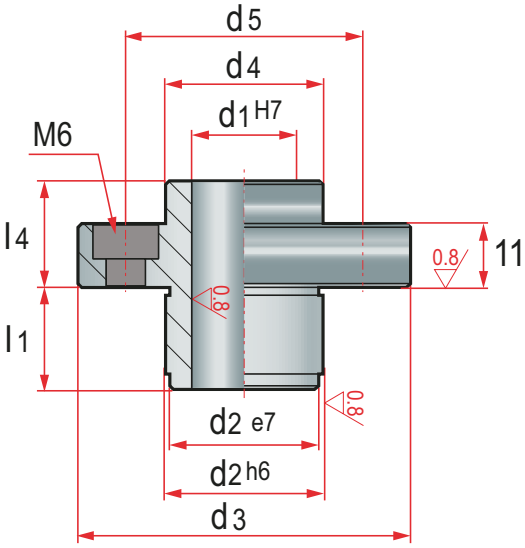
SW	l1	l2	l4	l5	d4	d1	l	REF.
19	22	12	35	25	M12	**24**	**380**	**BR1050E-12-24x380**
24	28	16	45	30	M16	**30**	**100**	**BR1050E-16-30x100**
							120	**BR1050E-16-30x120**
							140	**BR1050E-16-30x140**
							160	**BR1050E-16-30x160**
							180	**BR1050E-16-30x180**
							200	**BR1050E-16-30x200**
							220	**BR1050E-16-30x220**
							260	**BR1050E-16-30x260**
							300	**BR1050E-16-30x300**
							340	**BR1050E-16-30x340**
36	36		55	35	M20	**40**	**160**	**BR1050E-20-40x160**
							180	**BR1050E-20-40x180**
							200	**BR1050E-20-40x200**
							220	**BR1050E-20-40x220**
							240	**BR1050E-20-40x240**
							260	**BR1050E-20-40x260**
							300	**BR1050E-20-40x300**
							340	**BR1050E-20-40x340**
							380	**BR1050E-20-40x380**



BR1150

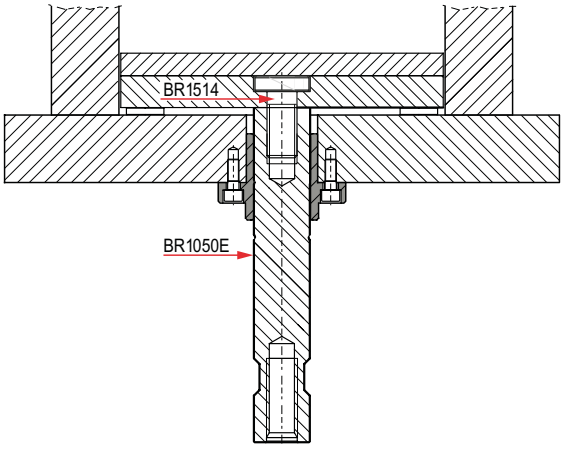
E1150

Guide bush for pusher guide
Casquillo guía para expulsor central
Tuleja prowadząca wypychacz płyty wypychaczy
Casquilho para haste
Douille de guidage pour queue de démoulage



Mat.: 1.7131 - 58 ± 2 HRC.

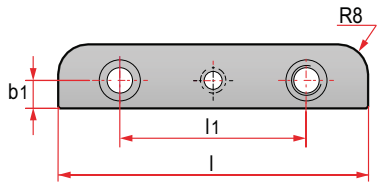
l1	l4	d1	d2	d3	d4	d5	REF
12	17	**14**	18	46	19	32	**BR1150-14**
16	18	**18**	24	52	25	38	**BR1150-18**
21	19	**24**	30	58	31	44	**BR1150-24**
26	20	**30**	38	68	39	52	**BR1150-30**

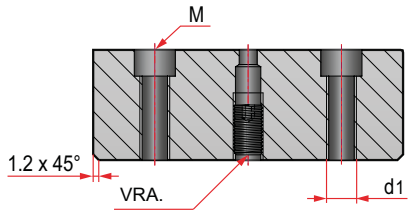


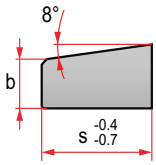
BR2670

E2670

Positioning wedge
Cuña de posicionamiento
Klin ustalający pozycję
Cunha posicionamento
Coin de positionnement

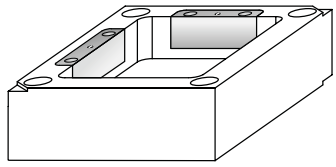






Mat. 1.2842 - Hardness: 58 ± 2 HRC.

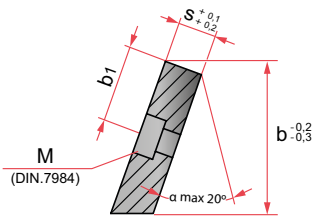
b_1	l_1	d_1	M	b	l	s	VRA	Descripción
7,5	36	M8	M6	**13**	**59**	**20**	M8x10	**BR2670-13- 59-20**
						24	M8x12	**BR2670-13- 59-24**
						30	M8x16	**BR2670-13- 59-30**
	50				**83**	**20**	M8x10	**BR2670-13- 83-20**
						24	M8x12	**BR2670-13- 83-24**
						30	M8x16	**BR2670-13- 83-30**
	68				**113**	**20**	M8x10	**BR2670-13-113-20**
						24	M8x12	**BR2670-13-113-24**
						30	M8x16	**BR2670-13-113-30**
9	46			**16**	**77**	**24**	M10x12	**BR2670-16- 77-24**
						30	M10x16	**BR2670-16- 77-30**
						38	M10x25	**BR2670-16- 77-38**
	65				**107**	**24**	M10x12	**BR2670-16-107-24**
						30	M10x16	**BR2670-16-107-30**
						38	M10x25	**BR2670-16-107-38**
	84				**137**	**24**	M10x12	**BR2670-16-137-24**
						30	M10x16	**BR2670-16-137-30**
						38	M10x25	**BR2670-16-137-38**
10,5	62	M10	M8	**19**	**101**	**30**	M10x16	**BR2670-19-101-30**
						38	M10x25	**BR2670-19-101-38**
						45	M10x30	**BR2670-19-101-45**
	80				**131**	**30**	M10x16	**BR2670-19-131-30**
						38	M10x25	**BR2670-19-131-38**
						45	M10x30	**BR2670-19-131-45**
	98				**161**	**30**	M10x16	**BR2670-19-161-30**
						38	M10x25	**BR2670-19-161-38**
						45	M10x30	**BR2670-19-161-45**



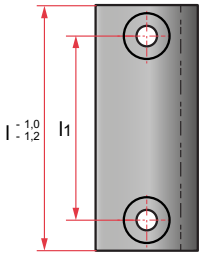
BR3030

E3030

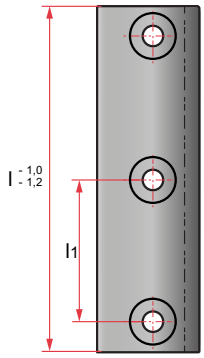
Wear plate
Placa de presion
Płyta dociskowa
Placa de pressão
Plaque de pression

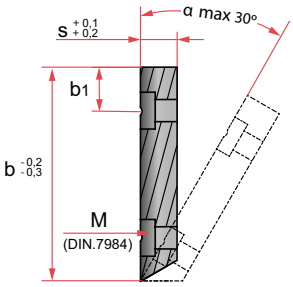


Form-A

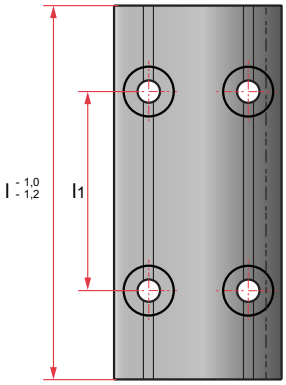


Form-B





Form-C



Mat. : 1.2379 58-60 HRC

Form	b1	M	s	l1	b	l	REF.
A	7,45	M5	6	30	14	48	BR3030/14x048
A				44		72	BR3030/14x072
B				39		98	BR3030/14x098
A	10,10			30	19	48	BR3030/19x048
A				44		72	BR3030/19x072
B				39		98	BR3030/19x098
A	14,90			30	28	48	BR3030/28x048
A				44		72	BR3030/28x072
B				39		98	BR3030/28x098
B				56		140	BR3030/28x140
C	13	M6	8	90	64	160	BR3030/64x160

BR3034

E3034

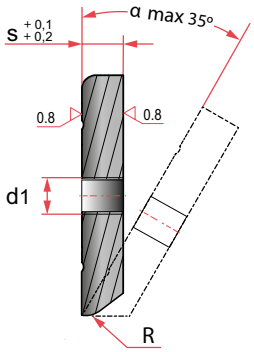
Wear plate with oil groove and thread

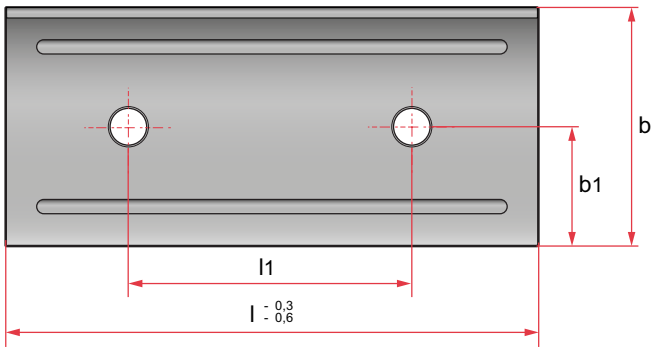
Placa sufridera con engrase y rosca

Płytka dociskowa z rowkami smarującymi i gwintem

Chapa de ajuste com rasgos de lubrificação e com roscas

Plaquette de frottement avec rainure de graissage et filetage



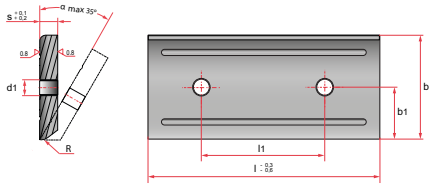


Mat. : 1.2379 58-60 HRC

R	b1	d1	l1	s	b	l	REF.
3	12	M 5	24	6	25	40	BR3034-6-25- 40
			32			50	BR3034-6-25- 50
			40			64	BR3034-6-25- 64
			52			80	BR3034-6-25- 80
			64			100	BR3034-6-25-100
	16		24		32	40	BR3034-6-32- 40
			32			50	BR3034-6-32- 50
			40			64	BR3034-6-32- 64
			52			80	BR3034-6-32- 80
			64			100	BR3034-6-32-100
	20		24		40	40	BR3034-6-40- 40
			32			50	BR3034-6-40- 50
			40			64	BR3034-6-40- 64
			52			80	BR3034-6-40- 80
			64			100	BR3034-6-40-100
			80			125	BR3034-6-40-125
		M 6	24	8		40	BR3034-8-40- 40
			32			50	BR3034-8-40- 50
			40			64	BR3034-8-40- 64
			52			80	BR3034-8-40- 80
			24			100	BR3034-8-40-100
			80			125	BR3034-8-40-125

BR3034

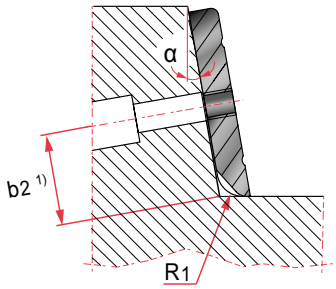
E3034

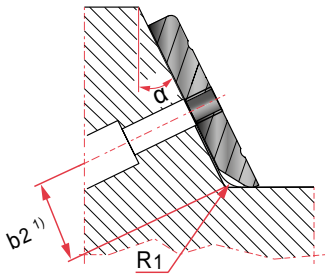


R	b1	d1	l1	s	b	l	REF.
3	25	M6	32	8	50	50	BR3034-8-50- 50
			40			64	BR3034-8-50- 64
			52			80	BR3034-8-50- 80
			64			100	BR3034-8-50-100
			80			125	BR3034-8-50-125
			100			160	BR3034-8-50-160
	32		40		64	64	BR3034-8-64- 64
			52			80	BR3034-8-64- 80
			64			100	BR3034-8-64-100
			80			125	BR3034-8-64-125
			100			160	BR3034-8-64-160
	40	M 8	40	10	80	64	E 3034-10-80- 64
			52			80	E 3034-10-80- 80
			64			100	E 3034-10-80-100
			80			125	E 3034-10-80-125
			100			160	E 3034-10-80-160
			125			200	E 3034-10-80-200

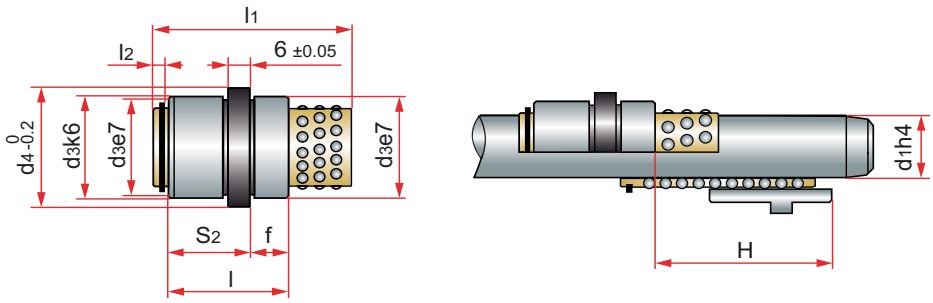
b2: Formula for calculating für b2: $b2 = b1 - \tan(\alpha) * \Delta s + \frac{R}{\cos(\alpha)} - R$

s	b	b1	R	R1 (max)	d1	α = 12°	α = 14°	α = 16°	α = 18°	α = 20°	α = 22°	α = 24°	Δs
6	25	12	3	5	M 5	10,84	10,66	10,47	10,28	10,10	9,91	9,72	5,763
	32	16				14,84	14,66	14,47	14,28	14,10	13,91	13,72	
	40	20				18,84	18,66	18,47	18,28	18,10	17,91	17,72	
8	40	20		6	M 6	18,54	18,31	18,07	17,83	17,59	17,34	17,10	7,163
	50	25				23,54	23,31	23,07	22,83	22,59	22,34	22,10	
	64	32				30,54	30,31	30,07	29,83	29,59	29,34	29,10	
10	80	40		8	M 8	38,33	38,06	37,78	37,50	37,22	36,94	36,65	8,163



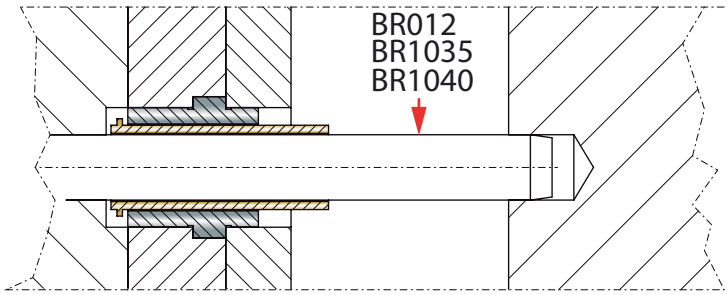


Ball guide bush
Casquillo de bolas
Koszyk kulkowy
Casquilho de esferas
Unité de guidage à billes

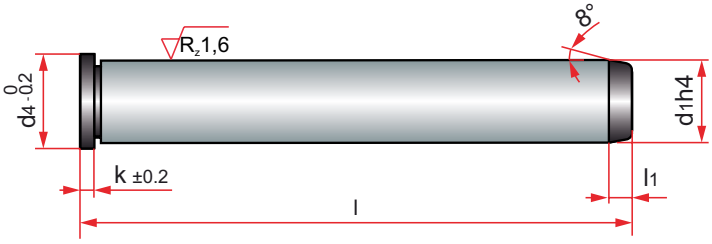


Hardness: 58 ± 2 HRC.

f	d3	d4	S2	l	l2	H max.	d1	l1	REF.
6	22	26	18	24	2,1	50	**12**	**40**	**BR12-12x40**
						82		**56**	**BR12-12x56**
11	30	35	23	34	3	44	**18**	**45**	**BR12-18x45**
						66		**56**	**BR12-18x56**
						96		**71**	**BR12-18x71**
21	46	52	33	54	4,8	32	**30**	**56**	**BR12-30x56**
						70		**75**	**BR12-30x75**
						110		**95**	**BR12-30x95**

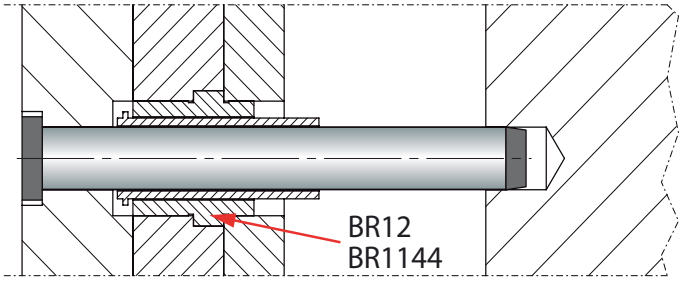


Guide pillar for ball guiding unit
Columna guía para casquillo de bolas
Słup prowadzący do koszyka kulkowego
Coluna guia para casquilho de esferas
Colonne de guidage pour bague a billes



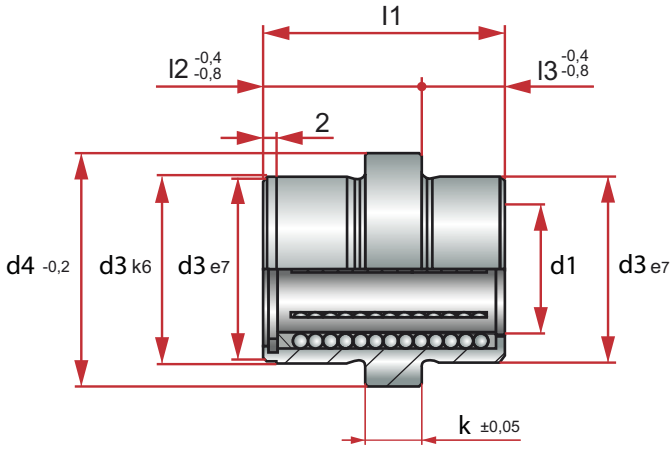
Hardness: 58 ± 2 HRC.

L1	K	D4	D1	L	REF.
4	4	16	**12**	**80**	**BR012-12x080**
				100	**BR012-12x100**
				120	**BR012-12x120**
7	6	22	**18**	**120**	**BR012-18x120**
				140	**BR012-18x140**
				160	**BR012-18x160**
		36	**30**	**160**	**BR012-30x160**
				200	**BR012-30x200**
				240	**BR012-30x240**



BR13

Lineal ball bearings
Casquillo lineal de bolas
Tuleja z rotacyjnym systemem kulkowym
Rolamentos lineares
Bague épaulée guidage à bille

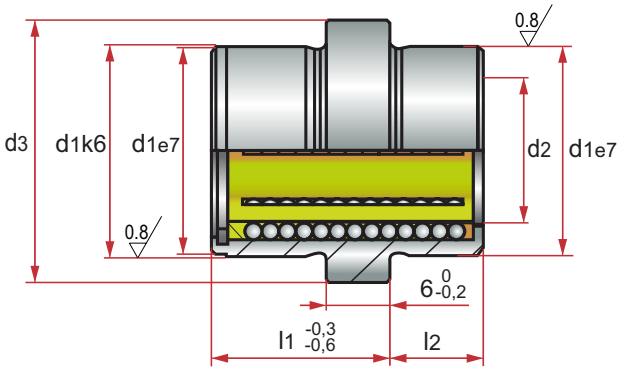


Mat.1.3505 - 60-62 HRC./ 2.0598 / Ball 62-67 HRC.

Temp max.180º

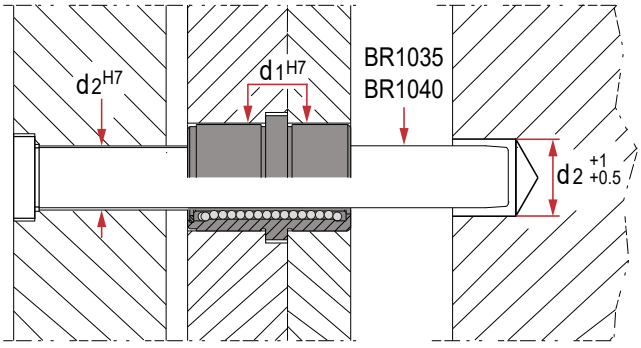
k	l1	d4	d3	d1	l2	l3	REF.
6	21	24	20	**10**	**12**	**9**	**BR13-10x12x09**
	26				**17**		**BR13-10x17x09**
		28	24	**12**			**BR13-12x17x09**
	29					**12**	**BR13-12x17x12**
	34	36	32	**18**	**22**		**BR13-18x22x12**
	39					**17**	**BR13-18x22x17**
	29	43	39	**24**	**17**	**12**	**BR13-24x17x12**
	44				**27**	**17**	**BR13-24x27x17**
	49					**22**	**BR13-24x27x22**
	39	54	50	**30**	**22**	**17**	**BR13-30x22x17**
	54				**32**	**22**	**BR13-30x32x22**
	63				**36**	**27**	**BR13-36x36x27**
	39	60	56	**36**	**22**	**17**	**BR13-36x22x17**
		74	70	**48**			**BR13-48x22x17**

Lineal ball bearings
Casquillo lineal de bolas
Tuleja z rotacyjnym systemem kulkowym
Rolamentos lineares
Bague épaulée guidage à bille



Mat.1.3505 - 60-62 HRC./ 2.0598 / Ball 62-67 HRC. Temp max.180º

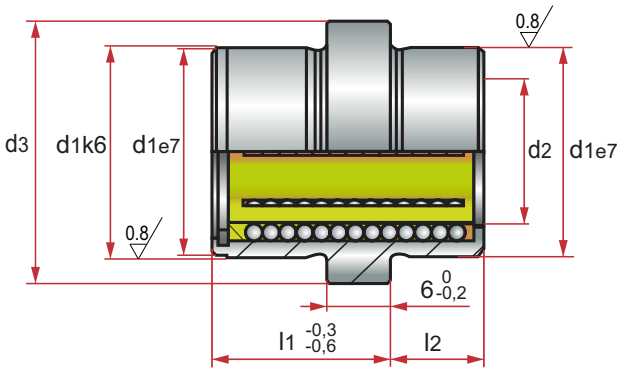
d1	d2	d3	l1	l2	REF.
17	**10**	20	**12**	**9**	**BR1144-10- 9-12**
			17	**9**	**BR1144-10- 9-17**
22	**12**	25		**9**	**BR1144-12- 9-17**
				12	**BR1144-12-12-17**
30	**18**	33	**22**	**12**	**BR1144-18-12-22**
				17	**BR1144-18-17-22**
38	**24**	41	**27**	**17**	**BR1144-24-17-27**
				22	**BR1144-24-22-27**
46	**30**	49	**32**	**22**	**BR1144-30-22-32**
			36	**27**	**BR1144-30-27-36**



BR1145

E1145

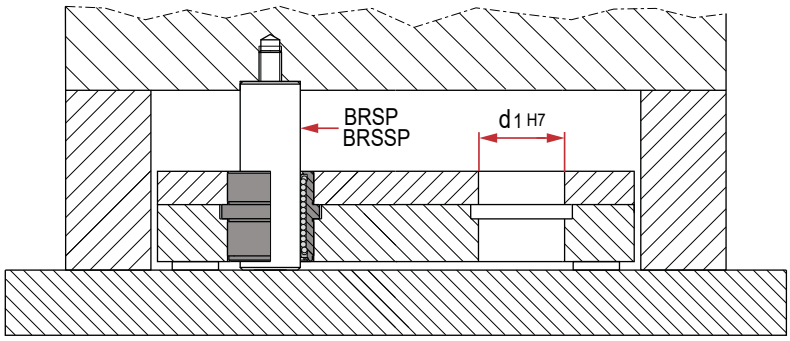
Lineal ball bearings
Casquillo lineal de bolas
Tuleja z rotacyjnym systemem kulkowym
Rolamentos lineares
Bague épaulée guidage à bille



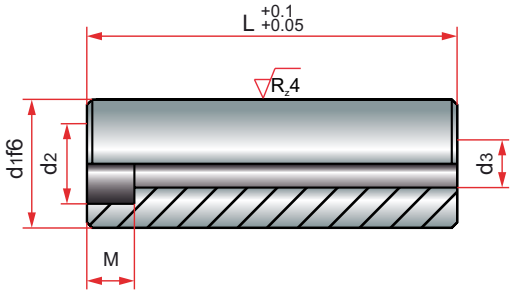
Mat.1.3505 - 60-62 HRC./ 2.0598 / Ball 62-67 HRC.

Temp max.180º

d1	d2	d3	l1	l2	REF.
38	**24**	41	**17**	**12**	**BR1145-24-12-17**
			22	**17**	**BR1145-24-17-22**
54	**36**	58			**BR1145-36-17-22**
			27	**22**	**BR1145-36-22-27**
68	**48**	73			**BR1145-48-22-27**
			36	**27**	**BR1145-48-27-36**

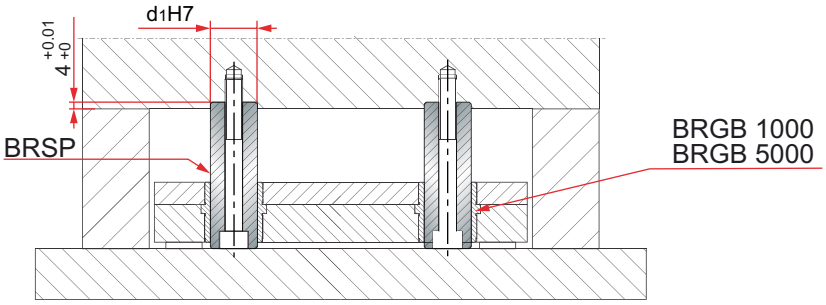


Support pillar
Columna de apoyo
Słup podporowy
Coluna de suporte
Plot de soutien



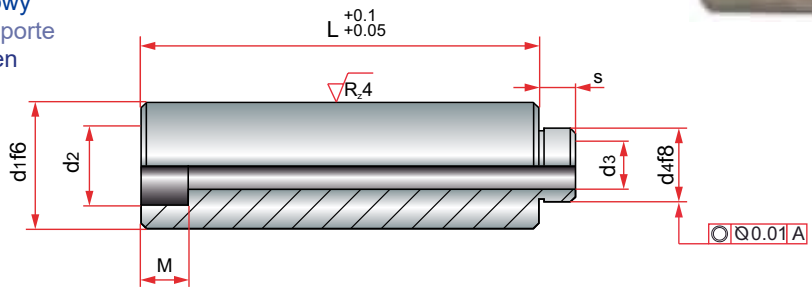
Hardness: 58 ± 2 HRC.

M	d2	d3	d1	L	REF.
9	15	9	**24**	**50**	**BRSP/24x050**
				60	**BRSP/24x060**
				70	**BRSP/24x070**
				80	**BRSP/24x080**
				90	**BRSP/24x090**
				100	**BRSP/24x100**
11	18	11	**36**	**60**	**BRSP/36x060**
				70	**BRSP/36x070**
				80	**BRSP/36x080**
				90	**BRSP/36x090**
				100	**BRSP/36x100**
				120	**BRSP/36x120**
				140	**BRSP/36x140**
13	20	13	**48**	**80**	**BRSP/48x080**
				90	**BRSP/48x090**
				100	**BRSP/48x100**
				120	**BRSP/48x120**
				140	**BRSP/48x140**
				160	**BRSP/48x160**



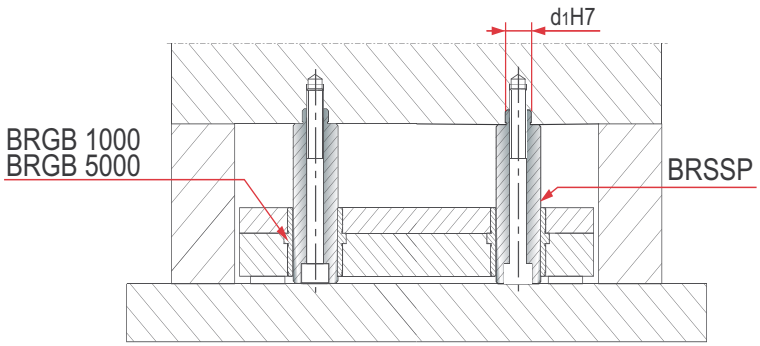
BRSSP

Spigotted support pillar
Columna de apoyo
Słup podporowy
Coluna de suporte
Plot de soutien



Hardness: 58 ± 2 HRC.

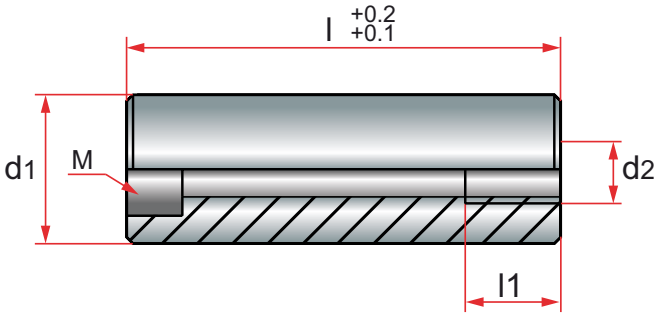
M	d2	d3	s	d4	d1	L	REF.
9	15	9	7	14	**24**	**36**	**BRSSP/24x036**
						46	**BRSSP/24x046**
						56	**BRSSP/24x056**
						76	**BRSSP/24x076**
						96	**BRSSP/24x096**
11	18	11	9	18	**36**	**46**	**BRSSP/36x046**
						56	**BRSSP/36x056**
						76	**BRSSP/36x076**
						96	**BRSSP/36x096**
						116	**BRSSP/36x116**
						136	**BRSSP/36x136**
13	20	13	10	20	**48**	**96**	**BRSSP/48x096**
						116	**BRSSP/48x116**
						136	**BRSSP/48x136**
						156	**BRSSP/48x156**



BR1510

E1510/Z571

Support pillar
Columna de apoyo
Trzpień podporowy
Coluna de suporte
Plot de soutien

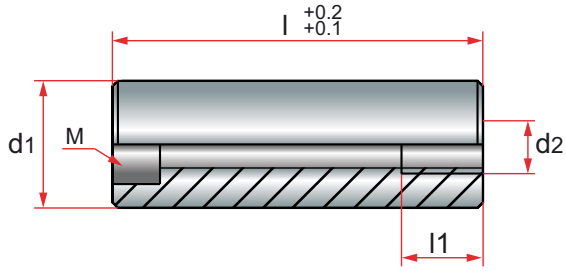


Mat. : 1.1730 / 660 N/mm².

l1	d2	M	d1	l	REF.
16	M8	M6	25	36	BR1510- 25 x 36
				46	BR1510- 25 x 46
				56	BR1510- 25 x 56
				66	BR1510- 25 x 66
				76	BR1510- 25 x 76
				86	BR1510- 25 x 86
				96	BR1510- 25 x 96
				116	BR1510- 25 x 116
				136	BR1510- 25 x 136
				156	BR1510- 25 x 156
20	M10	M8	32	36	BR1510- 32 x 36
				46	BR1510- 32 x 46
				56	BR1510- 32 x 56
				66	BR1510- 32 x 66
				76	BR1510- 32 x 76
				86	BR1510- 32 x 86
				96	BR1510- 32 x 96
				116	BR1510- 32 x 116
				136	BR1510- 32 x 136
				156	BR1510- 32 x 156
				176	BR1510- 32 x 176

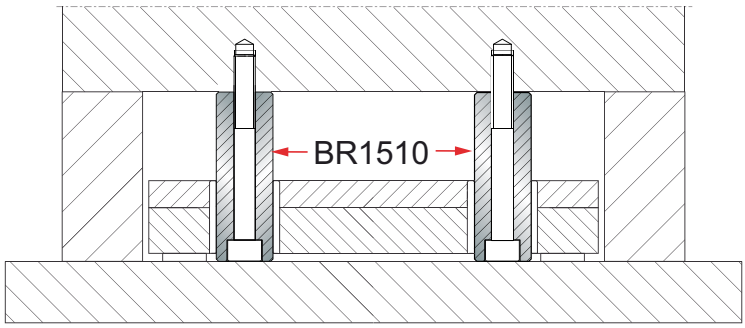
l1	d2	M	d1	l	REF.
20	M10	M8	40	46	BR1510- 40 x 46
				56	BR1510- 40 x 56
				66	BR1510- 40 x 66
				76	BR1510- 40 x 76
				86	BR1510- 40 x 86
				96	BR1510- 40 x 96
				116	BR1510- 40 x 116
				136	BR1510- 40 x 136
				156	BR1510- 40 x 156
				176	BR1510- 40 x 176
			50	46	BR1510- 50 x 46
				56	BR1510- 50 x 56
				66	BR1510- 50 x 66
				76	BR1510- 50 x 76
				86	BR1510- 50 x 86
				96	BR1510- 50 x 96
				116	BR1510- 50 x 116
				136	BR1510- 50 x 136
				156	BR1510- 50 x 156
				176	BR1510- 50 x 176
				196	BR1510- 50 x 196

BR1510



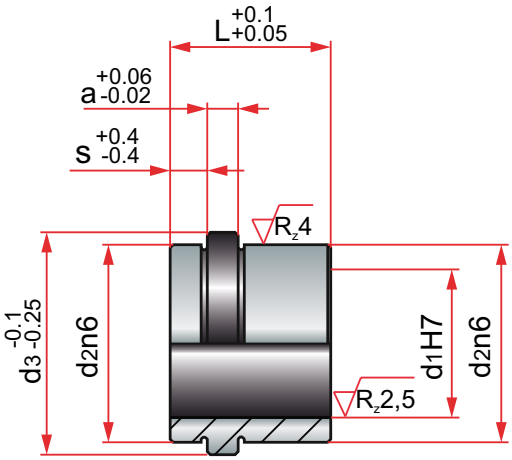
l1	d2	M	d1	l	REF.
20	M10	M8	60	56	BR1510- 60 x 56
				66	BR1510- 60 x 66
				76	BR1510- 60 x 76
				86	BR1510- 60 x 86
				96	BR1510- 60 x 96
				116	BR1510- 60 x 116
				136	BR1510- 60 x 136
				156	BR1510- 60 x 156
				176	BR1510- 60 x 176
				196	BR1510- 60 x 196
				236	BR1510- 60 x 236
25	M12	M10	70	66	BR1510- 70 x 66
				76	BR1510- 70 x 76
				86	BR1510- 70 x 86
				96	BR1510- 70 x 96
				116	BR1510- 70 x 116
				136	BR1510- 70 x 136
				156	BR1510- 70 x 156
				176	BR1510- 70 x 176
				196	BR1510- 70 x 196

l1	d2	M	d1	l	REF.
25	M12	M10	70	236	BR1510- 70 x 236
				276	BR1510- 70 x 276
			80	76	BR1510- 80 x 76
				86	BR1510- 80 x 86
				96	BR1510- 80 x 96
				116	BR1510- 80 x 116
				136	BR1510- 80 x 136
				156	BR1510- 80 x 156
				176	BR1510- 80 x 176
				196	BR1510- 80 x 196
				236	BR1510- 80 x 236
				276	BR1510- 80 x 276
			100	96	BR1510-100 x 96
				116	BR1510-100 x 116
				136	BR1510-100 x 136
				156	BR1510-100 x 156
				176	BR1510-100 x 176
				196	BR1510-100 x 196
				236	BR1510-100 x 236
				276	BR1510-100 x 276



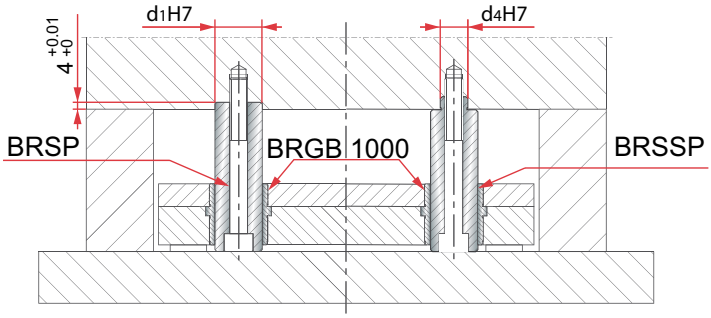
BRGB1000

Support pillar bushes
Casquillo para columna de apoyo
Tuleja prowadząca
Casquilho para coluna de suporte
Douille de guidage pour plot de soutien



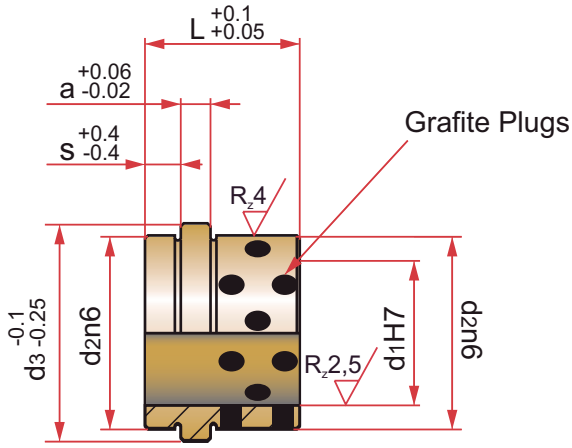
Hardness: 58 ± 2 HRC.

a	S	d3	d2	d1	L	REF.
5	6	36	32	**24**	**26**	**BRGB/1000**
		48	44	**36**	**30**	**BRGB/1001**
6	10	62	58	**48**	**40**	**BRGB/1002**



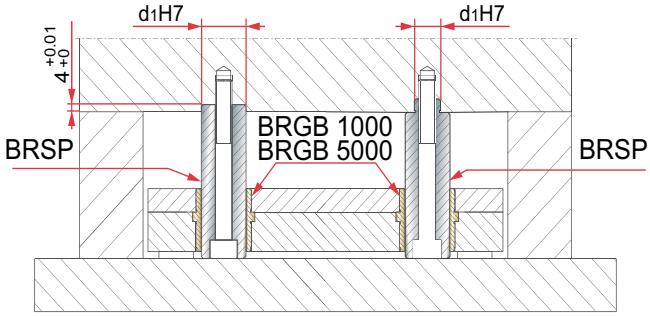
BRGB5000

Support pillar oilles bushes
Casquillo autolubricado para columna de apoyo
Tuleja prowadząca samosmarująca
Casquilho para coluna de suporte com grafite
Douille de guidage de bronze avec inserts graphite de soutien

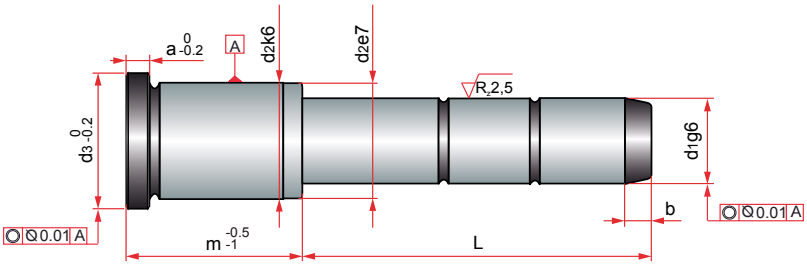


Mat. : Aluminium Bronze + Graphite Inserts.

a	S	d3	d2	d1	L	REF.
5	6	36	32	**24**	**26**	**BRGB/5000**
		48	44	**36**	**30**	**BRGB/5001**
6	10	62	58	**48**	**40**	**BRGB/5002**



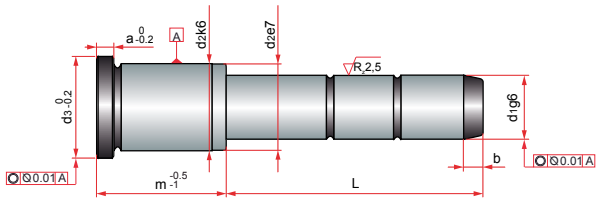
Stepped guide pillar BRGC
Guía de doble diámetro BRGC
Słup z dwiema średnicami pasowania BRGC
Guia dois corpos BRGC
Colonne de guidage epaulee monobloc type BRGC



Hardness: 58 ± 2 HRC.

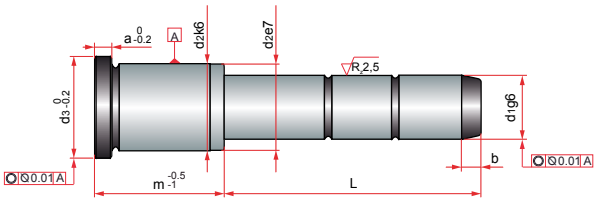
a	b	d3	d2	d1	m	L	REF.
4	4	17	14	10	17	26	BRGC/10x017x026
						36	BRGC/10x017x036
					50	18	BRGC/10x050x018
						26	BRGC/10x050x026
					70	18	BRGC/10x070x018
					80		BRGC/10x080x018
		20	16	12	17		BRGC/12x017x018
						26	BRGC/12x017x026
						36	BRGC/12x017x036
						45	BRGC/12x017x045
						65	BRGC/12x017x065
					21	26	BRGC/12x021x026
						36	BRGC/12x021x036
						45	BRGC/12x021x045
						65	BRGC/12x021x065
						90	BRGC/12x021x090
					26	26	BRGC/12x026x026
						36	BRGC/12x026x036
						45	BRGC/12x026x045
						65	BRGC/12x026x065
						90	BRGC/12x026x090
					34	26	BRGC/12x034x026
						36	BRGC/12x034x036
						45	BRGC/12x034x045
						65	BRGC/12x034x065

a	b	d3	d2	d1	m	L	REF.
4	4	20	16	12	34	90	BRGC/12x034x090
					44	26	BRGC/12x044x026
						36	BRGC/12x044x036
						45	BRGC/12x044x045
						65	BRGC/12x044x065
						90	BRGC/12x044x090
					54	26	BRGC/12x054x026
						36	BRGC/12x054x036
						45	BRGC/12x054x045
						65	BRGC/12x054x065
						90	BRGC/12x054x090
		24	20	16	20	18	BRGC/16x020x018
						26	BRGC/16x020x026
						36	BRGC/16x020x036
						45	BRGC/16x020x045
						65	BRGC/16x020x065
						90	BRGC/16x020x090
						125	BRGC/16x020x125
					26	26	BRGC/16x026x026
						36	BRGC/16x026x036
						45	BRGC/16x026x045
						65	BRGC/16x026x065
						90	BRGC/16x026x090
						125	BRGC/16x026x125
						150	BRGC/16x026x150



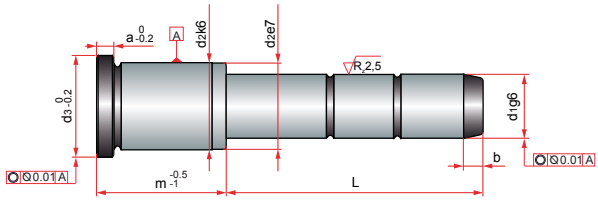
a	b	d3	d2	d1	m	L	REF.
4	4	24	20	16	34	26	BRGC/16x034x026
						36	BRGC/16x034x036
						45	BRGC/16x034x045
						65	BRGC/16x034x065
						90	BRGC/16x034x090
						125	BRGC/16x034x125
						150	BRGC/16x034x150
					44	26	BRGC/16x044x026
						36	BRGC/16x044x036
						45	BRGC/16x044x045
						70	BRGC/16x044x070
						90	BRGC/16x044x090
						125	BRGC/16x044x125
						150	BRGC/16x044x150
					54	26	BRGC/16x054x026
						36	BRGC/16x054x036
						50	BRGC/16x054x050
						70	BRGC/16x054x070
						90	BRGC/16x054x090
						125	BRGC/16x054x125
						150	BRGC/16x054x150
					64	36	BRGC/16x064x036
						50	BRGC/16x064x050
						70	BRGC/16x064x070
						90	BRGC/16x064x090
						125	BRGC/16x064x125
						150	BRGC/16x064x150
					74	36	BRGC/16x074x036
						50	BRGC/16x074x050
						70	BRGC/16x074x070
						90	BRGC/16x074x090
						125	BRGC/16x074x125

a	b	d3	d2	d1	m	L	REF.
4	4	24	20	16	74	150	BRGC/16x074x150
					94	36	BRGC/16x094x036
						50	BRGC/16x094x050
						70	BRGC/16x094x070
						90	BRGC/16x094x090
						125	BRGC/16x094x125
						150	BRGC/16x094x150
6	6	30	25	18	20	26	BRGC/18x020x026
						36	BRGC/18x020x036
						45	BRGC/18x020x045
						70	BRGC/18x020x070
						90	BRGC/18x020x090
						125	BRGC/18x020x125
						150	BRGC/18x020x150
					26	26	BRGC/18x026x026
						36	BRGC/18x026x036
						45	BRGC/18x026x045
						70	BRGC/18x026x070
						100	BRGC/18x026x100
						125	BRGC/18x026x125
						150	BRGC/18x026x150
					34	36	BRGC/18x034x036
						45	BRGC/18x034x045
						70	BRGC/18x034x070
						100	BRGC/18x034x100
						125	BRGC/18x034x125
						150	BRGC/18x034x150
					44	45	BRGC/18x044x045
						70	BRGC/18x044x070
						90	BRGC/18x044x090
						125	BRGC/18x044x125
						150	BRGC/18x044x150



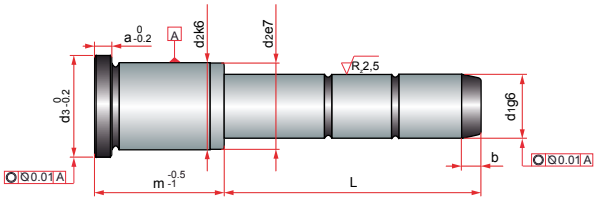
a	b	d3	d2	d1	m	L	REF.
6	6	30	25	18	54	36	BRGC/18x054x036
						50	BRGC/18x054x050
						70	BRGC/18x054x070
						100	BRGC/18x054x100
						125	BRGC/18x054x125
						150	BRGC/18x054x150
					64	36	BRGC/18x064x036
						50	BRGC/18x064x050
						70	BRGC/18x064x070
						100	BRGC/18x064x100
						125	BRGC/18x064x125
						150	BRGC/18x064x150
					74	36	BRGC/18x074x036
						50	BRGC/18x074x050
						70	BRGC/18x074x070
						100	BRGC/18x074x100
						125	BRGC/18x074x125
						150	BRGC/18x074x150
					94	36	BRGC/18x094x036
						50	BRGC/18x094x050
						70	BRGC/18x094x070
						100	BRGC/18x094x100
						125	BRGC/18x094x125
						150	BRGC/18x094x150
					115	70	BRGC/18x115x070
						100	BRGC/18x115x100
						125	BRGC/18x115x125
						150	BRGC/18x115x150
						175	BRGC/18x115x175
						200	BRGC/18x115x200
		35	30	22	26	36	BRGC/22x026x036
						45	BRGC/22x026x045

a	b	d3	d2	d1	m	L	REF.
6	6	35	30	22	26	70	BRGC/22x026x070
						100	BRGC/22x026x100
						125	BRGC/22x026x125
						150	BRGC/22x026x150
						175	BRGC/22x026x175
					34	36	BRGC/22x034x036
						45	BRGC/22x034x045
						70	BRGC/22x034x070
						100	BRGC/22x034x100
						125	BRGC/22x034x125
						150	BRGC/22x034x150
						175	BRGC/22x034x175
						200	BRGC/22x034x200
					44	36	BRGC/22x044x036
						45	BRGC/22x044x045
						70	BRGC/22x044x070
						100	BRGC/22x044x100
						125	BRGC/22x044x125
						150	BRGC/22x044x150
						175	BRGC/22x044x175
						200	BRGC/22x044x200
					54	36	BRGC/22x054x036
						50	BRGC/22x054x050
						70	BRGC/22x054x070
						100	BRGC/22x054x100
						125	BRGC/22x054x125
						150	BRGC/22x054x150
						175	BRGC/22x054x175
						200	BRGC/22x054x200
					64	36	BRGC/22x064x036
						50	BRGC/22x064x050
						70	BRGC/22x064x070



a	b	d3	d2	d1	m	L	REF.
6	6	35	30	22	64	100	BRGC/22x064x100
						125	BRGC/22x064x125
						150	BRGC/22x064x150
						175	BRGC/22x064x175
						200	BRGC/22x064x200
					74	36	BRGC/22x074x036
						50	BRGC/22x074x050
						70	BRGC/22x074x070
						100	BRGC/22x074x100
						125	BRGC/22x074x125
						150	BRGC/22x074x150
						175	BRGC/22x074x175
						200	BRGC/22x074x200
					94	36	BRGC/22x094x036
						50	BRGC/22x094x050
						70	BRGC/22x094x070
						100	BRGC/22x094x100
						125	BRGC/22x094x125
						150	BRGC/22x094x150
						175	BRGC/22x094x175
						200	BRGC/22x094x200
					115	70	BRGC/22x115x070
						100	BRGC/22x115x100
						125	BRGC/22x115x125
						150	BRGC/22x115x150
						175	BRGC/22x115x175
						200	BRGC/22x115x200
8	7	45	40	30	26	36	BRGC/30x026x036
						45	BRGC/30x026x045
						70	BRGC/30x026x070
						100	BRGC/30x026x100
						125	BRGC/30x026x125

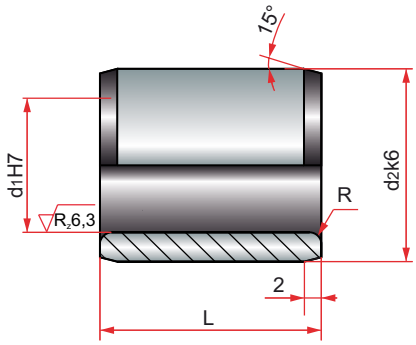
a	b	d3	d2	d1	m	L	REF.
8	7	45	40	30	26	150	BRGC/30x026x150
					34	36	BRGC/30x034x036
						45	BRGC/30x034x045
						70	BRGC/30x034x070
						100	BRGC/30x034x100
						125	BRGC/30x034x125
						150	BRGC/30x034x150
						175	BRGC/30x034x175
						200	BRGC/30x034x200
					44	50	BRGC/30x044x050
						70	BRGC/30x044x070
						90	BRGC/30x044x090
						125	BRGC/30x044x125
						150	BRGC/30x044x150
						175	BRGC/30x044x175
						200	BRGC/30x044x200
					54	36	BRGC/30x054x036
						50	BRGC/30x054x050
						70	BRGC/30x054x070
						100	BRGC/30x054x100
						125	BRGC/30x054x125
						150	BRGC/30x054x150
						175	BRGC/30x054x175
						200	BRGC/30x054x200
					64	36	BRGC/30x064x036
						50	BRGC/30x064x050
						70	BRGC/30x064x070
						100	BRGC/30x064x100
						125	BRGC/30x064x125
						150	BRGC/30x064x150
						175	BRGC/30x064x175
						200	BRGC/30x064x200



a	b	d3	d2	d1	m	L	REF.
8	7	45	40	**30**	**74**	**36**	**BRGC/30x074x036**
						50	**BRGC/30x074x050**
						70	**BRGC/30x074x070**
						100	**BRGC/30x074x100**
						125	**BRGC/30x074x125**
						150	**BRGC/30x074x150**
						175	**BRGC/30x074x175**
						200	**BRGC/30x074x200**
					94	**36**	**BRGC/30x094x036**
						50	**BRGC/30x094x050**
						70	**BRGC/30x094x070**
						100	**BRGC/30x094x100**
						125	**BRGC/30x094x125**
						150	**BRGC/30x094x150**
						175	**BRGC/30x094x175**
						200	**BRGC/30x094x200**
					115	**70**	**BRGC/30x115x070**

a	b	d3	d2	d1	m	L	REF.
8	7	45	40	**30**	**115**	**100**	**BRGC/30x115x100**
						125	**BRGC/30x115x125**
						150	**BRGC/30x115x150**
						175	**BRGC/30x115x175**
						200	**BRGC/30x115x200**
					134	**36**	**BRGC/30x134x036**
						50	**BRGC/30x134x050**
						70	**BRGC/30x134x070**
						100	**BRGC/30x134x100**
						125	**BRGC/30x134x125**
						150	**BRGC/30x134x150**
						175	**BRGC/30x134x175**
						200	**BRGC/30x134x200**
10	8	54	50	**40**	**70**	**90**	**BRGC/40x070x090**
						150	**BRGC/40x070x150**
						200	**BRGC/40x070x200**

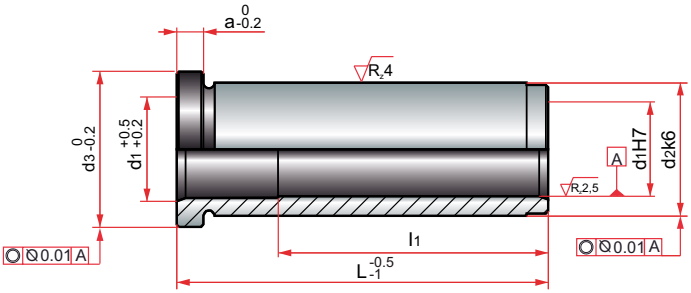
Guide bush
Casquillo guía liso
Tuleja prowadząca
Casquilho guia cementado
Bague de guidage lisse



Hardness: 58 ± 2 HRC.

r	d2	d1	L	REF.
1,5	14	**10**	**9**	**BRC/10x09**
			17	**BRC/10x17**
	16	**12**		**BRC/12x17**
	20	**14**	**21**	**BRC/14x21**
			30	**BRC/14x30**
		16	**21**	**BRC/16x21**
			30	**BRC/16x30**
2	25	**18**	**21**	**BRC/18x21**
			30	**BRC/18x30**
	30	**20**		**BRC/20x30**
		22	**35**	**BRC/22x35**
2,5	35	**25**		**BRC/25x35**
3,5	40	**30**	**45**	**BRC/30x45**
	50	**40**	**55**	**BRC/40x55**

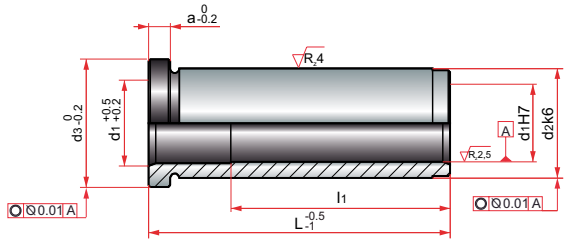
Headed leader pin bushing BRCV
Casquillo guía con valona BRCV
Tuleja prowadząca bez kołnierza centrującego BRCV
Casquilho cementado BRCV
Bague de guidage a collerette type BRCV



Hardness: 58 ± 2 HRC.

a	l1	d3	d2	d1	L	REF.
4	-	17	14	**10**	**17**	**BRCV/10x017**
					26	**BRCV/10x026**
		20	16	**12**	**21**	**BRCV/12x021**
					26	**BRCV/12x026**
					35	**BRCV/12x035**
	30				**45**	**BRCV/12x045**
					55	**BRCV/12x055**
	-	24	20	**14**	**21**	**BRCV/14x021**
					26	**BRCV/14x026**
					35	**BRCV/14x035**
	30				**45**	**BRCV/14x045**
	-			**16**	**21**	**BRCV/16x021**
					26	**BRCV/16x026**
					35	**BRCV/16x035**
					45	**BRCV/16x045**
					55	**BRCV/16x055**
	45				**65**	**BRCV/16x065**
					75	**BRCV/16x075**
					95	**BRCV/16x095**
6	-	30	25	**18**	**21**	**BRCV/18x021**
					26	**BRCV/18x026**
					35	**BRCV/18x035**
					45	**BRCV/18x045**
					55	**BRCV/18x055**
	45				**65**	**BRCV/18x065**
					75	**BRCV/18x075**

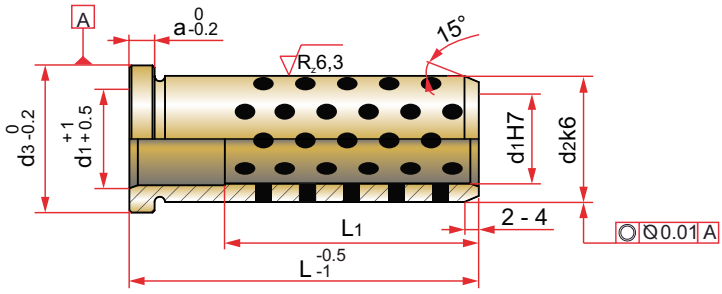
BRCV



a	l1	d3	d2	d1	L	REF.
6	65	30	25	**18**	**95**	**BRCV/18x095**
					115	**BRCV/18x115**
	-	35	30	**20**	**35**	**BRCV/20x035**
					55	**BRCV/20x055**
	45				**75**	**BRCV/20x075**
	-			**22**	**21**	**BRCV/22x021**
					26	**BRCV/22x026**
					35	**BRCV/22x035**
					45	**BRCV/22x045**
					55	**BRCV/22x055**
	55				**65**	**BRCV/22x065**
					75	**BRCV/22x075**
	65				**95**	**BRCV/22x095**
					115	**BRCV/22x115**
8	-	40	35	**25**	**35**	**BRCV/25x035**
					45	**BRCV/25x045**
					55	**BRCV/25x055**
	55				**65**	**BRCV/25x065**
					75	**BRCV/25x075**
	-	45	40	**30**	**26**	**BRCV/30x026**
					35	**BRCV/30x035**
					45	**BRCV/30x045**
					55	**BRCV/30x055**
	65				**65**	**BRCV/30x065**
					75	**BRCV/30x075**
					95	**BRCV/30x095**
					115	**BRCV/30x115**
					135	**BRCV/30x135**
10	-	54	50	**40**	**55**	**BRCV/40x055**
	65				**75**	**BRCV/40x075**
					95	**BRCV/40x095**
					135	**BRCV/40x135**

BRCVBG

Special headed oilless bush
Casquillo autolubricado con valona
Tuleja prowadząca samosmarująca
Casquilho bronze alumínio com grafite
Bague bronze a collerette sans plot de centrage avec inserts graphite



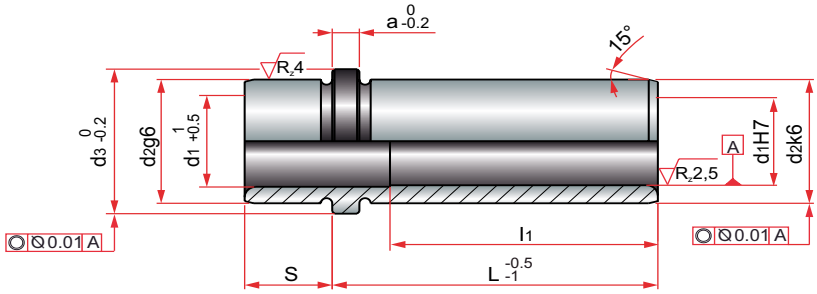
Mat. : Aluminium bronze + graphite inserts.

a	d3	d2	d1	L1	L	REF.
4	24	20	**16**	-	**21**	**BRCVBG/16x021**
					26	**BRCVBG/16x026**
					35	**BRCVBG/16x035**
					45	**BRCVBG/16x045**
					55	**BRCVBG/16x055**
				≥45	**65**	**BRCVBG/16x065**
					75	**BRCVBG/16x075**
					95	**BRCVBG/16x095**
6	30	25	**18**	-	**21**	**BRCVBG/18x021**
					26	**BRCVBG/18x026**
					35	**BRCVBG/18x035**
					45	**BRCVBG/18x045**
					55	**BRCVBG/18x055**
				≥45	**65**	**BRCVBG/18x065**
					75	**BRCVBG/18x075**
				≥65	**95**	**BRCVBG/18x095**
	35	30	**22**	-	**26**	**BRCVBG/22x026**

a	d3	d2	d1	L1	L	REF.
6	35	30	**22**	-	**35**	**BRCVBG/22x035**
					45	**BRCVBG/22x045**
					55	**BRCVBG/22x055**
				≥55	**65**	**BRCVBG/22x065**
					75	**BRCVBG/22x075**
				≥65	**95**	**BRCVBG/22x095**
8	45	40	**30**	-	**26**	**BRCVBG/30x026**
					35	**BRCVBG/30x035**
					45	**BRCVBG/30x045**
					55	**BRCVBG/30x055**
					65	**BRCVBG/30x065**
				≥65	**75**	**BRCVBG/30x075**
					95	**BRCVBG/30x095**
					135	**BRCVBG/30x135**
10	54	50	**40**	-	**55**	**BRCVBG/40x055**
				≥65	**95**	**BRCVBG/40x095**

BRCV2

Special tailed leader pin bushing
Casquillo guía con centrador
Tuleja prowadząca z kołnierzem centrującym
Casquilho dois corpos cementado
Bague de guidage epaulee type



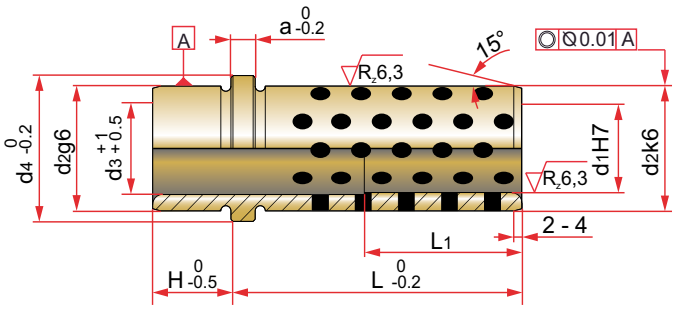
Hardness: 58 ± 2 HRC.

a	S	l1	d3	d2	d1	L	REF.
4	8	-	20	16	**12**	**17**	**BRCV2/12x017**
						26	**BRCV2/12x026**
						35	**BRCV2/12x035**
		35				**45**	**BRCV2/12x045**
						55	**BRCV2/12x055**
	12	-	24	20	**16**	**17**	**BRCV2/16x017**
						21	**BRCV2/16x021**
						26	**BRCV2/16x026**
						35	**BRCV2/16x035**
						45	**BRCV2/16x045**
						55	**BRCV2/16x055**
		55				**75**	**BRCV2/16x075**
6	17	-	30	25	**18**	**21**	**BRCV2/18x021**
						26	**BRCV2/18x026**
						35	**BRCV2/18x035**
						45	**BRCV2/18x045**
						55	**BRCV2/18x055**
		55				**75**	**BRCV2/18x075**

a	S	l1	d3	d2	d1	L	REF.
6	17	55	30	25	**18**	**95**	**BRCV2/18x095**
		-	35	30	**22**	**21**	**BRCV2/22x021**
						26	**BRCV2/22x026**
						35	**BRCV2/22x035**
						45	**BRCV2/22x045**
						55	**BRCV2/22x055**
		65				**75**	**BRCV2/22x075**
						95	**BRCV2/22x095**
						115	**BRCV2/22x115**
8	21	-	45	40	**30**	**26**	**BRCV2/30x026**
						35	**BRCV2/30x035**
						55	**BRCV2/30x055**
						75	**BRCV2/30x075**
		75				**95**	**BRCV2/30x095**
						115	**BRCV2/30x115**
						135	**BRCV2/30x135**
						155	**BRCV2/30x155**

BRCV2BG

Tailed oilless bush BRCV2BG
Casquillo autolubricado con centrador BRCV2BG
Tuleja prowadząca z kołnierzem centrującym samosmarująca BRCV2BG
Casquilho dois corpos bronze alumínio com grafite BRCV2BG
Bague bronze a collerette avec plot de centrage avec inserts graphite type BRCV2BG

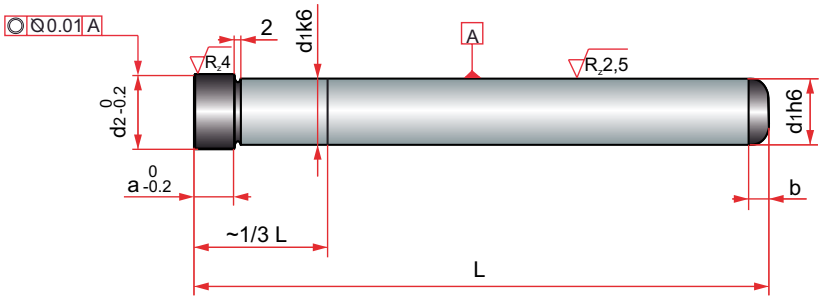


Mat. : Aluminium bronze + graphite inserts.

H	a	d3	d4	d2	d1	L1	L	REF.
8	4	12	20	16	**12**	-	**17**	**BRCV2BG-12x17**
12		16	24	20	**16**			**BRCV2BG-16x17**
							21	**BRCV2BG-16x21**
							26	**BRCV2BG-16x26**
							35	**BRCV2BG-16x35**
17	6	18	30	25	**18**		**21**	**BRCV2BG-18x21**
							26	**BRCV2BG-18x26**
							35	**BRCV2BG-18x35**
		20	35	30	**20**		**21**	**BRCV2BG-20x21**
							26	**BRCV2BG-20x26**
		22	35	30	**22**		**21**	**BRCV2BG-22x21**
							26	**BRCV2BG-22x26**
							35	**BRCV2BG-22x35**
						≥38	**55**	**BRCV2BG-22x55**
21	8	30	45	40	**30**	-	**35**	**BRCV2BG-30x35**
							55	**BRCV2BG-30x55**
25		40	56	50	**40**		**45**	**BRCV2BG-40x45**
35	10	50	75	66	**50**		**76**	**BRCV2BG-50x76**

BRG2

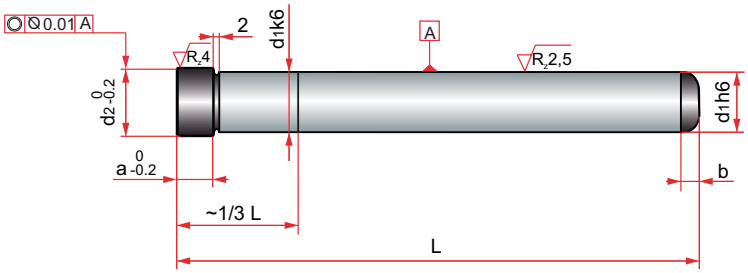
Angle pin
Guía para corredera
Słup skośny suwaka
Coluna inclinada
Doigt de demoulage



Hardness: 58 ± 2 HRC.

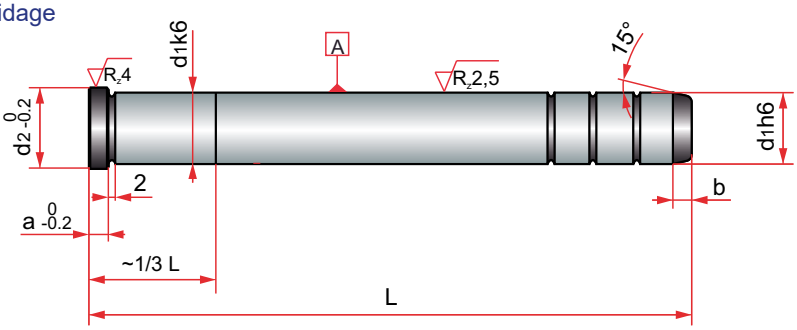
a	b	d2	d1	L	REF.
8	3	12	10	44	BRG2/10x044
				52	BRG2/10x052
				65	BRG2/10x065
				75	BRG2/10x075
				85	BRG2/10x085
				95	BRG2/10x095
				105	BRG2/10x105
	4	15	12	44	BRG2/12x044
				52	BRG2/12x052
				65	BRG2/12x065
				75	BRG2/12x075
				85	BRG2/12x085
				95	BRG2/12x095
				105	BRG2/12x105
				115	BRG2/12x115
				125	BRG2/12x125
				140	BRG2/12x140
10		17	14	44	BRG2/14x044
				52	BRG2/14x052
				65	BRG2/14x065
				75	BRG2/14x075
				85	BRG2/14x085
				95	BRG2/14x095
				105	BRG2/14x105
				115	BRG2/14x115

a	b	d2	d1	L	REF.
10	4	17	14	125	BRG2/14x125
				140	BRG2/14x140
12	5	19	16	52	BRG2/16x052
				65	BRG2/16x065
				75	BRG2/16x075
				85	BRG2/16x085
				95	BRG2/16x095
				105	BRG2/16x105
				115	BRG2/16x115
				125	BRG2/16x125
				140	BRG2/16x140
				170	BRG2/16x170
				200	BRG2/16x200
				250	BRG2/16x250
14	6	22	18	65	BRG2/18x065
				75	BRG2/18x075
				85	BRG2/18x085
				95	BRG2/18x095
				105	BRG2/18x105
				115	BRG2/18x115
				125	BRG2/18x125
				140	BRG2/18x140
				170	BRG2/18x170
				200	BRG2/18x200
				250	BRG2/18x250



a	b	d2	d1	L	REF.
15	6	24	**20**	**75**	**BRG2/20x075**
				85	**BRG2/20x085**
				95	**BRG2/20x095**
				105	**BRG2/20x105**
				115	**BRG2/20x115**
				125	**BRG2/20x125**
				140	**BRG2/20x140**
				170	**BRG2/20x170**
				200	**BRG2/20x200**
				250	**BRG2/20x250**
				300	**BRG2/20x300**
18	7	30	**25**	**75**	**BRG2/25x075**
				85	**BRG2/25x085**
				95	**BRG2/25x095**
				105	**BRG2/25x105**
				115	**BRG2/25x115**
				125	**BRG2/25x125**
				140	**BRG2/25x140**
				170	**BRG2/25x170**
				200	**BRG2/25x200**
				250	**BRG2/25x250**
				315	**BRG2/25x315**
				350	**BRG2/25x350**
20		35	**30**	**200**	**BRG2/30x200**
				250	**BRG2/30x250**
				315	**BRG2/30x315**
				350	**BRG2/30x350**
				400	**BRG2/30x400**

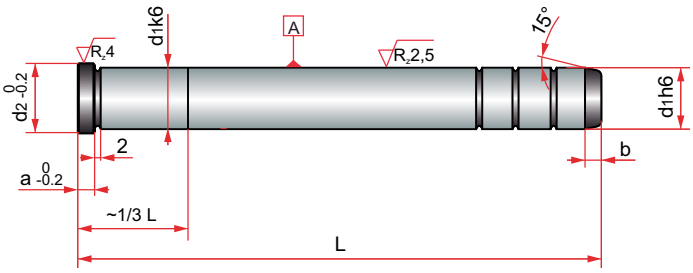
Guide pillar
Guía lisa
Słup
Coluna lisa
Colonne de guidage



Hardness: 58 ± 2 HRC.

b	a	d2	d1	L	REF.
3	4	12	10	44	BRG/10x044
				52	BRG/10x052
				65	BRG/10x065
				75	BRG/10x075
				85	BRG/10x085
				95	BRG/10x095
				105	BRG/10x105
				115	BRG/10x115
				125	BRG/10x125
4		15	12	44	BRG/12x044
				52	BRG/12x052
				65	BRG/12x065
				75	BRG/12x075
				85	BRG/12x085
				95	BRG/12x095
				105	BRG/12x105
				115	BRG/12x115
				125	BRG/12x125
				140	BRG/12x140
	5	17	14	44	BRG/14x044
				52	BRG/14x052
				65	BRG/14x065
				75	BRG/14x075
				85	BRG/14x085
				95	BRG/14x095

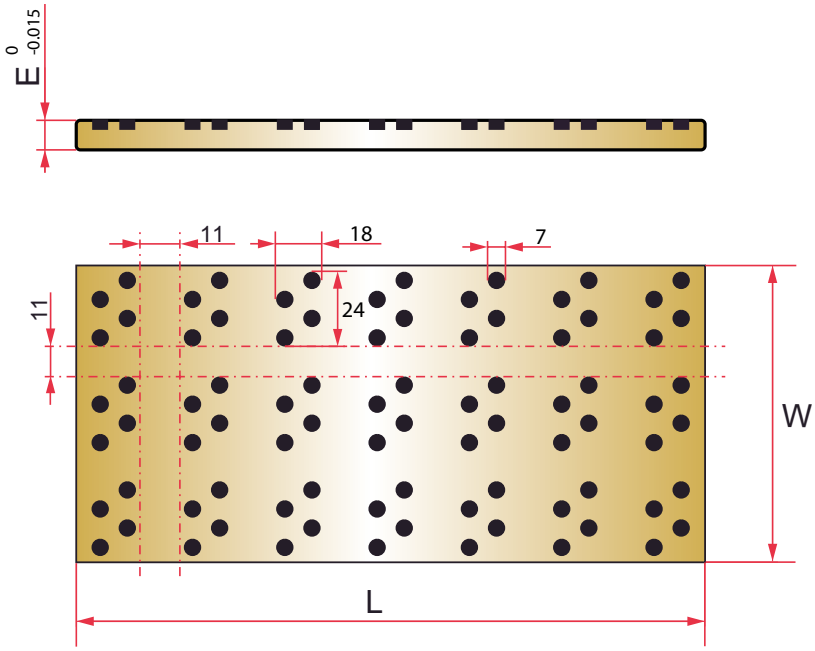
b	a	d2	d1	L	REF.
4	5	17	14	105	BRG/14x105
				115	BRG/14x115
				125	BRG/14x125
				140	BRG/14x140
				170	BRG/14x170
5	6	19	16	52	BRG/16x052
				65	BRG/16x065
				75	BRG/16x075
				85	BRG/16x085
				95	BRG/16x095
				105	BRG/16x105
				115	BRG/16x115
				125	BRG/16x125
				140	BRG/16x140
				170	BRG/16x170
				200	BRG/16x200
6		22	18	65	BRG/18x065
				75	BRG/18x075
				85	BRG/18x085
				95	BRG/18x095
				105	BRG/18x105
				115	BRG/18x115
				125	BRG/18x125
				140	BRG/18x140
				170	BRG/18x170



b	a	d2	d1	L	REF.
6	6	22	**18**	**200**	**BRG/18x200**
	7	24	**20**	**75**	**BRG/20x075**
				85	**BRG/20x085**
				95	**BRG/20x095**
				105	**BRG/20x105**
				115	**BRG/20x115**
				125	**BRG/20x125**
				140	**BRG/20x140**
				170	**BRG/20x170**
				200	**BRG/20x200**
				250	**BRG/20x250**
7	8	30	**25**	**75**	**BRG/25x075**
				85	**BRG/25x085**
				95	**BRG/25x095**
				105	**BRG/25x105**
				115	**BRG/25x115**
				125	**BRG/25x125**
				140	**BRG/25x140**
				170	**BRG/25x170**
				200	**BRG/25x200**
				250	**BRG/25x250**
8	10	35	**30**	**95**	**BRG/30x095**
				105	**BRG/30x105**
				115	**BRG/30x115**
				125	**BRG/30x125**
				140	**BRG/30x140**
				170	**BRG/30x170**
				200	**BRG/30x200**
				250	**BRG/30x250**

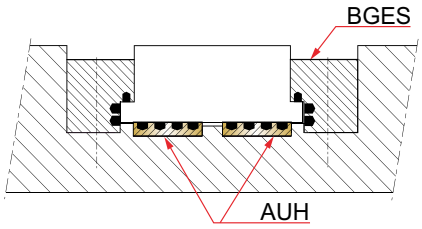
BRAUH

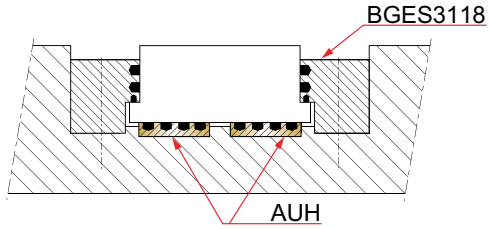
Special oilless wear plate BRAUH
Placa de bronce con grafito BRAUH
Płytka samosmarująca grafitem typ BRAUH
Placa de deslize bronze alumínio com grafite BRAUH
Plaque de frottement autolubrifiee BRAUH



Mat. : 2.0598 ≈ 180 HB / Graphit. T max. = 200º C.

W	E	L	REF.
100	6	200	BRAUH

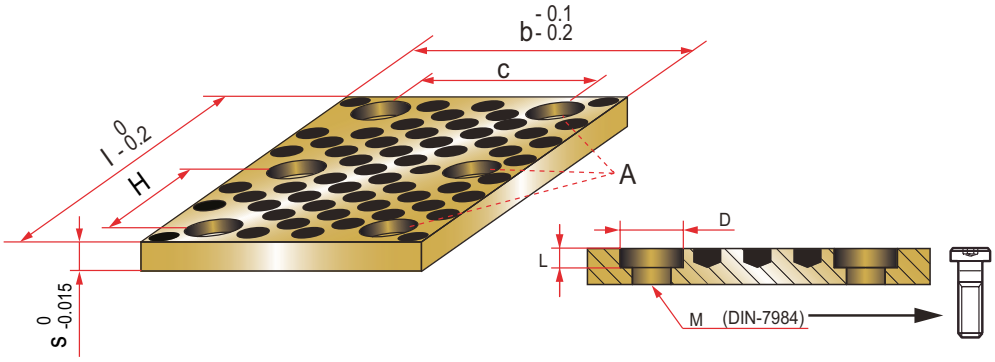




BR3176

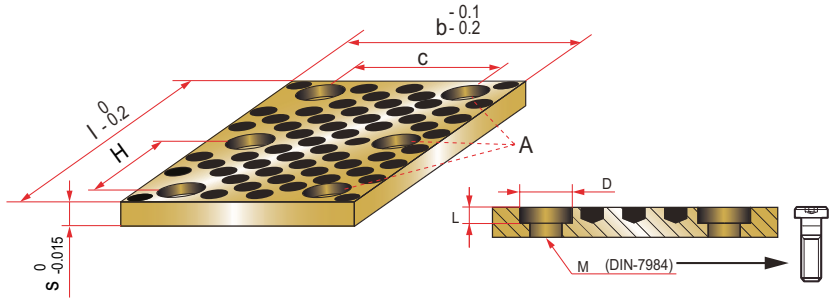
E3176

Special oilless wear plate
Placa de bronce con grafito
Płytka samosmarująca długa z grafitem
Placa de deslize bronze alumínio com grafite
Plaque de frottement autolubrifiee



Mat. : 2.0598 ≈ 180 HB / Graphit. T max. = 200º C.

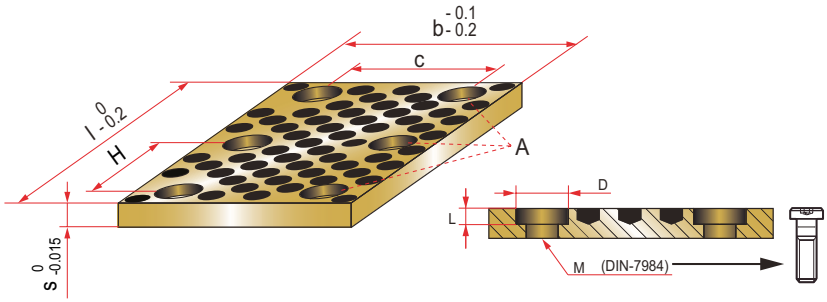
D	L	M	A (holes)	C	H	b	s	l	REF.
7,5	3	M 4	2	-	14	**12**	**5**	**25**	**BR3176-12- 5- 25**
					16			**32**	**BR3176-12- 5- 32**
					24			**40**	**BR3176-12- 5- 40**
					34			**50**	**BR3176-12- 5- 50**
					47			**63**	**BR3176-12- 5- 63**
			3		32			**80**	**BR3176-12- 5- 80**
					40			**100**	**BR3176-12- 5-100**
			2		16	**16**		**32**	**BR3176-16- 5- 32**
					24			**40**	**BR3176-16- 5- 40**
					34			**50**	**BR3176-16- 5- 50**
					47			**63**	**BR3176-16- 5- 63**
			3		32			**80**	**BR3176-16- 5- 80**
					42			**100**	**BR3176-16- 5-100**
					52			**125**	**BR3176-16- 5-125**



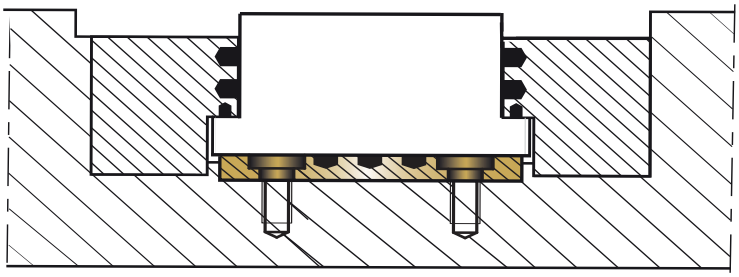
D	L	M	A (holes)	C	H	b	s	l	REF.
9	4	M 5	2	-	16	**20**	**6**	**32**	**BR3176-20- 6- 32**
					20			**40**	**BR3176-20- 6- 40**
					30			**50**	**BR3176-20- 6- 50**
					43			**63**	**BR3176-20- 6- 63**
					60			**80**	**BR3176-20- 6- 80**
			3		40			**100**	**BR3176-20- 6-100**
					50			**125**	**BR3176-20- 6-125**
			2		16	**25**		**32**	**BR3176-25- 6- 32**
					20			**40**	**BR3176-25- 6- 40**
					26			**50**	**BR3176-25- 6- 50**
					39			**63**	**BR3176-25- 6- 63**
					56			**80**	**BR3176-25- 6- 80**
					76			**100**	**BR3176-25- 6-100**
			3		50,5			**125**	**BR3176-25- 6-125**
					68			**160**	**BR3176-25- 6-160**
			2		20	**32**		**40**	**BR3176-32- 6- 40**
					26			**50**	**BR3176-32- 6- 50**
					39			**63**	**BR3176-32- 6- 63**
					56			**80**	**BR3176-32- 6- 80**
					76			**100**	**BR3176-32- 6-100**
			3		50,5			**125**	**BR3176-32- 6-125**
					68			**160**	**BR3176-32- 6-160**
					88			**200**	**BR3176-32- 6-200**
			4	20	26	**40**		**50**	**BR3176-40- 6- 50**
					39			**63**	**BR3176-40- 6- 63**
					56			**80**	**BR3176-40- 6- 80**
					76			**100**	**BR3176-40- 6-100**
			6		50,5			**125**	**BR3176-40- 6-125**
					68			**160**	**BR3176-40- 6-160**
			8		58			**200**	**BR3176-40- 6-200**

BR3176

E3176



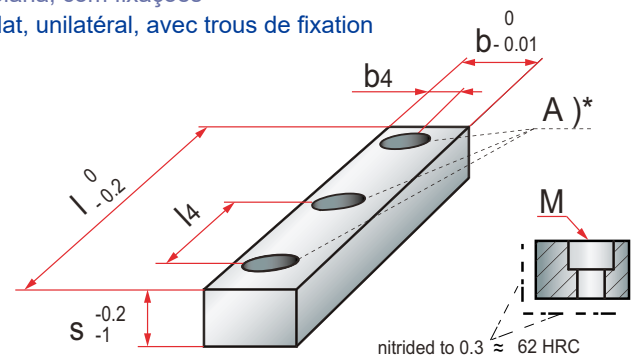
D	L	M	A (holes)	C	H	b	s	l	REF.
11	5	M 6	4	24	39	**50**	**8**	**63**	**BR3176-50- 8- 63**
					56			**80**	**BR3176-50- 8- 80**
					76			**100**	**BR3176-50- 8-100**
			6		50,5			**125**	**BR3176-50- 8-125**
					68			**160**	**BR3176-50- 8-160**
			8		58			**200**	**BR3176-50- 8-200**
					74			**250**	**BR3176-50- 8-250**
			4	35	56	**63**		**80**	**BR3176-63- 8- 80**
					76			**100**	**BR3176-63- 8-100**
			6		50,5			**125**	**BR3176-63- 8-125**
					68			**160**	**BR3176-63- 8-160**
			8		58			**200**	**BR3176-63- 8-200**
					72			**250**	**BR3176-63- 8-250**
					93			**315**	**BR3176-63- 8-315**
			4	50	76	**80**		**100**	**BR3176-80- 8-100**
			6		50,5			**125**	**BR3176-80- 8-125**
					68			**160**	**BR3176-80- 8-160**
			8		58			**200**	**BR3176-80- 8-200**
					72			**250**	**BR3176-80- 8-250**
					93			**315**	**BR3176-80- 8-315**



BR3141

E3141

One-sided flat guiding rail, with screw hole
Regleta-guía plana unilateral, con agujero para tornillo
Płaska listwa prowadząca, jednostronna z otworami pod śruby
Barra de deslize plana, com fixações
Rail de guidage plat, unilatéral, avec trous de fixation



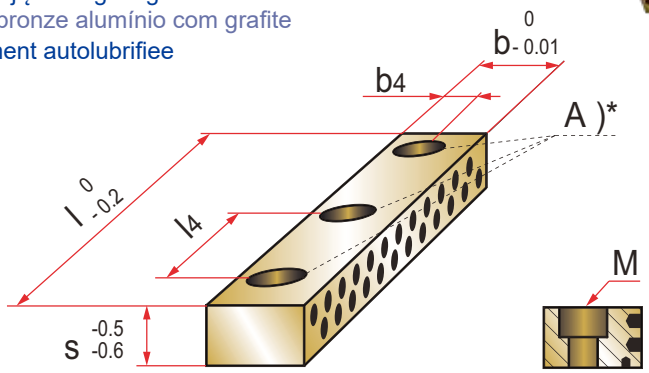
Mat. : 1.8550

E	M	A	b4	l4	b	s	l	REF.
UFK	M 5	2	6	24	**16**	**6**	**40**	**BR 3141-16- 6- 40**
				34			**50**	**BR 3141-16- 6- 50**
				47			**63**	**BR 3141-16- 6- 63**
		3		32			**80**	**BR 3141-16- 6- 80**
		2		34		**8**	**50**	**BR 3141-16- 8- 50**
				47			**63**	**BR 3141-16- 8- 63**
		3		32			**80**	**BR 3141-16- 8- 80**
				42			**100**	**BR 3141-16- 8-100**
TA12,9	M 6	2	9	43	**20**	**12**	**63**	**BR 3141-20-12- 63**
				60			**80**	**BR 3141-20-12- 80**
		3		40			**100**	**BR 3141-20-12-100**
				52,5			**125**	**BR 3141-20-12-125**
		2		60		**16**	**80**	**BR 3141-20-16- 80**
		3		40			**100**	**BR 3141-20-16-100**
				52,5			**125**	**BR 3141-20-16-125**
				70			**160**	**BR 3141-20-16-160**
	M 8	2	11	76	**25**	**22**	**100**	**BR 3141-25-22-100**
		3		50,5			**125**	**BR 3141-25-22-125**
				68			**160**	**BR 3141-25-22-160**
		4		58			**200**	**BR 3141-25-22-200**
		3		50,5		**30**	**125**	**BR 3141-25-30-125**
				68			**160**	**BR 3141-25-30-160**
		4		58			**200**	**BR 3141-25-30-200**
				74			**250**	**BR 3141-25-30-250**
	M10	3	14	64	**32**	**38**	**160**	**BR 3141-32-38-160**
				84			**200**	**BR 3141-32-38-200**
		4		72			**250**	**BR 3141-32-38-250**
				93			**315**	**BR 3141-32-38-315**

BR3143

E3143

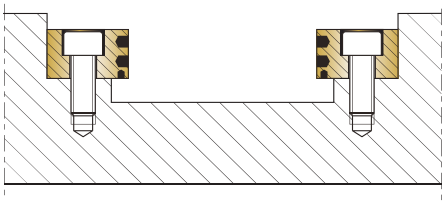
Special oilless wear plate
Placa de bronce con grafito
Płytka samosmarująca długa z grafitem
Placa de deslize bronze alumínio com grafite
Plaque de frottement autolubrifiee



Mat. : 2.0598 ≈ 180 HB / Graphit. T max. = 200º C.

M	A	b4	l4	b	s	l	REF.
M5 DIN-7991	2	6	24	**16**	**6**	**40**	**BR3143-16- 6- 40**
			34			**50**	**BR3143-16- 6- 50**
			47			**63**	**BR3143-16- 6- 63**
	3		32			**80**	**BR3143-16- 6- 80**
	2		34		**8**	**50**	**BR3143-16- 8- 50**
			47			**63**	**BR3143-16- 8- 63**
	3		32			**80**	**BR3143-16- 8- 80**
			42			**100**	**BR3143-16- 8-100**
M6 DIN-912	2	9	43	**20**	**12**	**63**	**BR3143-20-12-063**
			60			**80**	**BR3143-20-12-080**
	3		40			**100**	**BR3143-20-12-100**
			52,5			**125**	**BR3143-20-12-125**
	2		60		**16**	**80**	**BR3143-20-16-080**
	3		40			**100**	**BR3143-20-16-100**
			52,5			**125**	**BR3143-20-16-125**
			70			**160**	**BR3143-20-16-160**
M8 DIN-912	2	11	76	**25**	**22**	**100**	**BR3143-25-22-100**
	3		50,5			**125**	**BR3143-25-22-125**
			68			**160**	**BR3143-25-22-160**
	4		58			**200**	**BR3143-25-22-200**
	3		50,5		**30**	**125**	**BR3143-25-30-125**
			68			**160**	**BR3143-25-30-160**
	4		58			**200**	**BR3143-25-30-200**

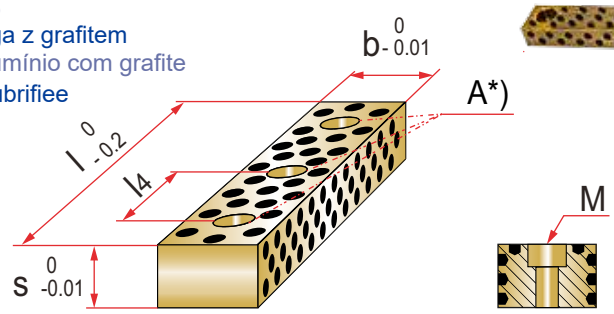
A)* number of holes



BR3151

E3151

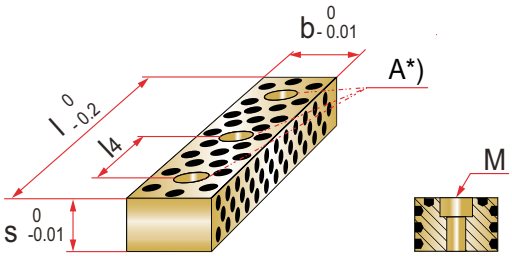
Special oilless wear plate
Placa de bronce con grafito
Płytka samosmarująca długa z grafitem
Placa de deslize bronze alumínio com grafite
Plaque de frottement autolubrifiee



Mat. : 2.0598 ≈ 180 HB / Graphit. T max. = 200º C.

M	A *)	l4	b	s	l	REF.
M 4	2	24	12	16	40	BR3151-12-16- 40
		34			50	BR3151-12-16- 50
		47			63	BR3151-12-16- 63
M 5		34	16		50	BR3151-16-16- 50
		47			63	BR3151-16-16- 63
	3	32			80	BR3151-16-16- 80
	2	34		20	50	BR3151-16-20- 50
		47			63	BR3151-16-20- 63
	3	32			80	BR3151-16-20- 80
M 6	2	43	20	16	63	BR3151-20-16- 63
		60			80	BR3151-20-16- 80
	3	40			100	BR3151-20-16-100
	2	43		20	63	BR3151-20-20- 63
		60			80	BR3151-20-20- 80
	3	40			100	BR3151-20-20-100
	2	43		25	63	BR3151-20-25- 63
		60			80	BR3151-20-25- 80
	3	40			100	BR3151-20-25-100
M 8	2	56	25	16	80	BR3151-25-16- 80
		76			100	BR3151-25-16-100
	3	50,5			125	BR3151-25-16-125
	2	56		20	80	BR3151-25-20- 80
		76			100	BR3151-25-20-100
	3	50,5			125	BR3151-25-20-125
	2	56		25	80	BR3151-25-25- 80
		76			100	BR3151-25-25-100
	3	50,5			125	BR3151-25-25-125
	2	56		32	80	BR3151-25-32- 80
		76			100	BR3151-25-32-100
	3	50,5			125	BR3151-25-32-125

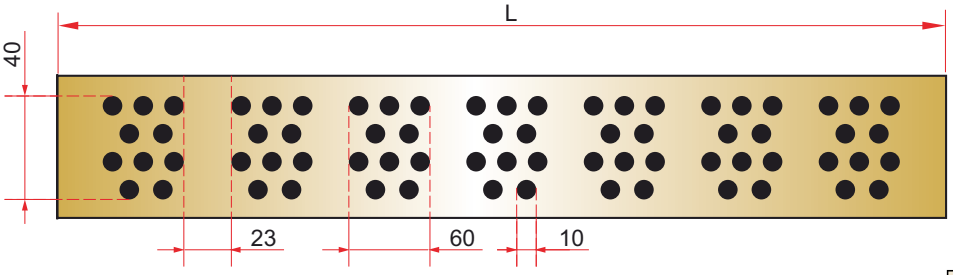
A)* number of holes

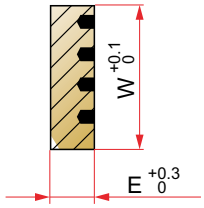


M	A (1)	l4	b	s	l	REF.
M 8	2	76	**32**	**20**	**100**	**BR3151-32-20-100**
	3	50,5			**125**	**BR3151-32-20-125**
		68			**160**	**BR3151-32-20-160**
	2	76		**25**	**100**	**BR3151-32-25-100**
	3	50,5			**125**	**BR3151-32-25-125**
		68			**160**	**BR3151-32-25-160**
	2	76		**32**	**100**	**BR3151-32-32-100**
	3	50,5			**125**	**BR3151-32-32-125**
		68			**160**	**BR3151-32-32-160**
	2	76		**40**	**100**	**BR3151-32-40-100**
	3	50,5			**125**	**BR3151-32-40-125**
		68			**160**	**BR3151-32-40-160**
M10		46,5	**40**	**25**	**125**	**BR3151-40-25-125**
		64			**160**	**BR3151-40-25-160**
		84			**200**	**BR3151-40-25-200**
		46,5		**32**	**125**	**BR3151-40-32-125**
		64			**160**	**BR3151-40-32-160**
		84			**200**	**BR3151-40-32-200**
		46,5		**40**	**125**	**BR3151-40-40-125**
		64			**160**	**BR3151-40-40-160**
		84			**200**	**BR3151-40-40-200**
		64	**50**	**32**	**160**	**BR3151-50-32-160**
		84			**200**	**BR3151-50-32-200**
	4	72			**250**	**BR3151-50-32-250**
	3	64		**40**	**160**	**BR3151-50-40-160**
		84			**200**	**BR3151-50-40-200**
	4	72			**250**	**BR3151-50-40-250**
M12	3	83	**63**		**200**	**BR3151-63-40-200**
	4	72			**250**	**BR3151-63-40-250**
		93			**315**	**BR3151-63-40-315**
	3	83		**50**	**200**	**BR3151-63-50-200**
	4	72			**250**	**BR3151-63-50-250**
		93			**315**	**BR3151-63-50-315**

BRBGPS

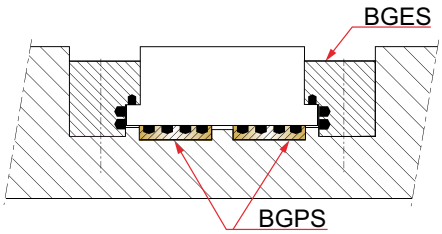
Special oilless wear plate BRBGPS
Placa de bronce con grafito BRBGPS
Płytka samosmarująca długa z grafitem typ BRBGPS
Placa de deslize bronze alumínio com grafite BRBGPS
Plaque de frottement autolubrifiee BRGPS

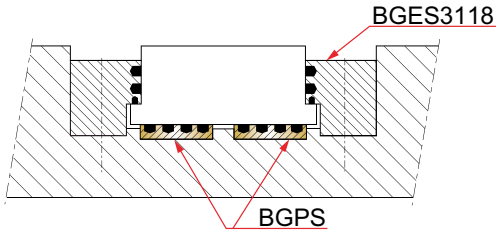




Mat. : 2.0598 ≈ 180 HB / Graphit. T max. = 200º C.

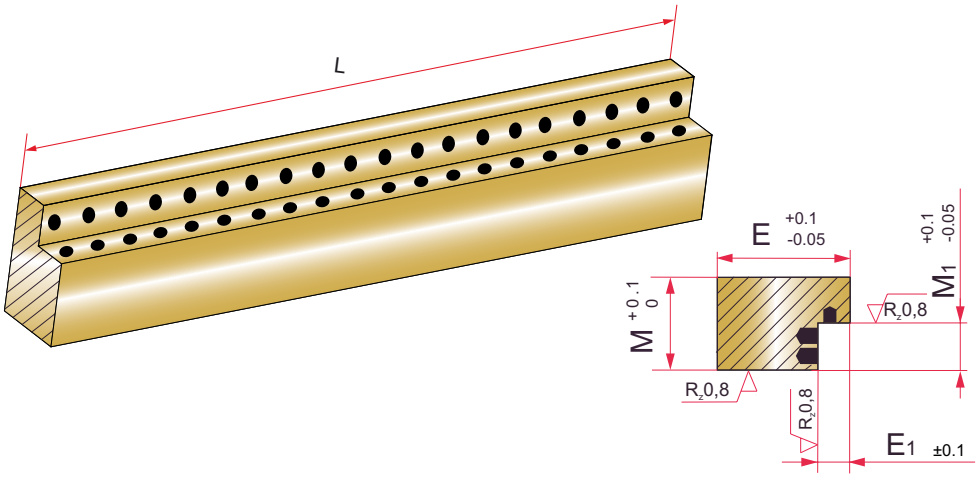
W	E	L	REF.
50	10	605	BRBGPS





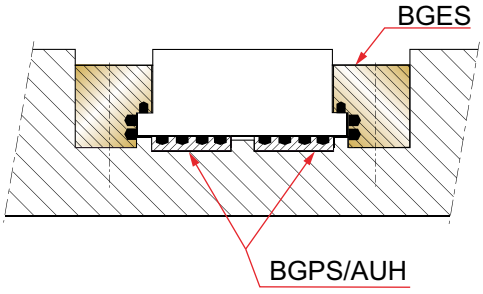
BRBGES

L-shape oilless plate BRBGES
Escuadra de bronce con grafito BRBGES
Listwa prowadząca jednostronnie samosmarująca, bezobsługowa
Esquadro de quiamento BRBGES
Plaque de frottement autolubrifiee BRBGES



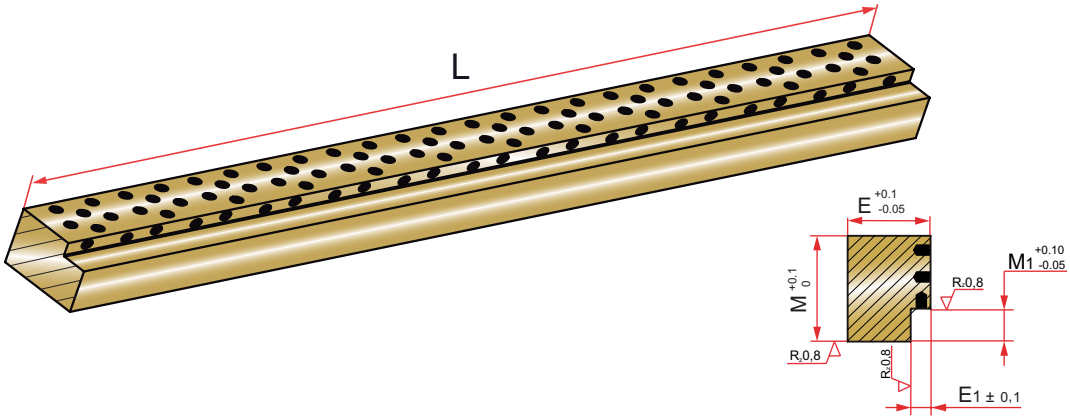
Mat. : 2.0598 ≈ 180 HB / Graphit. T max. = 200º C.

E1	M1	M	E	L	REF.
5	6	**12**	**20**	**305**	**BRBGES/1**
7	8	**15**	**25**		**BRBGES/2**
9	12	**20**	**30**		**BRBGES/3**



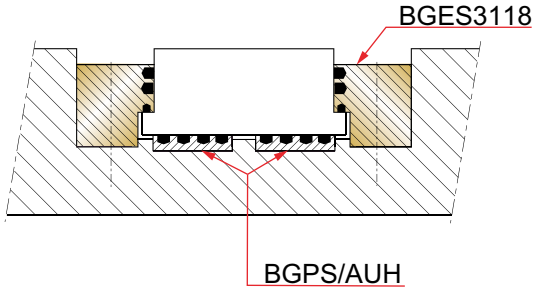
BR3118

L-shape oilless plate BRBGES3118
Escuadra de bronce con grafito BRBGES3118
Listwa prowadząca jednostronnie samosmarująca, bezobsługowa
Esquadro de quiamento BRBGES3118
Plaque de frottement autolubrifiee BRBGES3118



Mat. : 2.0598 ≈ 180 HB / Graphit. T max. = 200º C.

E1	M1	M	E	L	REF.
4	6	**12**	**16**	**305**	**BR3118-12**
5	8	**25**	**20**		**BR3118-25**
6	10	**32**	**25**		**BR3118-32**

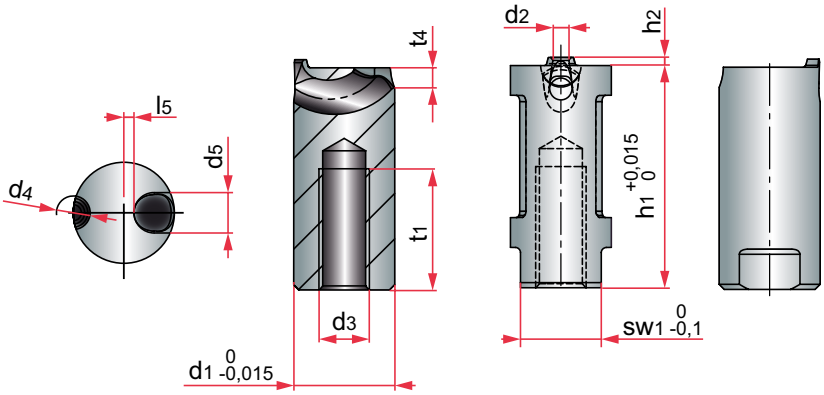


BR1050

Z1050

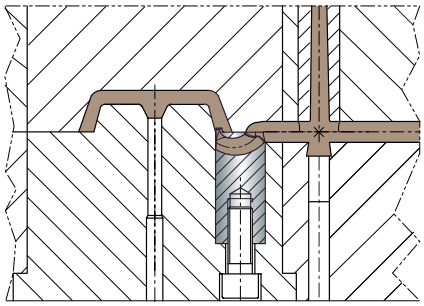
Tunnel gate insert
Inserto de inyección
Wkładka tunelowa
Postiço de injecção
Embout d´injection ciylindrique

3



Hardness: 54 ± 2 HRC.

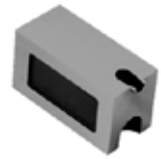
SW1	t1	t4	l5	h2	d3	d4	d5	d1	h1	d2	REF.
5,5	10	1,25	0,5	0,6	M4	2,2	2,5	**6**	**17**	**0,6**	**BR1050/06x17x0,6**
6	13	1,5	0,75				3	**8**	**22**		**BR1050/08x22x0,6**
						2,4				**0,8**	**BR1050/08x22x0,8**
8	12	2	1	0,8	M5	2,5	4	**10**			**BR1050/10x22x0,8**
						2,9				**1,2**	**BR1050/10x22x1,2**
						3,3				**1,6**	**BR1050/10x22x1,6**
10	11	2,5				2,9	5	**12**		**1,2**	**BR1050/12x22x1,2**
						3,3				**1,6**	**BR1050/12x22x1,6**
						3,7				**2,0**	**BR1050/12x22x2,0**

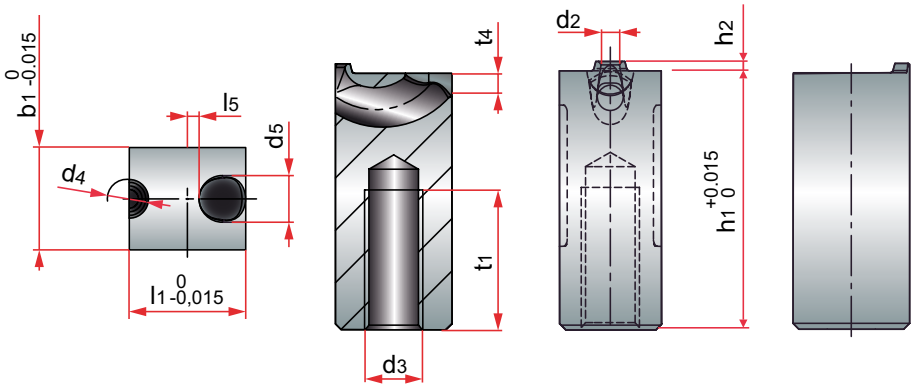


BR1060

Z1060

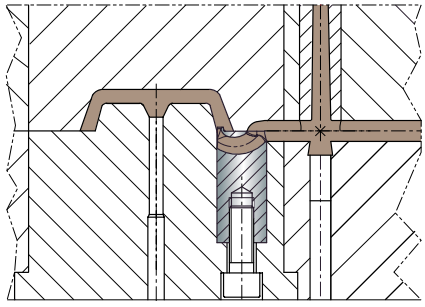
Tunnel gate insert
Inserto de inyección
Wkładka tunelowa
Postiço de injecção
Embout d´injection rectangulaire



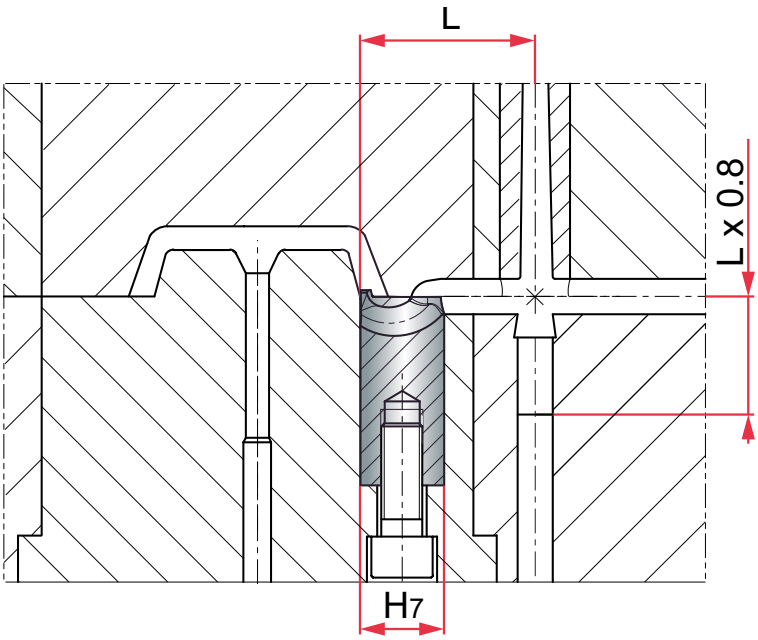


Hardness: 54 ± 2 HRC.

t1	t4	l5	h2	d3	d4	d5	l1	b1	h1	d2	REF.
13	1,5	0,75	0,6	M4	2,2	3	**8**	**6**	**22**	**0,6**	**BR1060/08x06x22x0,6**
					2,4					**0,8**	**BR1060/08x06x22x0,8**
12	2	1	0,8	M5	2,5	4	**10**	**8**			**BR1060/10x08x22x0,8**
					3					**1,2**	**BR1060/10x08x22x1,2**
					3,3					**1,6**	**BR1060/10x08x22x1,6**
11	2,5				2,9	5	**12**	**10**		**1,2**	**BR1060/12x10x22x1,2**
					3,3					**1,6**	**BR1060/12x10x22x1,6**
					3,7					**2,0**	**BR1060/12x10x22x2,0**



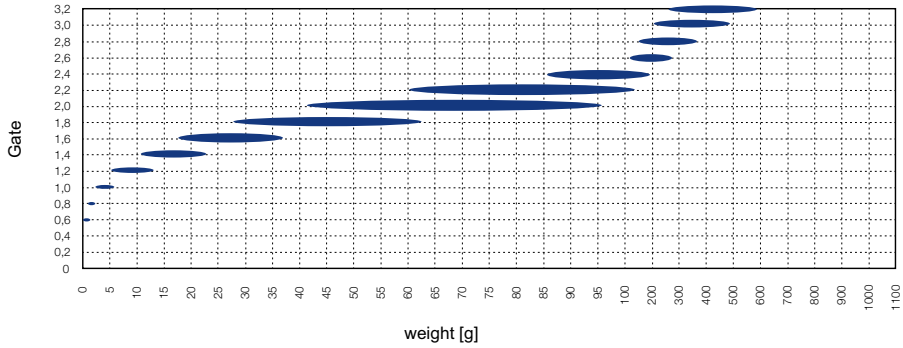
BR1050/BR1060



Distance L (mm)				REF.	
TPE, TPU, TPA	PE, PP, PET, PBT	ABS, PA, POM, ABS/PC	PA+GF, PC, SAN, PMMA, PS	**BR1050/ …**	**BR1060/ …**
9 - 11	12 - 18	15 - 22	18 - 25	… 6 x …	-
11 - 14	15 - 22	19 - 27	23 - 30	… 8 x …	… 8 x …
15 - 18	19 - 27	24 - 33	30 - 38	… 10 x …	… 10 x …
18 - 21	22 - 30	27 - 36	32 - 41	… 12 x …	… 12 x …

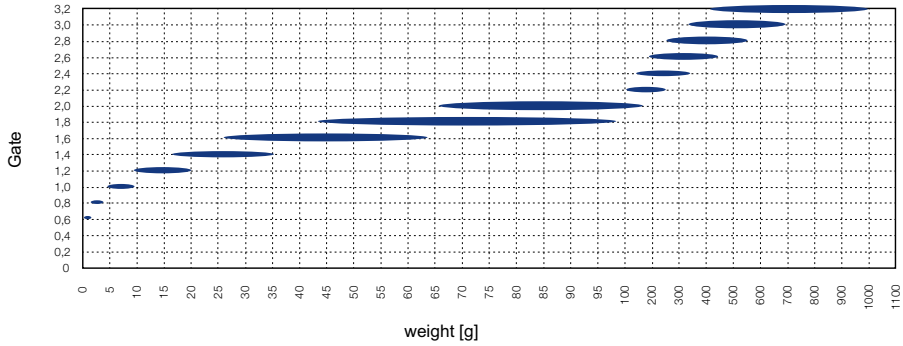
BR1050/BR1060

Gate diameter recommendation
Diámetro recomendado



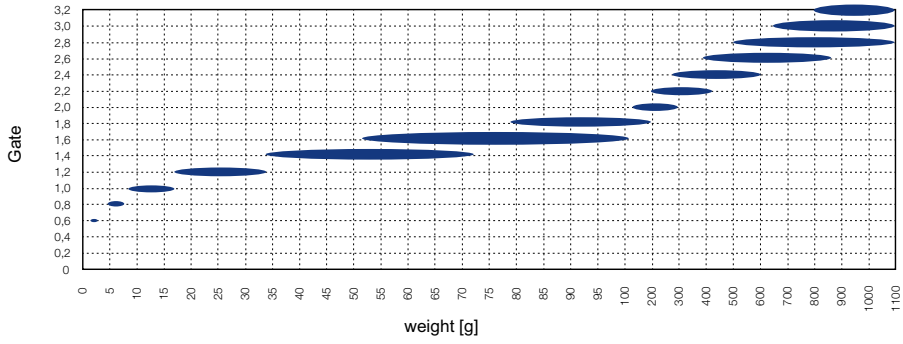
Medium Viscosity

ABS, SAN, POM-CO, PMMA , EPDM, PA, PBT, PET



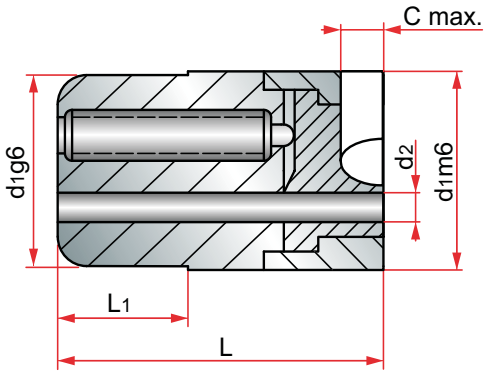
Low Viscosity

PP, PE, PS, SB



BR1716

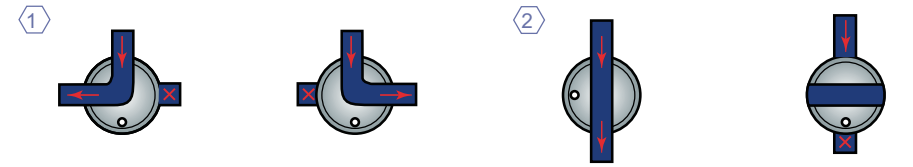
Runner shut-off insert
Direccionador de colada
Odcinacz kanału
Desvio jito
Insert coureur coulée



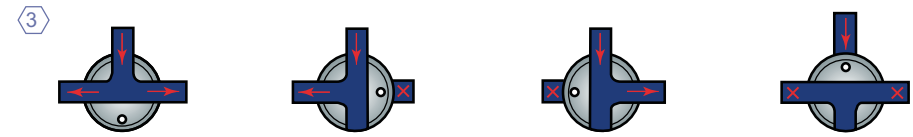
Hardness: 54 ± 2 HRC. Maximum temperature at work: 120º C.

C Max.	D1	L	L1	d2	REF.
3	**13**	22,5	9	2	**BR1716-13**
4,4	**16**				**BR1716-16**
9,5	**26**	32	14	3	**BR1716-26**

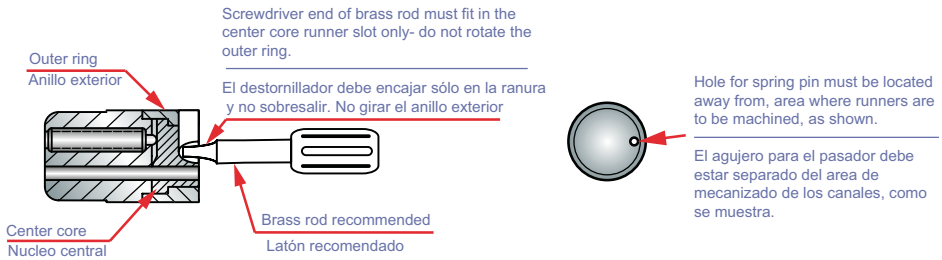
Posible configurations / Posibles configuraciones



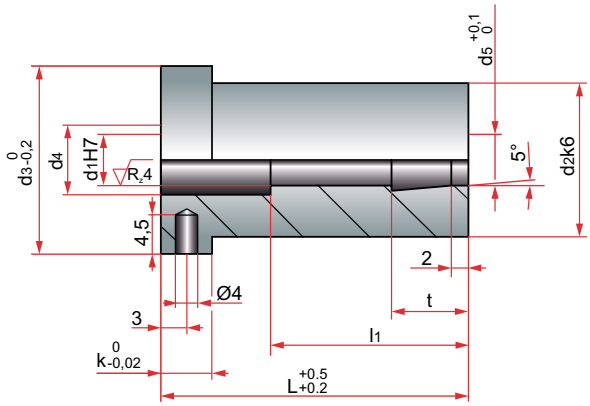
Left cavity / Cavidad izquierda — Right cavity / Cavidad derecha — Open / Abierto — Close / Cerrado



Open / Abierto — Left cavity / Cavidad izquierda — Right cavity / Cavidad derecha — Close / Cerrado

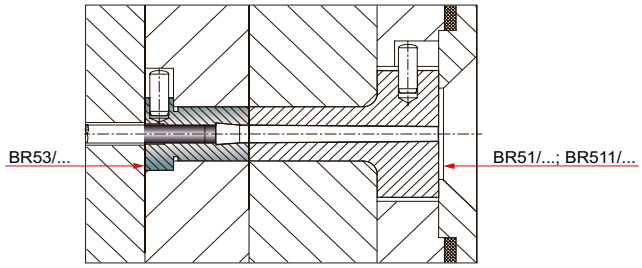


Sprue puller insert
Casquillo de retención de colada
Tulejowy zabierak wlewka
Casquilho gito
Douille de maintien de masse

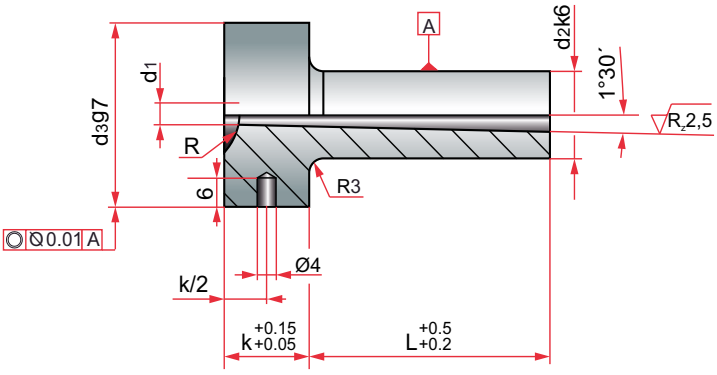


Mat. : 1.7035. Hardness: 54 ± 2 HRC.

k	d3	d4	d5	d1	t	l1	d2	L	REF.
6	16	4,50	4,20	4	7	18	**12**	**22**	**BR53-12x22**
								27	**BR53-12x27**
								36	**BR53-12x36**
								46	**BR53-12x46**
	22	6,50	6,20	6		22	**18**	**22**	**BR53-18x22**
						27		**27**	**BR53-18x27**
						28		**36**	**BR53-18x36**
								46	**BR53-18x46**
								56	**BR53-18x56**
								76	**BR53-18x76**
	28	8,50	8,20	8	9,50		**24**	**36**	**BR53-24x36**
								46	**BR53-24x46**
								56	**BR53-24x56**
								76	**BR53-24x76**
								96	**BR53-24x96**



Sprue bushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection



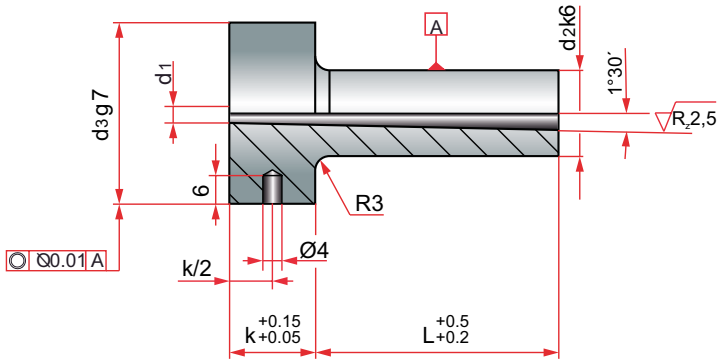
Mat. : 1.7035. Hardness: 54 ± 2 HRC.

d3	k	d2	L	d1	R	REF.	d1	REF.
38	18	18	27	3,5	15,5	BR51-18x27x3,5x15,5	4,5	BR51-18x27x4,5x15,5
			36			BR51-18x36x3,5x15,5		BR51-18x36x4,5x15,5
			46			BR51-18x46x3,5x15,5		BR51-18x46x4,5x15,5
			56			BR51-18x56x3,5x15,5		BR51-18x56x4,5x15,5
			76			BR51-18x76x3,5x15,5		BR51-18x76x4,5x15,5
			96			BR51-18x96x3,5x15,5		BR51-18x96x4,5x15,5
			27		40	BR51-18x27x3,5x40,0		BR51-18x27x4,5x40,0
			36			BR51-18x36x3,5x40,0		BR51-18x36x4,5x40,0
			46			BR51-18x46x3,5x40,0		BR51-18x46x4,5x40,0
			56			BR51-18x56x3,5x40,0		BR51-18x56x4,5x40,0
			76			BR51-18x76x3,5x40,0		BR51-18x76x4,5x40,0
			96			BR51-18x96x3,5x40,0		BR51-18x96x4,5x40,0
48	24	24	56	4,5	15,5	BR51-24x56x4,5x15,5	6,5	BR51-24x56x6,5x15,5
			96			BR51-24x96x4,5x15,5		BR51-24x96x6,5x15,5
			56		40	BR51-24x56x4,5x40,0		BR51-24x56x6,5x40,0
			96			BR51-24x96x4,5x40,0		BR51-24x96x6,5x40,0

BR51 Radio 0

E 1600/0510, Z 511

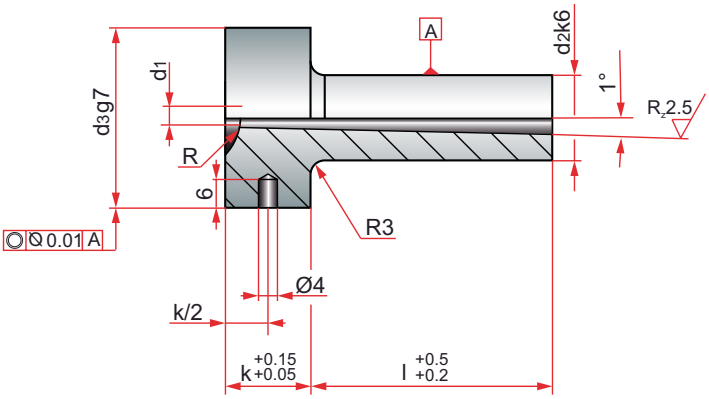
Sprue bushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection



Mat. : 1.7035. Hardness: 54 ± 2 HRC.

d3	k	d2	L	d1	REF
38	18	18	27	3,5	BR51-18x27x3,5x0
			36		BR51-18x36x3,5x0
			46		BR51-18x46x3,5x0
			56		BR51-18x56x3,5x0
			76		BR51-18x76x3,5x0
			96		BR51-18x96x3,5x0
			27	4,5	BR51-18x27x4,5x0
			36		BR51-18x36x4,5x0
			46		BR51-18x46x4,5x0
			56		BR51-18x56x4,5x0
			76		BR51-18x76x4,5x0
			96		BR51-18x96x4,5x0
48	24	24	56		BR51-24x56x4,5x0
			96		BR51-24x96x4,5x0
			56	6,5	BR51-24x56x6,5x0
			96		BR51-24x96x6,5x0

Sprue bushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection



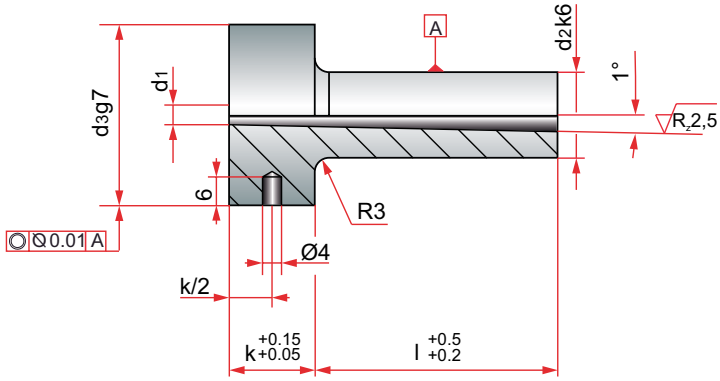
Mat. : 1.7035. Hardness: 54 ± 2 HRC.

d3	k	d2	l	d1	R	REF.	R	REF.
28	13	12	22	2,5	15,5	BR511-12x22x2,5x15,5	40	BR511-12x22x2,5x40
			27			BR511-12x27x2,5x15,5		BR511-12x27x2,5x40
			36			BR511-12x36x2,5x15,5		BR511-12x36x2,5x40
			46			BR511-12x46x2,5x15,5		BR511-12x46x2,5x40
			56			BR511-12x56x2,5x15,5		BR511-12x56x2,5x40
			76			BR511-12x76x2,5x15,5		BR511-12x76x2,5x40
			96			BR511-12x96x2,5x15,5		BR511-12x96x2,5x40
			22	3,5		BR511-12x22x3,5x15,5		BR511-12x22x3,5x40
			27			BR511-12x27x3,5x15,5		BR511-12x27x3,5x40
			36			BR511-12x36x3,5x15,5		BR511-12x36x3,5x40
			46			BR511-12x46x3,5x15,5		BR511-12x46x3,5x40
			56			BR511-12x56x3,5x15,5		BR511-12x56x3,5x40
			76			BR511-12x76x3,5x15,5		BR511-12x76x3,5x40
			96			BR511-12x96x3,5x15,5		BR511-12x96x3,5x40

BR511 Radio 0

E 1600/0510, Z 511

Sprue bushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

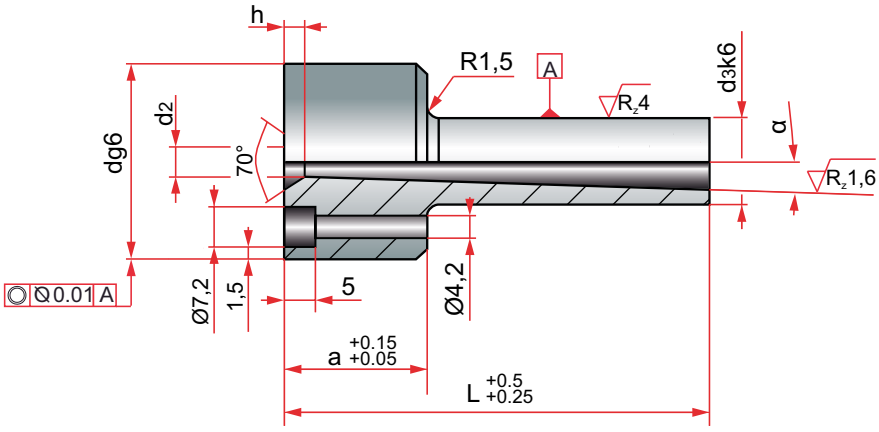


Mat. : 1.7035. Hardness: 54 ± 2 HRC.

d3	k	d2	l	d1	REF.	d1	REF.
28	13	12	22	2,50	BR511-12x22x2,5x0	3,50	BR511-12x22x3,5x0
			27		BR511-12x27x2,5x0		BR511-12x27x3,5x0
			36		BR511-12x36x2,5x0		BR511-12x36x3,5x0
			46		BR511-12x46x2,5x0		BR511-12x46x3,5x0
			56		BR511-12x56x2,5x0		BR511-12x56x3,5x0
			76		BR511-12x76x2,5x0		BR511-12x76x3,5x0
			96		BR511-12x96x2,5x0		BR511-12x96x3,5x0

BRB1

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

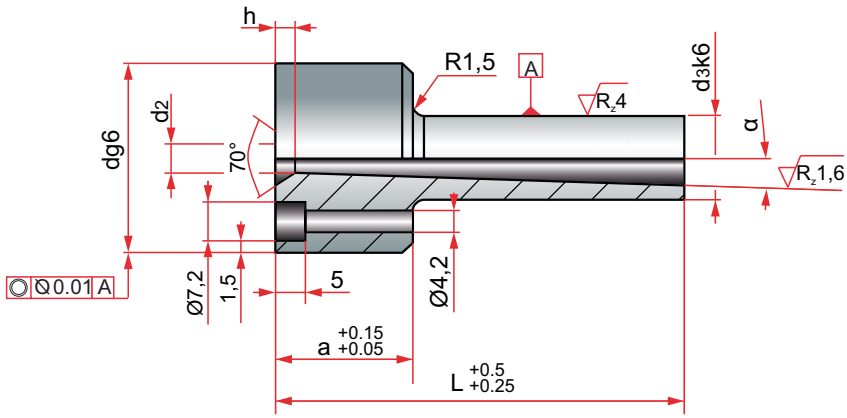


Mat. : 1.1191. Hardness: 21-23 HRC.

d2	h	α (º)	d	a	d3	L	REF.
4	3	2	35	**12**	14	**27**	**BRB1-12x027**
						36	**BRB1-12x036**
						46	**BRB1-12x046**
		1				**70**	**BRB1-12x070**
						100	**BRB1-12x100**
						128	**BRB1-12x128**
		2		**24**		**51**	**BRB1-24x051**
						60	**BRB1-24x060**
						70	**BRB1-24x070-2º**
		1					**BRB1-24x070-1º**
						100	**BRB1-24x100**
						128	**BRB1-24x128**

BRB1T

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

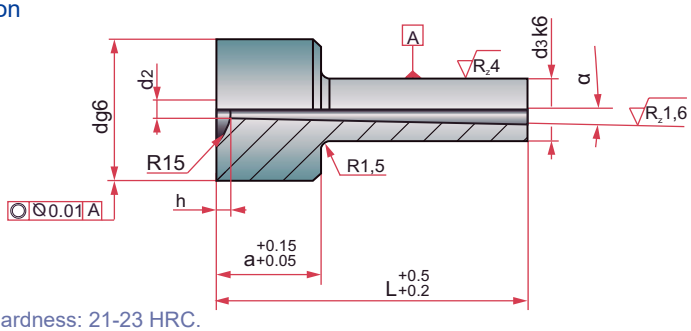


Mat. : 1.7035. Hardness: 54 ± 2 HRC.

d2	h	α (º)	d	a	d3	L	REF.
4	3	1	35	**12**	14	**70**	**BRB1T-12x070**
						100	**BRB1T-12x100**
		2		**24**		**70**	**BRB1T-24x070**
		1				**100**	**BRB1T-24x100**
						128	**BRB1T-24x128**

BRB3

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

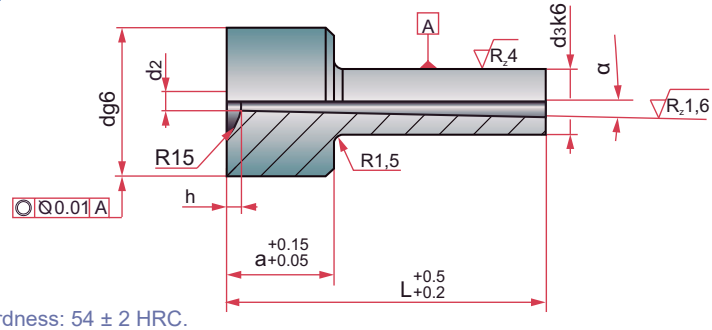


Mat. : 1.1191. Hardness: 21-23 HRC.

d2	h	α (º)	d	a	D3	L	REF.
4	3	1	35	**12**	14	**70**	**BRB3-12x070**
						100	**BRB3-12x100**
		2		**24**		**70**	**BRB3-24x070**
		1				**100**	**BRB3-24x100**

BRB3T

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

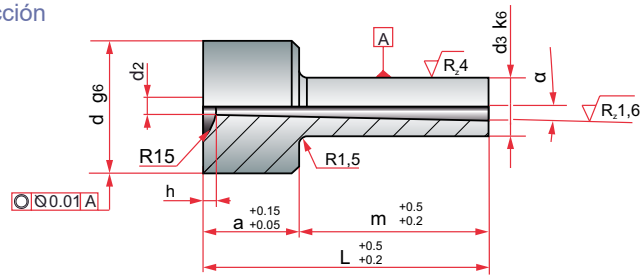


Mat. : 1.7035. Hardness: 54 ± 2 HRC.

d2	h	α (º)	d	a	D3	L	REF.
4	3	1	35	**12**	14	**70**	**BRB3T-12x070**
						100	**BRB3T-12x100**
		2		**24**		**70**	**BRB3T-24x070**
		1				**100**	**BRB3T-24x100**

BRB4

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

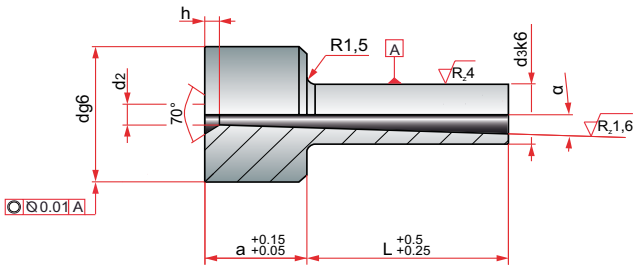


Mat. : 1.1191. Hardness: 21-23 HRC.

d_2	h	α (º)	d	m	a	d_3	L	REF.
5	3	1	50	76,5	26	25	**102,5**	**BRB4-102,5**
				86,5			**112,5**	**BRB4-112,5**
				96,5			**122,5**	**BRB4-122,5**
				106,5			**132,5**	**BRB4-132,5**
				116,5			**142,5**	**BRB4-142,5**
				126,5			**152,5**	**BRB4-152,5**
				136,5			**162,5**	**BRB4-162,5**
				156,5			**182,5**	**BRB4-182,5**

BRB7

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

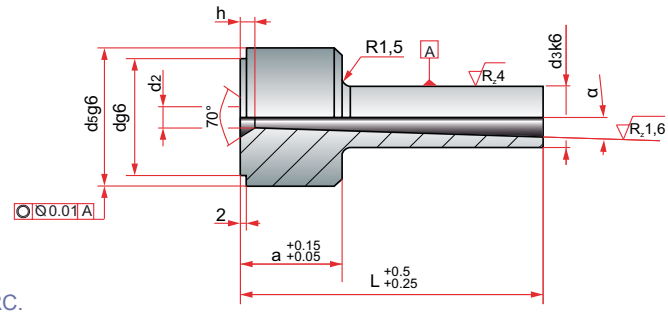


Mat. : 1.1191. Hardness: 21-23 HRC.

d2	h	α (º)	d	a	d3	L	REF.
4	3	1	35	18	18	**27**	**BRB7-027**
						36	**BRB7-036**
						46	**BRB7-046**
						56	**BRB7-056**
						76	**BRB7-076**
						96	**BRB7-096**
						116	**BRB7-116**

BRB11

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

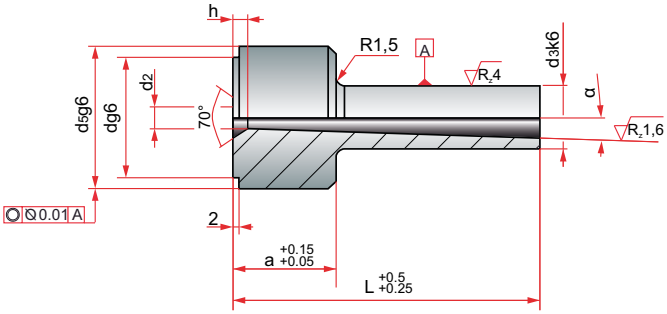


Hardness: 21-23 HRC.

d_2	h	α (º)	d5	d	a	d_3	L	REF.
4	3	1	38	35	**12**	14	**70**	**BRB11-12x070**
							100	**BRB11-12x100**
		2			**24**		**60**	**BRB11-24x060**
							70	**BRB11-24x070**
		1					**100**	**BRB11-24x100**

BRB11T

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

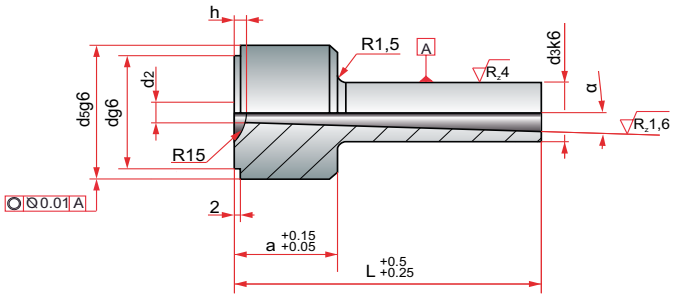


Mat. : 1.7035. Hardness: 54 ± 2 HRC.

d_2	h	α (º)	d_5	d	a	d_3	L	REF.
4	3	1	38	35	**12**	14	**70**	**BRB11T-12x070**
							100	**BRB11T-12x100**
		2			**24**		**70**	**BRB11T-24x070**
		1					**100**	**BRB11T-24x100**

BRB31

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

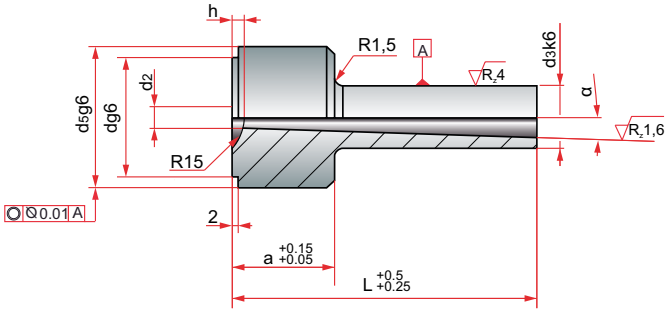


Mat. : 1.1191. Hardness: 21-23 HRC.

d2	h	α (º)	d_5	d	a	d_3	L	REF.
4	3	1	38	35	**12**	14	**70**	**BRB31-12x070**
							100	**BRB31-12x100**
		2			**24**		**70**	**BRB31-24x070**
		1					**100**	**BRB31-24x100**

BRB31T

Sprue brushing
Bebedero de inyección
Tuleja wtryskowa
Injector
Buse d´injection

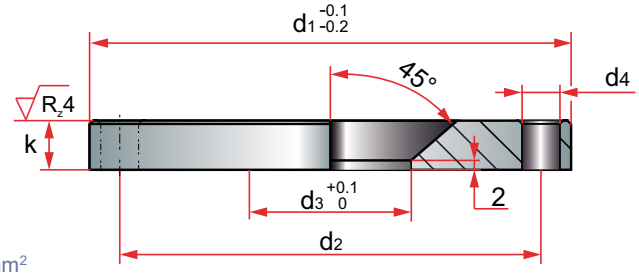


Mat. : 1.7035. Hardness: 58-60 HRC.

d2	h	α (º)	d_5	d	a	d_3	L	REF.
4	3	1	38	35	**12**	14	**70**	**BRB31T-12x070**
							100	**BRB31T-12x100**
		2			**24**		**70**	**BRB31T-24x070**
		1					**100**	**BRB31T-24x100**

BRDC

Locating ring
Disco centrador
Pierścień centrujący
Disco de centragem
Bague de centrage

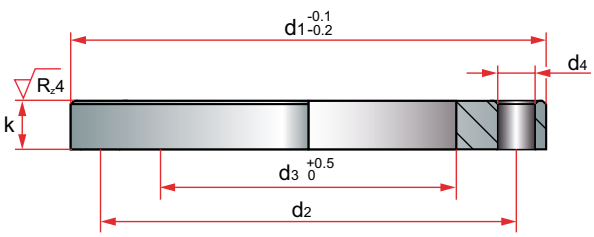


Mat. :1.1730. Min: 630 N/mm²

d4	d3	d2	d1	k	REF.	k	REF.
8,5	35	59	**70**	**8**	**BRDC-070x08**	**12**	**BRDC-070x12**
		65	**80**		**BRDC-080x08**		**BRDC-080x12**
		70	**90**		**BRDC-090x08**		**-**
		75	**100**		**BRDC-100x08**		**BRDC-100x12**
		80	**110**		**BRDC-110x08**		**BRDC-110x12**
		84	**120**		**BRDC-120x08**		**BRDC-120x12**
		86	**125**		**BRDC-125x08**		**BRDC-125x12**
		118	**150**		**BRDC-150x08**		**BRDC-150x12**
		118	**160**		**BRDC-160x08**		**BRDC-160x12**
		130	**175**		**BRDC-175x08**		**BRDC-175x12**
		142	**200**		**BRDC-200x08**		**BRDC-200x12**

BRDC0

Locating ring
Disco centrador
Pierścień centrujący
Disco de centragem
Bague de centrage



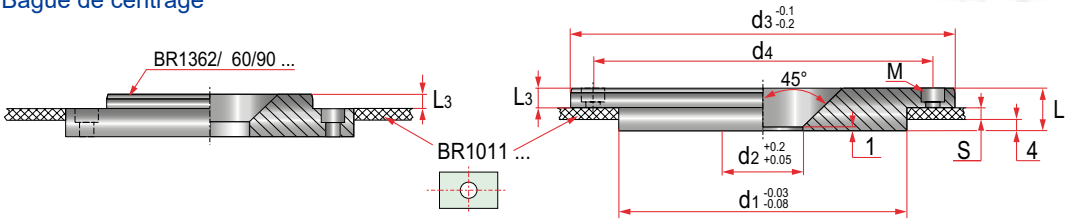
Mat. :1.1730. Min: 630 N/mm²

k	d_4	d_3	d2	d1	REF.
8	6,5	60	70	**80**	**BRDC0-080**
		65	77,5	**90**	**BRDC0-090**
		70	85	**100**	**BRDC0-100**
		80	95	**110**	**BRDC0-110**
		90	105	**120**	**BRDC0-120**
		95	110	**125**	**BRDC0-125**
		100	115	**130**	**BRDC0-130**

BR1362

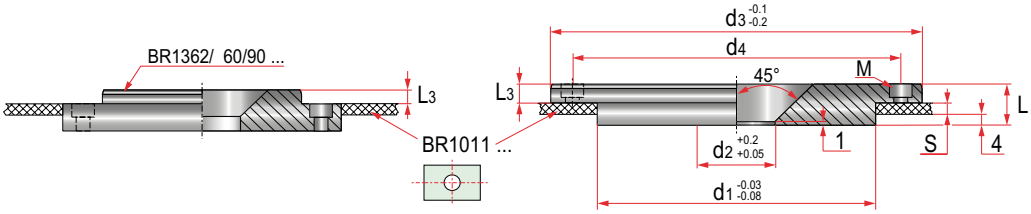
E1362

Locating ring
Disco centrador
Pierścień centrujący
Disco de centragem
Bague de centrage



Mat. :1.1730. Min: 630 N/mm²

M	L3	d4	S	d3	d1	d2	L	REF.
M 5	4	48	-	60	60	26	8	BR1362- 60- 60-26 x 8
			6				14	BR1362- 60- 60-26 x 14
	8	76	-	90			12	BR1362- 90- 60-26 x 12
			6				18	BR1362- 90- 60-26 x 18
			-			36	12	BR1362- 90- 60-36 x 12
	4	48	-	60	90	26	8	BR1362- 60- 90-26 x 8
		76	6				14	BR1362- 60- 90-26 x 14
	8		-	90			12	BR1362- 90- 90-26 x 12
			6				18	BR1362- 90- 90-26 x 18
			-			36	12	BR1362- 90- 90-36 x 12
			6				18	BR1362- 90- 90-36 x 18
		82	-	100		30	12	BR1362-100- 90-30 x 12
			6				18	BR1362-100- 90-30 x 18
			-			26	12	BR1362-100- 90-26 x 12
			6				18	BR1362-100- 90-26 x 18
			8				20	BR1362-100- 90-26 x 20
			-			36	12	BR1362-100- 90-36 x 12
			6				18	BR1362-100- 90-36 x 18
			8				20	BR1362-100- 90-36 x 20
			6			42	18	BR1362-100- 90-42 x 18
		98	-	110		30	12	BR1362-110- 90-30 x 12
			6				18	BR1362-110- 90-30 x 18
			-			26	12	BR1362-110- 90-26 x 12
			6				18	BR1362-110- 90-26 x 18
			8				20	BR1362-110- 90-26 x 20
			-			36	12	BR1362-110- 90-36 x 12
			6				18	BR1362-110- 90-36 x 18
			8				20	BR1362-110- 90-36 x 20
			6			42	18	BR1362-110- 90-42 x 18
			8				20	BR1362-110- 90-42 x 20

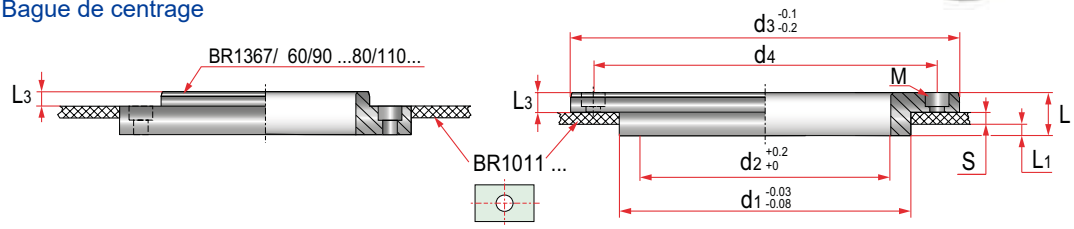


M	l3	d4	S	d3	d1	d2	l	REF.
M 5	8	104	-	120	90	36	12	BR1362-120- 90-36 x 12
			6				18	BR1362-120- 90-36 x 18
			8				20	BR1362-120- 90-36 x 20
			-	125		30	12	BR1362-125- 90-30 x 12
			6				18	BR1362-125- 90-30 x 18
			8				20	BR1362-125- 90-30 x 20
			-			26	12	BR1362-125- 90-26 x 12
			6				18	BR1362-125- 90-26 x 18
			8				20	BR1362-125- 90-26 x 20
	18						30	BR1362-125- 90-26 x 30
	8		-			36	12	BR1362-125- 90-36 x 12
			6				18	BR1362-125- 90-36 x 18
			8				20	BR1362-125- 90-36 x 20
	18						30	BR1362-125- 90-36 x 30
	8		6			42	18	BR1362-125- 90-42 x 18
			8				20	BR1362-125- 90-42 x 20
		128	-	160		30	12	BR1362-160- 90-30 x 12
			8				20	BR1362-160- 90-30 x 20
			-			36	12	BR1362-160- 90-36 x 12
			6				18	BR1362-160- 90-36 x 18
			8				20	BR1362-160- 90-36 x 20
	18						30	BR1362-160- 90-36 x 30
	8		6			42	18	BR1362-160- 90-42 x 18
			8				20	BR1362-160- 90-42 x 20
			-	175		36	12	BR1362-175- 90-36 x 12
			6				18	BR1362-175- 90-36 x 18
			8				20	BR1362-175- 90-36 x 20
	10	144	-	200	160		14	BR1362-200-160-36 x 14
			8				22	BR1362-200-160-36 x 22
	18						30	BR1362-200-160-36 x 30
	10		-	250			14	BR1362-250-160-36 x 14
			8				22	BR1362-250-160-36 x 22
	18						30	BR1362-250-160-36 x 30

BR1367

E1367

Locating ring
Disco centrador
Pierścień centrujący
Disco de centragem
Bague de centrage



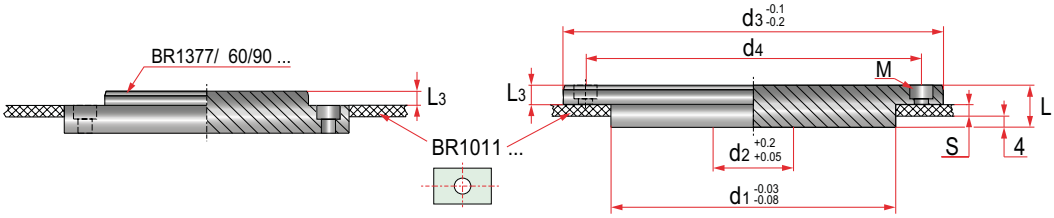
Mat. :1.1730. Min: 630 N/mm^2

M	L1	L3	d2	d4	S	d3	d1	L	REF.
M 5	8	10	50	75	-	**60**	**90**	**18**	**BR1367/ 60/ 90x18**
					6			**24**	**BR1367/ 60/ 90x24**
					8			**26**	**BR1367/ 60/ 90x26**
	4	8	82	98	-	**110**		**12**	**BR1367/110/ 90x12**
					6			**18**	**BR1367/110/ 90x18**
					8			**20**	**BR1367/110/ 90x20**
		14						**26**	**BR1367/110/ 90x26**
		8		104	-	**120**		**12**	**BR1367/120/ 90x12**
					6			**18**	**BR1367/120/ 90x18**
					8			**20**	**BR1367/120/ 90x20**
					-	**125**		**12**	**BR1367/125/ 90x12**
					6			**18**	**BR1367/125/ 90x18**
					8			**20**	**BR1367/125/ 90x20**
		18						**30**	**BR1367/125/ 90x30**
		8			-	**160**		**12**	**BR1367/160/ 90x12**
					6			**18**	**BR1367/160/ 90x18**
					8			**20**	**BR1367/160/ 90x20**
		18						**30**	**BR1367/160/ 90x30**
		8			-	**175**		**12**	**BR1367/175/ 90x12**
					8			**20**	**BR1367/175/ 90x20**
	8	10	70	95	-	**80**	**110**	**18**	**BR1367/ 80/110x18**
					6			**24**	**BR1367/ 80/110x24**
					8			**26**	**BR1367/ 80/110x26**
	4		120	144	-	**175**	**160**	**14**	**BR1367/175/160x14**
					8			**22**	**BR1367/175/160x22**
					-	**200**		**14**	**BR1367/200/160x14**
					8			**22**	**BR1367/200/160x22**
		18						**30**	**BR1367/200/160x30**
		10			-	**250**		**14**	**BR1367/250/160x14**
					8			**22**	**BR1367/250/160x22**
		18						**30**	**BR1367/250/160x30**

BR1377

E1377

Locating ring with neck and screw holes
Anillo de centraje con valona y agujero roscado
Pierścień centrujący z nasadką i otworami pod śruby
Anel de centragem de dois diâmetros maciço com fixações
Rondelle de centrage avec collet et trous de vis



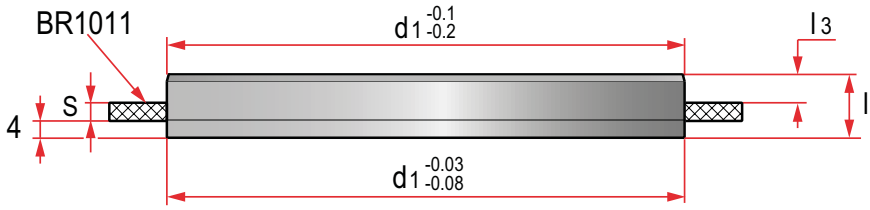
Mat. :1.1730. Min: 630 N/mm^2

M	L3	d4	S	d3	d1	L	REF.
M 5	8	76	-	**90**	**60**	**12**	**BR1377- 90- 60 - 12**
			6			**18**	**BR1377- 90- 60 - 18**
	4	48	-	**60**	**90**	**8**	**BR1377- 60- 90 - 8**
		76	6			**14**	**BR1377- 60- 90 - 14**
	8	82	-	**100**		**12**	**BR1377-100- 90 - 12**
			6			**18**	**BR1377-100- 90 - 18**
		98	-	**110**		**12**	**BR1377-110- 90 - 12**
			6			**18**	**BR1377-110- 90 - 18**
			8			**20**	**BR1377-110- 90 - 20**
		104	-	**120**		**12**	**BR1377-120- 90 - 12**
			6			**18**	**BR1377-120- 90 - 18**
			8			**20**	**BR1377-120- 90 - 20**
			-	**125**		**12**	**BR1377-125- 90 - 12**
			6			**18**	**BR1377-125- 90 - 18**
			8			**20**	**BR1377-125- 90 - 20**
	18					**30**	**BR1377-125- 90 - 30**
	8	128	-	**160**		**12**	**BR1377-160- 90 - 12**
			6			**18**	**BR1377-160- 90 - 18**
			8			**20**	**BR1377-160- 90 - 20**
	18					**30**	**BR1377-160- 90 - 30**
	8		-	**175**		**12**	**BR1377-175- 90 - 12**
			6			**18**	**BR1377-175- 90 - 18**
			8			**20**	**BR1377-175- 90 - 20**
	10	144	6		**160**	**20**	**BR1377-175-160 - 20**
			8			**22**	**BR1377-175-160 - 22**
			-	**200**		**14**	**BR1377-200-160 - 14**
			8			**22**	**BR1377-200-160 - 22**
			-	**250**		**14**	**BR1377-250-160 - 14**
			8			**22**	**BR1377-250-160 - 22**

BR1380

E1380

Locating ring
Disco centrador
Pierścień centrujący
Disco de centragem
Bague de centrage

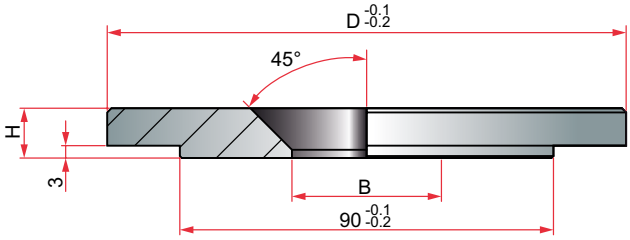


Mat. :1.1730. Min: 630 N/mm²

l	l_3	S	d_1	REF.
12	8	-	**100**	**BR1380-100X12**
18		6		**BR1380-100X18**
26	14	8		**BR1380-100X26**
12	8	-	**125**	**BR1380-125X12**
18		6		**BR1380-125X18**
20		8		**BR1380-125X20**
30	18			**BR1380-125X30**
14	10	-	**160**	**BR1380-160X14**
20		6		**BR1380-160X20**
22		8		**BR1380-160X22**
30	18			**BR1380-160X30**
14	10	-	**200**	**BR1380-200X14**
22		8		**BR1380-200X22**
30	18			**BR1380-200X30**

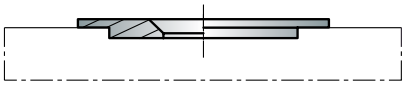
BRLRS

Locating ring
Disco centrador
Pierścień centrujący
Disco de centragem
Bague de centrage



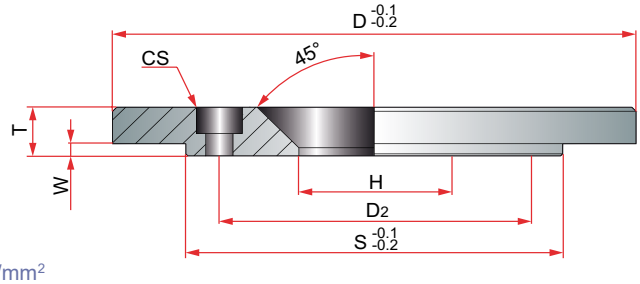
Mat. :1.1730. Min: 630 N/mm²

H	B	D	REF.
12	36	100,0	BRLRS-100 x 36x12
		101,6	BRLRS-101,6x36x12
		110,0	BRLRS-110 x 36x12
	26	125,0	BRLRS-125 x 26x12
	36		BRLRS-125 x 36x12



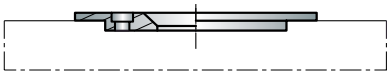
BRLRM

Locating ring
Disco centrador
Pierścień centrujący
Disco de centragem
Bague de centrage



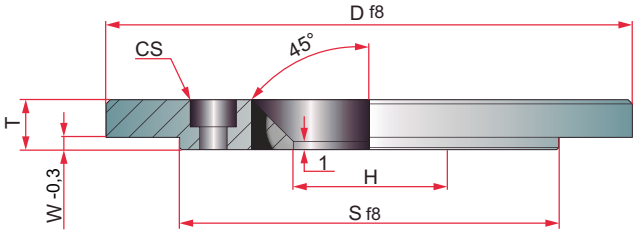
Mat. :1.1730. Min: 630 N/mm²

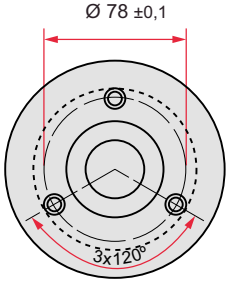
D2	W	S	H	CS	D	T	REF.
65	3,1	75	34	M6	100,0	10	BRLRM-100 x 10
					101,6		BRLRM-101,6x10
			21	M5	110,0	8	BRLRM-110 x 08
			34	M6		10	BRLRM-110 x 10
					125,0		BRLRM-125 x 10



BR1000

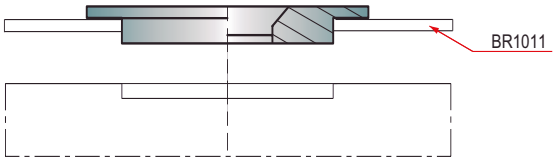
Locating ring
Disco centrador
Pierścień centrujący
Disco de centragem
Bague de centrage



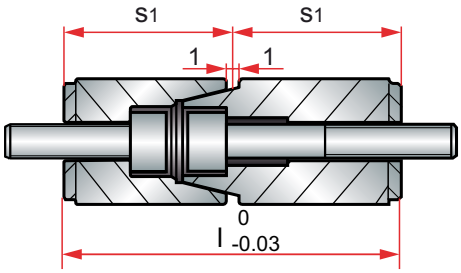


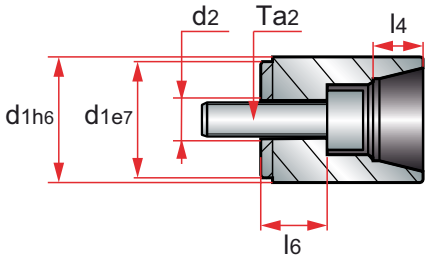
Mat.: 1.1730 / 640 N/mm².

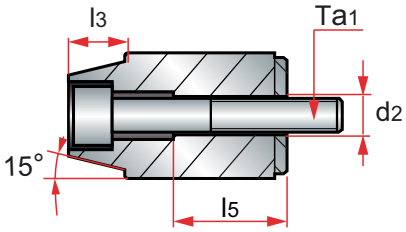
CS	H	S	W	T	D	REF.
M5	36	90	4	12	100	BR1000-100x12
			9	13		BR1000-100x13
			11	15		BR1000-100x15
			7	11	110	BR1000-110x11
			4	12		BR1000-110x12
			11	15		BR1000-110x15
			4	12	120	BR1000-120x12
			9	13		BR1000-120x13
			11	15		BR1000-120x15
			4	12	125	BR1000-125x12
			9	13		BR1000-125x13
			11	15		BR1000-125x15
			4	12	140	BR1000-140x12
				12	160	BR1000-160x12
			11	15		BR1000-160x15
			4	12	175	BR1000-175x12
					200	BR1000-200x12



Centrering plug
Unidad de centraje
Zespół centrujący
Interlock
Plot de centrage

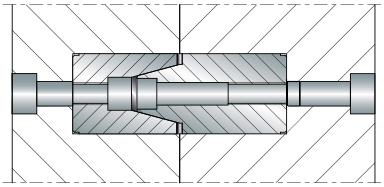


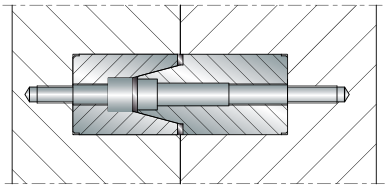




Mat. : 1.1213. Hardness: 54 ± 2 HRC.

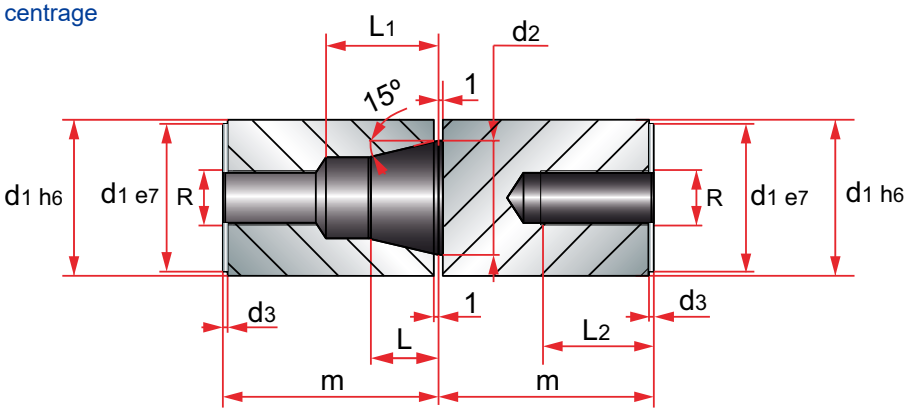
Ta1	Ta2	l5	l4	l	s1	l3	l6	d2	d1	REF.
M3 x 25	M3 x 16	9,6	5	34	17	4,5	8,5	M4	**12**	**BR051-12**
M4 x 25	M4 x 14	12,4	7			6	6	M5	**14**	**BR051-14**
							5,8		**16**	**BR051-16**
M6 x 40	M6 x 20	19,7	10	54	27	9	10,6	M8	**20**	**BR051-20**
		20,7	11			10	9,2		**25**	**BR051-25**
		21,7							**26**	**BR051-26**
M8 x 55	M8 x 25	25	16	72	36	14	12,2	M10	**30**	**BR051-30**
		26							**32**	**BR051-32**
M8 x 70	M8 x 30	27	20	92	46	18	16,8		**42**	**BR051-42**





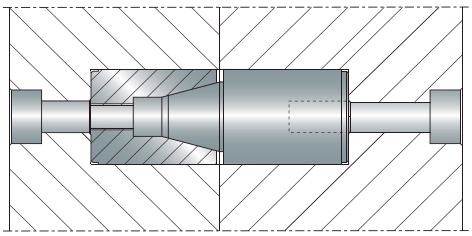
BRUC

Centrering plug
Unidad de centraje
Zespół centrujący
Interlock
Plot de centrage

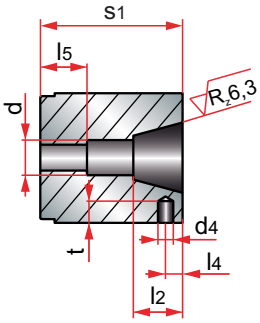


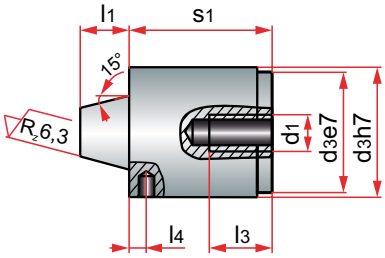
Mat. : 1.1213. Hardness: 54 ± 2 HRC.

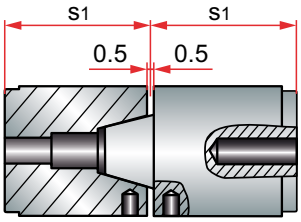
d2	R	L	L1	L2	d3	d1	m	REF.
8	M4	4,9	8	10	3	**12**	**17**	**BRUC-12x17**
10	M5	6,9		11		**14**		**BRUC-14x17**
12		7,9	10			**16**		**BRUC-16x17**
16	M8	10	13	15		**20**	**22**	**BRUC-20x22**
17							**27**	**BRUC-20x27**
18			15	16		**24**		**BRUC-24x27**
		13,9	16			**25**		**BRUC-25x27**
							36	**BRUC-25x36**
22	M10		20	18		**30**		**BRUC-30x36**
							46	**BRUC-30x46**
25						**32**	**36**	**BRUC-32x36**
30	M12	17,9	24	20		**40**	**46**	**BRUC-40x46**
							56	**BRUC-40x56**
35	M10					**42**	**46**	**BRUC-42x46**
40	M14	24,9	32	25		**50**	**56**	**BRUC-50x56**
46	M16	29,9	40	30		**60**	**76**	**BRUC-60x76**



Centrering plug
Unidad de centraje
Zespół centrujący
Interlock
Plot de centrage

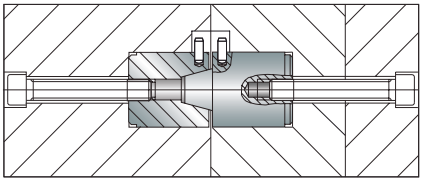


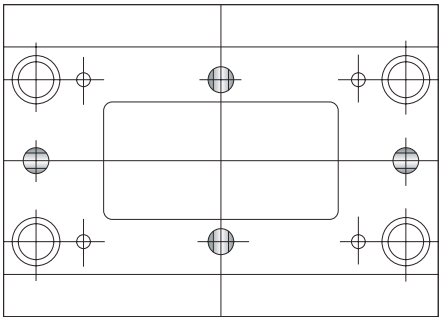




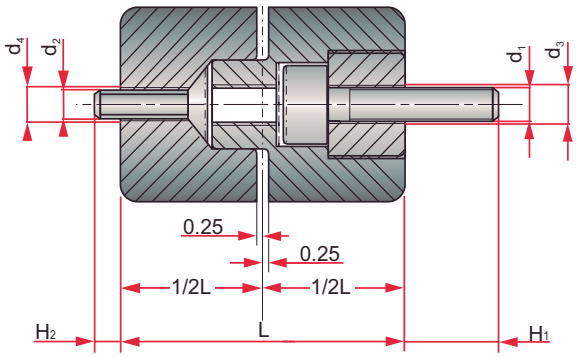
Mat. : 1.2510. Hardness: 54 ± 2 HRC.

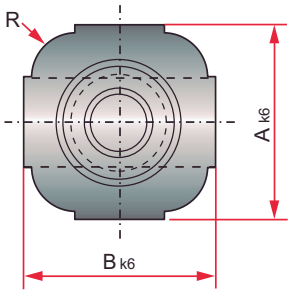
d4	t	l2	d	l1	l3	l4	l5	s1	d3	REF.
4	5	11,5	M10	10,5	20	4,5	16,5	36	**30**	**BR06-30**
5	7	15,5		14,5		5,5	18,5	46	**42**	**BR06-42**
6	8	18,5	M12	17,5	25	7,5	20,5	56	**54**	**BR06-54**
8	11	28,5	M16	27,5	30		25,5	76	**80**	**BR06-80**





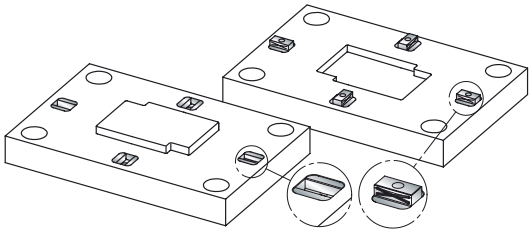
Centrering plug
Unidad de centraje
Zespół centrujący
Interlock
Plot de centrage

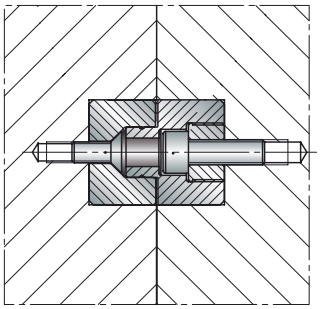




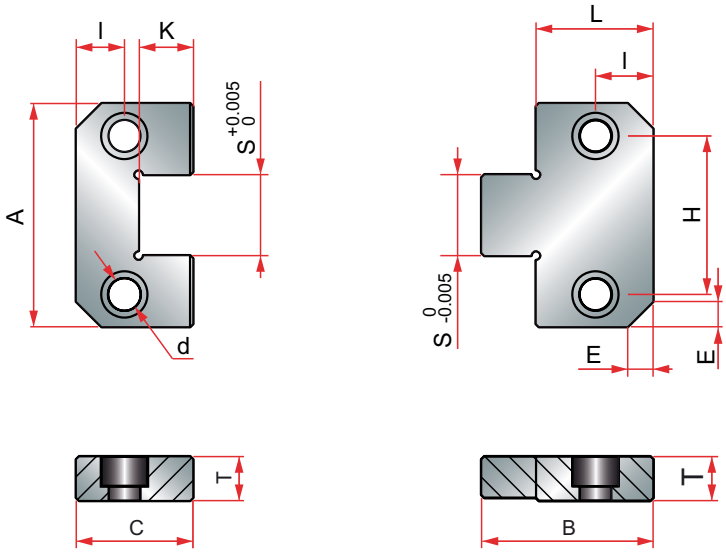
Mat. : 1.2510. Hardness: 54 ± 2 HRC.

R	d1	d3	d2	d4	H1	H2	L	B	A	REF.
4	M5	M6	M4	M5	12	4	28	**20**	**20**	**BR08-20**
5	M6	M8	M5	M6	13	8	32	**25**	**25**	**BR08-25**
6	M8	M10	M6	M8	15	12	36	**32**	**32**	**BR08-32**
	M10	M12	M8	M10	17	10	45	**40**	**40**	**BR08-40**



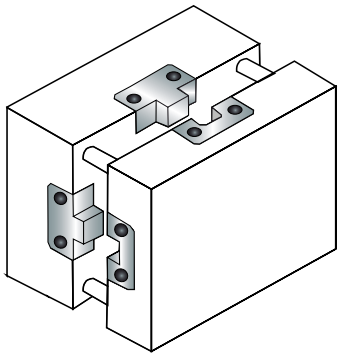


Lateral locating set
Centrador lateral
Zamek boczny
Bloco de travamento lateral
Plot de centrage lateral

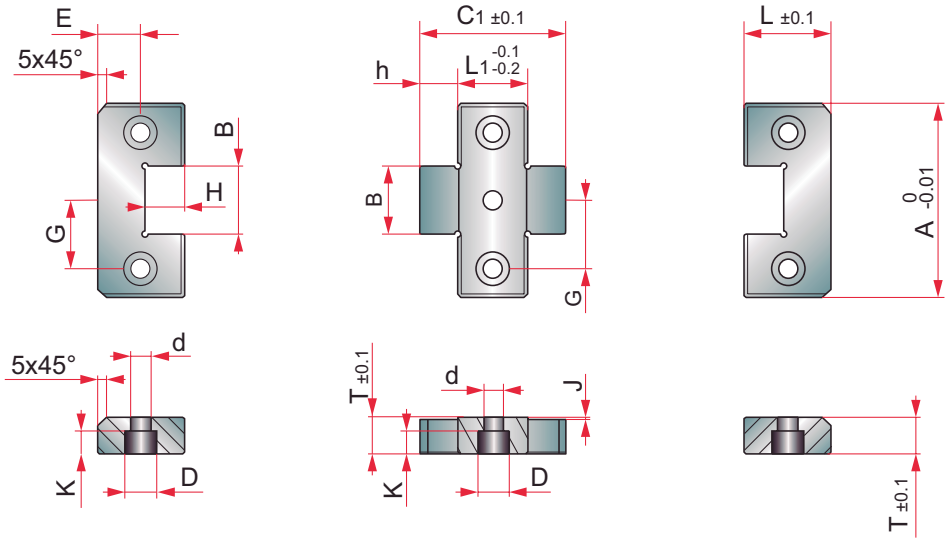


Mat. : 1.2510. Hardness: 54 ± 2 HRC.

K	d	E	I	H	S	L	T	C	B	A	REF.
8,5	M6	5	7	22	12	22	13	22	30	**38**	**BRCEL-038**
9,5			11	34	17	21,5	16	21,5		**50**	**BRCEL-050**
15	M10	8	18	50	25	36	19	36	50	**75**	**BRCEL-075**
21		10	22	70	35	45		45	65	**100**	**BRCEL-100**
				84	45		25			**125**	**BRCEL-125**

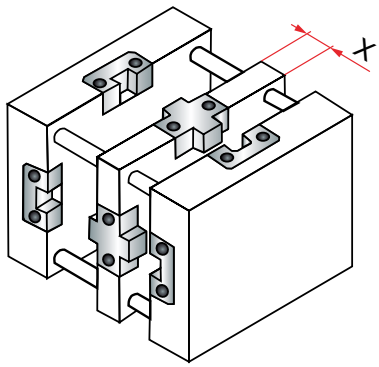


Straight interlock
Centrador lateral doble
Zamek boczny podwójny
Interlock laterais
Centreurs prismatiques



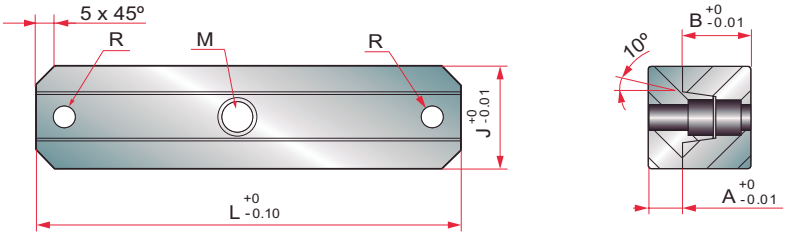
Mat. : 1.2510. Hardness: 54 ± 2 HRC.

N	M	T	L1	L	K	J	H	h	G	F	E	d	D	C1	B	X	A	REF.
15	M6	16	26	21,5	8	1,5	9,5	8,5	17	13	11	6,5	10,5	43	17	**26**	**50**	**BRCELD-05026**
			36							18				53		**36**		**BRCELD-05036**
20	M10	19	26	36	12		15	14	25	13	18	10,5	16,5	54	25	**26**	**75**	**BRCELD-07026**
			36							18				64		**36**		**BRCELD-07036**
				45			21	20	35		22			76	35		**100**	**BRCELD-10036**
			46							23				86		**46**		**BRCELD-10046**
		25	36						42	18				76	45	**36**	**125**	**BRCELD-12536**
			46							23				86		**46**		**BRCELD-12546**

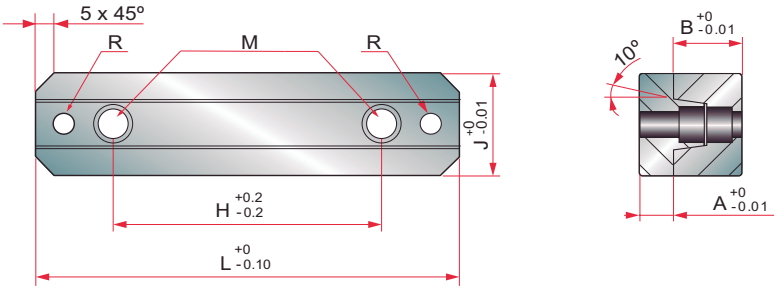


Rectangular locating set
Centrador rectangular
Prostokątny zespół centrujący
Bloco de travamento rectangular
Plot de centrage rectangular

CER-50



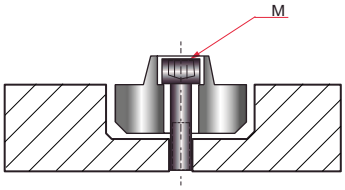
CER-100
CER-150



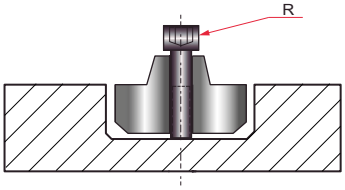
Mat. : 1.2510. Hardness: 54 ± 2 HRC.

M	R	B	A	J	H	L	REF.
M5	M5	17,5	8	25	-	**50**	**CER-050**
M6	M6	22	10	30	60	**100**	**CER-100**
M8	M8	25	13	40	100	**150**	**CER-150**

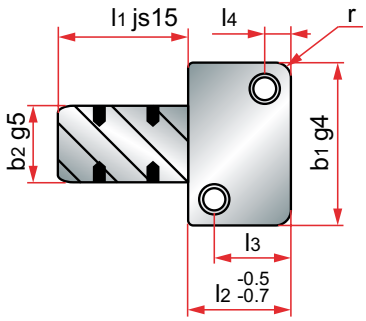
Fixation screw
Tornillo fijación

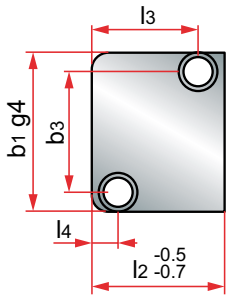


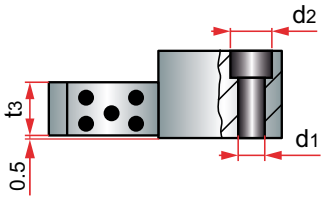
Extraction srew
Tornillo de extracción

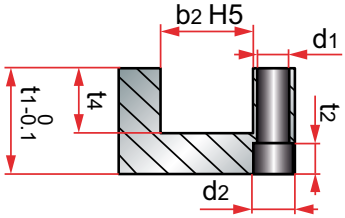


Oilles side locks
Centrador lateral de precisión con grafito
Zespół centrujący
Centrador lateral de precisâo com grafite
Centreur lateral de precision avec graphite



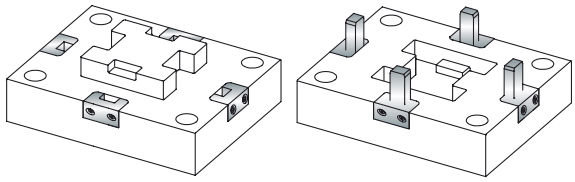






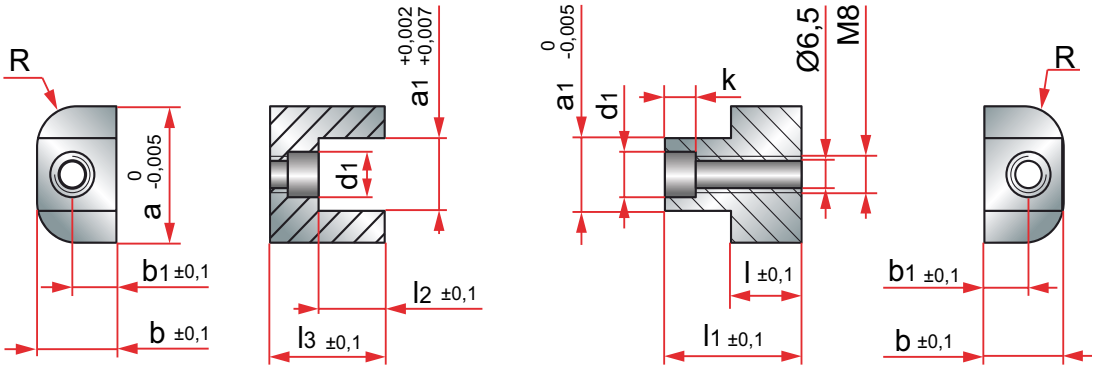
Mat. : 1.2510. Hardness: 54 ± 2 HRC.

r	t1	t3	t4	d1	d2	t2	b3	l4	l3	l2	l1	b2	b1	REF.
6	20	11	12	6,6	11	6,8	26	7	15	22	**20**	16	**40**	**BR07-040A**
											40			**BR07-040B**
	22	13	14				31		19	27	**25**	20	**45**	**BR07-045A**
											50			**BR07-045B**
8	25	14	15				35	9	27	36	**32**	25	**50**	**BR07-050A**
											63			**BR07-050B**
	32	19	20	9	15	9	45	11	35	46	**40**	32	**63**	**BR07-063A**
											80			**BR07-063B**
10	36	22	23	11	18	11	60	15	40	56	**50**	40	**85**	**BR07-085A**
											100			**BR07-085B**
	40	24	25	14	20	13	74	18	48	66	**56**	50	**100**	**BR07-100A**
											112			**BR07-100B**



BR50/0

Centring element
Centrador lateral
Zamek boczny
Bloco de travamento lateral
Unites de centrage

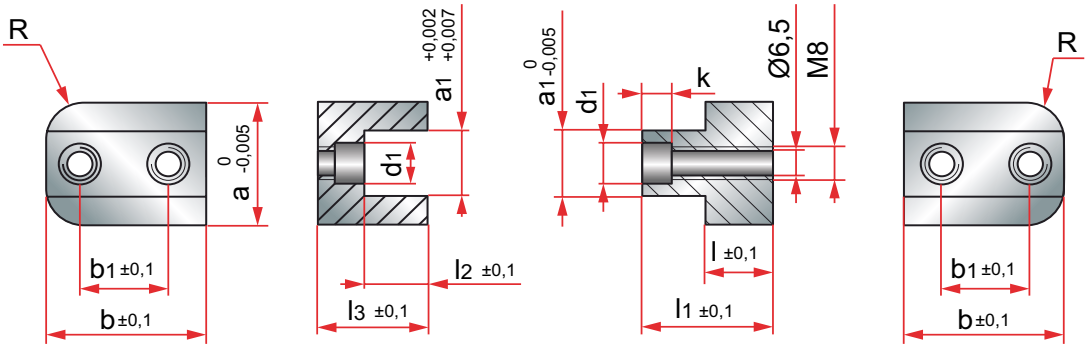


Mat. : 1.2510. Hardness: 54 ± 2 HRC.

a1	k	d1	l2	l	b1	R	l3	b	a	l1	REF.
16	7	11	14,8	15,5	10	8	26	18	30	30	**BR50-0**

BR50/1

Centring element
Centrador lateral
Zamek boczny
Bloco de travamento lateral
Unites de centrage

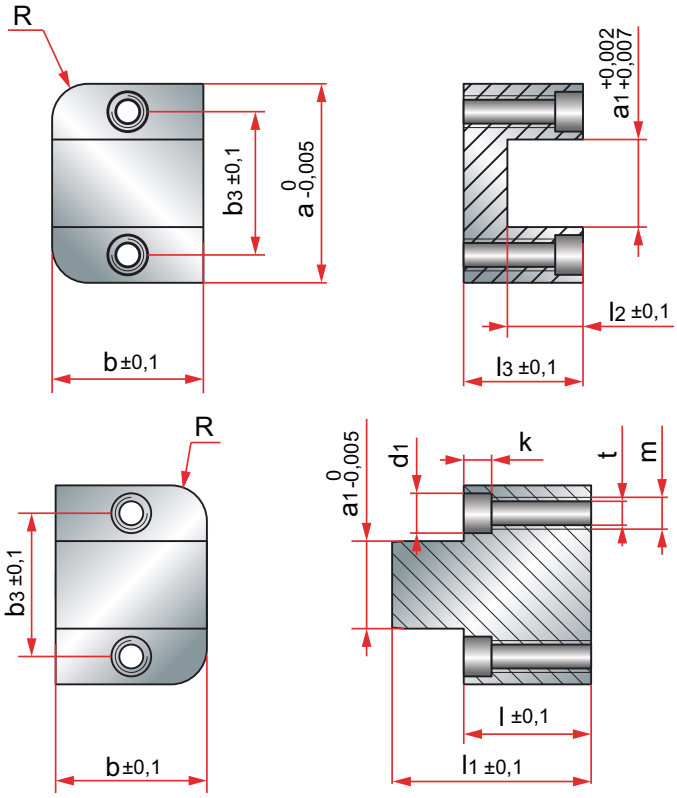


Mat. : 1.2510. Hardness: 54 ± 2 HRC.

a1	k	d1	l2	l	b1	R	l3	b	a	l1	REF.
16	7	11	14,8	15,5	22	8	26	**38**	**30**	**30**	**BR50-1**

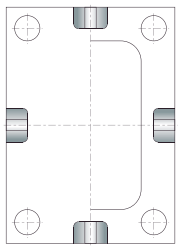
BR50/2-3

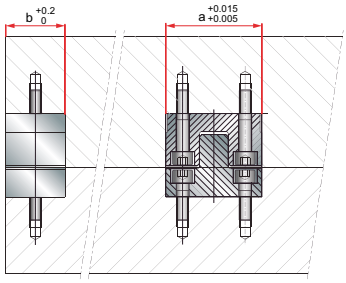
Centring element
Centrador lateral
Zamek boczny
Bloco de travamento lateral
Unites de centrage



Mat. : 1.2510. Hardness: 54 ± 2 HRC.

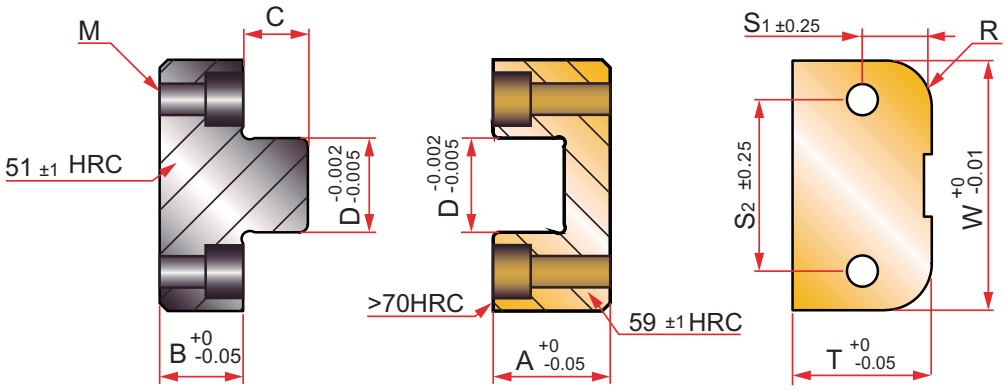
a1	t	m	k	d1	l	l2	b3	R	l3	l1	b	a	REF.
20	6,5	M8	7	11	29,8	20	35	8	29,8	**48,8**	**38**	**50**	**BR50-2**
30	8,3	M10	10	14	39,8	25	52		39,8	**63,8**		**75**	**BR50-3**





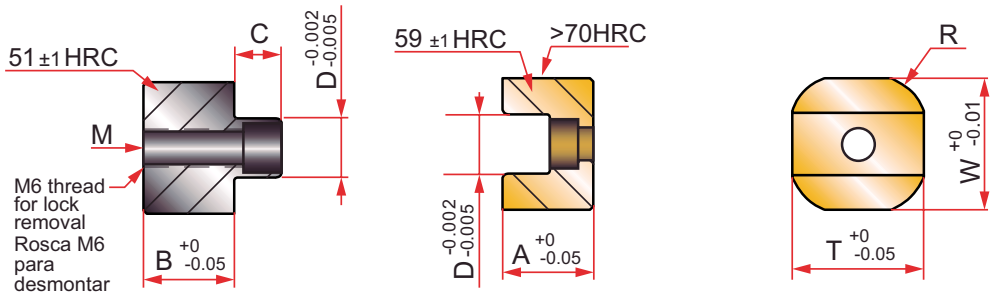
BR152

Centring element
Centrador lateral
Zamek górny
Bloco de travamento lateral
Unites de centrage



Mat. : 1.2510

Mat. : 1.2379



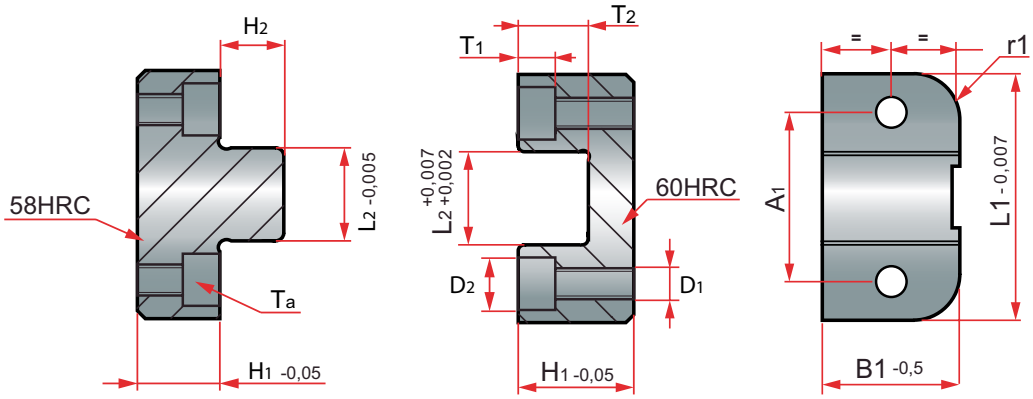
Mat. : 1.2510/1.2379

R	M	S1	S2	D	C	B	A	T	W	REF.
5	M6	CENTER	CENTER	9	7	14	14	**20**	**20**	**BR152-20x020**
8	Ø5,5	13	23	11	16	15	25	**26**	**35**	**BR152-26x035**
	Ø6,5	15	30	15				**30**	**45**	**BR152-30x045**
	Ø9	18	37,5	20	20	20	30	**36**	**55**	**BR152-36x055**
	Ø11		52	30	26		35		**75**	**BR152-36x075**
		22,5	70	40	41		60	**45**	**100**	**BR152-45x100**

BR085-1

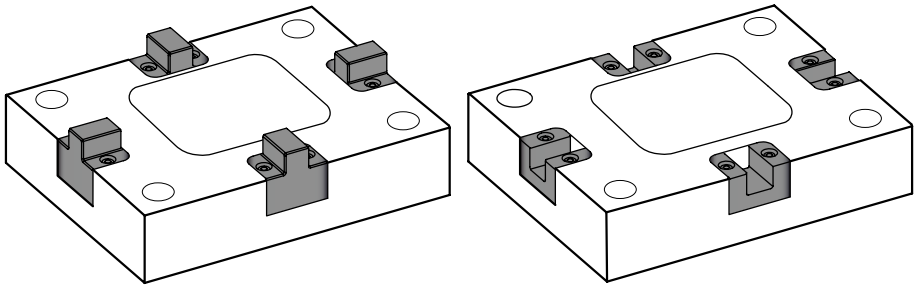
Z085-1

Centring element
Centrador lateral
Zamek górny
Bloco de travamento lateral
Unites de centrage



Mat. : 1.2379

T1	T2	H1	H2	A1	L2	r1	D2	D1	Ta.	L1	B1	REF.
4,6	10,0	19,8	9,0	20	10	6	8	M 5	**M-4**	**30**	**28**	**BR085-1-30x28**
6,8	17,5	29,8	16,5	35	20	8	11	M 8	**M-6**	**50**	**33**	**BR085-1-50x33**
9,0	25,0	39,8	24,0	52	30	10	15	M10	**M-8**	**75**	**38**	**BR085-1-75x38**

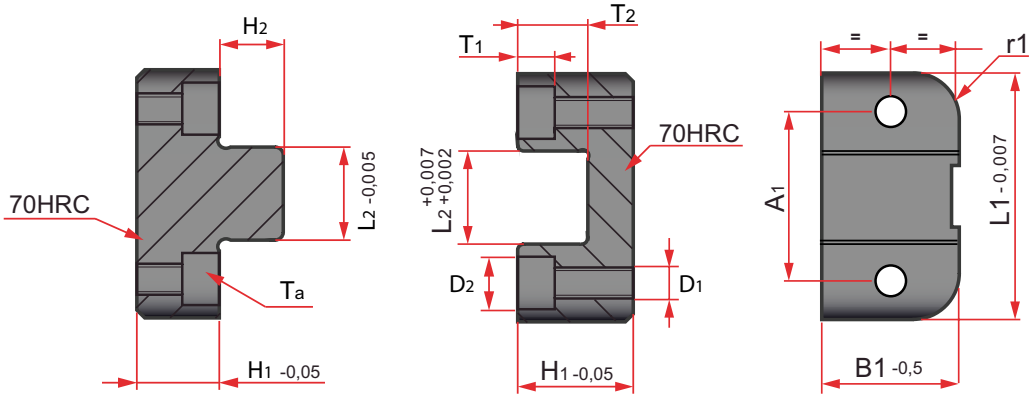


Example: BR085-1 / BR085-2

BR085-2

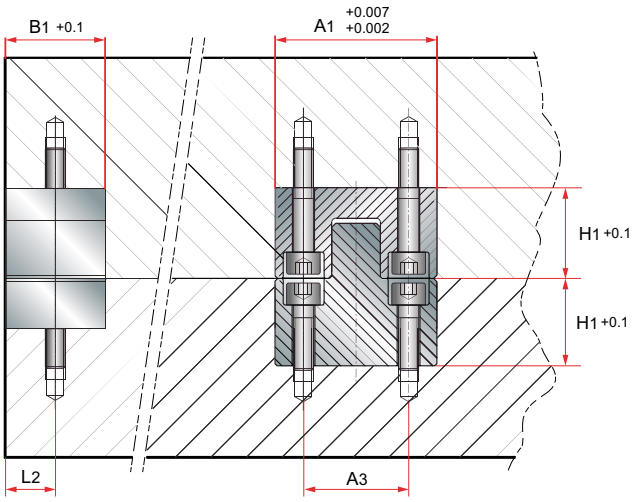
Z085-2

Centring element, DLC
Centrador lateral, DLC
Zamek górny, DLC
Bloco de travamento lateral, DLC
Unites de centrage, DLC



Mat. : 1.2379 - +DLC

T1	T2	H1	H2	A1	L2	r1	D2	D1	Ta.	L1	B1	REF.
4,6	10,0	19,8	9,0	20	10	6	8	M 5	**M-4**	**30**	**28**	**BR085-2-30x28**
6,8	17,5	29,8	16,5	35	20	8	11	M 8	**M-6**	**50**	**33**	**BR085-2-50x33**
9,0	25,0	39,8	24,0	52	30	10	15	M10	**M-8**	**75**	**38**	**BR085-2-75x38**

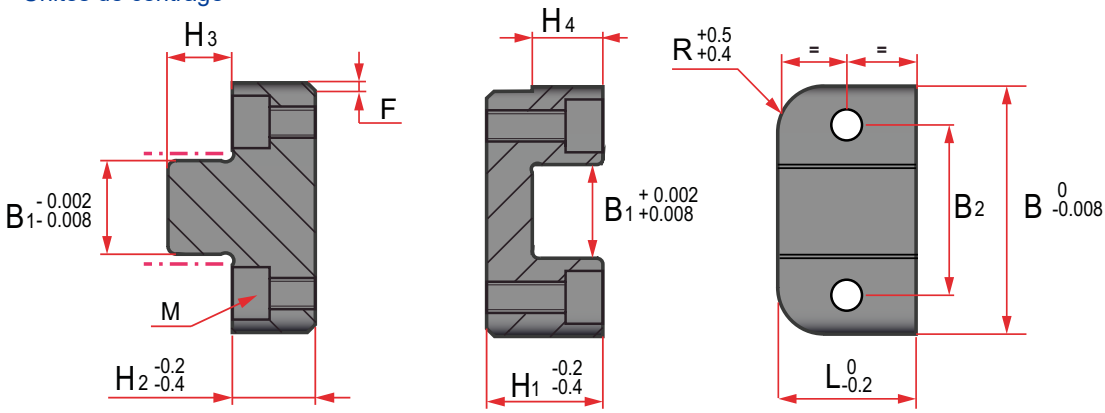


T1	T2	A3	H1	L2	A1	B1	REF.	REF.
4,6	10,0	20	20	14,0	30	28	**BR085-1-30x28**	**BR085-2-30x28**
6,8	17,5	35	30	16,5	50	33	**BR085-1-50x33**	**BR085-2-50x33**
9,0	25,0	52	40	19,0	75	38	**BR085-1-75x38**	**BR085-2-75x38**

BR1304

E1304

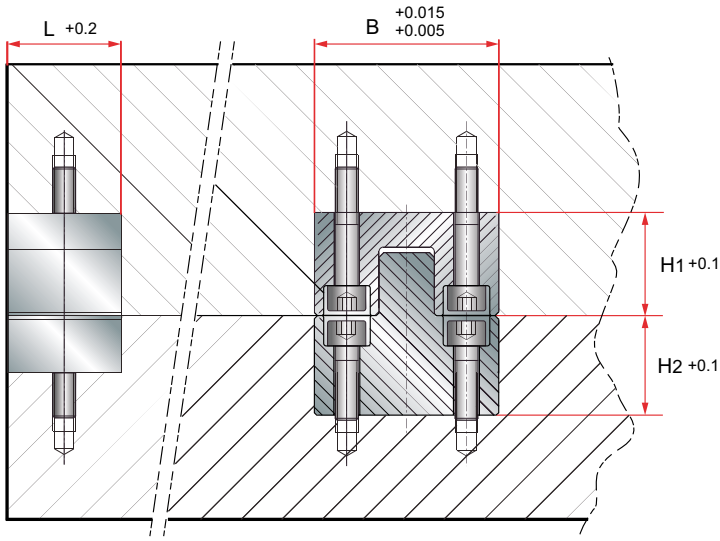
Centring element
Centrador lateral
Zamek górny
Bloco de travamento lateral
Unites de centrage



DLC coated

Mat. : 1.2162 56 HRC

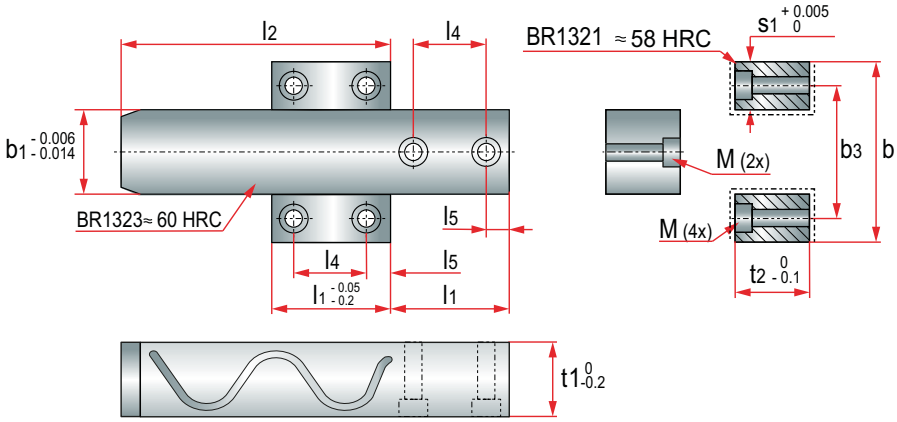
F	R	M	H1	H2	H3	H4	B1	B2	L	B	REF.
0,7	8,0	M4	18	10	12	11	10	22	18	**34**	**BR1304-34**
	10	M5	22	12	14	13	12	26	22	**40**	**BR1304-40**
1,2		M6	30	15	18	17	18	34	30	**50**	**BR1304-50**
		M8	40	18	24	23	22	42	40	**64**	**BR1304-64**
			46	20	28	27	26	48	52	**72**	**BR1304-72**
		M10	57	22	36	31	36	66	56	**96**	**BR1304-96**



BR1320

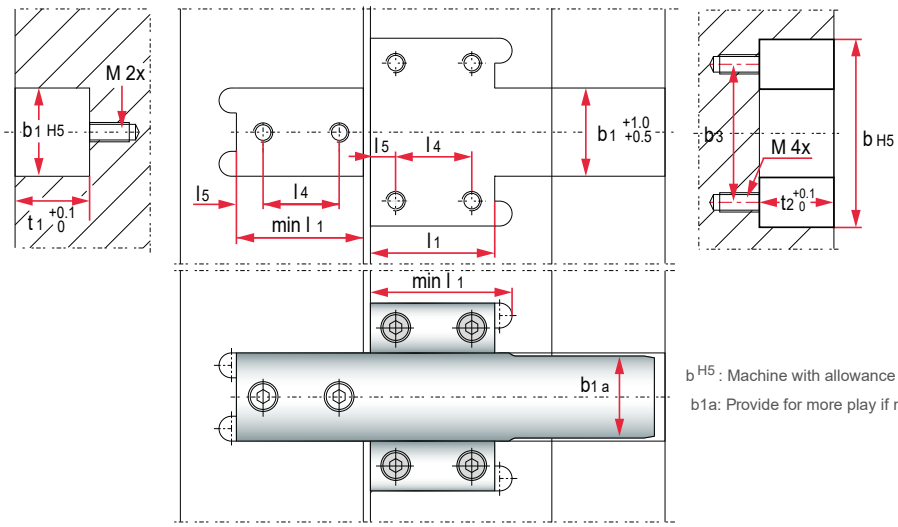
E1320

Flat guiding unit with final centring horizontal
Guia plana centraje horizontal
Płaskie prowadnice z centrowaniem końcowym, poziomym
Guia prismática com centramento lateral
Guidage plat à centrage final, horizontal



b	b3	l1	l4	l5	t1	t2	M	b1	s1	l2	REF.
36	26	26	14	6	14	14,2	M 4	**16**	**10**	**44**	**BR1320/16/10/ 44**
										54	**BR1320/16/10/ 54**
										64	**BR1320/16/10/ 64**
49	37	34	18	8	22	22,3	M 5	**25**	**12**	**54**	**BR1320/25/12/ 54**
										74	**BR1320/25/12/ 74**
										94	**BR1320/25/12/ 94**
64	48	44	28		30	30,4	M 6	**32**	**16**	**54**	**BR1320/32/16/ 54**
										94	**BR1320/32/16/ 94**
										134	**BR1320/32/16/134**
										174	**BR1320/32/16/174**
66	50							**34**		**54**	**BR1320/34/16/ 54**
										94	**BR1320/34/16/ 94**
										134	**BR1320/34/16/134**
										174	**BR1320/34/16/174**
84	64	62	38	12	38	38,7	M 8	**44**	**20**	**74**	**BR1320/44/20/ 74**
									20	**114**	**BR1320/44/20/114**
									20	**154**	**BR1320/44/20/154**
									20	**194**	**BR1320/44/20/194**
86	66							**46**	**20**	**74**	**BR1320/46/20/ 74**
									20	**114**	**BR1320/46/20/114**
									20	**154**	**BR1320/46/20/154**
									20	**194**	**BR1320/46/20/194**

b	b3	l1	l4	l5	t1	t2	M	b1	s1	l2	REF.
108	83	80	48	16	50	51,1	M10	58	25	94	BR1320/58/25/ 94
									25	134	BR1320/58/25/134
									25	174	BR1320/58/25/174
									25	214	BR1320/58/25/214
									25	254	BR1320/58/25/254
110	85							60	25	94	BR1320/60/25/ 94
									25	134	BR1320/60/25/134
									25	174	BR1320/60/25/174
									25	214	BR1320/60/25/214
									25	254	BR1320/60/25/254
142	110	98	58	20	70	71,5	M12	78	32	114	BR1320/78/32/114
										154	BR1320/78/32/154
										194	BR1320/78/32/194
										234	BR1320/78/32/234
										274	BR1320/78/32/274
										314	BR1320/78/32/314
144	112							80		114	BR1320/80/32/114
										154	BR1320/80/32/154
										194	BR1320/80/32/194
										234	BR1320/80/32/234
										274	BR1320/80/32/274
										314	BR1320/80/32/314

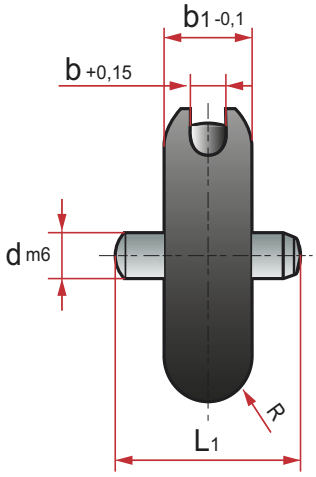


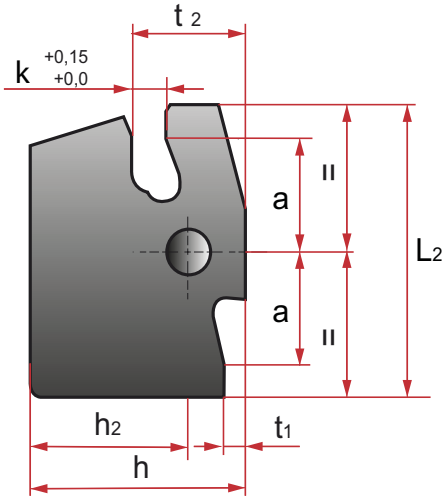
b H5 : Machine with allowance if required

b1a: Provide for more play if required

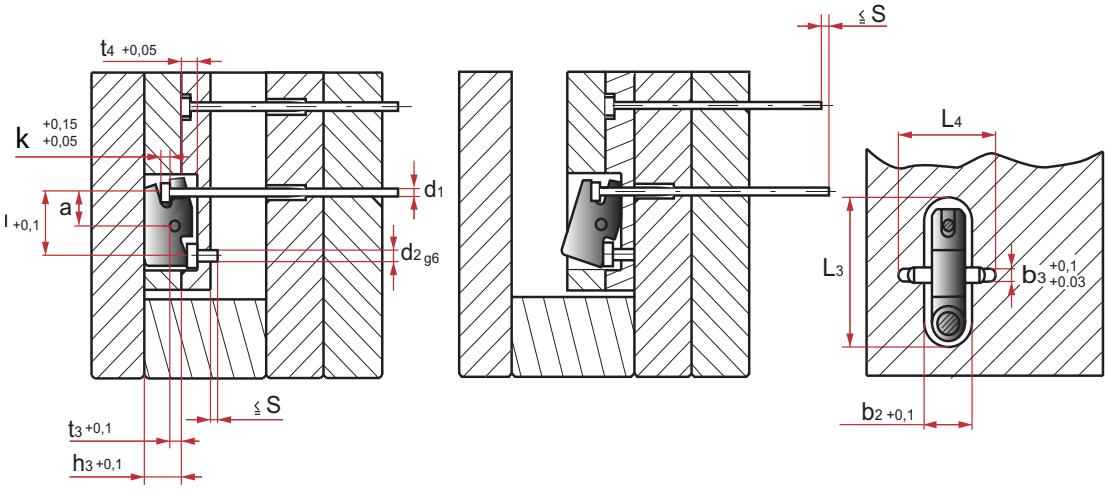
BR141

Acceleration rocker
Acelerador de expulsión
Przedłużenie wypychania
Acelerador de expulsão
Accélérateur éjection



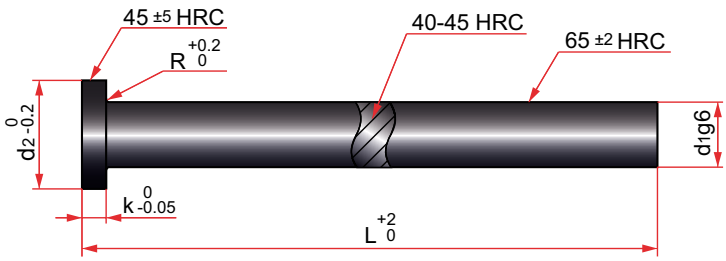


d1	b	b1	b2	b3	a	a1	d	d2	h	k	h2	h3	L1	L2	L3	L4	t1	t2	t3	t4	R	S	REF.
3	3	8	8	4	10	20	4	4	19	3	14	16	16	26	31	23	2	10	4	4	4	2,5	BR141x3
6	6	16	16,5	8	21	42	8	8	34	5	23	27	36	56	63	45	4	21	8	8	8	7,6	BR141x6
8	8																						BR141x8



5

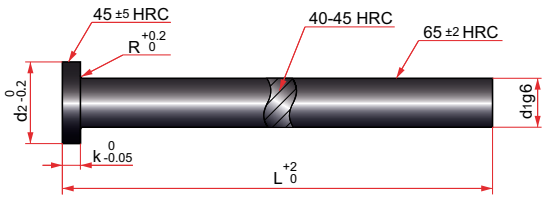
Ejector pin hardened + black nitrided oxidized coating
Expulsor templado + nitrurado oxidado
Wypychacz hartowany, azotowany i oksydowany
Extrator temperado + nitrurado oxidado
Ejecteur nitrure baigne oxidized



Mat. : 1.2344 DIN 1530A / ISO 6751 - Maximum temperature at work: 550º C.

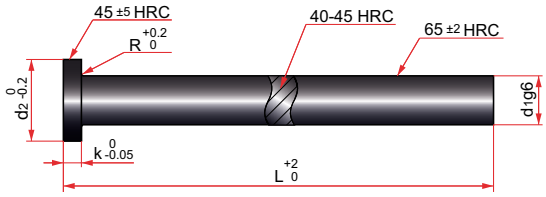
R	k	d2	d1	L	REF.
0,2	1,2	2,5	**1**	**100**	**A-01,00x0100**
				125	**A-01,00x0125**
				160	**A-01,00x0160**
				200	**A-01,00x0200**
			1,2	**100**	**A-01,20x0100**
				125	**A-01,20x0125**
				160	**A-01,20x0160**
				200	**A-01,20x0200**
	1,5	3	**1,5**	**100**	**A-01,50x0100**
				125	**A-01,50x0125**
				160	**A-01,50x0160**
				200	**A-01,50x0200**
			1,7	**100**	**A-01,70x0100**
				125	**A-01,70x0125**
				160	**A-01,70x0160**
				200	**A-01,70x0200**
	2	4	**2**	**100**	**A-02,00x0100**
				125	**A-02,00x0125**
				160	**A-02,00x0160**
				200	**A-02,00x0200**
				250	**A-02,00x0250**
				315	**A-02,00x0315**
			2,2	**100**	**A-02,20x0100**
				125	**A-02,20x0125**
				160	**A-02,20x0160**

R	k	d2	d1	L	REF.
0,2	2	4	**2,2**	**200**	**A-02,20x0200**
				250	**A-02,20x0250**
				315	**A-02,20x0315**
0,3		5	**2,5**	**100**	**A-02,50x0100**
				125	**A-02,50x0125**
				160	**A-02,50x0160**
				200	**A-02,50x0200**
				250	**A-02,50x0250**
				315	**A-02,50x0315**
			2,7	**100**	**A-02,70x0100**
				125	**A-02,70x0125**
				160	**A-02,70x0160**
				200	**A-02,70x0200**
				250	**A-02,70x0250**
				315	**A-02,70x0315**
	3	6	**3**	**100**	**A-03,00x0100**
				125	**A-03,00x0125**
				160	**A-03,00x0160**
				200	**A-03,00x0200**
				250	**A-03,00x0250**
				315	**A-03,00x0315**
				400	**A-03,00x0400**
				500	**A-03,00x0500**
			3,2	**100**	**A-03,20x0100**
				125	**A-03,20x0125**



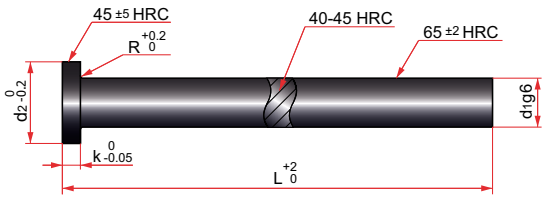
R	k	d2	d1	L	REF.
0,3	3	6	3,2	160	A-03,20x0160
				200	A-03,20x0200
				250	A-03,20x0250
				315	A-03,20x0315
				400	A-03,20x0400
		7	3,5	100	A-03,50x0100
				125	A-03,50x0125
				160	A-03,50x0160
				200	A-03,50x0200
				250	A-03,50x0250
				315	A-03,50x0315
				400	A-03,50x0400
			3,7	100	A-03,70x0100
				125	A-03,70x0125
				160	A-03,70x0160
				200	A-03,70x0200
				250	A-03,70x0250
				315	A-03,70x0315
				400	A-03,70x0400
		8	4	100	A-04,00x0100
				125	A-04,00x0125
				160	A-04,00x0160
				200	A-04,00x0200
				250	A-04,00x0250
				315	A-04,00x0315
				400	A-04,00x0400
				500	A-04,00x0500
				630	A-04,00x0630
				800	A-04,00x0800
			4,2	100	A-04,20x0100
				125	A-04,20x0125
				160	A-04,20x0160

R	k	d2	d1	L	REF.
0,3	3	8	4,2	200	A-04,20x0200
				250	A-04,20x0250
				315	A-04,20x0315
				400	A-04,20x0400
			4,5	100	A-04,50x0100
				125	A-04,50x0125
				160	A-04,50x0160
				200	A-04,50x0200
				250	A-04,50x0250
				315	A-04,50x0315
				400	A-04,50x0400
				500	A-04,50x0500
		10	5	100	A-05,00x0100
				125	A-05,00x0125
				160	A-05,00x0160
				200	A-05,00x0200
				250	A-05,00x0250
				315	A-05,00x0315
				400	A-05,00x0400
				500	A-05,00x0500
				630	A-05,00x0630
				800	A-05,00x0800
			5,2	100	A-05,20x0100
				125	A-05,20x0125
				160	A-05,20x0160
				200	A-05,20x0200
				250	A-05,20x0250
				315	A-05,20x0315
				400	A-05,20x0400
				500	A-05,20x0500
			5,5	100	A-05,50x0100
				125	A-05,50x0125



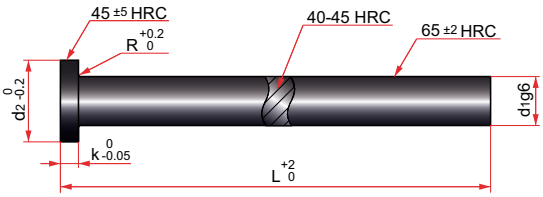
R	k	d2	d1	L	REF.
0,3	3	10	5,5	160	A-05,50x0160
				200	A-05,50x0200
				250	A-05,50x0250
				315	A-05,50x0315
				400	A-05,50x0400
				500	A-05,50x0500
				630	A-05,50x0630
				1000	A-05,50x1000
0,5	5	12	6	100	A-06,00x0100
				125	A-06,00x0125
				160	A-06,00x0160
				200	A-06,00x0200
				250	A-06,00x0250
				315	A-06,00x0315
				400	A-06,00x0400
				500	A-06,00x0500
				630	A-06,00x0630
				800	A-06,00x0800
				1000	A-06,00x1000
			6,2	100	A-06,20x0100
				125	A-06,20x0125
				160	A-06,20x0160
				200	A-06,20x0200
				250	A-06,20x0250
				315	A-06,20x0315
				400	A-06,20x0400
				500	A-06,20x0500
				630	A-06,20x0630
			6,5	100	A-06,50x0100
				125	A-06,50x0125
				160	A-06,50x0160
				200	A-06,50x0200

R	k	d2	d1	L	REF.
0,5	5	12	6,5	250	A-06,50x0250
				315	A-06,50x0315
				400	A-06,50x0400
				500	A-06,50x0500
			7	100	A-07,00x0100
				125	A-07,00x0125
				160	A-07,00x0160
				200	A-07,00x0200
				250	A-07,00x0250
				315	A-07,00x0315
				400	A-07,00x0400
				500	A-07,00x0500
			7,5	100	A-07,50x0100
				125	A-07,50x0125
				160	A-07,50x0160
				200	A-07,50x0200
				250	A-07,50x0250
		14	8	100	A-08,00x0100
				125	A-08,00x0125
				160	A-08,00x0160
				200	A-08,00x0200
				250	A-08,00x0250
				315	A-08,00x0315
				400	A-08,00x0400
				500	A-08,00x0500
				630	A-08,00x0630
				800	A-08,00x0800
				1000	A-08,00x1000
			8,2	100	A-08,20x0100
				125	A-08,20x0125
				160	A-08,20x0160
				200	A-08,20x0200



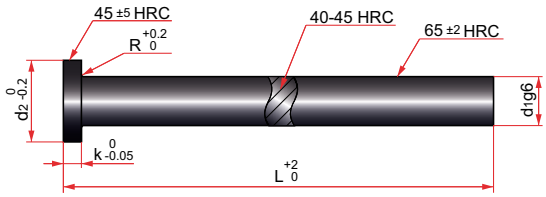
R	k	d2	d1	L	REF.
0,5	5	14	8,2	250	A-08,20x0250
				315	A-08,20x0315
				400	A-08,20x0400
				500	A-08,20x0500
				630	A-08,20x0630
			8,5	100	A-08,50x0100
				125	A-08,50x0125
				160	A-08,50x0160
				200	A-08,50x0200
				250	A-08,50x0250
				315	A-08,50x0315
				400	A-08,50x0400
				500	A-08,50x0500
				630	A-08,50x0630
			9	100	A-09,00x0100
				125	A-09,00x0125
				160	A-09,00x0160
				200	A-09,00x0200
				250	A-09,00x0250
				315	A-09,00x0315
				400	A-09,00x0400
				500	A-09,00x0500
				630	A-09,00x0630
		16	10	100	A-10,00x0100
				125	A-10,00x0125
				160	A-10,00x0160
				200	A-10,00x0200
				250	A-10,00x0250
				315	A-10,00x0315
				400	A-10,00x0400
				500	A-10,00x0500
				630	A-10,00x0630

R	k	d2	d1	L	REF.
0,5	5	16	10	800	A-10,00x0800
				1000	A-10,00x1000
				100	A-10,20x0100
				125	A-10,20x0125
				160	A-10,20x0160
				200	A-10,20x0200
				250	A-10,20x0250
				315	A-10,20x0315
				400	A-10,20x0400
				500	A-10,20x0500
				630	A-10,20x0630
			10,5	100	A-10,50x0100
				125	A-10,50x0125
				160	A-10,50x0160
				200	A-10,50x0200
				250	A-10,50x0250
				315	A-10,50x0315
				400	A-10,50x0400
				500	A-10,50x0500
				630	A-10,50x0630
				800	A-10,50x0800
				100	A-11,00x0100
				125	A-11,00x0125
				160	A-11,00x0160
				200	A-11,00x0200
				250	A-11,00x0250
				315	A-11,00x0315
				400	A-11,00x0400
				500	A-11,00x0500
				630	A-11,00x0630
0,8	7	18	12	100	A-12,00x0100
				125	A-12,00x0125



R	k	d2	d1	L	REF.
0,8	7	18	12	160	A-12,00x0160
				200	A-12,00x0200
				250	A-12,00x0250
				315	A-12,00x0315
				400	A-12,00x0400
				500	A-12,00x0500
				630	A-12,00x0630
				800	A-12,00x0800
				1000	A-12,00x1000
				100	A-12,20x0100
				125	A-12,20x0125
				160	A-12,20x0160
				200	A-12,20x0200
				250	A-12,20x0250
				315	A-12,20x0315
				400	A-12,20x0400
				500	A-12,20x0500
				630	A-12,20x0630
			12,5	100	A-12,50x0100
				125	A-12,50x0125
				160	A-12,50x0160
				200	A-12,50x0200
				250	A-12,50x0250
				315	A-12,50x0315
				400	A-12,50x0400
				500	A-12,50x0500
				630	A-12,50x0630
		22	14	100	A-14,00x0100
				125	A-14,00x0125
				160	A-14,00x0160
				200	A-14,00x0200
				250	A-14,00x0250

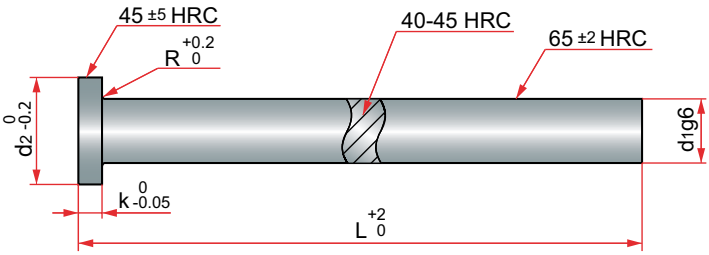
R	k	d2	d1	L	REF.
0,8	7	22	14	315	A-14,00x0315
				400	A-14,00x0400
				500	A-14,00x0500
				630	A-14,00x0630
				800	A-14,00x0800
				1000	A-14,00x1000
			16	100	A-16,00x0100
				125	A-16,00x0125
				160	A-16,00x0160
				200	A-16,00x0200
				250	A-16,00x0250
				315	A-16,00x0315
				400	A-16,00x0400
				500	A-16,00x0500
				630	A-16,00x0630
				800	A-16,00x0800
				1000	A-16,00x1000
		24	18	100	A-18,00x0100
				125	A-18,00x0125
				160	A-18,00x0160
				200	A-18,00x0200
				250	A-18,00x0250
				315	A-18,00x0315
				400	A-18,00x0400
				500	A-18,00x0500
				630	A-18,00x0630
				800	A-18,00x0800
				1000	A-18,00x1000
1	8	26	20	100	A-20,00x0100
				125	A-20,00x0125
				160	A-20,00x0160
				200	A-20,00x0200



R	k	d2	d1	L	REF.
1	8	26	**20**	**250**	**A-20,00x0250**
				315	**A-20,00x0315**
				400	**A-20,00x0400**
				500	**A-20,00x0500**
				630	**A-20,00x0630**
				800	**A-20,00x0800**
				1000	**A-20,00x1000**
	10	32	**25**	**160**	**A-25,00x0160**
				200	**A-25,00x0200**
				250	**A-25,00x0250**
				315	**A-25,00x0315**
				400	**A-25,00x0400**

R	k	d2	d1	L	REF.
1	10	32	**25**	**500**	**A-25,00x0500**
				630	**A-25,00x0630**
				800	**A-25,00x0800**
				1000	**A-25,00x1000**
		40	**32**	**200**	**A-32,00x0200**
				250	**A-32,00x0250**
				315	**A-32,00x0315**
				400	**A-32,00x0400**
				500	**A-32,00x0500**
				630	**A-32,00x0630**
				800	**A-32,00x0800**
				1000	**A-32,00x1000**

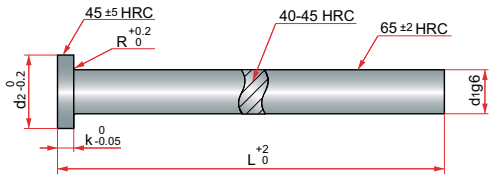
Ejector pin nitrided polished
Expulsor nitrurado pulido
Wypychacz azotowany polerowany
Extrator nitrurado pulido
Ejecteur nitrure rode



Mat. : 1.2344 DIN 1530A / ISO 6751 - Maximum temperature at work: 550º C.

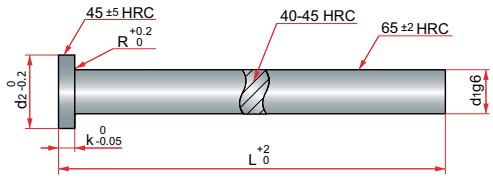
R	k	d2	d1	L	REF.
0,2	1,2	2,5	**0,8**	**100**	**AP-00’80x0100**
				125	**AP-00’80x0125**
				160	**AP-00’80x0160**
			0,9	**100**	**AP-00’90x0100**
				125	**AP-00’90x0125**
			1,0	**100**	**AP-01’00x0100**
				125	**AP-01’00x0125**
				160	**AP-01’00x0160**
				200	**AP-01’00x0200**
				250	**AP-01’00x0250**
			1,2	**100**	**AP-01’20x0100**
				125	**AP-01’20x0125**
				160	**AP-01’20x0160**
				200	**AP-01’20x0200**
	1,5	3	**1,5**	**100**	**AP-01’50x0100**
				125	**AP-01’50x0125**
				160	**AP-01’50x0160**
				200	**AP-01’50x0200**
			1,7	**100**	**AP-01’70x0100**
				125	**AP-01’70x0125**
				160	**AP-01’70x0160**
				200	**AP-01’70x0200**
	2	4	**2,0**	**100**	**AP-02’00x0100**
				125	**AP-02’00x0125**
				160	**AP-02’00x0160**

R	k	d2	d1	L	REF.
0,2	2	4	**2,0**	**200**	**AP-02’00x0200**
				250	**AP-02’00x0250**
				315	**AP-02’00x0315**
			2,1	**125**	**AP-02’10x0125**
				200	**AP-02’10x0200**
				315	**AP-02’10x0315**
			2,2	**100**	**AP-02’20x0100**
				125	**AP-02’20x0125**
				160	**AP-02’20x0160**
				200	**AP-02’20x0200**
				250	**AP-02’20x0250**
				315	**AP-02’20x0315**
			2,3	**125**	**AP-02’30x0125**
				200	**AP-02’30x0200**
				315	**AP-02’30x0315**
0,3		5	**2,4**	**125**	**AP-02’40x0125**
				200	**AP-02’40x0200**
				315	**AP-02’40x0315**
			2,5	**100**	**AP-02’50x0100**
				125	**AP-02’50x0125**
				160	**AP-02’50x0160**
				200	**AP-02’50x0200**
				250	**AP-02’50x0250**
				315	**AP-02’50x0315**
				400	**AP-02’50x0400**



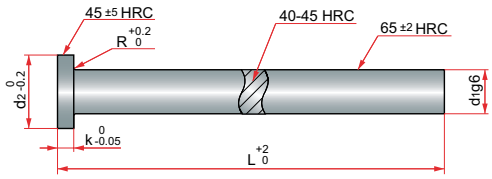
R	k	d2	d1	L	REF.
0,3	2	5	2,6	125	AP-02’60x0125
				200	AP-02’60x0200
				315	AP-02’60x0315
			2,7	100	AP-02’70x0100
				125	AP-02’70x0125
				160	AP-02’70x0160
				200	AP-02’70x0200
				250	AP-02’70x0250
				315	AP-02’70x0315
			2,8	125	AP-02’80x0125
				200	AP-02’80x0200
				315	AP-02’80x0315
	3	6	2,9	125	AP-02’90x0125
				200	AP-02’90x0200
				315	AP-02’90x0315
			3,0	100	AP-03’00x0100
				125	AP-03’00x0125
				160	AP-03’00x0160
				200	AP-03’00x0200
				250	AP-03’00x0250
				315	AP-03’00x0315
				400	AP-03’00x0400
				500	AP-03’00x0500
			3,1	125	AP-03’10x0125
				200	AP-03’10x0200
				315	AP-03’10x0315
			3,2	100	AP-03’20x0100
				125	AP-03’20x0125
				160	AP-03’20x0160
				200	AP-03’20x0200
				250	AP-03’20x0250
				315	AP-03’20x0315

R	k	d2	d1	L	REF.
0,3	3	6	3,2	400	AP-03’20x0400
				500	AP-03’20x0500
				800	AP-03’20x0800
			3,3	125	AP-03’30x0125
				200	AP-03’30x0200
			3,4	125	AP-03’40x0125
				200	AP-03’40x0200
				315	AP-03’40x0315
		7	3,5	100	AP-03’50x0100
				125	AP-03’50x0125
				160	AP-03’50x0160
				200	AP-03’50x0200
				250	AP-03’50x0250
				315	AP-03’50x0315
				400	AP-03’50x0400
				500	AP-03’50x0500
				630	AP-03’50x0630
			3,6	125	AP-03’60x0125
				200	AP-03’60x0200
			3,7	100	AP-03’70x0100
				125	AP-03’70x0125
				160	AP-03’70x0160
				200	AP-03’70x0200
				250	AP-03’70x0250
				315	AP-03’70x0315
				400	AP-03’70x0400
			3,8	125	AP-03’80x0125
				200	AP-03’80x0200
				315	AP-03’80x0315
			3,9	125	AP-03’90x0125
				200	AP-03’90x0200
				315	AP-03’90x0315



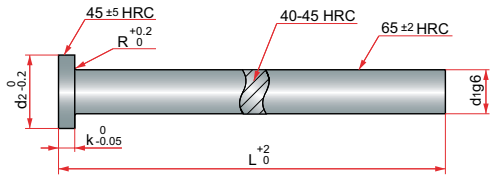
R	k	d2	d1	L	REF.
0,3	3	8	4,0	100	AP-04’00x0100
				125	AP-04’00x0125
				160	AP-04’00x0160
				200	AP-04’00x0200
				250	AP-04’00x0250
				315	AP-04’00x0315
				400	AP-04’00x0400
				500	AP-04’00x0500
				630	AP-04’00x0630
				800	AP-04’00x0800
				1000	AP-04’00x1000
			4,1	125	AP-04’10x0125
				200	AP-04’10x0200
				315	AP-04’10x0315
			4,2	100	AP-04’20x0100
				125	AP-04’20x0125
				160	AP-04’20x0160
				200	AP-04’20x0200
				250	AP-04’20x0250
				315	AP-04’20x0315
				400	AP-04’20x0400
			4,3	125	AP-04’30x0125
				200	AP-04’30x0200
			4,4	125	AP-04’40x0125
				200	AP-04’40x0200
			4,5	100	AP-04’50x0100
				125	AP-04’50x0125
				160	AP-04’50x0160
				200	AP-04’50x0200
				250	AP-04’50x0250
				315	AP-04’50x0315
				400	AP-04’50x0400

R	k	d2	d1	L	REF.
0,3	3	8	4,5	500	AP-04’50x0500
				630	AP-04’50x0630
				800	AP-04’50x0800
				1000	AP-04’50x1000
			4,6	125	AP-04’60x0125
				200	AP-04’60x0200
			4,7	125	AP-04’70x0125
				200	AP-04’70x0200
				315	AP-04’70x0315
			4,8	125	AP-04’80x0125
				200	AP-04’80x0200
			4,9	125	AP-04’90x0125
				200	AP-04’90x0200
		10	5,0	100	AP-05’00x0100
				125	AP-05’00x0125
				160	AP-05’00x0160
				200	AP-05’00x0200
				250	AP-05’00x0250
				315	AP-05’00x0315
				400	AP-05’00x0400
				500	AP-05’00x0500
				630	AP-05’00x0630
				800	AP-05’00x0800
				1000	AP-05’00x1000
			5,1	160	AP-05’10x0160
				250	AP-05’10x0250
				400	AP-05’10x0400
			5,2	100	AP-05’20x0100
				125	AP-05’20x0125
				160	AP-05’20x0160
				200	AP-05’20x0200
				250	AP-05’20x0250



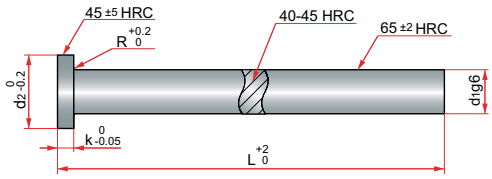
R	k	d2	d1	L	REF.
0,3	3	10	5,2	315	AP-05’20x0315
				400	AP-05’20x0400
				500	AP-05’20x0500
				630	AP-05’20x0630
				800	AP-05’20x0800
				1000	AP-05’20x1000
			5,3	160	AP-05’30x0160
				250	AP-05’30x0250
				400	AP-05’30x0400
			5,4	160	AP-05’40x0160
				250	AP-05’40x0250
				400	AP-05’40x0400
			5,5	100	AP-05’50x0100
				125	AP-05’50x0125
				160	AP-05’50x0160
				200	AP-05’50x0200
				250	AP-05’50x0250
				315	AP-05’50x0315
				400	AP-05’50x0400
				500	AP-05’50x0500
				630	AP-05’50x0630
				800	AP-05’50x0800
				1000	AP-05’50x1000
			5,6	160	AP-05’60x0160
				250	AP-05’60x0250
				400	AP-05’60x0400
			5,7	160	AP-05’70x0160
				250	AP-05’70x0250
				400	AP-05’70x0400
			5,8	160	AP-05’80x0160
				250	AP-05’80x0250
				400	AP-05’80x0400

R	k	d2	d1	L	REF.
0,3	3	10	5,9	160	AP-05’90x0160
				250	AP-05’90x0250
				400	AP-05’90x0400
0,5	5	12	6,0	100	AP-06’00x0100
				125	AP-06’00x0125
				160	AP-06’00x0160
				200	AP-06’00x0200
				250	AP-06’00x0250
				315	AP-06’00x0315
				400	AP-06’00x0400
				500	AP-06’00x0500
				630	AP-06’00x0630
				800	AP-06’00x0800
				1000	AP-06’00x1000
			6,1	160	AP-06’10x0160
				250	AP-06’10x0250
				400	AP-06’10x0400
			6,2	100	AP-06’20x0100
				125	AP-06’20x0125
				160	AP-06’20x0160
				200	AP-06’20x0200
				250	AP-06’20x0250
				315	AP-06’20x0315
				400	AP-06’20x0400
				500	AP-06’20x0500
				630	AP-06’20x0630
				800	AP-06’20x0800
				1000	AP-06’20x1000
			6,3	250	AP-06’30x0250
				400	AP-06’30x0400
			6,4	250	AP-06’40x0250
				400	AP-06’40x0400



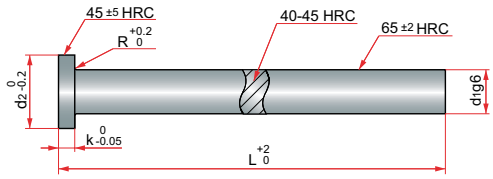
R	k	d2	d1	L	REF.
0,5	5	12	6,5	100	AP-06’50x0100
				125	AP-06’50x0125
				160	AP-06’50x0160
				200	AP-06’50x0200
				250	AP-06’50x0250
				315	AP-06’50x0315
				400	AP-06’50x0400
				500	AP-06’50x0500
				630	AP-06’50x0630
			6,6	160	AP-06’60x0160
				250	AP-06’60x0250
				400	AP-06’60x0400
			6,7	160	AP-06’70x0160
				250	AP-06’70x0250
				400	AP-06’70x0400
			6,8	160	AP-06’80x0160
				250	AP-06’80x0250
				400	AP-06’80x0400
			6,9	160	AP-06’90x0160
				250	AP-06’90x0250
				400	AP-06’90x0400
			7,0	100	AP-07’00x0100
				125	AP-07’00x0125
				160	AP-07’00x0160
				200	AP-07’00x0200
				250	AP-07’00x0250
				315	AP-07’00x0315
				400	AP-07’00x0400
				500	AP-07’00x0500
				630	AP-07’00x0630
				800	AP-07’00x0800
			7,1	160	AP-07’10x0160

R	k	d2	d1	L	REF.
0,5	5	12	7,1	250	AP-07’10x0250
				400	AP-07’10x0400
			7,2	160	AP-07’20x0160
				250	AP-07’20x0250
				400	AP-07’20x0400
			7,3	160	AP-07’30x0160
				250	AP-07’30x0250
				400	AP-07’30x0400
			7,4	160	AP-07’40x0160
				250	AP-07’40x0250
				400	AP-07’40x0400
			7,5	100	AP-07’50x0100
				125	AP-07’50x0125
				160	AP-07’50x0160
				200	AP-07’50x0200
				250	AP-07’50x0250
		14	7,6	160	AP-07’60x0160
				250	AP-07’60x0250
				400	AP-07’60x0400
			7,7	160	AP-07’70x0160
				250	AP-07’70x0250
				400	AP-07’70x0400
			7,8	160	AP-07’80x0160
				250	AP-07’80x0250
				400	AP-07’80x0400
			7,9	160	AP-07’90x0160
				250	AP-07’90x0250
				400	AP-07’90x0400
			8,0	100	AP-08’00x0100
				125	AP-08’00x0125
				160	AP-08’00x0160
				200	AP-08’00x0200



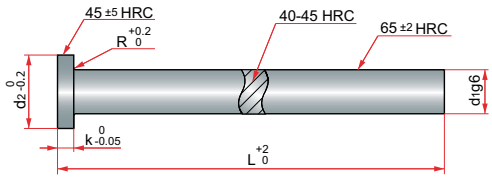
R	k	d2	d1	L	REF.
0,5	5	14	8,0	250	AP-08’00x0250
				315	AP-08’00x0315
				400	AP-08’00x0400
				500	AP-08’00x0500
				630	AP-08’00x0630
				800	AP-08’00x0800
				1000	AP-08’00x1000
			8,1	200	AP-08’10x0200
				400	AP-08’10x0400
			8,2	100	AP-08’20x0100
				125	AP-08’20x0125
				160	AP-08’20x0160
				200	AP-08’20x0200
				250	AP-08’20x0250
				315	AP-08’20x0315
				400	AP-08’20x0400
				500	AP-08’20x0500
				630	AP-08’20x0630
				800	AP-08’20x0800
				1000	AP-08’20x1000
			8,3	200	AP-08’30x0200
				400	AP-08’30x0400
				500	AP-08’30x0500
			8,4	200	AP-08’40x0200
				400	AP-08’40x0400
				500	AP-08’40x0500
			8,5	100	AP-08’50x0100
				125	AP-08’50x0125
				160	AP-08’50x0160
				200	AP-08’50x0200
				250	AP-08’50x0250
				315	AP-08’50x0315

R	k	d2	d1	L	REF.
0,5	5	14	8,5	400	AP-08’50x0400
				500	AP-08’50x0500
				630	AP-08’50x0630
			8,6	200	AP-08’60x0200
				400	AP-08’60x0400
			8,7	200	AP-08’70x0200
				400	AP-08’70x0400
			8,8	200	AP-08’80x0200
				400	AP-08’80x0400
			8,9	200	AP-08’90x0200
				400	AP-08’90x0400
			9,0	100	AP-09’00x0100
				125	AP-09’00x0125
				160	AP-09’00x0160
				200	AP-09’00x0200
				250	AP-09’00x0250
				315	AP-09’00x0315
				400	AP-09’00x0400
				500	AP-09’00x0500
				630	AP-09’00x0630
			9,1	200	AP-09’10x0200
				400	AP-09’10x0400
			9,2	200	AP-09’20x0200
				400	AP-09’20x0400
			9,3	200	AP-09’30x0200
				400	AP-09’30x0400
			9,4	200	AP-09’40x0200
				400	AP-09’40x0400
			9,5	100	AP-09’50x0100
				125	AP-09’50x0125
				160	AP-09’50x0160
				200	AP-09’50x0200



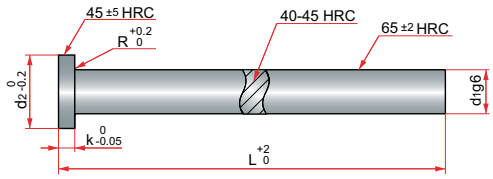
R	k	d2	d1	L	REF.
0,5	5	14	9,5	250	AP-09’50x0250
				315	AP-09’50x0315
				400	AP-09’50x0400
				500	AP-09’50x0500
				630	AP-09’50x0630
		16	9,6	200	AP-09’60x0200
				400	AP-09’60x0400
			9,7	200	AP-09’70x0200
				400	AP-09’70x0400
			9,8	200	AP-09’80x0200
				400	AP-09’80x0400
			9,9	200	AP-09’90x0200
				400	AP-09’90x0400
			10,0	100	AP-10’00x0100
				125	AP-10’00x0125
				160	AP-10’00x0160
				200	AP-10’00x0200
				250	AP-10’00x0250
				315	AP-10’00x0315
				400	AP-10’00x0400
				500	AP-10’00x0500
				630	AP-10’00x0630
				800	AP-10’00x0800
				1000	AP-10’00x1000
			10,1	200	AP-10’10x0200
				400	AP-10’10x0400
			10,2	100	AP-10’20x0100
				125	AP-10’20x0125
				160	AP-10’20x0160
				200	AP-10’20x0200
				250	AP-10’20x0250
				315	AP-10’20x0315

R	k	d2	d1	L	REF.
0,5	5	16	10,2	400	AP-10’20x0400
				500	AP-10’20x0500
				630	AP-10’20x0630
			10,5	100	AP-10’50x0100
				125	AP-10’50x0125
				160	AP-10’50x0160
				200	AP-10’50x0200
				250	AP-10’50x0250
				315	AP-10’50x0315
				400	AP-10’50x0400
				500	AP-10’50x0500
				630	AP-10’50x0630
				800	AP-10’50x0800
			11,0	100	AP-11’00x0100
				125	AP-11’00x0125
				160	AP-11’00x0160
				200	AP-11’00x0200
				250	AP-11’00x0250
				315	AP-11’00x0315
				400	AP-11’00x0400
				500	AP-11’00x0500
				630	AP-11’00x0630
			11,5	200	AP-11’50x0200
				400	AP-11’50x0400
				630	AP-11’50x0630
0,8	7	18	12,0	100	AP-12’00x0100
				125	AP-12’00x0125
				160	AP-12’00x0160
				200	AP-12’00x0200
				250	AP-12’00x0250
				315	AP-12’00x0315
				400	AP-12’00x0400



R	k	d2	d1	L	REF.
0,8	7	18	12,0	500	AP-12’00x0500
				630	AP-12’00x0630
				800	AP-12’00x0800
				1000	AP-12’00x1000
			12,2	100	AP-12’20x0100
				125	AP-12’20x0125
				160	AP-12’20x0160
				200	AP-12’20x0200
				250	AP-12’20x0250
				315	AP-12’20x0315
				400	AP-12’20x0400
				500	AP-12’20x0500
				630	AP-12’20x0630
			12,5	100	AP-12’50x0100
				125	AP-12’50x0125
				160	AP-12’50x0160
				200	AP-12’50x0200
				250	AP-12’50x0250
				315	AP-12’50x0315
				400	AP-12’50x0400
				500	AP-12’50x0500
				630	AP-12’50x0630
			13,0	100	AP-13’00x0100
				125	AP-13’00x0125
				160	AP-13’00x0160
				200	AP-13’00x0200
				250	AP-13’00x0250
				315	AP-13’00x0315
				400	AP-13’00x0400
				630	AP-13’00x0630
		22	13,5	250	AP-13’50x0250
				400	AP-13’50x0400

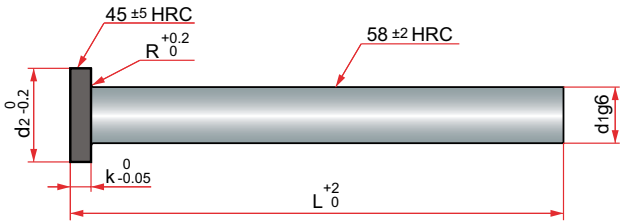
R	k	d2	d1	L	REF.
0,8	7	22	13,5	630	AP-13’50x0630
			14,0	100	AP-14’00x0100
				125	AP-14’00x0125
				160	AP-14’00x0160
				200	AP-14’00x0200
				250	AP-14’00x0250
				315	AP-14’00x0315
				400	AP-14’00x0400
				500	AP-14’00x0500
				630	AP-14’00x0630
				800	AP-14’00x0800
				1000	AP-14’00x1000
			14,5	250	AP-14’50x0250
				400	AP-14’50x0400
				630	AP-14’50x0630
			15,0	100	AP-15’00x0100
				125	AP-15’00x0125
				160	AP-15’00x0160
				200	AP-15’00x0200
				250	AP-15’00x0250
				400	AP-15’00x0400
			16,0	100	AP-16’00x0100
				125	AP-16’00x0125
				160	AP-16’00x0160
				200	AP-16’00x0200
				250	AP-16’00x0250
				315	AP-16’00x0315
				400	AP-16’00x0400
				500	AP-16’00x0500
				630	AP-16’00x0630
				800	AP-16’00x0800
				1000	AP-16’00x1000



R	k	d2	d1	L	REF.
0,8	7	22	**16,2**	**200**	**AP-16’20x0200**
				400	**AP-16’20x0400**
			16,5	**200**	**AP-16’50x0200**
				400	**AP-16’50x0400**
		24	**18,0**	**100**	**AP-18’00x0100**
				125	**AP-18’00x0125**
				160	**AP-18’00x0160**
				200	**AP-18’00x0200**
				250	**AP-18’00x0250**
				315	**AP-18’00x0315**
				400	**AP-18’00x0400**
				500	**AP-18’00x0500**
				630	**AP-18’00x0630**
				800	**AP-18’00x0800**
				1000	**AP-18’00x1000**
1	8	26	**20,0**	**100**	**AP-20’00x0100**
				125	**AP-20’00x0125**
				160	**AP-20’00x0160**
				200	**AP-20’00x0200**
				250	**AP-20’00x0250**
				315	**AP-20’00x0315**
				400	**AP-20’00x0400**
				500	**AP-20’00x0500**
				630	**AP-20’00x0630**

R	k	d2	d1	L	REF.
1	8	26	**20,0**	**800**	**AP-20’00x0800**
				1000	**AP-20’00x1000**
			20,5	**250**	**AP-20’50x0250**
				400	**AP-20’50x0400**
		28	**22,0**	**250**	**AP-22’00x0250**
				400	**AP-22’00x0400**
	10	32	**25,0**	**160**	**AP-25’00x0160**
				200	**AP-25’00x0200**
				250	**AP-25’00x0250**
				315	**AP-25’00x0315**
				400	**AP-25’00x0400**
				500	**AP-25’00x0500**
				630	**AP-25’00x0630**
				800	**AP-25’00x0800**
				1000	**AP-25’00x1000**
		40	**32,0**	**200**	**AP-32’00x0200**
				250	**AP-32’00x0250**
				315	**AP-32’00x0315**
				400	**AP-32’00x0400**
				500	**AP-32’00x0500**
				630	**AP-32’00x0630**
				800	**AP-32’00x0800**
				1000	**AP-32’00x1000**

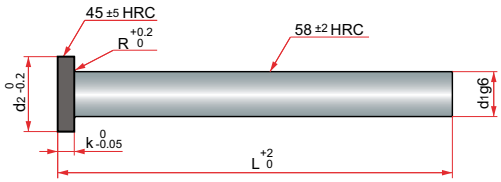
Ejector pin hardened
Expulsor templado
Wypychacz hartowany
Extrator temperado
Ejecteur trempé



Mat. : 1.2210 / 58 ± 2 HRC - DIN 1530AH - Maximum temperature at work: 220º C.

R	k	d2	d1	L	REF.
0,2	1,2	2,5	**0,8**	**100**	**AH-00,80x0100**
				125	**AH-00,80x0125**
				160	**AH-00,80x0160**
			0,9	**100**	**AH-00,90x0100**
				125	**AH-00,90x0125**
			1,0	**100**	**AH-01,00x0100**
				125	**AH-01,00x0125**
				160	**AH-01,00x0160**
				200	**AH-01,00x0200**
				250	**AH-01,00x0250**
			1,1	**100**	**AH-01,10x0100**
				125	**AH-01,10x0125**
				160	**AH-01,10x0160**
				200	**AH-01,10x0200**
			1,2	**100**	**AH-01,20x0100**
				125	**AH-01,20x0125**
				160	**AH-01,20x0160**
				200	**AH-01,20x0200**
	1,5	3	**1,3**	**100**	**AH-01,30x0100**
				125	**AH-01,30x0125**
				160	**AH-01,30x0160**
				200	**AH-01,30x0200**
			1,4	**100**	**AH-01,40x0100**
				125	**AH-01,40x0125**
				160	**AH-01,40x0160**

R	k	d2	d1	L	REF.
0,2	1,5	3	**1,4**	**200**	**AH-01,40x0200**
			1,5	**100**	**AH-01,50x0100**
				125	**AH-01,50x0125**
				160	**AH-01,50x0160**
				200	**AH-01,50x0200**
			1,6	**100**	**AH-01,60x0100**
				125	**AH-01,60x0125**
				160	**AH-01,60x0160**
				200	**AH-01,60x0200**
			1,7	**100**	**AH-01,70x0100**
				125	**AH-01,70x0125**
				160	**AH-01,70x0160**
				200	**AH-01,70x0200**
			1,8	**100**	**AH-01,80x0100**
				125	**AH-01,80x0125**
				160	**AH-01,80x0160**
				200	**AH-01,80x0200**
			1,9	**100**	**AH-01,90x0100**
				125	**AH-01,90x0125**
				160	**AH-01,90x0160**
				200	**AH-01,90x0200**
	2	4	**2,0**	**100**	**AH-02,00x0100**
				125	**AH-02,00x0125**
				160	**AH-02,00x0160**
				200	**AH-02,00x0200**



R	k	d2	d1	L	REF.
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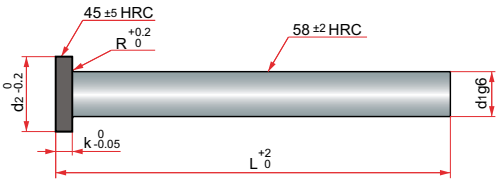
				315	AH-02,00x0315
			2,1	125	AH-02,10x0125
				200	AH-02,10x0200
				315	AH-02,10x0315
			2,2	100	AH-02,20x0100
				125	AH-02,20x0125
				160	AH-02,20x0160
				200	AH-02,20x0200
				250	AH-02,20x0250
				315	AH-02,20x0315
			2,3	125	AH-02,30x0125
				200	AH-02,30x0200
				315	AH-02,30x0315
0,3		5	2,4	125	AH-02,40x0125
				200	AH-02,40x0200
				315	AH-02,40x0315
			2,5	100	AH-02,50x0100
				125	AH-02,50x0125
				160	AH-02,50x0160
				200	AH-02,50x0200
				250	AH-02,50x0250
				315	AH-02,50x0315
			2,6	125	AH-02,60x0125
				200	AH-02,60x0200
				315	AH-02,60x0315
			2,7	100	AH-02,70x0100
				125	AH-02,70x0125
				160	AH-02,70x0160
				200	AH-02,70x0200
				250	AH-02,70x0250
				315	AH-02,70x0315

R	k	d2	d1	L	REF.
0,3	2	5	2,8	125	AH-02,80x0125
				200	AH-02,80x0200
				315	AH-02,80x0315
	3	6	2,9	125	AH-02,90x0125
				200	AH-02,90x0200
				315	AH-02,90x0315
			3,0	100	AH-03,00x0100
				125	AH-03,00x0125
				160	AH-03,00x0160
				200	AH-03,00x0200
				250	AH-03,00x0250
				315	AH-03,00x0315
				400	AH-03,00x0400
				500	AH-03,00x0500
				630	AH-03,00x0630
				800	AH-03,00x0800
				1000	AH-03,00x1000
			3,1	125	AH-03,10x0125
				200	AH-03,10x0200
				315	AH-03,10x0315
			3,2	100	AH-03,20x0100
				125	AH-03,20x0125
				160	AH-03,20x0160
				200	AH-03,20x0200
				250	AH-03,20x0250
				315	AH-03,20x0315
				400	AH-03,20x0400
				500	AH-03,20x0500
				800	AH-03,20x0800
			3,3	125	AH-03,30x0125
				200	AH-03,30x0200
			3,4	125	AH-03,40x0125



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		7	3,5	100	AH-03,50x0100
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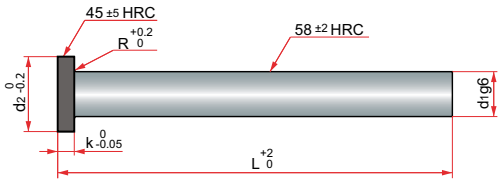
				160	AH-03,50x0160
				200	AH-03,50x0200
				250	AH-03,50x0250
				315	AH-03,50x0315
				400	AH-03,50x0400
				500	AH-03,50x0500
				630	AH-03,50x0630
			3,6	125	AH-03,60x0125
				200	AH-03,60x0200
			3,7	100	AH-03,70x0100
				125	AH-03,70x0125
				160	AH-03,70x0160
				200	AH-03,70x0200
				250	AH-03,70x0250
				315	AH-03,70x0315
				400	AH-03,70x0400
			3,8	125	AH-03,80x0125
				200	AH-03,80x0200
				315	AH-03,80x0315
			3,9	125	AH-03,90x0125
				200	AH-03,90x0200
				315	AH-03,90x0315
		8	4,0	100	AH-04,00x0100
				125	AH-04,00x0125
				160	AH-04,00x0160
				200	AH-04,00x0200
				250	AH-04,00x0250
				315	AH-04,00x0315

R	k	d2	d1	L	REF.
0,3	3	8	4,0	400	AH-04,00x0400
				500	AH-04,00x0500
				630	AH-04,00x0630
				800	AH-04,00x0800
				1000	AH-04,00x1000
			4,1	125	AH-04,10x0125
				200	AH-04,10x0200
				315	AH-04,10x0315
			4,2	100	AH-04,20x0100
				125	AH-04,20x0125
				160	AH-04,20x0160
				200	AH-04,20x0200
				250	AH-04,20x0250
				315	AH-04,20x0315
				400	AH-04,20x0400
			4,3	125	AH-04,30x0125
				200	AH-04,30x0200
			4,4	125	AH-04,40x0125
				200	AH-04,40x0200
			4,5	100	AH-04,50x0100
				125	AH-04,50x0125
				160	AH-04,50x0160
				200	AH-04,50x0200
				250	AH-04,50x0250
				315	AH-04,50x0315
				400	AH-04,50x0400
				500	AH-04,50x0500
				630	AH-04,50x0630
				800	AH-04,50x0800
				1000	AH-04,50x1000
			4,6	125	AH-04,60x0125
				200	AH-04,60x0200



R	k	d2	d1	L	REF.
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				125	AH-04,70x0125
				160	AH-04,70x0160
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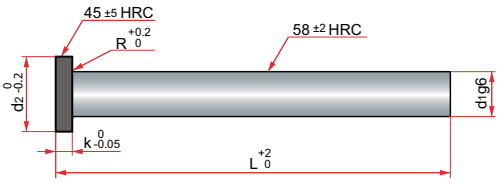
				315	AH-04,70x0315
				400	AH-04,70x0400
			4,8	125	AH-04,80x0125
				200	AH-04,80x0200
			4,9	125	AH-04,90x0125
				200	AH-04,90x0200
		10	5,0	100	AH-05,00x0100
				125	AH-05,00x0125
				160	AH-05,00x0160
				200	AH-05,00x0200
				250	AH-05,00x0250
				315	AH-05,00x0315
				400	AH-05,00x0400
				500	AH-05,00x0500
				630	AH-05,00x0630
				800	AH-05,00x0800
				1000	AH-05,00x1000
			5,1	160	AH-05,10x0160
				250	AH-05,10x0250
				400	AH-05,10x0400
			5,2	100	AH-05,20x0100
				125	AH-05,20x0125
				160	AH-05,20x0160
				200	AH-05,20x0200
				250	AH-05,20x0250
				315	AH-05,20x0315
				400	AH-05,20x0400

R	k	d2	d1	L	REF.
0,3	3	10	5,2	500	AH-05,20x0500
				630	AH-05,20x0630
				800	AH-05,20x0800
				1000	AH-05,20x1000
			5,3	160	AH-05,30x0160
				250	AH-05,30x0250
				400	AH-05,30x0400
			5,4	160	AH-05,40x0160
				250	AH-05,40x0250
				400	AH-05,40x0400
			5,5	100	AH-05,50x0100
				125	AH-05,50x0125
				160	AH-05,50x0160
				200	AH-05,50x0200
				250	AH-05,50x0250
				315	AH-05,50x0315
				400	AH-05,50x0400
				500	AH-05,50x0500
				630	AH-05,50x0630
				800	AH-05,50x0800
			5,6	160	AH-05,60x0160
				250	AH-05,60x0250
				400	AH-05,60x0400
			5,7	160	AH-05,70x0160
				250	AH-05,70x0250
				400	AH-05,70x0400
			5,8	160	AH-05,80x0160
				250	AH-05,80x0250
				400	AH-05,80x0400
			5,9	160	AH-05,90x0160
				250	AH-05,90x0250
				400	AH-05,90x0400



R	k	d2	d1	L	REF.
0,5	5	12	6,0	100	AH-06,00x0100
				125	AH-06,00x0125
				160	AH-06,00x0160
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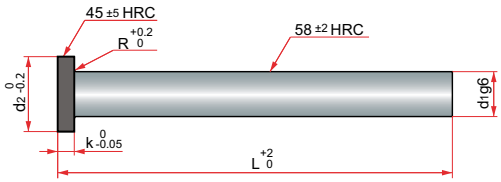
				250	AH-06,00x0250
				315	AH-06,00x0315
				400	AH-06,00x0400
				500	AH-06,00x0500
				630	AH-06,00x0630
				800	AH-06,00x0800
				1000	AH-06,00x1000
			6,1	160	AH-06,10x0160
				250	AH-06,10x0250
				400	AH-06,10x0400
			6,2	100	AH-06,20x0100
				125	AH-06,20x0125
				160	AH-06,20x0160
				200	AH-06,20x0200
				250	AH-06,20x0250
				315	AH-06,20x0315
				400	AH-06,20x0400
				500	AH-06,20x0500
				630	AH-06,20x0630
				800	AH-06,20x0800
				1000	AH-06,20x1000
			6,3	250	AH-06,30x0250
				400	AH-06,30x0400
			6,4	250	AH-06,40x0250
				400	AH-06,40x0400
			6,5	100	AH-06,50x0100
				125	AH-06,50x0125
				160	AH-06,50x0160

R	k	d2	d1	L	REF.
0,5	5	12	6,5	200	AH-06,50x0200
				250	AH-06,50x0250
				315	AH-06,50x0315
				400	AH-06,50x0400
				500	AH-06,50x0500
				630	AH-06,50x0630
			6,6	160	AH-06,60x0160
				250	AH-06,60x0250
				400	AH-06,60x0400
			6,7	160	AH-06,70x0160
				250	AH-06,70x0250
				400	AH-06,70x0400
			6,8	160	AH-06,80x0160
				250	AH-06,80x0250
				400	AH-06,80x0400
			6,9	160	AH-06,90x0160
				250	AH-06,90x0250
				400	AH-06,90x0400
			7,0	100	AH-07,00x0100
				125	AH-07,00x0125
				160	AH-07,00x0160
				200	AH-07,00x0200
				250	AH-07,00x0250
				315	AH-07,00x0315
				400	AH-07,00x0400
				500	AH-07,00x0500
				630	AH-07,00x0630
				800	AH-07,00x0800
			7,1	160	AH-07,10x0160
				250	AH-07,10x0250
				400	AH-07,10x0400
			7,2	160	AH-07,20x0160



R	k	d2	d1	L	REF.
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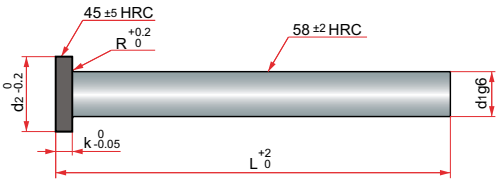
				400	AH-07,20x0400
			7,3	160	AH-07,30x0160
				250	AH-07,30x0250
				400	AH-07,30x0400
			7,4	160	AH-07,40x0160
				250	AH-07,40x0250
				400	AH-07,40x0400
		14	7,6	160	AH-07,60x0160
				250	AH-07,60x0250
				400	AH-07,60x0400
			7,7	160	AH-07,70x0160
				250	AH-07,70x0250
				400	AH-07,70x0400
			7,8	160	AH-07,80x0160
				250	AH-07,80x0250
				400	AH-07,80x0400
			7,9	160	AH-07,90x0160
				250	AH-07,90x0250
				400	AH-07,90x0400
			8,0	100	AH-08,00x0100
				125	AH-08,00x0125
				160	AH-08,00x0160
				200	AH-08,00x0200
				250	AH-08,00x0250
				315	AH-08,00x0315
				400	AH-08,00x0400
				500	AH-08,00x0500
				630	AH-08,00x0630
				800	AH-08,00x0800
				1000	AH-08,00x1000
			8,1	200	AH-08,10x0200

R	k	d2	d1	L	REF.
0,5	5	14	8,1	400	AH-08,10x0400
			8,2	100	AH-08,20x0100
				125	AH-08,20x0125
				160	AH-08,20x0160
				200	AH-08,20x0200
				250	AH-08,20x0250
				315	AH-08,20x0315
				400	AH-08,20x0400
				500	AH-08,20x0500
				630	AH-08,20x0630
				800	AH-08,20x0800
			8,3	200	AH-08,30x0200
				400	AH-08,30x0400
				500	AH-08,30x0500
			8,4	200	AH-08,40x0200
				400	AH-08,40x0400
				500	AH-08,40x0500
			8,5	100	AH-08,50x0100
				125	AH-08,50x0125
				160	AH-08,50x0160
				200	AH-08,50x0200
				250	AH-08,50x0250
				315	AH-08,50x0315
				400	AH-08,50x0400
				500	AH-08,50x0500
				630	AH-08,50x0630
			8,6	200	AH-08,60x0200
				400	AH-08,60x0400
			8,7	200	AH-08,70x0200
				400	AH-08,70x0400
			8,8	200	AH-08,80x0200
				400	AH-08,80x0400



R	k	d2	d1	L	REF.
0,5	5	14	8,9	200	AH-08,90x0200
				400	AH-08,90x0400
			9,0	100	AH-09,00x0100
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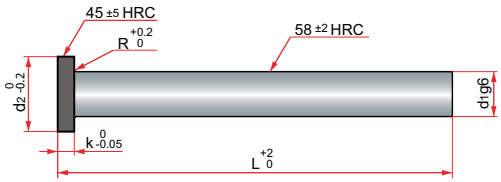
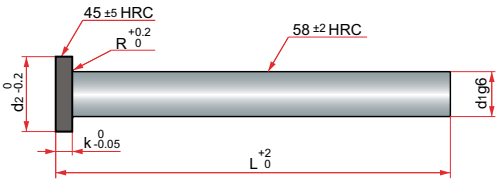
				160	AH-09,00x0160
				200	AH-09,00x0200
				250	AH-09,00x0250
				315	AH-09,00x0315
				400	AH-09,00x0400
				500	AH-09,00x0500
				630	AH-09,00x0630
			9,1	200	AH-09,10x0200
				400	AH-09,10x0400
			9,2	200	AH-09,20x0200
				400	AH-09,20x0400
			9,3	200	AH-09,30x0200
				400	AH-09,30x0400
			9,4	200	AH-09,40x0200
				400	AH-09,40x0400
			9,5	100	AH-09,50x0100
				125	AH-09,50x0125
				160	AH-09,50x0160
				200	AH-09,50x0200
				250	AH-09,50x0250
				315	AH-09,50x0315
				400	AH-09,50x0400
				500	AH-09,50x0500
				630	AH-09,50x0630
		16	9,6	200	AH-09,60x0200
				400	AH-09,60x0400
			9,7	200	AH-09,70x0200
				400	AH-09,70x0400

R	k	d2	d1	L	REF.
0,5	5	16	9,8	200	AH-09,80x0200
				400	AH-09,80x0400
			9,9	200	AH-09,90x0200
				400	AH-09,90x0400
			10,0	100	AH-10,00x0100
				125	AH-10,00x0125
				160	AH-10,00x0160
				200	AH-10,00x0200
				250	AH-10,00x0250
				315	AH-10,00x0315
				400	AH-10,00x0400
				500	AH-10,00x0500
				630	AH-10,00x0630
				800	AH-10,00x0800
				1000	AH-10,00x1000
			10,1	200	AH-10,10x0200
				400	AH-10,10x0400
			10,2	100	AH-10,20x0100
				125	AH-10,20x0125
				160	AH-10,20x0160
				200	AH-10,20x0200
				250	AH-10,20x0250
				315	AH-10,20x0315
				400	AH-10,20x0400
				500	AH-10,20x0500
				630	AH-10,20x0630
			10,5	100	AH-10,50x0100
				125	AH-10,50x0125
				160	AH-10,50x0160
				200	AH-10,50x0200
				250	AH-10,50x0250
				315	AH-10,50x0315



R	k	d2	d1	L	REF.
0,5	5	16	**10,5**	**400**	**AH-10,50x0400**
				500	**AH-10,50x0500**
				630	**AH-10,50x0630**
			11,0	**100**	**AH-11,00x0100**
				125	**AH-11,00x0125**
				160	**AH-11,00x0160**
				200	**AH-11,00x0200**
				250	**AH-11,00x0250**
				315	**AH-11,00x0315**
				400	**AH-11,00x0400**
				500	**AH-11,00x0500**
				630	**AH-11,00x0630**
			11,5	**200**	**AH-11,50x0200**
				400	**AH-11,50x0400**
				630	**AH-11,50x0630**
0,8	7	18	**12,0**	**100**	**AH-12,00x0100**
				125	**AH-12,00x0125**
				160	**AH-12,00x0160**
				200	**AH-12,00x0200**
				250	**AH-12,00x0250**
				315	**AH-12,00x0315**
				400	**AH-12,00x0400**
				500	**AH-12,00x0500**
				630	**AH-12,00x0630**
				800	**AH-12,00x0800**
				1000	**AH-12,00x1000**
			12,2	**100**	**AH-12,20x0100**
				125	**AH-12,20x0125**
				160	**AH-12,20x0160**
				200	**AH-12,20x0200**
				250	**AH-12,20x0250**
				315	**AH-12,20x0315**

R	k	d2	d1	L	REF.
0,8	7	18	**12,2**	**400**	**AH-12,20x0400**
				500	**AH-12,20x0500**
				630	**AH-12,20x0630**
			12,5	**100**	**AH-12,50x0100**
				125	**AH-12,50x0125**
				160	**AH-12,50x0160**
				200	**AH-12,50x0200**
				250	**AH-12,50x0250**
				315	**AH-12,50x0315**
				400	**AH-12,50x0400**
				500	**AH-12,50x0500**
				630	**AH-12,50x0630**
			13,0	**100**	**AH-13,00x0100**
				125	**AH-13,00x0125**
				160	**AH-13,00x0160**
				200	**AH-13,00x0200**
				250	**AH-13,00x0250**
				315	**AH-13,00x0315**
				400	**AH-13,00x0400**
				630	**AH-13,00x0630**
		22	**13,5**	**250**	**AH-13,50x0250**
				400	**AH-13,50x0400**
				630	**AH-13,50x0630**
			14,0	**100**	**AH-14,00x0100**
				125	**AH-14,00x0125**
				160	**AH-14,00x0160**
				200	**AH-14,00x0200**
				250	**AH-14,00x0250**
				315	**AH-14,00x0315**
				400	**AH-14,00x0400**
				500	**AH-14,00x0500**
				630	**AH-14,00x0630**



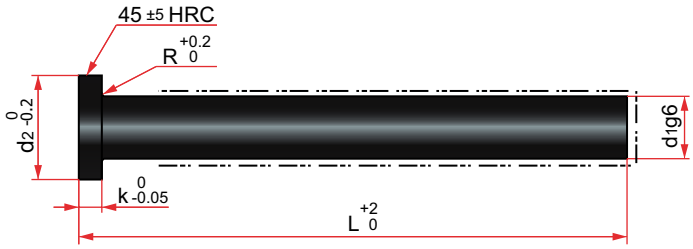
R	k	d2	d1	L	REF.
0,8	7	22	**14,0**	**800**	**AH-14,00x0800**
				1000	**AH-14,00x1000**
			14,5	**250**	**AH-14,50x0250**
				400	**AH-14,50x0400**
				630	**AH-14,50x0630**
			15,0	**100**	**AH-15,00x0100**
				125	**AH-15,00x0125**
				160	**AH-15,00x0160**
				200	**AH-15,00x0200**
				250	**AH-15,00x0250**
				400	**AH-15,00x0400**
				630	**AH-15,00x0630**
			16,0	**100**	**AH-16,00x0100**
				125	**AH-16,00x0125**
				160	**AH-16,00x0160**
				200	**AH-16,00x0200**
				250	**AH-16,00x0250**
				315	**AH-16,00x0315**
				400	**AH-16,00x0400**
				500	**AH-16,00x0500**
				630	**AH-16,00x0630**
				800	**AH-16,00x0800**
				1000	**AH-16,00x1000**
			16,2	**200**	**AH-16,20x0200**
				400	**AH-16,20x0400**
			16,5	**200**	**AH-16,50x0200**
				400	**AH-16,50x0400**
		24	**18,0**	**100**	**AH-18,00x0100**
				125	**AH-18,00x0125**
				160	**AH-18,00x0160**
				200	**AH-18,00x0200**
				250	**AH-18,00x0250**

R	k	d2	d1	L	REF.
0,8	7	24	**18,0**	**315**	**AH-18,00x0315**
				400	**AH-18,00x0400**
				500	**AH-18,00x0500**
				630	**AH-18,00x0630**
1	8	26	**20,0**	**100**	**AH-20,00x0100**
				125	**AH-20,00x0125**
				160	**AH-20,00x0160**
				200	**AH-20,00x0200**
				250	**AH-20,00x0250**
				315	**AH-20,00x0315**
				400	**AH-20,00x0400**
				500	**AH-20,00x0500**
				630	**AH-20,00x0630**
				800	**AH-20,00x0800**
				1000	**AH-20,00x1000**
			20,5	**250**	**AH-20,50x0250**
				400	**AH-20,50x0400**
		28	**22,0**	**250**	**AH-22,00x0250**
				400	**AH-22,00x0400**
	10	32	**25,0**	**160**	**AH-25,00x0160**
				200	**AH-25,00x0200**
				250	**AH-25,00x0250**
				315	**AH-25,00x0315**
				400	**AH-25,00x0400**
				500	**AH-25,00x0500**
				630	**AH-25,00x0630**

BR1710DLC

E 1710, Z 40

Ejector pin hardened DLC
Expulsor templado DLC
Wypychacz hartowany DLC
Extrator temperado DLC
Ejecteur trempé DLC



Mat.: 1.2210 / 58±2 HRC. DIN 1530AH / DLC > 70 HRC. Max.temperature at work: 220º C

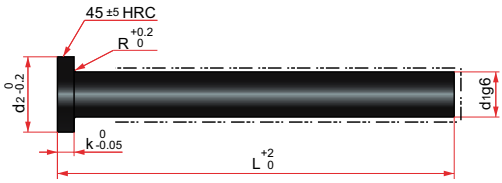
DLC coated

R	k	d2	d1	L	REF.
0,2	1,2	2,5	0,80	80	BR1710 DLC-0.8 x 80
				100	BR1710 DLC-0.8 x 100
				125	BR1710 DLC-0.8 x 125
				160	BR1710 DLC-0.8 x 160
			1,00	80	BR1710 DLC- 1 x 80
				100	BR1710 DLC- 1 x 100
				125	BR1710 DLC- 1 x 125
				160	BR1710 DLC- 1 x 160
				200	BR1710 DLC- 1 x 200
			1,10	80	BR1710 DLC- 1.1 x 80
				100	BR1710 DLC- 1.1 x 100
				125	BR1710 DLC- 1.1 x 125
				160	BR1710 DLC- 1.1 x 160
				200	BR1710 DLC- 1.1 x 200
			1,20	80	BR1710 DLC- 1.2 x 80
				100	BR1710 DLC- 1.2 x 100
				125	BR1710 DLC- 1.2 x 125
				160	BR1710 DLC- 1.2 x 160
				200	BR1710 DLC- 1.2 x 200
	1,5	3	1,30	80	BR1710 DLC- 1.3 x 80
				100	BR1710 DLC- 1.3 x 100
				125	BR1710 DLC- 1.3 x 125
				160	BR1710 DLC- 1.3 x 160
				200	BR1710 DLC- 1.3 x 200

R	k	d2	d1	L	REF.
0,2	1,5	3	1,40	80	BR1710 DLC- 1.4 x 80
				100	BR1710 DLC- 1.4 x 100
				125	BR1710 DLC- 1.4 x 125
				160	BR1710 DLC- 1.4 x 160
				200	BR1710 DLC- 1.4 x 200
			1,50	80	BR1710 DLC- 1.5 x 80
				100	BR1710 DLC- 1.5 x 100
				125	BR1710 DLC- 1.5 x 125
				160	BR1710 DLC- 1.5 x 160
				200	BR1710 DLC- 1.5 x 200
				250	BR1710 DLC- 1.5 x 250
			1,60	80	BR1710 DLC- 1.6 x 80
				100	BR1710 DLC- 1.6 x 100
				125	BR1710 DLC- 1.6 x 125
				160	BR1710 DLC- 1.6 x 160
				200	BR1710 DLC- 1.6 x 200
				250	BR1710 DLC- 1.6 x 250
			1,70	80	BR1710 DLC- 1.7 x 80
				100	BR1710 DLC- 1.7 x 100
				125	BR1710 DLC- 1.7 x 125
				160	BR1710 DLC- 1.7 x 160
				200	BR1710 DLC- 1.7 x 200
			1,80	80	BR1710 DLC- 1.8 x 80
				100	BR1710 DLC- 1.8 x 100

BR1710DLC

E 1710, Z 40

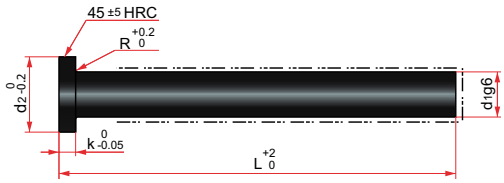


R	k	d2	d1	L	REF.
0,2	1,5	3	1,80	125	BR1710 DLC- 1.8 x 125
				160	BR1710 DLC- 1.8 x 160
				200	BR1710 DLC- 1.8 x 200
			1,90	80	BR1710 DLC- 1.9 x 80
				100	BR1710 DLC- 1.9 x 100
				125	BR1710 DLC- 1.9 x 125
				160	BR1710 DLC- 1.9 x 160
				200	BR1710 DLC- 1.9 x 200
	2	4	2,00	80	BR1710 DLC-2 x 80
				100	BR1710 DLC-2 x 100
				125	BR1710 DLC-2 x 125
				160	BR1710 DLC-2 x 160
				200	BR1710 DLC-2 x 200
				250	BR1710 DLC-2 x 250
				315	BR1710 DLC-2 x 315
			2,20	100	BR1710 DLC-2.2 x 100
				125	BR1710 DLC-2.2 x 125
				160	BR1710 DLC-2.2 x 160
				200	BR1710 DLC-2.2 x 200
				250	BR1710 DLC-2.2 x 250
				315	BR1710 DLC-2.2 x 315
0,3		5	2,50	80	BR1710 DLC-2.5 x 80
				100	BR1710 DLC-2.5 x 100
				125	BR1710 DLC-2.5 x 125
				160	BR1710 DLC-2.5 x 160
				200	BR1710 DLC-2.5 x 200
				250	BR1710 DLC-2.5 x 250
				315	BR1710 DLC-2.5 x 315
				400	BR1710 DLC-2.5 x 400
	3	6	3,00	80	BR1710 DLC-3 x 80
				100	BR1710 DLC-3 x 100
				125	BR1710 DLC-3 x 125

R	k	d2	d1	L	REF.
0,3	3	6	3,00	160	BR1710 DLC-3 x 160
				200	BR1710 DLC-3 x 200
				250	BR1710 DLC-3 x 250
				315	BR1710 DLC-3 x 315
				400	BR1710 DLC-3 x 400
			3,20	100	BR1710 DLC-3.2 x 100
				125	BR1710 DLC-3.2 x 125
				160	BR1710 DLC-3.2 x 160
				200	BR1710 DLC-3.2 x 200
				250	BR1710 DLC-3.2 x 250
				315	BR1710 DLC-3.2 x 315
				400	BR1710 DLC-3.2 x 400
		7	3,50	100	BR1710 DLC-3.5 x 100
				125	BR1710 DLC-3.5 x 125
				160	BR1710 DLC-3.5 x 160
				200	BR1710 DLC-3.5 x 200
				250	BR1710 DLC-3.5 x 250
				315	BR1710 DLC-3.5 x 315
				400	BR1710 DLC-3.5 x 400
			3,70	100	BR1710 DLC-3.7 x 100
				160	BR1710 DLC-3.7 x 160
				250	BR1710 DLC-3.7 x 250
		8	4,00	80	BR1710 DLC-4 x 80
				100	BR1710 DLC-4 x 100
				125	BR1710 DLC-4 x 125
				160	BR1710 DLC-4 x 160
				200	BR1710 DLC-4 x 200
				250	BR1710 DLC-4 x 250
				315	BR1710 DLC-4 x 315
				400	BR1710 DLC-4 x 400
				500	BR1710 DLC-4 x 500
			4,20	100	BR1710 DLC-4.2 x 100

BR1710DLC

E 1710, Z 40

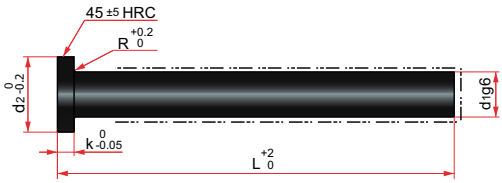


R	k	d2	d1	L	REF.
0,3	3	8	4,20	125	BR1710 DLC-4.2 x 125
				160	BR1710 DLC-4.2 x 160
				200	BR1710 DLC-4.2 x 200
				250	BR1710 DLC-4.2 x 250
				315	BR1710 DLC-4.2 x 315
			4,50	100	BR1710 DLC-4.5 x 100
				125	BR1710 DLC-4.5 x 125
				160	BR1710 DLC-4.5 x 160
				200	BR1710 DLC-4.5 x 200
				250	BR1710 DLC-4.5 x 250
				315	BR1710 DLC-4.5 x 315
				400	BR1710 DLC-4.5 x 400
		10	5,00	80	BR1710 DLC-5 x 80
				100	BR1710 DLC-5 x 100
				125	BR1710 DLC-5 x 125
				160	BR1710 DLC-5 x 160
				200	BR1710 DLC-5 x 200
				250	BR1710 DLC-5 x 250
				315	BR1710 DLC-5 x 315
				400	BR1710 DLC-5 x 400
				500	BR1710 DLC-5 x 500
			5,20	100	BR1710 DLC-5.2 x 100
				125	BR1710 DLC-5.2 x 125
				160	BR1710 DLC-5.2 x 160
				200	BR1710 DLC-5.2 x 200
				250	BR1710 DLC-5.2 x 250
				315	BR1710 DLC-5.2 x 315
			5,50	100	BR1710 DLC-5.5 x 100
				125	BR1710 DLC-5.5 x 125
				160	BR1710 DLC-5.5 x 160
				200	BR1710 DLC-5.5 x 200
				250	BR1710 DLC-5.5 x 250

R	k	d2	d1	L	REF.
0,3	3	10	5,50	315	BR1710 DLC-5.5 x 315
0,5	5	12	6,00	80	BR1710 DLC-6 x 80
				100	BR1710 DLC-6 x 100
				125	BR1710 DLC-6 x 125
				160	BR1710 DLC-6 x 160
				200	BR1710 DLC-6 x 200
				250	BR1710 DLC-6 x 250
				315	BR1710 DLC-6 x 315
				400	BR1710 DLC-6 x 400
				500	BR1710 DLC-6 x 500
			6,20	100	BR1710 DLC-6.2 x 100
				125	BR1710 DLC-6.2 x 125
				160	BR1710 DLC-6.2 x 160
				200	BR1710 DLC-6.2 x 200
				250	BR1710 DLC-6.2 x 250
				315	BR1710 DLC-6.2 x 315
			6,50	100	BR1710 DLC-6.5 x 100
				125	BR1710 DLC-6.5 x 125
				160	BR1710 DLC-6.5 x 160
				200	BR1710 DLC-6.5 x 200
				250	BR1710 DLC-6.5 x 250
				315	BR1710 DLC-6.5 x 315
				400	BR1710 DLC-6.5 x 400
			7,00	100	BR1710 DLC-7 x 100
				125	BR1710 DLC-7 x 125
				160	BR1710 DLC-7 x 160
				200	BR1710 DLC-7 x 200
				250	BR1710 DLC-7 x 250
				315	BR1710 DLC-7 x 315
				400	BR1710 DLC-7 x 400
			7,50	100	BR1710 DLC-7.5 x 100
				160	BR1710 DLC-7.5 x 160

BR1710DLC

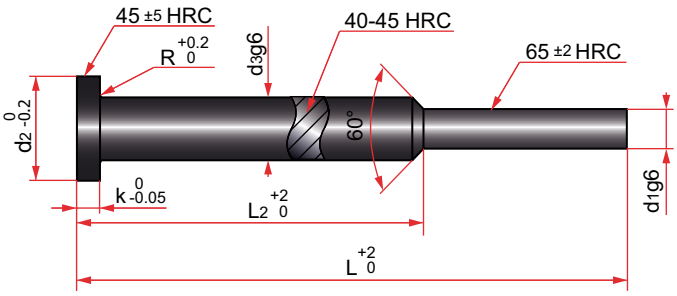
E 1710, Z 40



R	k	d2	d1	L	REF.
0,5	5	12	7,50	250	BR1710 DLC-7.5 x 250
		14	8,00	100	BR1710 DLC-8 x 100
				125	BR1710 DLC-8 x 125
				160	BR1710 DLC-8 x 160
				200	BR1710 DLC-8 x 200
				250	BR1710 DLC-8 x 250
				315	BR1710 DLC-8 x 315
				400	BR1710 DLC-8 x 400
				500	BR1710 DLC-8 x 500
			8,20	100	BR1710 DLC-8.2 x 100
				125	BR1710 DLC-8.2 x 125
				160	BR1710 DLC-8.2 x 160
				200	BR1710 DLC-8.2 x 200
				250	BR1710 DLC-8.2 x 250
				315	BR1710 DLC-8.2 x 315
			8,50	100	BR1710 DLC-8.5 x 100
				125	BR1710 DLC-8.5 x 125
				160	BR1710 DLC-8.5 x 160
				200	BR1710 DLC-8.5 x 200
				250	BR1710 DLC-8.5 x 250
				315	BR1710 DLC-8.5 x 315
			9,00	100	BR1710 DLC-9 x 100
				160	BR1710 DLC-9 x 160
				250	BR1710 DLC-9 x 250
				315	BR1710 DLC-9 x 315
		16	10,00	100	BR1710 DLC-10 x 100
				125	BR1710 DLC-10 x 125
				160	BR1710 DLC-10 x 160
				200	BR1710 DLC-10 x 200
				250	BR1710 DLC-10 x 250
				315	BR1710 DLC-10 x 315
				400	BR1710 DLC-10 x 400
				500	BR1710 DLC-10 x 500

R	k	d2	d1	L	REF.
0,5	5	16	10,50	100	BR1710 DLC-10.5 x 100
				160	BR1710 DLC-10.5 x 160
				250	BR1710 DLC-10.5 x 250
				400	BR1710 DLC-10.5 x 400
0,8	7	18	12,00	100	BR1710 DLC-12 x 100
				125	BR1710 DLC-12 x 125
				160	BR1710 DLC-12 x 160
				200	BR1710 DLC-12 x 200
				250	BR1710 DLC-12 x 250
				315	BR1710 DLC-12 x 315
				400	BR1710 DLC-12 x 400
				500	BR1710 DLC-12 x 500
			12,50	160	BR1710 DLC-12.5 x 160
				250	BR1710 DLC-12.5 x 250
			13,00	160	BR1710 DLC-13 x 160
				250	BR1710 DLC-13 x 250
		22	14,00	100	BR1710 DLC-14 x 100
				160	BR1710 DLC-14 x 160
				250	BR1710 DLC-14 x 250
				400	BR1710 DLC-14 x 400
			16,00	100	BR1710 DLC-16 x 100
				125	BR1710 DLC-16 x 125
				160	BR1710 DLC-16 x 160
				200	BR1710 DLC-16 x 200
				250	BR1710 DLC-16 x 250
				315	BR1710 DLC-16 x 315
				400	BR1710 DLC-16 x 400
				500	BR1710 DLC-16 x 500
1	8	26	20,00	125	BR1710 DLC-20 x 125
				200	BR1710 DLC-20 x 200
				315	BR1710 DLC-20 x 315
				500	BR1710 DLC-20 x 500

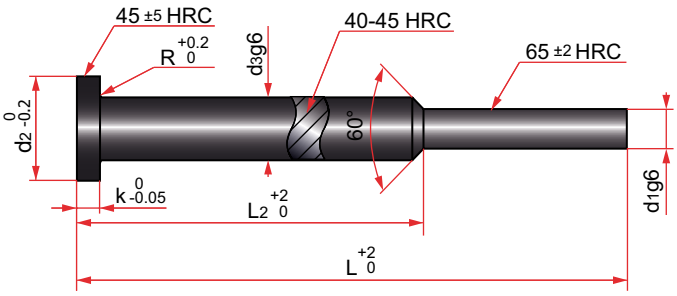
Black nitrited oxidized stepped ejector pin
Expulsor nitrurado mechado oxidado
Wypychacz odsadzany azotowany i oksydowany
Extrator respigado nitrurado oxidado
Ejecteur epaulee nitrure baigne oxidized



Mat. : 1.2344 DIN 1530 / ISO 8694 - Maximum temperature at work: 550º C.

R	k	d2	d3	L2	d1	L	REF.
0,2	2	4	2	32	**0,8**	**80**	**CN-0,80x080**
				50		**100**	**CN-0,80x100**
				50		**125**	**CN-0,80x125**
				63		**160**	**CN-0,80x160**
				32	**0,9**	**80**	**CN-0,90x080**
				50		**100**	**CN-0,90x100**
				50		**125**	**CN-0,90x125**
				63		**160**	**CN-0,90x160**
				80		**200**	**CN-0,90x200**
				32	**1**	**80**	**CN-1,00x080**
				50		**100**	**CN-1,00x100**
				50		**125**	**CN-1,00x125**
				63		**160**	**CN-1,00x160**
				80		**200**	**CN-1,00x200**
				100		**250**	**CN-1,00x250**
				32	**1,1**	**80**	**CN-1,10x080**
				50		**100**	**CN-1,10x100**
				50		**125**	**CN-1,10x125**
				63		**160**	**CN-1,10x160**
				80		**200**	**CN-1,10x200**
				100		**250**	**CN-1,10x250**
				32	**1,2**	**80**	**CN-1,20x080**
				50		**100**	**CN-1,20x100**
				50		**125**	**CN-1,20x125**
				63		**160**	**CN-1,20x160**
				80		**200**	**CN-1,20x200**

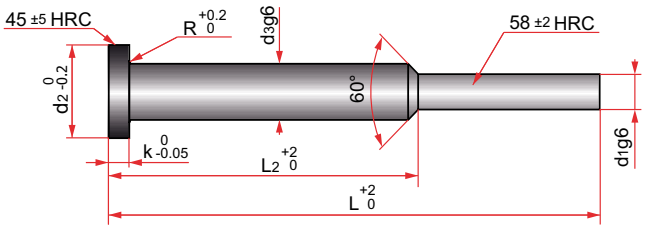
R	k	d2	d3	L2	d1	L	REF.
0,2	2	4	2	100	**1,2**	**250**	**CN-1,20x250**
				32	**1,3**	**80**	**CN-1,30x080**
				50		**100**	**CN-1,30x100**
				50		**125**	**CN-1,30x125**
				63		**160**	**CN-1,30x160**
				80		**200**	**CN-1,30x200**
				100		**250**	**CN-1,30x250**
				32	**1,4**	**80**	**CN-1,40x080**
				50		**100**	**CN-1,40x100**
				50		**125**	**CN-1,40x125**
				63		**160**	**CN-1,40x160**
				80		**200**	**CN-1,40x200**
				100		**250**	**CN-1,40x250**
0,3	3	6	3	32	**1,5**	**80**	**CN-1,50x080**
				50		**100**	**CN-1,50x100**
				50		**125**	**CN-1,50x125**
				63		**160**	**CN-1,50x160**
				80		**200**	**CN-1,50x200**
				100		**250**	**CN-1,50x250**
				32	**1,6**	**80**	**CN-1,60x080**
				50		**100**	**CN-1,60x100**
				50		**125**	**CN-1,60x125**
				63		**160**	**CN-1,60x160**
				80		**200**	**CN-1,60x200**
				100		**250**	**CN-1,60x250**
				32	**1,7**	**80**	**CN-1,70x080**



R	k	d2	d3	L2	d1	L	REF.
0,3	3	6	3	50	**1,7**	**100**	**CN-1,70x100**
				50		**125**	**CN-1,70x125**
				63		**160**	**CN-1,70x160**
				80		**200**	**CN-1,70x200**
				100		**250**	**CN-1,70x250**
				32	**1,8**	**80**	**CN-1,80x080**
				50		**100**	**CN-1,80x100**
				50		**125**	**CN-1,80x125**
				63		**160**	**CN-1,80x160**
				80		**200**	**CN-1,80x200**
				100		**250**	**CN-1,80x250**
				32	**1,9**	**80**	**CN-1,90x080**
				50		**100**	**CN-1,90x100**
				50		**125**	**CN-1,90x125**
				63		**160**	**CN-1,90x160**
				80		**200**	**CN-1,90x200**
				100		**250**	**CN-1,90x250**
				32	**2**	**80**	**CN-2,00x080**
				50		**100**	**CN-2,00x100**
				50		**125**	**CN-2,00x125**
				63		**160**	**CN-2,00x160**
				80		**200**	**CN-2,00x200**
				100		**250**	**CN-2,00x250**
				160		**315**	**CN-2,00x315**
				32	**2,1**	**80**	**CN-2,10x080**
				50		**100**	**CN-2,10x100**
				50		**125**	**CN-2,10x125**
				63		**160**	**CN-2,10x160**
				80		**200**	**CN-2,10x200**
				100		**250**	**CN-2,10x250**
				160		**315**	**CN-2,10x315**

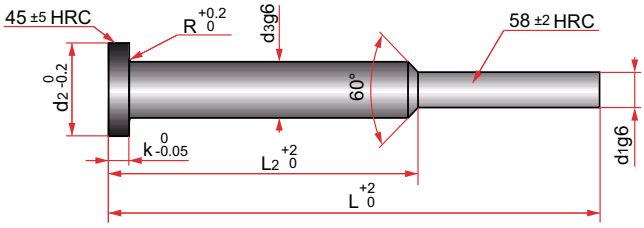
R	k	d2	d3	L2	d1	L	REF.
0,3	3	6	3	32	**2,2**	**80**	**CN-2,20x080**
				50		**100**	**CN-2,20x100**
				50		**125**	**CN-2,20x125**
				63		**160**	**CN-2,20x160**
				80		**200**	**CN-2,20x200**
				100		**250**	**CN-2,20x250**
				130		**315**	**CN-2,20x315**
				32	**2,3**	**80**	**CN-2,30x080**
				50		**100**	**CN-2,30x100**
				50		**125**	**CN-2,30x125**
				63		**160**	**CN-2,30x160**
				80		**200**	**CN-2,30x200**
				100		**250**	**CN-2,30x250**
				160		**315**	**CN-2,30x315**
				32	**2,4**	**80**	**CN-2,40x080**
				50		**100**	**CN-2,40x100**
				50		**125**	**CN-2,40x125**
				63		**160**	**CN-2,40x160**
				80		**200**	**CN-2,40x200**
				100		**250**	**CN-2,40x250**
				160		**315**	**CN-2,40x315**
				50	**2,5**	**100**	**CN-2,50x100**
				50		**125**	**CN-2,50x125**
				63		**160**	**CN-2,50x160**
				80		**200**	**CN-2,50x200**
				100		**250**	**CN-2,50x250**
				160		**315**	**CN-2,50x315**
		8	4	50	**3**	**125**	**CN-3,00x125**
				80		**200**	**CN-3,00x200**
				100		**250**	**CN-3,00x250**
				160		**315**	**CN-3,00x315**

Hardened stepped ejector pin
Expulsor templado mechado
Wypychacz hartowany azotowany
Extrator temperado respigado
Ejecteur à tête cylindrique épaulé trempé

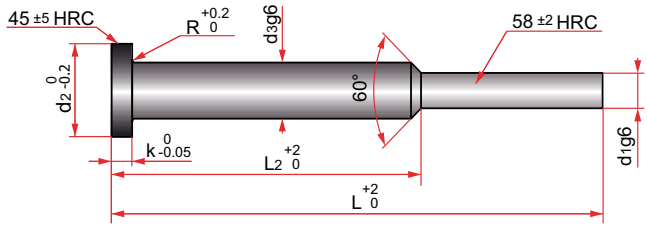


Mat. : 1.2210 / 58 ± 2 HRC. DIN 1530 / Maximum temperature at work: 220º C.

R	k	d2	d3	L2	d1	L	REF.
0,2	2	4	2	32	**0,80**	**80**	**C-0,80x080**
				50		**100**	**C-0,80x100**
						125	**C-0,80x125**
				63		**160**	**C-0,80x160**
				32	**0,90**	**80**	**C-0,90x080**
				50		**100**	**C-0,90x100**
						125	**C-0,90x125**
				63		**160**	**C-0,90x160**
				80		**200**	**C-0,90x200**
				32	**1,00**	**80**	**C-1,00x080**
				50		**100**	**C-1,00x100**
						125	**C-1,00x125**
				63		**160**	**C-1,00x160**
				80		**200**	**C-1,00x200**
				32	**1,10**	**80**	**C-1,10x080**
				50		**100**	**C-1,10x100**
						125	**C-1,10x125**
				63		**160**	**C-1,10x160**
				80		**200**	**C-1,10x200**
				32	**1,20**	**80**	**C-1,20x080**
				50		**100**	**C-1,20x100**
						125	**C-1,20x125**
				63		**160**	**C-1,20x160**
				80		**200**	**C-1,20x200**
				32	**1,30**	**80**	**C-1,30x080**
				50		**100**	**C-1,30x100**
						125	**C-1,30x125**



R	k	d2	d3	L2	d1	L	REF.
0,2	2	4	2	63	**1,30**	**160**	**C-1,30x160**
				80		**200**	**C-1,30x200**
				32	**1,40**	**80**	**C-1,40x080**
				50		**100**	**C-1,40x100**
						125	**C-1,40x125**
				63		**160**	**C-1,40x160**
				80		**200**	**C-1,40x200**
0,3	3	6	3	32	**1,50**	**80**	**C-1,50x080**
				50		**100**	**C-1,50x100**
						125	**C-1,50x125**
				63		**160**	**C-1,50x160**
				80		**200**	**C-1,50x200**
				32	**1,60**	**80**	**C-1,60x080**
				50		**100**	**C-1,60x100**
						125	**C-1,60x125**
				63		**160**	**C-1,60x160**
				80		**200**	**C-1,60x200**
				32	**1,70**	**80**	**C-1,70x080**
				50		**100**	**C-1,70x100**
						125	**C-1,70x125**
				63		**160**	**C-1,70x160**
				80		**200**	**C-1,70x200**
				32	**1,80**	**80**	**C-1,80x080**
				50		**100**	**C-1,80x100**
						125	**C-1,80x125**
				63		**160**	**C-1,80x160**
				80		**200**	**C-1,80x200**
				32	**1,90**	**80**	**C-1,90x080**
				50		**100**	**C-1,90x100**
						125	**C-1,90x125**
				63		**160**	**C-1,90x160**
				80		**200**	**C-1,90x200**

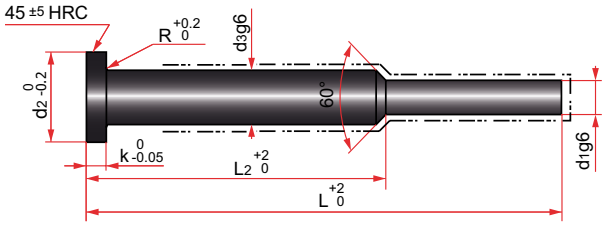


R	k	d2	d3	L2	d1	L	REF.
0,3	3	6	3	32	**2,00**	**80**	**C-2,00x080**
				50		**100**	**C-2,00x100**
						125	**C-2,00x125**
				63		**160**	**C-2,00x160**
				80		**200**	**C-2,00x200**
				32	**2,10**	**80**	**C-2,10x080**
				50		**100**	**C-2,10x100**
						125	**C-2,10x125**
				63		**160**	**C-2,10x160**
				80		**200**	**C-2,10x200**
				32	**2,20**	**80**	**C-2,20x080**
				50		**100**	**C-2,20x100**
						125	**C-2,20x125**
				63		**160**	**C-2,20x160**
				80		**200**	**C-2,20x200**
				32	**2,30**	**80**	**C-2,30x080**
				50		**100**	**C-2,30x100**
						125	**C-2,30x125**
				63		**160**	**C-2,30x160**
				80		**200**	**C-2,30x200**
				32	**2,40**	**80**	**C-2,40x080**
				50		**100**	**C-2,40x100**
						125	**C-2,40x125**
				63		**160**	**C-2,40x160**
				80		**200**	**C-2,40x200**
				50	**2,50**	**100**	**C-2,50x100**
						125	**C-2,50x125**
				63		**160**	**C-2,50x160**
				80		**200**	**C-2,50x200**
						250	**C-2,50x250**
		8	4	50	**3,00**	**125**	**C-3,00x125**
				80		**200**	**C-3,00x200**

CDLC

Z 443

Hardened stepped ejector pin DLC
Expulsor templado mechado DLC
Wypychacz hartowany azotowany DLC
Extrator temperado respigado DLC
Ejecteur à tête cylindrique épaulé trempé DLC



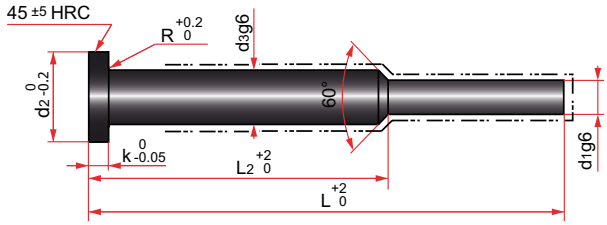
Mat. : 1.2210 / 58 ± 2 HRC. DIN 1530 / DLC > 70 HRC. Max. temperature at work: 220º C.

DLC coated

5

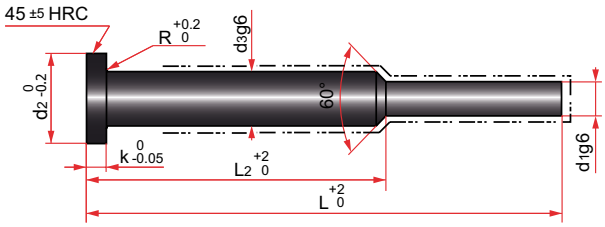
R	k	d2	d3	L2	d1	L	REF.
0,2	2	4	2	32	**0,80**	**80**	**CDLC-0,80x080**
				50		**100**	**CDLC-0,80x100**
						125	**CDLC-0,80x125**
				63		**160**	**CDLC-0,80x160**
				32	**0,90**	**80**	**CDLC-0,90x080**
				50		**100**	**CDLC-0,90x100**
						125	**CDLC-0,90x125**
				63		**160**	**CDLC-0,90x160**
				80		**200**	**CDLC-0,90x200**
				32	**1,00**	**80**	**CDLC-1,00x080**
				50		**100**	**CDLC-1,00x100**
						125	**CDLC-1,00x125**
				63		**160**	**CDLC-1,00x160**
				80		**200**	**CDLC-1,00x200**
				32	**1,10**	**80**	**CDLC-1,10x080**
				50		**100**	**CDLC-1,10x100**
						125	**CDLC-1,10x125**
				63		**160**	**CDLC-1,10x160**
				80		**200**	**CDLC-1,10x200**
				32	**1,20**	**80**	**CDLC-1,20x080**
				50		**100**	**CDLC-1,20x100**
						125	**CDLC-1,20x125**
				63		**160**	**CDLC-1,20x160**
				80		**200**	**CDLC-1,20x200**
				32	**1,30**	**80**	**CDLC-1,30x080**
				50		**100**	**CDLC-1,30x100**
						125	**CDLC-1,30x125**

CDLC



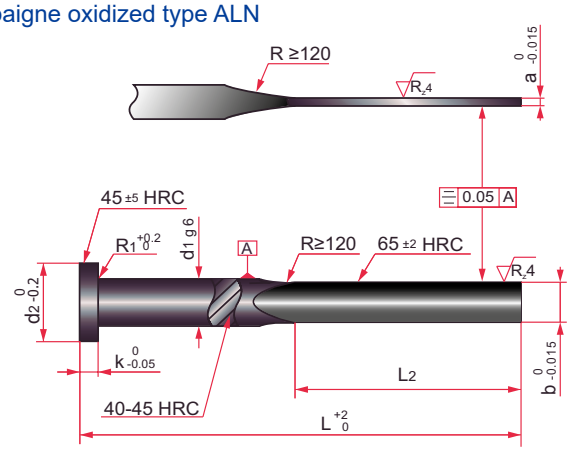
R	k	d2	d3	L2	d1	L	REF.
0,2	2	4	2	63	**1,30**	**160**	**CDLC-1,30x160**
				80		**200**	**CDLC-1,30x200**
				32	**1,40**	**80**	**CDLC-1,40x080**
				50		**100**	**CDLC-1,40x100**
						125	**CDLC-1,40x125**
				63		**160**	**CDLC-1,40x160**
				80		**200**	**CDLC-1,40x200**
0,3	3	6	3	32	**1,50**	**80**	**CDLC-1,50x080**
				50		**100**	**CDLC-1,50x100**
						125	**CDLC-1,50x125**
				63		**160**	**CDLC-1,50x160**
				80		**200**	**CDLC-1,50x200**
				32	**1,60**	**80**	**CDLC-1,60x080**
				50		**100**	**CDLC-1,60x100**
						125	**CDLC-1,60x125**
				63		**160**	**CDLC-1,60x160**
				80		**200**	**CDLC-1,60x200**
				32	**1,70**	**80**	**CDLC-1,70x080**
				50		**100**	**CDLC-1,70x100**
						125	**CDLC-1,70x125**
				63		**160**	**CDLC-1,70x160**
				80		**200**	**CDLC-1,70x200**
				32	**1,80**	**80**	**CDLC-1,80x080**
				50		**100**	**CDLC-1,80x100**
						125	**CDLC-1,80x125**
				63		**160**	**CDLC-1,80x160**
				80		**200**	**CDLC-1,80x200**
				32	**1,90**	**80**	**CDLC-1,90x080**
				50		**100**	**CDLC-1,90x100**
						125	**CDLC-1,90x125**
				63		**160**	**CDLC-1,90x160**
				80		**200**	**CDLC-1,90x200**

CDLC



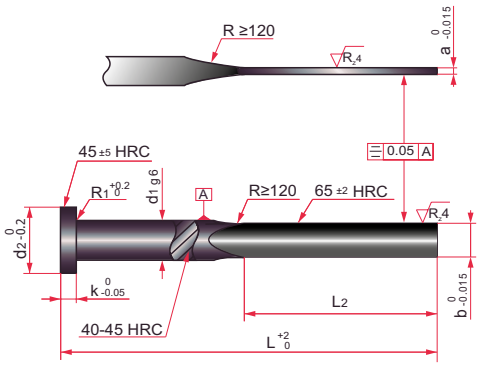
R	k	d2	d3	L2	d1	L	REF.
0,3	3	6	3	32	**2,00**	**80**	**CDLC-2,00x080**
				50		**100**	**CDLC-2,00x100**
						125	**CDLC-2,00x125**
				63		**160**	**CDLC-2,00x160**
				80		**200**	**CDLC-2,00x200**
				32	**2,10**	**80**	**CDLC-2,10x080**
				50		**100**	**CDLC-2,10x100**
						125	**CDLC-2,10x125**
				63		**160**	**CDLC-2,10x160**
				80		**200**	**CDLC-2,10x200**
				32	**2,20**	**80**	**CDLC-2,20x080**
				50		**100**	**CDLC-2,20x100**
						125	**CDLC-2,20x125**
				63		**160**	**CDLC-2,20x160**
				80		**200**	**CDLC-2,20x200**
				32	**2,30**	**80**	**CDLC-2,30x080**
				50		**100**	**CDLC-2,30x100**
						125	**CDLC-2,30x125**
				63		**160**	**CDLC-2,30x160**
				80		**200**	**CDLC-2,30x200**
				32	**2,40**	**80**	**CDLC-2,40x080**
				50		**100**	**CDLC-2,40x100**
						125	**CDLC-2,40x125**
				63		**160**	**CDLC-2,40x160**
				80		**200**	**CDLC-2,40x200**
				50	**2,50**	**100**	**CDLC-2,50x100**
						125	**CDLC-2,50x125**
				63		**160**	**CDLC-2,50x160**
				80		**200**	**CDLC-2,50x200**
						250	**CDLC-2,50x250**
		8	4	50	**3,00**	**125**	**CDLC-3,00x125**
				80		**200**	**CDLC-3,00x200**

Flat ejector pin black nitrited oxidized ALN
Expulsor laminar nitrurado oxidado ALN
Wypychacz płaski azotowany i oksydowany
Extrator de lamina nitrurado oxidado ALN
Ejecteur lame nitrure baigne oxidized type ALN

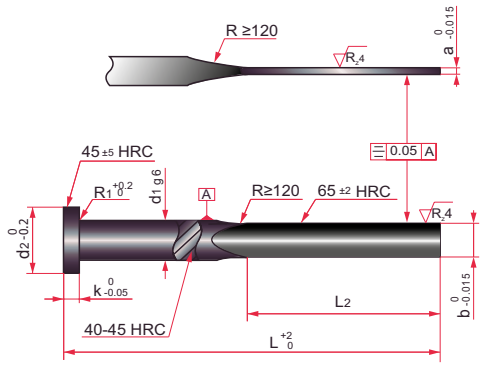


Mat. : 1.2344 DIN 1530 / ISO 8693 - Maximum temperature at work: 550º C.

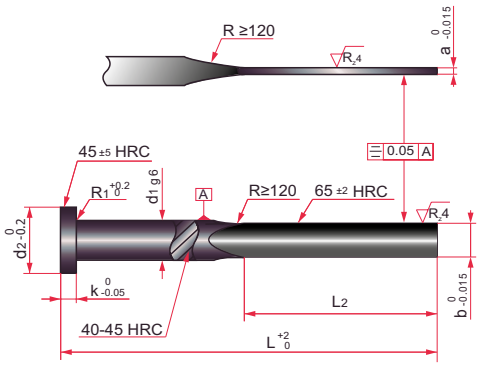
R1	k	d2	d1	L2	a	b	L	REF.
0,3	3	6	3	40	**0,8**	**2,8**	**80**	**ALN-0’8x02’8x080**
				50			**100**	**ALN-0’8x02’8x100**
				60			**125**	**ALN-0’8x02’8x125**
				80			**160**	**ALN-0’8x02’8x160**
				100			**200**	**ALN-0’8x02’8x200**
				125			**250**	**ALN-0’8x02’8x250**
				155			**315**	**ALN-0’8x02’8x315**
				40	**1**		**80**	**ALN-1’0x02’8x080**
				50			**100**	**ALN-1’0x02’8x100**
				60			**125**	**ALN-1’0x02’8x125**
				80			**160**	**ALN-1’0x02’8x160**
				100			**200**	**ALN-1’0x02’8x200**
				125			**250**	**ALN-1’0x02’8x250**
				155			**315**	**ALN-1’0x02’8x315**
		8	4	40	**0,8**	**3,5**	**80**	**ALN-0,8x03,5x080**
				50			**100**	**ALN-0,8x03,5x100**
				60			**125**	**ALN-0,8x03,5x125**
				80			**160**	**ALN-0,8x03,5x160**
				40	**1**		**80**	**ALN-1,0x03,5x080**
				50			**100**	**ALN-1,0x03,5x100**
				60			**125**	**ALN-1,0x03,5x125**
				80			**160**	**ALN-1,0x03,5x160**
				40	**1,2**		**80**	**ALN-1,2x03,5x080**



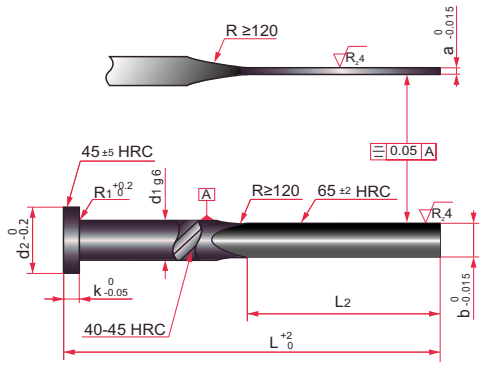
R1	k	d2	d1	L2	a	b	L	REF.
0,3	3	8	4	50	**1,2**	**3,5**	**100**	**ALN-1,2x03,5x100**
				60			**125**	**ALN-1,2x03,5x125**
				80			**160**	**ALN-1,2x03,5x160**
			4,2	40	**0,8**	**3,8**	**80**	**ALN-0,8x03,8x080**
				50			**100**	**ALN-0,8x03,8x100**
				60			**125**	**ALN-0,8x03,8x125**
				80			**160**	**ALN-0,8x03,8x160**
				100			**200**	**ALN-0,8x03,8x200**
				125			**250**	**ALN-0,8x03,8x250**
				40	**1**		**80**	**ALN-1,0x03,8x080**
				50			**100**	**ALN-1,0x03,8x100**
				60			**125**	**ALN-1,0x03,8x125**
				80			**160**	**ALN-1,0x03,8x160**
				100			**200**	**ALN-1,0x03,8x200**
				125			**250**	**ALN-1,0x03,8x250**
				40	**1,2**		**80**	**ALN-1,2x03,8x080**
				50			**100**	**ALN-1,2x03,8x100**
				60			**125**	**ALN-1,2x03,8x125**
				80			**160**	**ALN-1,2x03,8x160**
				100			**200**	**ALN-1,2x03,8x200**
				125			**250**	**ALN-1,2x03,8x250**
		10	5	40	**1**	**4,5**	**80**	**ALN-1,0x04,5x080**
				50			**100**	**ALN-1,0x04,5x100**
				60			**125**	**ALN-1,0x04,5x125**
				80			**160**	**ALN-1,0x04,5x160**
				100			**200**	**ALN-1,0x04,5x200**
				125			**250**	**ALN-1,0x04,5x250**
				155			**315**	**ALN-1,0x04,5x315**
				40	**1,2**		**80**	**ALN-1,2x04,5x080**
				50			**100**	**ALN-1,2x04,5x100**



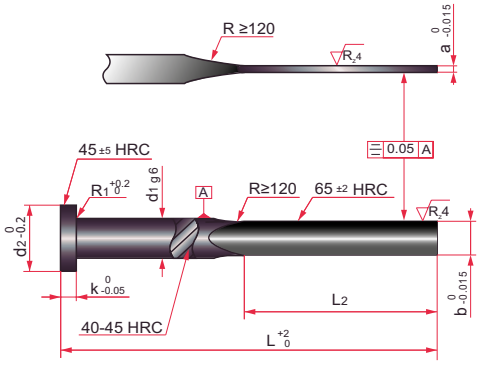
R1	k	d2	d1	L2	a	b	L	REF.
0,3	3	10	5	60	**1,2**	**4,5**	**125**	**ALN-1,2x04,5x125**
				80			**160**	**ALN-1,2x04,5x160**
				100			**200**	**ALN-1,2x04,5x200**
				125			**250**	**ALN-1,2x04,5x250**
				155			**315**	**ALN-1,2x04,5x315**
				40	**1,5**		**80**	**ALN-1,5x04,5x080**
				50			**100**	**ALN-1,5x04,5x100**
				60			**125**	**ALN-1,5x04,5x125**
				80			**160**	**ALN-1,5x04,5x160**
				100			**200**	**ALN-1,5x04,5x200**
				125			**250**	**ALN-1,5x04,5x250**
				155			**315**	**ALN-1,5x04,5x315**
0,5	5	12	6	40	**1**	**5,5**	**80**	**ALN-1,0x05,5x080**
				50			**100**	**ALN-1,0x05,5x100**
				60			**125**	**ALN-1,0x05,5x125**
				80			**160**	**ALN-1,0x05,5x160**
				100			**200**	**ALN-1,0x05,5x200**
				125			**250**	**ALN-1,0x05,5x250**
				155			**315**	**ALN-1,0x05,5x315**
				40	**1,2**		**80**	**ALN-1,2x05,5x080**
				50			**100**	**ALN-1,2x05,5x100**
				60			**125**	**ALN-1,2x05,5x125**
				80			**160**	**ALN-1,2x05,5x160**
				100			**200**	**ALN-1,2x05,5x200**
				125			**250**	**ALN-1,2x05,5x250**
				155			**315**	**ALN-1,2x05,5x315**
				40	**1,5**		**80**	**ALN-1,5x05,5x080**
				50			**100**	**ALN-1,5x05,5x100**
				60			**125**	**ALN-1,5x05,5x125**
				80			**160**	**ALN-1,5x05,5x160**



R1	k	d2	d1	L2	a	b	L	REF.
0,5	5	12	6	100	**1,5**	**5,5**	**200**	**ALN-1,5x05,5x200**
				125			**250**	**ALN-1,5x05,5x250**
				155			**315**	**ALN-1,5x05,5x315**
				40	**2**		**80**	**ALN-2,0x05,5x080**
				50			**100**	**ALN-2,0x05,5x100**
				60			**125**	**ALN-2,0x05,5x125**
				80			**160**	**ALN-2,0x05,5x160**
				100			**200**	**ALN-2,0x05,5x200**
				125			**250**	**ALN-2,0x05,5x250**
				155			**315**	**ALN-2,0x05,5x315**
		14	8	40	**1,2**	**7,5**	**80**	**ALN-1,2x07,5x080**
				50			**100**	**ALN-1,2x07,5x100**
				60			**125**	**ALN-1,2x07,5x125**
				80			**160**	**ALN-1,2x07,5x160**
				100			**200**	**ALN-1,2x07,5x200**
				125			**250**	**ALN-1,2x07,5x250**
				155			**315**	**ALN-1,2x07,5x315**
				200			**400**	**ALN-1,2x07,5x400**
				40	**1,5**		**80**	**ALN-1,5x07,5x080**
				50			**100**	**ALN-1,5x07,5x100**
				60			**125**	**ALN-1,5x07,5x125**
				80			**160**	**ALN-1,5x07,5x160**
				100			**200**	**ALN-1,5x07,5x200**
				125			**250**	**ALN-1,5x07,5x250**
				155			**315**	**ALN-1,5x07,5x315**
				200			**400**	**ALN-1,5x07,5x400**
				40	**2**		**80**	**ALN-2,0x07,5x080**
				50			**100**	**ALN-2,0x07,5x100**
				60			**125**	**ALN-2,0x07,5x125**
				80			**160**	**ALN-2,0x07,5x160**

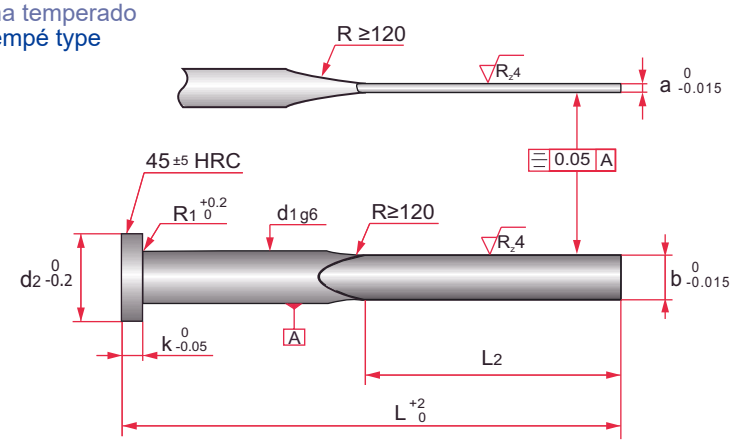


R1	k	d2	d1	L2	a	b	L	REF.
0,5	5	14	8	100	**2**	**7,5**	**200**	**ALN-2,0x07,5x200**
				125			**250**	**ALN-2,0x07,5x250**
				155			**315**	**ALN-2,0x07,5x315**
				200			**400**	**ALN-2,0x07,5x400**
		16	10	50	**1,5**	**9,5**	**100**	**ALN-1,5x09,5x100**
				60			**125**	**ALN-1,5x09,5x125**
				80			**160**	**ALN-1,5x09,5x160**
				100			**200**	**ALN-1,5x09,5x200**
				125			**250**	**ALN-1,5x09,5x250**
				155			**315**	**ALN-1,5x09,5x315**
				200			**400**	**ALN-1,5x09,5x400**
				50	**2**		**100**	**ALN-2,0x09,5x100**
				60			**125**	**ALN-2,0x09,5x125**
				80			**160**	**ALN-2,0x09,5x160**
				100			**200**	**ALN-2,0x09,5x200**
				125			**250**	**ALN-2,0x09,5x250**
				155			**315**	**ALN-2,0x09,5x315**
				200			**400**	**ALN-2,0x09,5x400**
0,8	7	18	12	60		**11,5**	**125**	**ALN-2,0x11,5x125**
				80			**160**	**ALN-2,0x11,5x160**
				100			**200**	**ALN-2,0x11,5x200**
				125			**250**	**ALN-2,0x11,5x250**
				155			**315**	**ALN-2,0x11,5x315**
				200			**400**	**ALN-2,0x11,5x400**
				60	**2,5**		**125**	**ALN-2,5x11,5x125**
				80			**160**	**ALN-2,5x11,5x160**
				100			**200**	**ALN-2,5x11,5x200**
				125			**250**	**ALN-2,5x11,5x250**
				155			**315**	**ALN-2’5x11’5x315**
				200			**400**	**ALN-2’5x11’5x400**



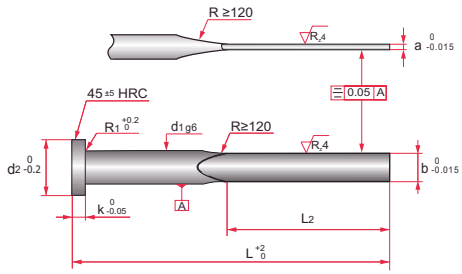
R1	k	d2	d1	L2	a	b	L	REF.
0,8	7	22	16	80	**2**	**15,5**	**160**	**ALN-2,0x15,5x160**
				100			**200**	**ALN-2,0x15,5x200**
				125			**250**	**ALN-2,0x15,5x250**
				155			**315**	**ALN-2,0x15,5x315**
				200			**400**	**ALN-2,0x15,5x400**
				80	**2,5**		**160**	**ALN-2,5x15,5x160**
				100			**200**	**ALN-2,5x15,5x200**
				125			**250**	**ALN-2,5x15,5x250**
				155			**315**	**ALN-2’5x15’5x315**
				200			**400**	**ALN-2’5x15’5x400**

Flat ejector pin hardened
Expulsor laminar templado
Wypychacz płaski hartowany
Extrator de lamina temperado
Ejecteur lame trempé type

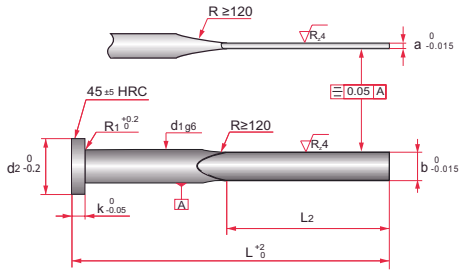


Mat.: 1.2210 / 58±2 HRC. DIN 1530A . Maximum temperature at work: 220º C

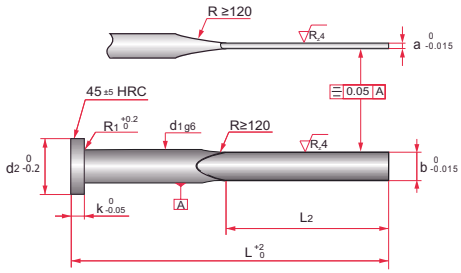
R1	k	d2	d1	L2	a	b	L	REF.
0,3	3	8	4	40	**0,8**	**3,5**	**80**	**AL-0,8x3,5x080**
				50			**100**	**AL-0,8x3,5x100**
				60			**125**	**AL-0,8x3,5x125**
				80			**160**	**AL-0,8x3,5x160**
				40	**1**		**80**	**AL-1,0x3,5x080**
				50			**100**	**AL-1,0x3,5x100**
				60			**125**	**AL-1,0x3,5x125**
				80			**160**	**AL-1,0x3,5x160**
				40	**1,2**		**80**	**AL-1,2x3,5x080**
				50			**100**	**AL-1,2x3,5x100**
				60			**125**	**AL-1,2x3,5x125**
				80			**160**	**AL-1,2x3,5x160**
			4,2	40	**0,8**	**3,8**	**80**	**AL-0,8x3,8x080**
				50			**100**	**AL-0,8x3,8x100**
				60			**125**	**AL-0,8x3,8x125**
				80			**160**	**AL-0,8x3,8x160**
				100			**200**	**AL-0,8x3,8x200**
				40	**1**		**80**	**AL-1,0x3,8x080**
				50			**100**	**AL-1,0x3,8x100**
				60			**125**	**AL-1,0x3,8x125**
				80			**160**	**AL-1,0x3,8x160**
				100			**200**	**AL-1,0x3,8x200**
				40	**1,2**		**80**	**AL-1,2x3,8x080**



R1	k	d2	d1	L2	a	b	L	REF.
0,3	3	8	4,2	50	**1,2**	**3,8**	**100**	**AL-1,2x3,8x100**
				60			**125**	**AL-1,2x3,8x125**
				80			**160**	**AL-1,2x3,8x160**
				100			**200**	**AL-1,2x3,8x200**
		10	5	40	**1**	**4,5**	**80**	**AL-1,0x4,5x080**
				50			**100**	**AL-1,0x4,5x100**
				60			**125**	**AL-1,0x4,5x125**
				80			**160**	**AL-1,0x4,5x160**
				100			**200**	**AL-1,0x4,5x200**
				125			**250**	**AL-1,0x4,5x250**
				40	**1,2**		**80**	**AL-1,2x4,5x080**
				50			**100**	**AL-1,2x4,5x100**
				60			**125**	**AL-1,2x4,5x125**
				80			**160**	**AL-1,2x4,5x160**
				100			**200**	**AL-1,2x4,5x200**
				125			**250**	**AL-1,2x4,5x250**
				40	**1,5**		**80**	**AL-1,5x4,5x080**
				50			**100**	**AL-1,5x4,5x100**
				60			**125**	**AL-1,5x4,5x125**
				80			**160**	**AL-1,5x4,5x160**
				100			**200**	**AL-1,5x4,5x200**
				125			**250**	**AL-1,5x4,5x250**
0,5	5	12	6	40	**1**	**5,5**	**80**	**AL-1,0x5,5x080**
				50			**100**	**AL-1,0x5,5x100**
				60			**125**	**AL-1,0x5,5x125**
				80			**160**	**AL-1,0x5,5x160**
				100			**200**	**AL-1,0x5,5x200**
				125			**250**	**AL-1,0x5,5x250**
				40	**1,2**		**80**	**AL-1,2x5,5x080**
				50			**100**	**AL-1,2x5,5x100**

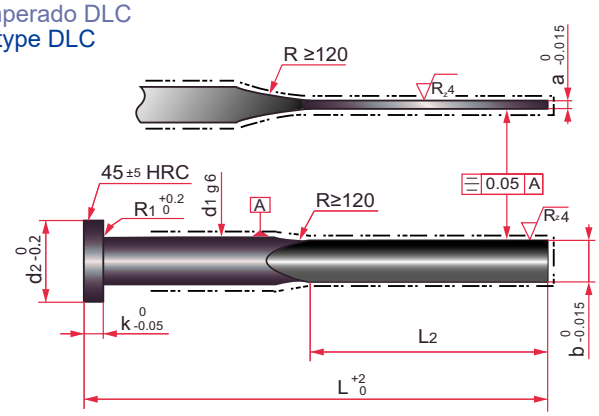


R1	k	d2	d1	L2	a	b	L	REF.
0,5	5	12	6	60	**1,2**	**5,5**	**125**	**AL-1,2x5,5x125**
				80			**160**	**AL-1,2x5,5x160**
				100			**200**	**AL-1,2x5,5x200**
				125			**250**	**AL-1,2x5,5x250**
				40	**1,5**		**80**	**AL-1,5x5,5x080**
				50			**100**	**AL-1,5x5,5x100**
				60			**125**	**AL-1,5x5,5x125**
				80			**160**	**AL-1,5x5,5x160**
				100			**200**	**AL-1,5x5,5x200**
				125			**250**	**AL-1,5x5,5x250**
				40	**2**		**80**	**AL-2,0x5,5x080**
				50			**100**	**AL-2,0x5,5x100**
				60			**125**	**AL-2,0x5,5x125**
				80			**160**	**AL-2,0x5,5x160**
				100			**200**	**AL-2,0x5,5x200**
				125			**250**	**AL-2,0x5,5x250**
		14	8	40	**1,2**	**7,5**	**80**	**AL-1,2x7,5x080**
				50			**100**	**AL-1,2x7,5x100**
				60			**125**	**AL-1,2x7,5x125**
				80			**160**	**AL-1,2x7,5x160**
				100			**200**	**AL-1,2x7,5x200**
				125			**250**	**AL-1,2x7,5x250**
				40	**1,5**		**80**	**AL-1,5x7,5x080**
				50			**100**	**AL-1,5x7,5x100**
				60			**125**	**AL-1,5x7,5x125**
				80			**160**	**AL-1,5x7,5x160**
				100			**200**	**AL-1,5x7,5x200**
				125			**250**	**AL-1,5x7,5x250**
				40	**2**		**80**	**AL-2,0x7,5x080**
				50			**100**	**AL-2,0x7,5x100**



R1	k	d2	d1	L2	a	b	L	REF.
0,5	5	14	8	60	**2**	**7,5**	**125**	**AL-2,0x7,5x125**
				80			**160**	**AL-2,0x7,5x160**
				100			**200**	**AL-2,0x7,5x200**
				125			**250**	**AL-2,0x7,5x250**
		16	10	50	**1,5**	**9,5**	**100**	**AL-1,5x9,5x100**
				60			**125**	**AL-1,5x9,5x125**
				80			**160**	**AL-1,5x9,5x160**
				100			**200**	**AL-1,5x9,5x200**
				125			**250**	**AL-1,5x9,5x250**
				50	**2**		**100**	**AL-2,0x9,5x100**
				60			**125**	**AL-2,0x9,5x125**
				80			**160**	**AL-2,0x9,5x160**
				100			**200**	**AL-2,0x9,5x200**
				125			**250**	**AL-2,0x9,5x250**
0,8	7	18	12	60		**11,5**	**125**	**AL-2,0x11,5x125**
				80			**160**	**AL-2,0x11,5x160**
				100			**200**	**AL-2,0x11,5x200**
				125			**250**	**AL-2,0x11,5x250**
				60	**2,5**		**125**	**AL-2,5x11,5x125**
				80			**160**	**AL-2,5x11,5x160**
				100			**200**	**AL-2,5x11,5x200**
				125			**250**	**AL-2,5x11,5x250**
		22	16	80	**2**	**15,5**	**160**	**AL-2,0x15,5x160**
				100			**200**	**AL-2,0x15,5x200**
				125			**250**	**AL-2,0x15,5x250**
				80	**2,5**		**160**	**AL-2,5x15,5x160**
				100			**200**	**AL-2,5x15,5x200**
				125			**250**	**AL-2,5x15,5x250**

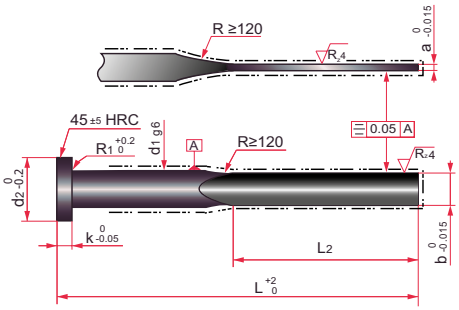
Flat ejector pin hardened DLC
Expulsor laminar templado DLC
Wypychacz płaski hartowany DLC
Extrator de lamina temperado DLC
Ejecteur lame trempé type DLC



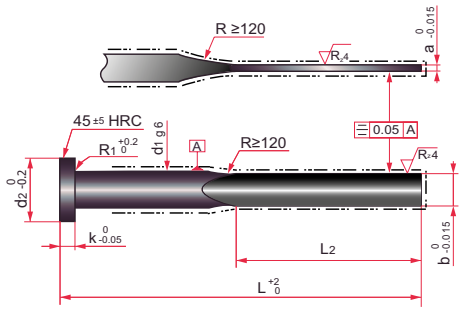
Mat.: 1.2210 / 58±2 HRC. DIN 1530A / DLC > 70 HRC. Max. temperature at work: 220º C

DLC coated

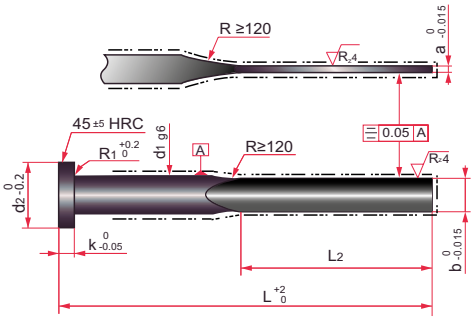
R1	k	d2	d1	L2	a	b	L	REF.
0,3	3	8	4	40	**0,8**	**3,5**	**80**	**ALDLC-0,8x3,5x080**
				50			**100**	**ALDLC-0,8x3,5x100**
				60			**125**	**ALDLC-0,8x3,5x125**
				80			**160**	**ALDLC-0,8x3,5x160**
				40	**1**		**80**	**ALDLC-1,0x3,5x080**
				50			**100**	**ALDLC-1,0x3,5x100**
				60			**125**	**ALDLC-1,0x3,5x125**
				80			**160**	**ALDLC-1,0x3,5x160**
				40	**1,2**		**80**	**ALDLC-1,2x3,5x080**
				50			**100**	**ALDLC-1,2x3,5x100**
				60			**125**	**ALDLC-1,2x3,5x125**
				80			**160**	**ALDLC-1,2x3,5x160**
			4,2	40	**0,8**	**3,8**	**80**	**ALDLC-0,8x3,8x080**
				50			**100**	**ALDLC-0,8x3,8x100**
				60			**125**	**ALDLC-0,8x3,8x125**
				80			**160**	**ALDLC-0,8x3,8x160**
				100			**200**	**ALDLC-0,8x3,8x200**
				40	**1**		**80**	**ALDLC-1,0x3,8x080**
				50			**100**	**ALDLC-1,0x3,8x100**
				60			**125**	**ALDLC-1,0x3,8x125**
				80			**160**	**ALDLC-1,0x3,8x160**
				100			**200**	**ALDLC-1,0x3,8x200**
				40	**1,2**		**80**	**ALDLC-1,2x3,8x080**



R1	k	d2	d1	L2	a	b	L	REF.
0,3	3	8	4,2	50	**1,2**	**3,8**	**100**	**ALDLC-1,2x3,8x100**
				60			**125**	**ALDLC-1,2x3,8x125**
				80			**160**	**ALDLC-1,2x3,8x160**
				100			**200**	**ALDLC-1,2x3,8x200**
		10	5	40	**1**	**4,5**	**80**	**ALDLC-1,0x4,5x080**
				50			**100**	**ALDLC-1,0x4,5x100**
				60			**125**	**ALDLC-1,0x4,5x125**
				80			**160**	**ALDLC-1,0x4,5x160**
				100			**200**	**ALDLC-1,0x4,5x200**
				125			**250**	**ALDLC-1,0x4,5x250**
				40	**1,2**		**80**	**ALDLC-1,2x4,5x080**
				50			**100**	**ALDLC-1,2x4,5x100**
				60			**125**	**ALDLC-1,2x4,5x125**
				80			**160**	**ALDLC-1,2x4,5x160**
				100			**200**	**ALDLC-1,2x4,5x200**
				125			**250**	**ALDLC-1,2x4,5x250**
				40	**1,5**		**80**	**ALDLC-1,5x4,5x080**
				50			**100**	**ALDLC-1,5x4,5x100**
				60			**125**	**ALDLC-1,5x4,5x125**
				80			**160**	**ALDLC-1,5x4,5x160**
				100			**200**	**ALDLC-1,5x4,5x200**
				125			**250**	**ALDLC-1,5x4,5x250**
0,5	5	12	6	40	**1**	**5,5**	**80**	**ALDLC-1,0x5,5x080**
				50			**100**	**ALDLC-1,0x5,5x100**
				60			**125**	**ALDLC-1,0x5,5x125**
				80			**160**	**ALDLC-1,0x5,5x160**
				100			**200**	**ALDLC-1,0x5,5x200**
				125			**250**	**ALDLC-1,0x5,5x250**
				40	**1,2**		**80**	**ALDLC-1,2x5,5x080**
				50			**100**	**ALDLC-1,2x5,5x100**



R1	k	d2	d1	L2	a	b	L	REF.
0,5	5	12	6	60	**1,2**	**5,5**	**125**	**ALDLC-1,2x5,5x125**
				80			**160**	**ALDLC-1,2x5,5x160**
				100			**200**	**ALDLC-1,2x5,5x200**
				125			**250**	**ALDLC-1,2x5,5x250**
				40	**1,5**		**80**	**ALDLC-1,5x5,5x080**
				50			**100**	**ALDLC-1,5x5,5x100**
				60			**125**	**ALDLC-1,5x5,5x125**
				80			**160**	**ALDLC-1,5x5,5x160**
				100			**200**	**ALDLC-1,5x5,5x200**
				125			**250**	**ALDLC-1,5x5,5x250**
				40	**2**		**80**	**ALDLC-2,0x5,5x080**
				50			**100**	**ALDLC-2,0x5,5x100**
				60			**125**	**ALDLC-2,0x5,5x125**
				80			**160**	**ALDLC-2,0x5,5x160**
				100			**200**	**ALDLC-2,0x5,5x200**
				125			**250**	**ALDLC-2,0x5,5x250**
		14	8	40	**1,2**	**7,5**	**80**	**ALDLC-1,2x7,5x080**
				50			**100**	**ALDLC-1,2x7,5x100**
				60			**125**	**ALDLC-1,2x7,5x125**
				80			**160**	**ALDLC-1,2x7,5x160**
				100			**200**	**ALDLC-1,2x7,5x200**
				125			**250**	**ALDLC-1,2x7,5x250**
				40	**1,5**		**80**	**ALDLC-1,5x7,5x080**
				50			**100**	**ALDLC-1,5x7,5x100**
				60			**125**	**ALDLC-1,5x7,5x125**
				80			**160**	**ALDLC-1,5x7,5x160**
				100			**200**	**ALDLC-1,5x7,5x200**
				125			**250**	**ALDLC-1,5x7,5x250**
				40	**2**		**80**	**ALDLC-2,0x7,5x080**
				50			**100**	**ALDLC-2,0x7,5x100**

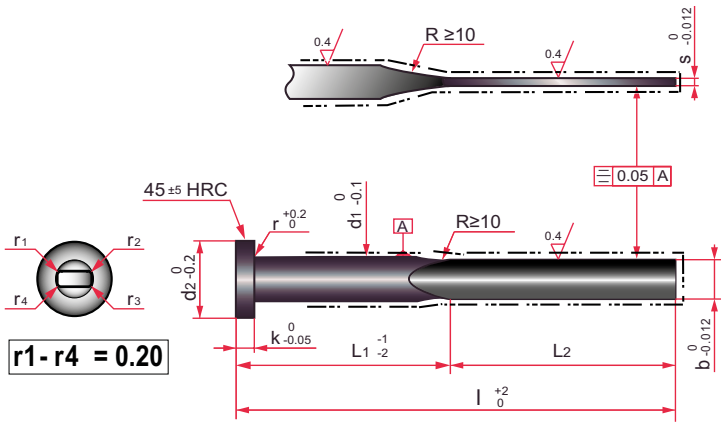


R1	k	d2	d1	L2	a	b	L	REF.
0,5	5	14	8	60	**2**	**7,5**	**125**	**ALDLC-2,0x7,5x125**
				80			**160**	**ALDLC-2,0x7,5x160**
				100			**200**	**ALDLC-2,0x7,5x200**
				125			**250**	**ALDLC-2,0x7,5x250**
		16	10	50	**1,5**	**9,5**	**100**	**ALDLC-1,5x9,5x100**
				60			**125**	**ALDLC-1,5x9,5x125**
				80			**160**	**ALDLC-1,5x9,5x160**
				100			**200**	**ALDLC-1,5x9,5x200**
				125			**250**	**ALDLC-1,5x9,5x250**
				50	**2**		**100**	**ALDLC-2,0x9,5x100**
				60			**125**	**ALDLC-2,0x9,5x125**
				80			**160**	**ALDLC-2,0x9,5x160**
				100			**200**	**ALDLC-2,0x9,5x200**
				125			**250**	**ALDLC-2,0x9,5x250**
0,8	7	18	12	60		**11,5**	**125**	**ALDLC-2,0x11,5x125**
				80			**160**	**ALDLC-2,0x11,5x160**
				100			**200**	**ALDLC-2,0x11,5x200**
				125			**250**	**ALDLC-2,0x11,5x250**
				60	**2,5**		**125**	**ALDLC-2,5x11,5x125**
				80			**160**	**ALDLC-2,5x11,5x160**
				100			**200**	**ALDLC-2,5x11,5x200**
				125			**250**	**ALDLC-2,5x11,5x250**
		22	16	80	**2**	**15,5**	**160**	**ALDLC-2,0x15,5x160**
				100			**200**	**ALDLC-2,0x15,5x200**
				125			**250**	**ALDLC-2,0x15,5x250**
				80	**2,5**		**160**	**ALDLC-2,5x15,5x160**
				100			**200**	**ALDLC-2,5x15,5x200**
				125			**250**	**ALDLC-2,5x15,5x250**

BR1728DLC

E 1728DLC. Z4650

Flat ejector pin with 4 angle radii, through-hardened,with DLC coating
Expulsor laminar templado, 4 radios, con recubrimiento.DLC
Wypychacz płaski, hartowany, końcówka 4R zaokrąglona, z powłoką DLC
Extrator de lâmina, temperado, 4 radios, com revestimento DLC
Ëjecteur á lame, trempé avec 4 rayons et revêtement DLC



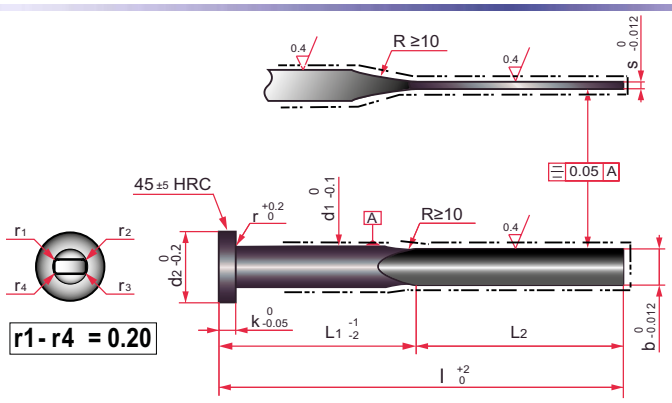
Material:SUJ2(58-62HRC)+DLC

DLC coated

r	d1	d2	l1	l2	k	b	s	l	REF.
0,3	3	6	50	50	3	2,8	0,5	100	BR1728DLC-02,8x0,5x100
			60	65				125	BR1728DLC-02,8x0,5x125
			80	80				160	BR1728DLC-02,8x0,5x160
			50	50			0,6	100	BR1728DLC-02,8x0,6x100
			60	65				125	BR1728DLC-02,8x0,6x125
			80	80				160	BR1728DLC-02,8x0,6x160
			50	50			0,8	100	BR1728DLC-02,8x0,8x100
			60	65				125	BR1728DLC-02,8x0,8x125
			80	80				160	BR1728DLC-02,8x0,8x160
			100	100				200	BR1728DLC-02,8x0,8x200
			50	50			1	100	BR1728DLC-02,8x1,0x100
			60	65				125	BR1728DLC-02,8x1,0x125
			80	80				160	BR1728DLC-02,8x1,0x160
			100	100				200	BR1728DLC-02,8x1,0x200
	4,2	8	50	50		3,8	0,5	100	BR1728DLC-03,8x0,5x100
			60	65				125	BR1728DLC-03,8x0,5x125
			80	80				160	BR1728DLC-03,8x0,5x160
			50	50			0,6	100	BR1728DLC-03,8x0,6x100
			60	65				125	BR1728DLC-03,8x0,6x125
			80	80				160	BR1728DLC-03,8x0,6x160
			100	100				200	BR1728DLC-03,8x0,6x200
			50	50			0,8	100	BR1728DLC-03,8x0,8x100
			60	65				125	BR1728DLC-03,8x0,8x125

BR1728DLC

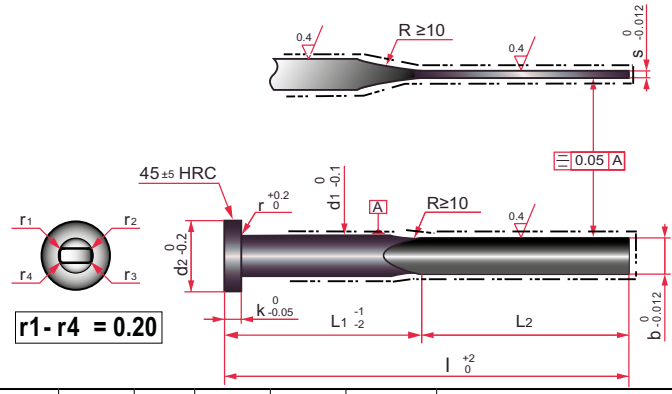
E 1728DLC. Z4650



r	d1	d2	l1	l2	k	b	s	l	REF.
0,3	4,2	8	80	80	3	**3,8**	**0,8**	**160**	**BR1728DLC-03,8x0,8x160**
			100	100				**200**	**BR1728DLC-03,8x0,8x200**
			125	125				**250**	**BR1728DLC-03,8x0,8x250**
			50	50			**1**	**100**	**BR1728DLC-03,8x1,0x100**
			60	65				**125**	**BR1728DLC-03,8x1,0x125**
			80	80				**160**	**BR1728DLC-03,8x1,0x160**
			100	100				**200**	**BR1728DLC-03,8x1,0x200**
			125	125				**250**	**BR1728DLC-03,8x1,0x250**
			160	155				**315**	**BR1728DLC-03,8x1,0x315**
			50	50			**1,2**	**100**	**BR1728DLC-03,8x1,2x100**
			60	65				**125**	**BR1728DLC-03,8x1,2x125**
			80	80				**160**	**BR1728DLC-03,8x1,2x160**
			100	100				**200**	**BR1728DLC-03,8x1,2x200**
			125	125				**250**	**BR1728DLC-03,8x1,2x250**
			160	155				**315**	**BR1728DLC-03,8x1,2x315**
	5	10	50	50		**4,5**	**1**	**100**	**BR1728DLC-04,5x1,0x100**
			60	65				**125**	**BR1728DLC-04,5x1,0x125**
			80	80				**160**	**BR1728DLC-04,5x1,0x160**
			100	100				**200**	**BR1728DLC-04,5x1,0x200**
			125	125				**250**	**BR1728DLC-04,5x1,0x250**
			160	155				**315**	**BR1728DLC-04,5x1,0x315**
			50	50			**1,2**	**100**	**BR1728DLC-04,5x1,2x100**
			60	65				**125**	**BR1728DLC-04,5x1,2x125**
			80	80				**160**	**BR1728DLC-04,5x1,2x160**
			100	100				**200**	**BR1728DLC-04,5x1,2x200**
			125	125				**250**	**BR1728DLC-04,5x1,2x250**
			160	155				**315**	**BR1728DLC-04,5x1,2x315**
			50	50			**1,5**	**100**	**BR1728DLC-04,5x1,5x100**
			60	65				**125**	**BR1728DLC-04,5x1,5x125**
			80	80				**160**	**BR1728DLC-04,5x1,5x160**

BR1728DLC

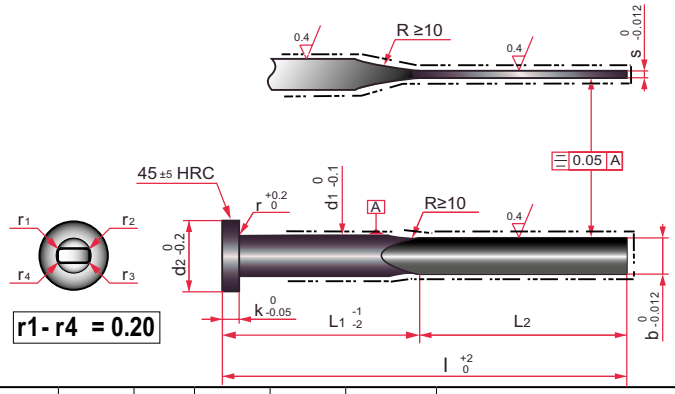
E 1728DLC. Z4650



r	d1	d2	l1	l2	k	b	s	l	REF.
0,3	5	10	100	100	3	**4,5**	**1,5**	**200**	**BR1728DLC-04,5x1,5x200**
			125	125				**250**	**BR1728DLC-04,5x1,5x250**
			160	155				**315**	**BR1728DLC-04,5x1,5x315**
0,5	6	12	50	50	5	**5,5**	**1**	**100**	**BR1728DLC-05,5x1,0x100**
			60	65				**125**	**BR1728DLC-05,5x1,0x125**
			80	80				**160**	**BR1728DLC-05,5x1,0x160**
			100	100				**200**	**BR1728DLC-05,5x1,0x200**
			125	125				**250**	**BR1728DLC-05,5x1,0x250**
			160	155				**315**	**BR1728DLC-05,5x1,0x315**
			50	50			**1,2**	**100**	**BR1728DLC-05,5x1,2x100**
			60	65				**125**	**BR1728DLC-05,5x1,2x125**
			80	80				**160**	**BR1728DLC-05,5x1,2x160**
			100	100				**200**	**BR1728DLC-05,5x1,2x200**
			125	125				**250**	**BR1728DLC-05,5x1,2x250**
			160	155				**315**	**BR1728DLC-05,5x1,2x315**
			50	50			**1,5**	**100**	**BR1728DLC-05,5x1,5x100**
			60	65				**125**	**BR1728DLC-05,5x1,5x125**
			80	80				**160**	**BR1728DLC-05,5x1,5x160**
			100	100				**200**	**BR1728DLC-05,5x1,5x200**
			125	125				**250**	**BR1728DLC-05,5x1,5x250**
			160	155				**315**	**BR1728DLC-05,5x1,5x315**
			50	50			**2**	**100**	**BR1728DLC-05,5x2,0x100**
			60	65				**125**	**BR1728DLC-05,5x2,0x125**
			80	80				**160**	**BR1728DLC-05,5x2,0x160**
			100	100				**200**	**BR1728DLC-05,5x2,0x200**
			125	125				**250**	**BR1728DLC-05,5x2,0x250**
			160	155				**315**	**BR1728DLC-05,5x2,0x315**
	8	14	50	50		**7,5**	**1,2**	**100**	**BR1728DLC-07,5x1,2x100**
			60	65				**125**	**BR1728DLC-07,5x1,2x125**
			80	80				**160**	**BR1728DLC-07,5x1,2x160**

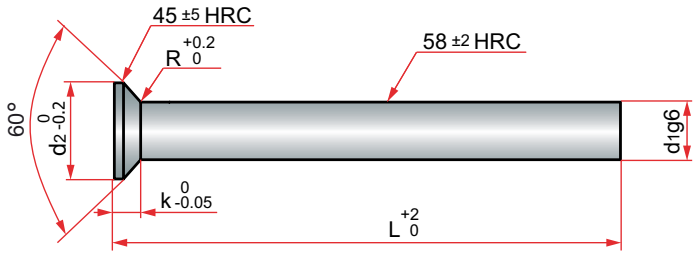
BR1728DLC

E 1728DLC. Z4650



r	d1	d2	l1	l2	k	b	s	l	REF.
0,5	8	14	100	100	5	**7,5**	**1,2**	**200**	**BR1728DLC-07,5x1,2x200**
			125	125				**250**	**BR1728DLC-07,5x1,2x250**
			160	155				**315**	**BR1728DLC-07,5x1,2x315**
			60	65			**1,5**	**125**	**BR1728DLC-07,5x1,5x125**
			80	80				**160**	**BR1728DLC-07,5x1,5x160**
			100	100				**200**	**BR1728DLC-07,5x1,5x200**
			125	125				**250**	**BR1728DLC-07,5x1,5x250**
			160	155				**315**	**BR1728DLC-07,5x1,5x315**
			80	80			**2**	**160**	**BR1728DLC-07,5x2,0x160**
			100	100				**200**	**BR1728DLC-07,5x2,0x200**
			125	125				**250**	**BR1728DLC-07,5x2,0x250**
			160	155				**315**	**BR1728DLC-07,5x2,0x315**
	10	16	80	80		**9,5**	**1,5**	**160**	**BR1728DLC-09,5x1,5x160**
			100	100				**200**	**BR1728DLC-09,5x1,5x200**
			125	125				**250**	**BR1728DLC-09,5x1,5x250**
			160	155				**315**	**BR1728DLC-09,5x1,5x315**
			100	100			**2**	**200**	**BR1728DLC-09,5x2,0x200**
			125	125				**250**	**BR1728DLC-09,5x2,0x250**
			160	155				**315**	**BR1728DLC-09,5x2,0x315**
0,8	12	18	100	100	7	**11,5**		**200**	**BR1728DLC-11,5x2,0x200**
			125	125				**250**	**BR1728DLC-11,5x2,0x250**
			160	155				**315**	**BR1728DLC-11,5x2,0x315**
			100	100			**2,5**	**200**	**BR1728DLC-11,5x2,5x200**
			125	125				**250**	**BR1728DLC-11,5x2,5x250**
			160	155				**315**	**BR1728DLC-11,5x2,5x315**

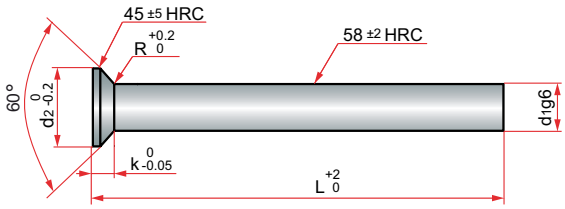
Ejector pin hardened
Expulsor templado
Wypychacz hartowany z łbem stożkowym
Extrator temperado
Ejecteur trempé



Mat. : 1.2210 / 58 ± 2 HRC - DIN 1530D - Maximum temperature at work: 220º C.

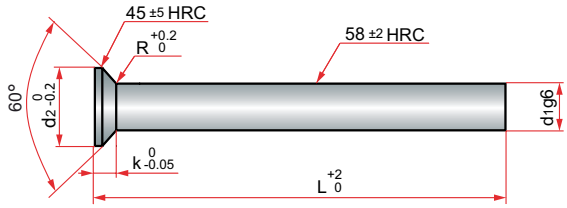
R	k	d2	d1	L	REF.
0,4	1,2	1,8	**1,00**	**70**	**D-01,00x070**
				100	**D-01,00x100**
				125	**D-01,00x125**
				160	**D-01,00x160**
				200	**D-01,00x200**
	1,1		**1,10**	**70**	**D-01,10x070**
				100	**D-01,10x100**
				125	**D-01,10x125**
				160	**D-01,10x160**
				200	**D-01,10x200**
	1,2	2	**1,20**	**70**	**D-01,20x070**
				100	**D-01,20x100**
				125	**D-01,20x125**
				160	**D-01,20x160**
				200	**D-01,20x200**
	1,1		**1,25**	**70**	**D-01,25x070**
				100	**D-01,25x100**
				125	**D-01,25x125**
				160	**D-01,25x160**
				200	**D-01,25x200**
			1,30	**70**	**D-01,30x070**
				100	**D-01,30x100**
				125	**D-01,30x125**
				160	**D-01,30x160**
				200	**D-01,30x200**

R	k	d2	d1	L	REF.
0,4	1,2	2,2	**1,40**	**70**	**D-01,40x070**
				100	**D-01,40x100**
				125	**D-01,40x125**
				160	**D-01,40x160**
				200	**D-01,40x200**
	1,1		**1,50**	**80**	**D-01,50x080**
				100	**D-01,50x100**
				125	**D-01,50x125**
				160	**D-01,50x160**
				200	**D-01,50x200**
	1,2	2,5	**1,60**	**70**	**D-01,60x070**
				100	**D-01,60x100**
				125	**D-01,60x125**
				160	**D-01,60x160**
				200	**D-01,60x200**
			1,70	**70**	**D-01,70x070**
				100	**D-01,70x100**
				125	**D-01,70x125**
				160	**D-01,70x160**
				200	**D-01,70x200**
	1,5	2,8	**1,75**	**70**	**D-01,75x070**
				100	**D-01,75x100**
				125	**D-01,75x125**
				160	**D-01,75x160**
				200	**D-01,75x200**



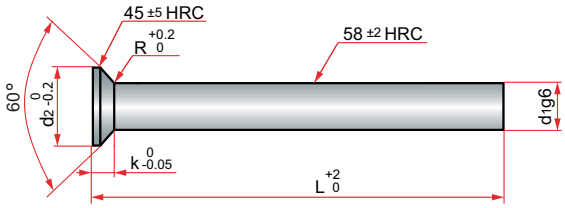
R	k	d2	d1	L	REF.
0,4	1,4	2,8	**1,80**	**70**	**D-01,80x070**
				100	**D-01,80x100**
				125	**D-01,80x125**
				160	**D-01,80x160**
				200	**D-01,80x200**
	1,3		**1,90**	**70**	**D-01,90x070**
				100	**D-01,90x100**
				125	**D-01,90x125**
				160	**D-01,90x160**
				200	**D-01,90x200**
	1,4	3	**2,00**	**80**	**D-02,00x080**
				100	**D-02,00x100**
				125	**D-02,00x125**
				160	**D-02,00x160**
				200	**D-02,00x200**
				250	**D-02,00x250**
				315	**D-02,00x315**
	1,5	3,2	**2,10**	**70**	**D-02,10x070**
				100	**D-02,10x100**
				125	**D-02,10x125**
				160	**D-02,10x160**
				200	**D-02,10x200**
	1,4		**2,20**	**70**	**D-02,20x070**
				100	**D-02,20x100**
				125	**D-02,20x125**
				160	**D-02,20x160**
				200	**D-02,20x200**
	1,5	3,5	**2,25**	**70**	**D-02,25x070**
				100	**D-02,25x100**
				125	**D-02,25x125**
				160	**D-02,25x160**
				200	**D-02,25x200**

R	k	d2	d1	L	REF.
0,4	1,5	3,5	**2,30**	**70**	**D-02,30x070**
				100	**D-02,30x100**
				125	**D-02,30x125**
				160	**D-02,30x160**
				200	**D-02,30x200**
	1,4		**2,40**	**70**	**D-02,40x070**
				100	**D-02,40x100**
				125	**D-02,40x125**
				160	**D-02,40x160**
				200	**D-02,40x200**
			2,50	**80**	**D-02,50x080**
				100	**D-02,50x100**
				125	**D-02,50x125**
				160	**D-02,50x160**
				200	**D-02,50x200**
				250	**D-02,50x250**
	1,7	4	**2,60**	**70**	**D-02,60x070**
				100	**D-02,60x100**
				125	**D-02,60x125**
				160	**D-02,60x160**
				200	**D-02,60x200**
	1,6		**2,70**	**70**	**D-02,70x070**
				100	**D-02,70x100**
				125	**D-02,70x125**
				160	**D-02,70x160**
				200	**D-02,70x200**
			2,75	**70**	**D-02,75x070**
				100	**D-02,75x100**
				125	**D-02,75x125**
				160	**D-02,75x160**
				200	**D-02,75x200**
	1,5		**2,80**	**70**	**D-02,80x070**



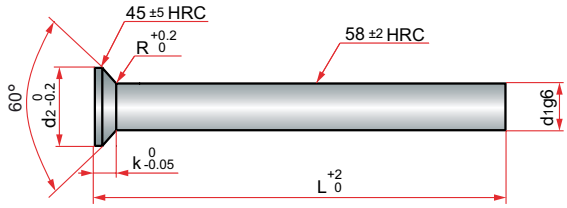
R	k	d2	d1	L	REF.
0,4	1,5	4	2,80	100	D-02,80x100
				125	D-02,80x125
				160	D-02,80x160
				200	D-02,80x200
			2,90	70	D-02,90x070
				100	D-02,90x100
				125	D-02,90x125
				160	D-02,90x160
				200	D-02,90x200
	1,8	4,5	3,00	80	D-03,00x080
				100	D-03,00x100
				125	D-03,00x125
				160	D-03,00x160
				200	D-03,00x200
				250	D-03,00x250
				315	D-03,00x315
	1,7		3,10	70	D-03,10x070
				100	D-03,10x100
				125	D-03,10x125
				160	D-03,10x160
				200	D-03,10x200
			3,20	70	D-03,20x070
				100	D-03,20x100
				125	D-03,20x125
				160	D-03,20x160
				200	D-03,20x200
			3,25	70	D-03,25x070
				100	D-03,25x100
				125	D-03,25x125
				160	D-03,25x160
				200	D-03,25x200
			3,30	70	D-03,30x070

R	k	d2	d1	L	REF.
0,4	1,7	4,5	3,30	100	D-03,30x100
				125	D-03,30x125
				160	D-03,30x160
				200	D-03,30x200
			3,40	70	D-03,40x070
				100	D-03,40x100
				125	D-03,40x125
				160	D-03,40x160
				200	D-03,40x200
	1,8	5	3,50	80	D-03,50x080
				100	D-03,50x100
				125	D-03,50x125
				160	D-03,50x160
				200	D-03,50x200
				250	D-03,50x250
	1,7		3,60	70	D-03,60x070
				100	D-03,60x100
				125	D-03,60x125
				160	D-03,60x160
				200	D-03,60x200
			3,70	70	D-03,70x070
				100	D-03,70x100
				125	D-03,70x125
				160	D-03,70x160
				200	D-03,70x200
			3,75	70	D-03,75x070
				100	D-03,75x100
				125	D-03,75x125
				160	D-03,75x160
				200	D-03,75x200
			3,80	70	D-03,80x070
				100	D-03,80x100



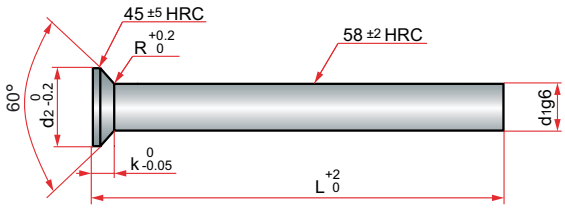
R	k	d2	d1	L	REF.
0,4	1,7	5	3,80	125	D-03,80x125
				160	D-03,80x160
				200	D-03,80x200
	1,8	5,5	3,90	70	D-03,90x070
				100	D-03,90x100
				125	D-03,90x125
				160	D-03,90x160
				200	D-03,90x200
			4,00	80	D-04,00x080
				100	D-04,00x100
				125	D-04,00x125
				160	D-04,00x160
				200	D-04,00x200
				250	D-04,00x250
				315	D-04,00x315
0,6	1,7		4,10	70	D-04,10x070
				100	D-04,10x100
				125	D-04,10x125
				160	D-04,10x160
				200	D-04,10x200
			4,20	70	D-04,20x070
				100	D-04,20x100
				125	D-04,20x125
				160	D-04,20x160
				200	D-04,20x200
			4,25	70	D-04,25x070
				100	D-04,25x100
				125	D-04,25x125
				160	D-04,25x160
				200	D-04,25x200
			4,40	70	D-04,40x070
				100	D-04,40x100

R	k	d2	d1	L	REF.
0,6	1,7	5,5	4,40	125	D-04,40x125
				160	D-04,40x160
				200	D-04,40x200
	1,8	6	4,50	80	D-04,50x080
				100	D-04,50x100
				125	D-04,50x125
				150	D-04,50x150
				160	D-04,50x160
				200	D-04,50x200
				250	D-04,50x250
	1,7		4,60	70	D-04,60x070
				100	D-04,60x100
				125	D-04,60x125
				160	D-04,60x160
				200	D-04,60x200
			4,75	70	D-04,75x070
				100	D-04,75x100
				125	D-04,75x125
				160	D-04,75x160
				200	D-04,75x200
	1,8	6,5	5,00	80	D-05,00x080
				100	D-05,00x100
				125	D-05,00x125
				160	D-05,00x160
				200	D-05,00x200
				250	D-05,00x250
				315	D-05,00x315
	1,7		5,10	70	D-05,10x070
				100	D-05,10x100
				125	D-05,10x125
				160	D-05,10x200
				200	D-05,10x200



R	k	d2	d1	L	REF.
0,6	1,7	6,5	**5,20**	**70**	**D-05,20x070**
				100	**D-05,20x100**
				125	**D-05,20x125**
				160	**D-05,20x160**
				200	**D-05,20x200**
			5,25	**70**	**D-05,25x070**
				100	**D-05,25x100**
				125	**D-05,25x125**
				160	**D-05,25x160**
				200	**D-05,25x200**
			5,30	**70**	**D-05,30x070**
				100	**D-05,30x100**
				125	**D-05,30x125**
				160	**D-05,30x160**
				200	**D-05,30x200**
			5,40	**70**	**D-05,40x070**
				100	**D-05,40x100**
				125	**D-05,40x125**
				160	**D-05,40x160**
				200	**D-05,40x200**
	1,8	7	**5,50**	**80**	**D-05,50x080**
				100	**D-05,50x100**
				125	**D-05,50x125**
				150	**D-05,50x150**
				160	**D-05,50x160**
				200	**D-05,50x200**
				250	**D-05,50x250**
			5,60	**70**	**D-05,60x070**
				100	**D-05,60x100**
				125	**D-05,60x125**
				160	**D-05,60x160**
				200	**D-05,60x200**

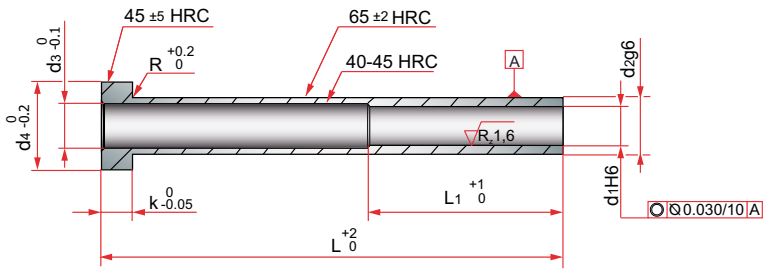
R	k	d2	d1	L	REF.
0,6	1,8	7	**5,75**	**70**	**D-05,75x070**
				100	**D-05,75x100**
				125	**D-05,75x125**
				160	**D-05,75x160**
				200	**D-05,75x200**
	2,2	8	**6,00**	**80**	**D-06,00x080**
				100	**D-06,00x100**
				125	**D-06,00x125**
				160	**D-06,00x160**
				200	**D-06,00x200**
				250	**D-06,00x250**
				315	**D-06,00x315**
	3,2	9	**6,50**	**70**	**D-06,50x070**
				100	**D-06,50x100**
				125	**D-06,50x125**
				160	**D-06,50x160**
				200	**D-06,50x200**
				250	**D-06,50x250**
	2,7		**7,00**	**80**	**D-07,00x080**
				100	**D-07,00x100**
				125	**D-07,00x125**
				150	**D-07,00x150**
				160	**D-07,00x160**
				200	**D-07,00x200**
				250	**D-07,00x250**
				315	**D-07,00x315**
1	3,2	10	**7,50**	**70**	**D-07,50x070**
				100	**D-07,50x100**
				125	**D-07,50x125**
				160	**D-07,50x160**
				200	**D-07,50x200**
				250	**D-07,50x250**



R	k	d2	d1	L	REF.
1	2,7	10	**8,00**	**80**	**D-08,00x080**
				100	**D-08,00x100**
				125	**D-08,00x125**
				160	**D-08,00x160**
				200	**D-08,00x200**
				250	**D-08,00x250**
				315	**D-08,00x315**
	3,2	11	**8,50**	**70**	**D-08,50x070**
				100	**D-08,50x100**
				125	**D-08,50x125**
				160	**D-08,50x160**
				200	**D-08,50x200**
				250	**D-08,50x250**
	2,7		**9,00**	**80**	**D-09,00x080**
				100	**D-09,00x100**
				125	**D-09,00x125**
				160	**D-09,00x160**
				200	**D-09,00x200**
				250	**D-09,00x250**
				315	**D-09,00x315**
		12	**10,00**	**80**	**D-10,00x080**
				100	**D-10,00x100**
				125	**D-10,00x125**
				160	**D-10,00x160**
				200	**D-10,00x200**

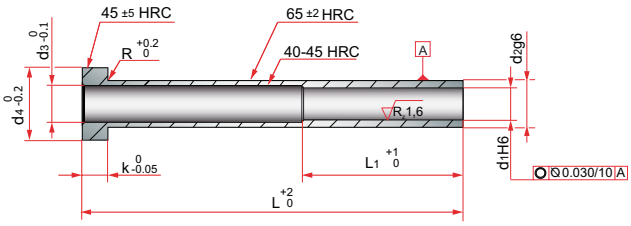
R	k	d2	d1	L	REF.
1	2,7	12	**10,00**	**250**	**D-10,00x250**
				315	**D-10,00x315**
		14	**12,00**	**80**	**D-12,00x080**
				100	**D-12,00x100**
				125	**D-12,00x125**
				160	**D-12,00x160**
				200	**D-12,00x200**
				250	**D-12,00x250**
				315	**D-12,00x315**
1,5	3,2	16	**14,00**	**80**	**D-14,00x080**
				100	**D-14,00x100**
				125	**D-14,00x125**
				150	**D-14,00x150**
				160	**D-14,00x160**
				200	**D-14,00x200**
				250	**D-14,00x250**
				315	**D-14,00x315**
		18	**16,00**	**80**	**D-16,00x080**
				100	**D-16,00x100**
				125	**D-16,00x125**
				160	**D-16,00x160**
				200	**D-16,00x200**
				250	**D-16,00x250**
				315	**D-16,00x315**

Nitrided bright ejector sleeve ETN
Expulsor tubular nitrurado pulido ETN
Wypychacz tulejowy azotowany ETN
Extrator tubular nitrurado polido ETN
Ejecteur tubulaire nitrure rode type ETN

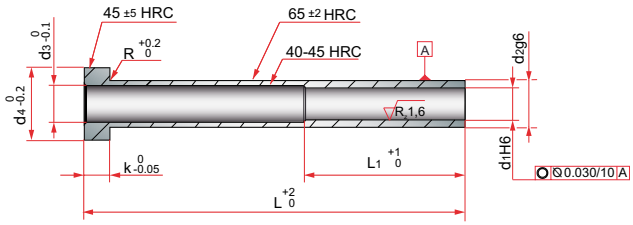


Mat. : 1.2344 - DIN 16756 / ISO 8405 - Maximum temperature at work: 550º C.

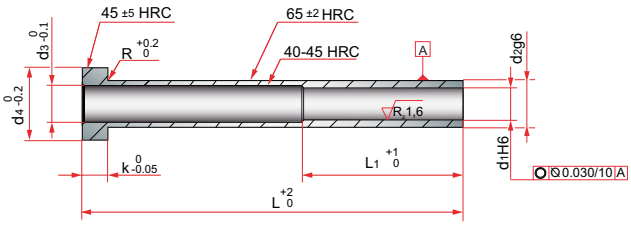
R	k	L1	d3	d4	d2	d1	L	REF.
0,3	3	35	2	6	3	**1,6**	**75**	**ETN-01’60x03’00x075**
							100	**ETN-01’60x03’00x100**
							125	**ETN-01’60x03’00x125**
			2,4	8	4	**2**	**75**	**ETN-02’00x04’00x075**
							100	**ETN-02’00x04’00x100**
							125	**ETN-02’00x04’00x125**
							150	**ETN-02’00x04’00x150**
							175	**ETN-02’00x04’00x175**
							200	**ETN-02’00x04’00x200**
			2,5			**2,2**	**75**	**ETN-02’20x04’00x075**
							100	**ETN-02’20x04’00x100**
							125	**ETN-02’20x04’00x125**
							150	**ETN-02’20x04’00x150**
							175	**ETN-02’20x04’00x175**
							200	**ETN-02’20x04’00x200**
			3	10	5	**2,5**	**75**	**ETN-02’50x05’00x075**
							100	**ETN-02’50x05’00x100**
							125	**ETN-02’50x05’00x125**
							150	**ETN-02’50x05’00x150**
							175	**ETN-02’50x05’00x175**
							200	**ETN-02’50x05’00x200**
		45				**2,7**	**75**	**ETN-02’70x05’00x075**
							100	**ETN-02’70x05’00x100**
							125	**ETN-02’70x05’00x125**
							150	**ETN-02’70x05’00x150**



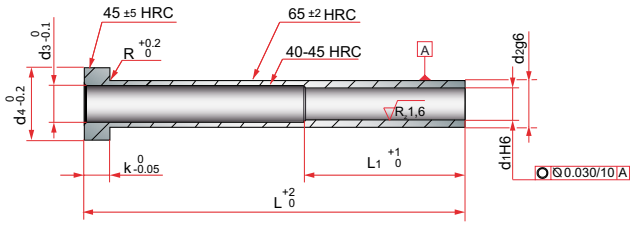
R	k	L1	d3	d4	d2	d1	L	REF.
0,3	3	45	3	10	5	**2,7**	**175**	**ETN-02’70x05’00x175**
							200	**ETN-02’70x05’00x200**
			3,3			**3**	**75**	**ETN-03’00x05’00x075**
							100	**ETN-03’00x05’00x100**
							125	**ETN-03’00x05’00x125**
							150	**ETN-03’00x05’00x150**
							175	**ETN-03’00x05’00x175**
							200	**ETN-03’00x05’00x200**
							225	**ETN-03’00x05’00x225**
							250	**ETN-03’00x05’00x250**
							275	**ETN-03’00x05’00x275**
							300	**ETN-03’00x05’00x300**
			3,5			**3,2**	**75**	**ETN-03’20x05’00x075**
							100	**ETN-03’20x05’00x100**
							125	**ETN-03’20x05’00x125**
							150	**ETN-03’20x05’00x150**
							175	**ETN-03’20x05’00x175**
							200	**ETN-03’20x05’00x200**
0,5	5		4	12	6	**3,5**	**75**	**ETN-03’50x06’00x075**
							100	**ETN-03’50x06’00x100**
							125	**ETN-03’50x06’00x125**
							150	**ETN-03’50x06’00x150**
							175	**ETN-03’50x06’00x175**
							200	**ETN-03’50x06’00x200**
							225	**ETN-03’50x06’00x225**
							250	**ETN-03’50x06’00x250**
							275	**ETN-03’50x06’00x275**
							300	**ETN-03’50x06’00x300**
						3,7	**75**	**ETN-03’70x06’00x075**
							100	**ETN-03’70x06’00x100**
							125	**ETN-03’70x06’00x125**
							150	**ETN-03’70x06’00x150**



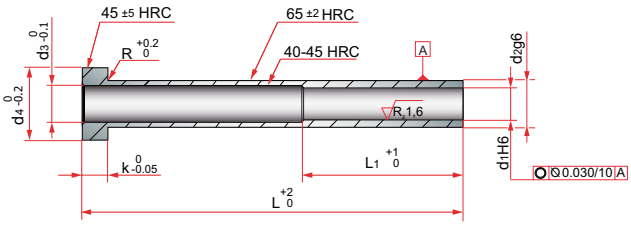
R	k	L1	d3	d4	d2	d1	L	REF.
0,5	5	45	4	12	6	**3,7**	**175**	**ETN-03’70x06’00x175**
							200	**ETN-03’70x06’00x200**
			4,5			**4**	**75**	**ETN-04’00x06’00x075**
							100	**ETN-04’00x06’00x100**
							125	**ETN-04’00x06’00x125**
							150	**ETN-04’00x06’00x150**
							175	**ETN-04’00x06’00x175**
							200	**ETN-04’00x06’00x200**
							225	**ETN-04’00x06’00x225**
							250	**ETN-04’00x06’00x250**
							275	**ETN-04’00x06’00x275**
							300	**ETN-04’00x06’00x300**
			5	14	8	**4,2**	**75**	**ETN-04’20x08’00x075**
							100	**ETN-04’20x08’00x100**
							125	**ETN-04’20x08’00x125**
							150	**ETN-04’20x08’00x150**
							175	**ETN-04’20x08’00x175**
							200	**ETN-04’20x08’00x200**
			5,3			**4,5**	**75**	**ETN-04’50x08’00x075**
							100	**ETN-04’50x08’00x100**
							125	**ETN-04’50x08’00x125**
							150	**ETN-04’50x08’00x150**
							175	**ETN-04’50x08’00x175**
							200	**ETN-04’50x08’00x200**
							225	**ETN-04’50x08’00x225**
							250	**ETN-04’50x08’00x250**
							275	**ETN-04’50x08’00x275**
							300	**ETN-04’50x08’00x300**
				12	7	**5**	**100**	**ETN-05’00x07’00x100**
							125	**ETN-05’00x07’00x125**
							150	**ETN-05’00x07’00x150**
							175	**ETN-05’00x07’00x175**



R	k	L1	d3	d4	d2	d1	L	REF.
0,5	5	45	5,3	12	7	**5**	**200**	**ETN-05’00x07’00x200**
							225	**ETN-05’00x07’00x225**
							250	**ETN-05’00x07’00x250**
			5,5	14	8		**75**	**ETN-05’00x08’00x075**
							100	**ETN-05’00x08’00x100**
							125	**ETN-05’00x08’00x125**
							150	**ETN-05’00x08’00x150**
							175	**ETN-05’00x08’00x175**
							200	**ETN-05’00x08’00x200**
							225	**ETN-05’00x08’00x225**
							250	**ETN-05’00x08’00x250**
							275	**ETN-05’00x08’00x275**
							300	**ETN-05’00x08’00x300**
						5,2	**75**	**ETN-05’20x08’00x075**
							100	**ETN-05’20x08’00x100**
							125	**ETN-05’20x08’00x125**
							150	**ETN-05’20x08’00x150**
							175	**ETN-05’20x08’00x175**
							200	**ETN-05’20x08’00x200**
			6	16	9	**5,5**	**75**	**ETN-05’50x09’00x075**
							100	**ETN-05’50x09’00x100**
							125	**ETN-05’50x09’00x125**
							150	**ETN-05’50x09’00x150**
							175	**ETN-05’50x09’00x175**
							200	**ETN-05’50x09’00x200**
							225	**ETN-05’50x09’00x225**
							250	**ETN-05’50x09’00x250**
							275	**ETN-05’50x09’00x275**
							300	**ETN-05’50x09’00x300**
			6,5		10	**6**	**75**	**ETN-06’00x10’00x075**
							100	**ETN-06’00x10’00x100**
							125	**ETN-06’00x10’00x125**

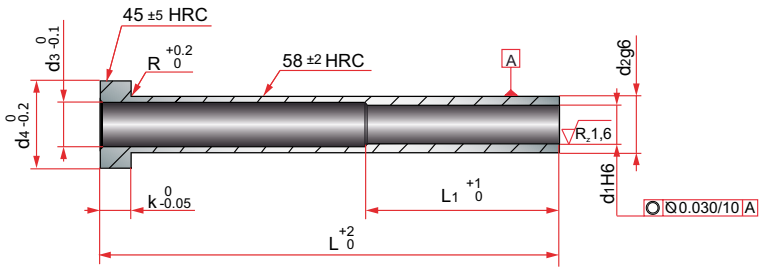


R	k	L1	d3	d4	d2	d1	L	REF.
0,5	5	45	6,5	16	10	**6**	**150**	**ETN-06’00x10’00x150**
							175	**ETN-06’00x10’00x175**
							200	**ETN-06’00x10’00x200**
							225	**ETN-06’00x10’00x225**
							250	**ETN-06’00x10’00x250**
							275	**ETN-06’00x10’00x275**
							300	**ETN-06’00x10’00x300**
						6,2	**75**	**ETN-06’20x10’00x075**
							100	**ETN-06’20x10’00x100**
							125	**ETN-06’20x10’00x125**
							150	**ETN-06’20x10’00x150**
							175	**ETN-06’20x10’00x175**
							200	**ETN-06’20x10’00x200**
							225	**ETN-06’20x10’00x225**
							250	**ETN-06’20x10’00x250**
			7,5			**7**	**100**	**ETN-07’00x10’00x100**
							125	**ETN-07’00x10’00x125**
							150	**ETN-07’00x10’00x150**
							175	**ETN-07’00x10’00x175**
							200	**ETN-07’00x10’00x200**
							225	**ETN-07’00x10’00x225**
							250	**ETN-07’00x10’00x250**
0,8	7		8,5	20	12	**8**	**75**	**ETN-08’00x12’00x075**
							100	**ETN-08’00x12’00x100**
							125	**ETN-08’00x12’00x125**
							150	**ETN-08’00x12’00x150**
							175	**ETN-08’00x12’00x175**
							200	**ETN-08’00x12’00x200**
							225	**ETN-08’00x12’00x225**
							250	**ETN-08’00x12’00x250**
							275	**ETN-08’00x12’00x275**
							300	**ETN-08’00x12’00x300**



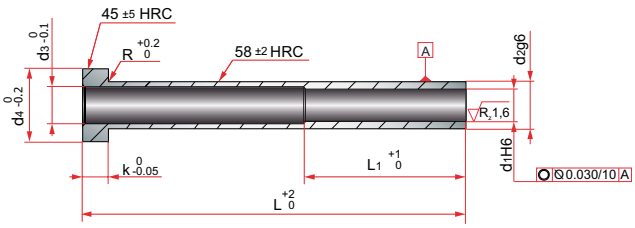
R	k	L1	d3	d4	d2	d1	L	REF.
0,8	7	45	8,5	20	12	**8,2**	**75**	**ETN-08’20x12’00x075**
							100	**ETN-08’20x12’00x100**
							125	**ETN-08’20x12’00x125**
							150	**ETN-08’20x12’00x150**
							175	**ETN-08’20x12’00x175**
							200	**ETN-08’20x12’00x200**
							225	**ETN-08’20x12’00x225**
							250	**ETN-08’20x12’00x250**
		50	10,5	22	14	**10**	**75**	**ETN-10’00x14’00x075**
							100	**ETN-10’00x14’00x100**
							125	**ETN-10’00x14’00x125**
							150	**ETN-10’00x14’00x150**
							175	**ETN-10’00x14’00x175**
							200	**ETN-10’00x14’00x200**
							225	**ETN-10’00x14’00x225**
							250	**ETN-10’00x14’00x250**
							275	**ETN-10’00x14’00x275**
							300	**ETN-10’00x14’00x300**
			12,5		16	**12**	**100**	**ETN-12’00x16’00x100**
							125	**ETN-12’00x16’00x125**
							150	**ETN-12’00x16’00x150**
							175	**ETN-12’00x16’00x175**
							200	**ETN-12’00x16’00x200**
							225	**ETN-12’00x16’00x225**
							250	**ETN-12’00x16’00x250**
							275	**ETN-12’00x16’00x275**
							300	**ETN-12’00x16’00x300**

Hardened ejector sleeve ET
Expulsor tubular templado ET
Wypychacz tulejowy hartowany ET
Extrator tubular temperado ET
Ejecteur tubulaire non nitrure type ET

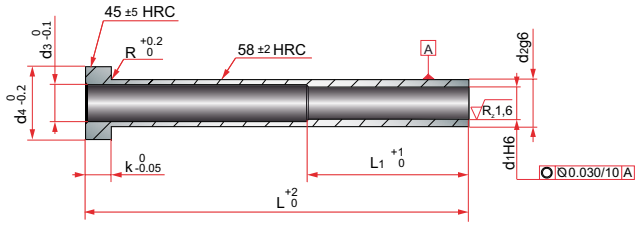


Mat. : 1.2210 / 58 ± 2 HRC - DIN 16576 / ISO 8405 - Maximum temperature at work: 220º C.

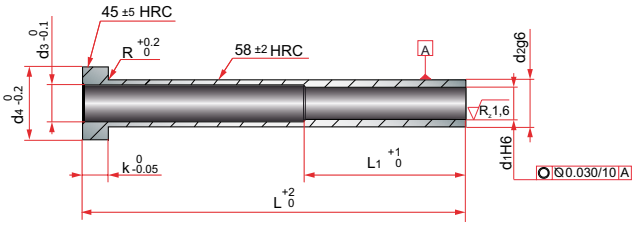
R	k	L1	d3	d4	d2	d1	L	REF.
0,3	3	35	2	6	3	**1,6**	**75**	**ET-01,60x075**
							100	**ET-01,60x100**
							125	**ET-01,60x125**
			2,4	8	4	**2,0**	**75**	**ET-02,00x075**
							100	**ET-02,00x100**
							125	**ET-02,00x125**
							150	**ET-02,00x150**
							175	**ET-02,00x175**
							200	**ET-02,00x200**
			2,5			**2,2**	**75**	**ET-02,20x075**
							100	**ET-02,20x100**
							125	**ET-02,20x125**
							150	**ET-02,20x150**
							175	**ET-02,20x175**
							200	**ET-02,20x200**
			3	10	5	**2,5**	**75**	**ET-02,50x075**
							100	**ET-02,50x100**
							125	**ET-02,50x125**
							150	**ET-02,50x150**
							175	**ET-02,50x175**
							200	**ET-02,50x200**
		45				**2,7**	**75**	**ET-02,70x075**
							100	**ET-02,70x100**
							125	**ET-02,70x125**
							150	**ET-02,70x150**



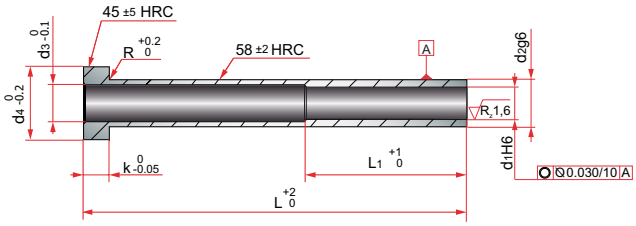
R	k	L1	d3	d4	d2	d1	L	REF.
0,3	3	45	3	10	5	**2,7**	**175**	**ET-02,70x175**
							200	**ET-02,70x200**
			3,3			**3,0**	**75**	**ET-03,00x075**
							100	**ET-03,00x100**
							125	**ET-03,00x125**
							150	**ET-03,00x150**
							175	**ET-03,00x175**
							200	**ET-03,00x200**
							225	**ET-03,00x225**
							250	**ET-03,00x250**
							275	**ET-03,00x275**
							300	**ET-03,00x300**
			3,5			**3,2**	**75**	**ET-03,20x075**
							100	**ET-03,20x100**
							125	**ET-03,20x125**
							150	**ET-03,20x150**
							175	**ET-03,20x175**
							200	**ET-03,20x200**
0,5	5		4	12	6	**3,5**	**75**	**ET-03,50x075**
							100	**ET-03,50x100**
							125	**ET-03,50x125**
							150	**ET-03,50x150**
							175	**ET-03,50x175**
							200	**ET-03,50x200**
							225	**ET-03,50x225**
							250	**ET-03,50x250**
							275	**ET-03,50x275**
							300	**ET-03,50x300**
						3,7	**75**	**ET-03,70x075**
							100	**ET-03,70x100**
							125	**ET-03,70x125**
							150	**ET-03,70x150**



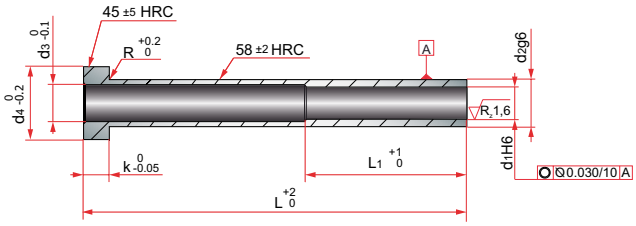
R	k	L1	d3	d4	d2	d1	L	REF.
0,5	5	45	4	12	6	**3,7**	**175**	**ET-03,70x175**
							200	**ET-03,70x200**
			4,5			**4,0**	**75**	**ET-04,00x075**
							100	**ET-04,00x100**
							125	**ET-04,00x125**
							150	**ET-04,00x150**
							175	**ET-04,00x175**
							200	**ET-04,00x200**
							225	**ET-04,00x225**
							250	**ET-04,00x250**
							275	**ET-04,00x275**
							300	**ET-04,00x300**
			5	14	8	**4,2**	**75**	**ET-04,20x0 75**
							100	**ET-04,20x100**
							125	**ET-04,20x125**
							150	**ET-04,20x150**
							175	**ET-04,20x175**
							200	**ET-04,20x200**
			5,3			**4,5**	**75**	**ET-04,50x075**
							100	**ET-04,50x100**
							125	**ET-04,50x125**
							150	**ET-04,50x150**
							175	**ET-04,50x175**
							200	**ET-04,50x200**
							225	**ET-04,50x225**
							250	**ET-04,50x250**
							275	**ET-04,50x275**
							300	**ET-04,50x300**
			5,5			**5,0**	**75**	**ET-05,00x075**
							100	**ET-05,00x100**
							125	**ET-05,00x125**
							150	**ET-05,00x150**



R	k	L1	d3	d4	d2	d1	L	REF.
0,5	5	45	5,5	14	8	**5,0**	**175**	**ET-05,00x175**
							200	**ET-05,00x200**
							225	**ET-05,00x225**
							250	**ET-05,00x250**
							275	**ET-05,00x275**
							300	**ET-05,00x300**
						5,2	**75**	**ET-05,20x075**
							100	**ET-05,20x100**
							125	**ET-05,20x125**
							150	**ET-05,20x150**
							175	**ET-05,20x175**
							200	**ET-05,20x200**
			6	16	9	**5,5**	**75**	**ET-05,50x075**
							100	**ET-05,50x100**
							125	**ET-05,50x125**
							150	**ET-05,50x150**
							175	**ET-05,50x175**
							200	**ET-05,50x200**
							225	**ET-05,50x225**
							250	**ET-05,50x250**
							275	**ET-05,50x275**
							300	**ET-05,50x300**
			6,5		10	**6,0**	**75**	**ET-06,00x075**
							100	**ET-06,00x100**
							125	**ET-06,00x125**
							150	**ET-06,00x150**
							175	**ET-06,00x175**
							200	**ET-06,00x200**
							225	**ET-06,00x225**
							250	**ET-06,00x250**
							275	**ET-06,00x275**
							300	**ET-06,00x300**



R	k	L1	d3	d4	d2	d1	L	REF.
0,5	5	45	6,5	16	10	**6,2**	**75**	**ET-06,20x075**
							100	**ET-06,20x100**
							125	**ET-06,20x125**
							150	**ET-06,20x150**
							175	**ET-06,20x175**
							200	**ET-06,20x200**
							225	**ET-06,20x225**
							250	**ET-06,20x250**
0,8	7		8,5	20	12	**8,0**	**75**	**ET-08,00x075**
							100	**ET-08,00x100**
							125	**ET-08,00x125**
							150	**ET-08,00x150**
							175	**ET-08,00x175**
							200	**ET-08,00x200**
							225	**ET-08,00x225**
							250	**ET-08,00x250**
							275	**ET-08,00x275**
							300	**ET-08,00x300**
						8,2	**75**	**ET-08,20x075**
							100	**ET-08,20x100**
							125	**ET-08,20x125**
							150	**ET-08,20x150**
							175	**ET-08,20x175**
							200	**ET-08,20x200**
							225	**ET-08,20x225**
							250	**ET-08,20x250**
		50	10,5	22	14	**10,0**	**75**	**ET-10,00x075**
							100	**ET-10,00x100**
							125	**ET-10,00x125**
							150	**ET-10,00x150**
							175	**ET-10,00x175**
							200	**ET-10,00x200**

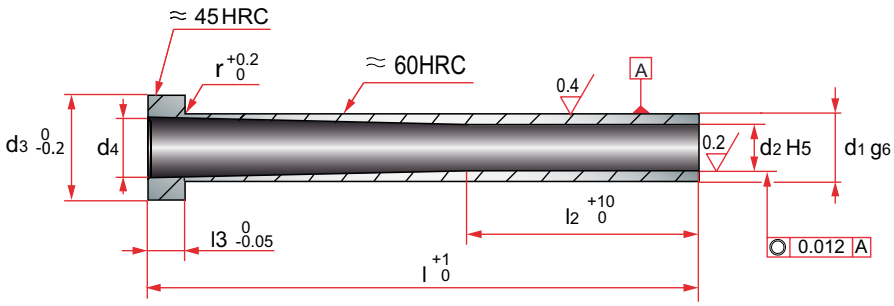


R	k	L1	d3	d4	d2	d1	L	REF.
0,8	7	50	10,5	22	14	**10,0**	**225**	**ET-10,00x225**
							250	**ET-10,00x250**
							275	**ET-10,00x275**
							300	**ET-10,00x300**
			11			**10,5**	**100**	**ET-10,50x100**
							125	**ET-10,50x125**
							150	**ET-10,50x150**
							175	**ET-10,50x175**
							200	**ET-10,50x200**
							225	**ET-10,50x225**
							250	**ET-10,50x250**
			12,5		16	**12,0**	**100**	**ET-12,00x100**
							125	**ET-12,00x125**
							150	**ET-12,00x150**
							175	**ET-12,00x175**
							200	**ET-12,00x200**
							225	**ET-12,00x225**
							250	**ET-12,00x250**
							275	**ET-12,00x275**
							300	**ET-12,00x300**
			13			**12,5**	**100**	**ET-12,50x100**
							125	**ET-12,50x125**
							150	**ET-12,50x150**
							175	**ET-12,50x175**
							200	**ET-12,50x200**
							225	**ET-12,50x225**
							250	**ET-12,50x250**

BR1723

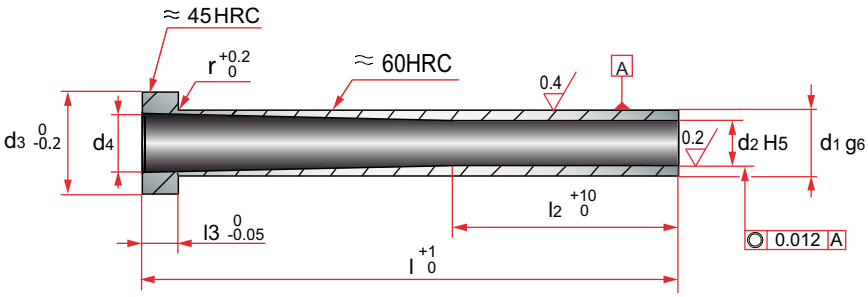
E1723

Ejector sleeve, stepless, through-hardened
Expulsor tubular continuo
Wypychacz tulejowy bezstopniowy, hartowany
Extrator tubular stepless, temperado
Éjecteur tubulaire en continu, trempé

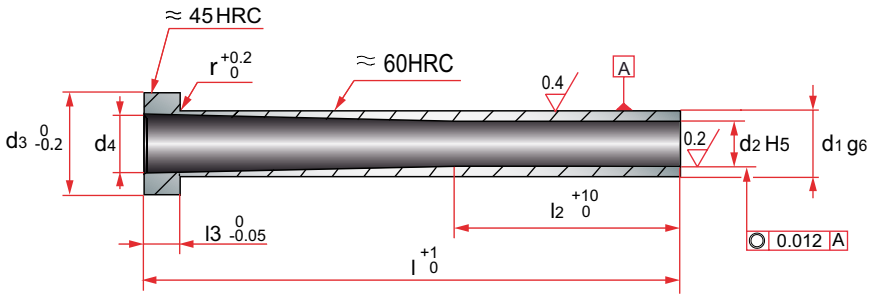


Mat. : 1.2210 ≈ ISO 8405 (DIN 16756) t max. 200º

r	l3	l2	d4	d3	d1	d2	l	REF.
0,3	3	35	2,4	8	**4**	**2**	**75**	**BR1723-02’00x04’00x075**
							100	**BR1723-02’00x04’00x100**
							125	**BR1723-02’00x04’00x125**
							150	**BR1723-02’00x04’00x150**
							175	**BR1723-02’00x04’00x175**
			2,9			**2,5**	**75**	**BR1723-02’50x04’00x075**
							100	**BR1723-02’50x04’00x100**
							125	**BR1723-02’50x04’00x125**
							150	**BR1723-02’50x04’00x150**
							175	**BR1723-02’50x04’00x175**
							200	**BR1723-02’50x04’00x200**
		45	3,4	10	**5**	**3**	**75**	**BR1723-03’00x05’00x075**
							100	**BR1723-03’00x05’00x100**
							125	**BR1723-03’00x05’00x125**
							150	**BR1723-03’00x05’00x150**
							175	**BR1723-03’00x05’00x175**
							200	**BR1723-03’00x05’00x200**
			3,9			**3,5**	**75**	**BR1723-03’50x05’00x075**
							100	**BR1723-03’50x05’00x100**
							125	**BR1723-03’50x05’00x125**
							150	**BR1723-03’50x05’00x150**
							175	**BR1723-03’50x05’00x175**
							200	**BR1723-03’50x05’00x200**

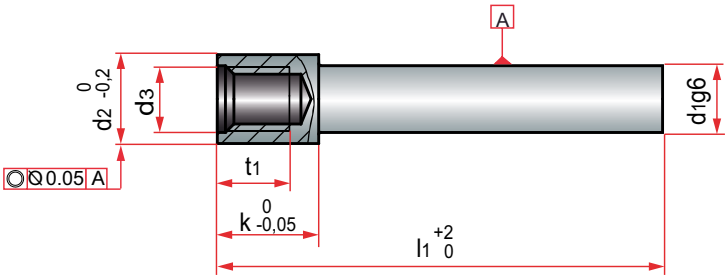


r	l3	l2	d4	d3	d1	d2	l	REF.
0,5	5	45	4,4	12	**6**	**4**	**75**	**BR1723-04’00x06’00x075**
							100	**BR1723-04’00x06’00x100**
							125	**BR1723-04’00x06’00x125**
							150	**BR1723-04’00x06’00x150**
							175	**BR1723-04’00x06’00x175**
							200	**BR1723-04’00x06’00x200**
							225	**BR1723-04’00x06’00x225**
							250	**BR1723-04’00x06’00x250**
			4,9			**4,5**	**75**	**BR1723-04’50x06’00x075**
							100	**BR1723-04’50x06’00x100**
							125	**BR1723-04’50x06’00x125**
							150	**BR1723-04’50x06’00x150**
							175	**BR1723-04’50x06’00x175**
							200	**BR1723-04’50x06’00x200**
							225	**BR1723-04’50x06’00x225**
							250	**BR1723-04’50x06’00x250**
		50	5,3		**7**	**5**	**100**	**BR1723-05’00x07’00x100**
							125	**BR1723-05’00x07’00x125**
							150	**BR1723-05’00x07’00x150**
							175	**BR1723-05’00x07’00x175**
							200	**BR1723-05’00x07’00x200**
							225	**BR1723-05’00x07’00x225**
							250	**BR1723-05’00x07’00x250**



r	l3	l2	d4	d3	d1	d2	l	REF.
0,5	5	50	5,9	14	**8**	**5,5**	**100**	**BR1723-05’50x08’00x100**
							125	**BR1723-05’50x08’00x125**
							150	**BR1723-05’50x08’00x150**
							175	**BR1723-05’50x08’00x175**
							200	**BR1723-05’50x08’00x200**
							225	**BR1723-05’50x08’00x225**
							250	**BR1723-05’50x08’00x250**
			6,4		**9**	**6**	**100**	**BR1723-06’00x09’00x100**
							125	**BR1723-06’00x09’00x125**
							150	**BR1723-06’00x09’00x150**
							175	**BR1723-06’00x09’00x175**
							200	**BR1723-06’00x09’00x200**
							225	**BR1723-06’00x09’00x225**
							250	**BR1723-06’00x09’00x250**
0,8	7		8,5	20	**12**	**8**	**100**	**BR1723-08’00x12’00x100**
							125	**BR1723-08’00x12’00x125**
							150	**BR1723-08’00x12’00x150**
							175	**BR1723-08’00x12’00x175**
							200	**BR1723-08’00x12’00x200**
			10,5	22	**14**	**10**	**100**	**BR1723-10’00x14’00x100**
							125	**BR1723-10’00x14’00x125**
							150	**BR1723-10’00x14’00x150**
							175	**BR1723-10’00x14’00x175**
							200	**BR1723-10’00x14’00x200**

Core pin, with extracting thread
Noyo
Rdzeń z gwintem wewnętrzym
Postiço redondo
Noyaux

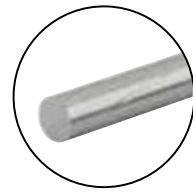


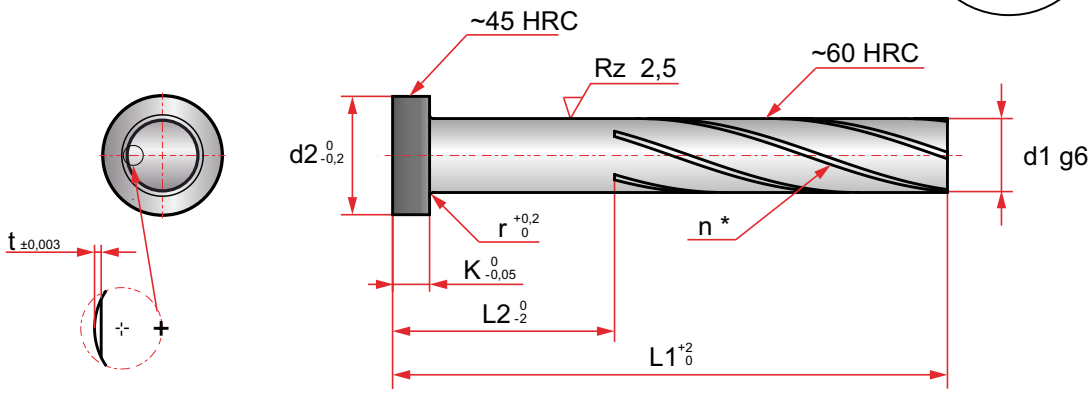
Mat. : 1.2344. Hardness: 45 ± 2 HRC.

d2	d3	t1	k	d1	l1	REF.
9	M6	9	14	5	160	BR49-05,00x160
					200	BR49-05,00x200
				5,5	160	BR49-05,50x160
					250	BR49-05,50x250
10				6	100	BR49-06,00x100
					160	BR49-06,00x160
					200	BR49-06,00x200
					250	BR49-06,00x250
				6,5	200	BR49-06,50x200
					250	BR49-06,50x250
				7	160	BR49-7x160 M6
					250	BR49-7x250 M6
13	M8	10	16	7	160	BR49-07,00x160
					250	BR49-07,00x250
				7,5	250	BR49-07,50x250
				8	250	BR49-08,00x250
				8,5	200	BR49-08,50x200
15	M10	12	18	10	160	BR49-10,00x160
					200	BR49-10,00x200
					250	BR49-10,00x250
				10,2		BR49-10,20x250
				10,5	160	BR49-10,50x160
					200	BR49-10,50x200
					250	BR49-10,50x250
18	M12	14	22	11		BR49-11,00x250
				11,5	200	BR49-11,50x200
				12		BR49-12,00x200
				12,5		BR49-12,50x200

BR7318

Ejector pin for ventilation, through-hardened
Expulsor con ventilación, templado
Wypychacz do odpowietrzania, hartowany
Extrator com escape de gases, temperado
Éjecteur d'éventation, trempé



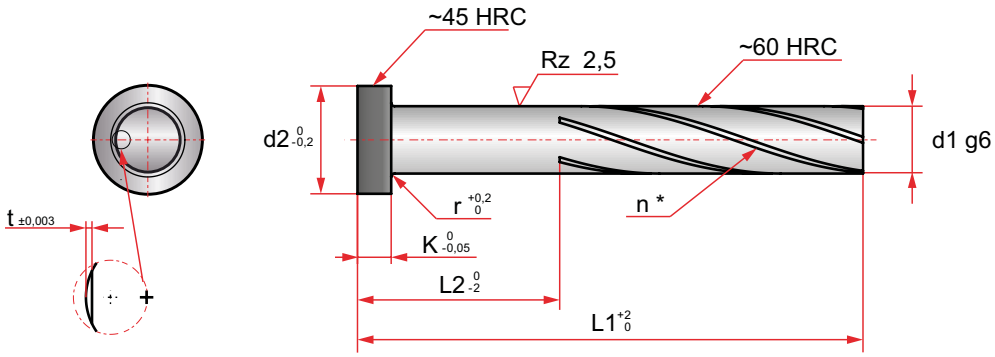


n* = Num. of chanels/Num. canales
Mat. : 1.2067/ 58 ± 2 HRC - DIN 1530AH - Maximum temperature at work: 220º C.

t	n*	r	K	d_2	d_1	L_1	L_2	REF.
0,02	3	0,2	2	4	**2**	**125**	50	**BR7318-02'00x125**
						160	63	**BR7318-02'00x160**
						200	80	**BR7318-02'00x200**
						250	100	**BR7318-02'00x250**
		0,3		5	**2,5**	**125**	50	**BR7318-02'50x125**
						160	63	**BR7318-02'50x160**
						200	80	**BR7318-02'50x200**
						250	100	**BR7318-02'50x250**
			3	6	**3**	**125**	50	**BR7318-03'00x125**
						160	63	**BR7318-03'00x160**
						200	80	**BR7318-03'00x200**
						250	100	**BR7318-03'00x250**
						315	125	**BR7318-03'00x315**
						450	158	**BR7318-03'00x450**
				7	**3,5**	**125**	50	**BR7318-03'50x125**

t	n*	r	K	d_2	d_1	L_1	L_2	REF.
0,02	3	0,3	3	8	**3,5**	**160**	63	**BR7318-03'50x160**
						200	80	**BR7318-03'50x200**
						250	100	**BR7318-03'50x250**
					4	**125**	50	**BR7318-04'00x125**
						160	63	**BR7318-04'00x160**
						200	80	**BR7318-04'00x200**
						250	100	**BR7318-04'00x250**
						315	125	**BR7318-04'00x315**
						450	158	**BR7318-04'00x450**
					4,5	**160**	63	**BR7318-04'50x160**
						200	80	**BR7318-04'50x200**
						250	100	**BR7318-04'50x250**
	5			10	**5**	**125**	50	**BR7318-05'00x125**
						160	63	**BR7318-05'00x160**
						200	80	**BR7318-05'00x200**

BR7318



t	n*	r	K	d_2	d_1	L_1	L_2	REF.
0,02	5	0,3	3	10	**5**	**250**	100	**BR7318-05'00x250**
						315	125	**BR7318-05'00x315**
						450	158	**BR7318-05'00x450**
					5,5	**160**	63	**BR7318-05'50x160**
						250	100	**BR7318-05'50x250**
		0,5	5	12	**6**	**125**	50	**BR7318-06'00x125**
						160	63	**BR7318-06'00x160**
						200	80	**BR7318-06'00x200**
						250	100	**BR7318-06'00x250**
						315	125	**BR7318-06'00x315**
						450	158	**BR7318-06'00x450**
					6,5	**160**	63	**BR7318-06'50x160**
						250	100	**BR7318-06'50x250**
					7	**160**	63	**BR7318-07'00x160**
						200	80	**BR7318-07'00x200**
						250	100	**BR7318-07'00x250**

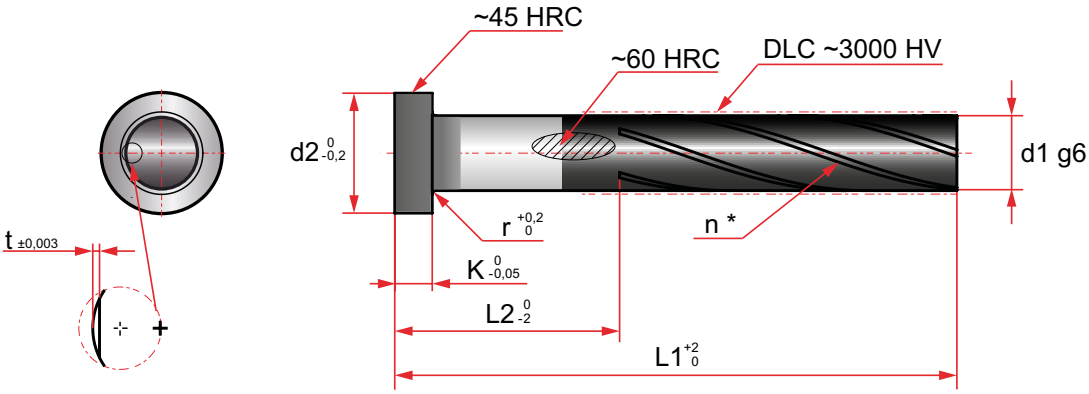
t	n*	r	K	d_2	d_1	L_1	L_2	REF.
0,02	5	0,5	5	14	**8**	**125**	50	**BR7318-08'00x125**
						160	63	**BR7318-08'00x160**
						200	80	**BR7318-08'00x200**
						250	100	**BR7318-08'00x250**
						315	125	**BR7318-08'00x315**
						450	158	**BR7318-08'00x450**
	7			16	**10**	**160**	63	**BR7318-10'00x160**
						200	80	**BR7318-10'00x200**
						250	100	**BR7318-10'00x250**
						315	125	**BR7318-10'00x315**
						450	158	**BR7318-10'00x450**
		0,8	7	18	**12**	**160**	63	**BR7318-12'00x160**
						200	80	**BR7318-12'00x200**
						250	100	**BR7318-12'00x250**
						315	125	**BR7318-12'00x315**

*Optimization of the mold through ventilation of the cavity
*High-precision, self-cleaning propeller geometry ensures reliable operation
*Less surface wear increases useful life
*Interchangeable with standard ejectors
*Wide range of dimensions (Ø2 to12 mm)

*Optimización del molde mediante la ventilación de la cavidad
*La geometría de hélice de alta precisión y autolimpiante garantiza un funcionamiento fiable
*El menor desgaste de la superficie aumenta la vida útil
*Intercambiable con expulsores estándar
*Amplia gama de dimensiones (Ø 2 a 12 mm)

BR7319

Ejector pin for ventilation, through-hardened, with DLC coating
Expulsor con ventilación, templado con DLC
Wypychacz do odpowietrzania, hartowany, z powłoką DLC
Extrator com escape de gases, temperado, e revestimento DLC
Éjecteur d'éventation, trempé, avec revêtement DLC

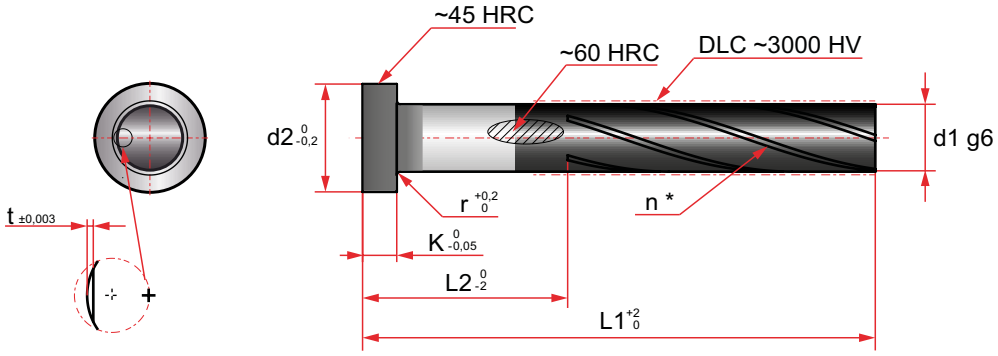


n* = Num. of chanels/Num. canales
Mat.: 1.2067+DLC / 58±2 HRC. DIN 1530A Maximum temperature at work: 220º C

t	n*	r	K	d_2	d_1	L_1	L_2	REF.
0,02	3	0,2	2	4	**2**	**125**	50	**BR7319-02'00x125**
						160	63	**BR7319-02'00x160**
						200	80	**BR7319-02'00x200**
						250	100	**BR7319-02'00x250**
		0,3		5	**2,5**	**125**	50	**BR7319-02'50x125**
						160	63	**BR7319-02'50x160**
						200	80	**BR7319-02'50x200**
						250	100	**BR7319-02'50x250**
			3	6	**3**	**125**	50	**BR7319-03'00x125**
						160	63	**BR7319-03'00x160**
						200	80	**BR7319-03'00x200**
						250	100	**BR7319-03'00x250**
						315	125	**BR7319-03'00x315**
						450	158	**BR7319-03'00x450**
				7	**3,5**	**125**	50	**BR7319-03'50x125**

t	n*	r	K	d_2	d_1	L_1	L_2	REF.
0,02	3	0,3	3	8	**3,5**	**160**	63	**BR7319-03'50x160**
						200	80	**BR7319-03'50x200**
						250	100	**BR7319-03'50x250**
					4	**125**	50	**BR7319-04'00x125**
						160	63	**BR7319-04'00x160**
						200	80	**BR7319-04'00x200**
						250	100	**BR7319-04'00x250**
						315	125	**BR7319-04'00x315**
						450	158	**BR7319-04'00x450**
					4,5	**160**	63	**BR7319-04'50x160**
						200	80	**BR7319-04'50x200**
						250	100	**BR7319-04'50x250**
	5			10	**5**	**125**	50	**BR7319-05'00x125**
						160	63	**BR7319-05'00x160**
						200	80	**BR7319-05'00x200**

BR7319



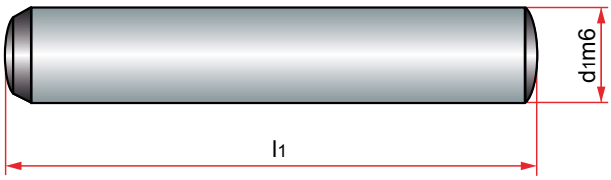
t	n*	r	K	d_2	d_1	L_1	L_2	REF.
0,02	5	0,3	3	10	**5**	**250**	100	**BR7319-05'00x250**
						315	125	**BR7319-05'00x315**
						450	158	**BR7319-05'00x450**
					5,5	**160**	63	**BR7319-05'50x160**
						250	100	**BR7319-05'50x250**
		0,5	5	12	**6**	**125**	50	**BR7319-06'00x125**
						160	63	**BR7319-06'00x160**
						200	80	**BR7319-06'00x200**
						250	100	**BR7319-06'00x250**
						315	125	**BR7319-06'00x315**
						450	158	**BR7319-06'00x450**
					6,5	**160**	63	**BR7319-06'50x160**
						250	100	**BR7319-06'50x250**
					7	**160**	63	**BR7319-07'00x160**
						200	80	**BR7319-07'00x200**
						250	100	**BR7319-07'00x250**

t	n*	r	K	d_2	d_1	L_1	L_2	REF.
0,02	5	0,5	5	14	**8**	**125**	50	**BR7319-08'00x125**
						160	63	**BR7319-08'00x160**
						200	80	**BR7319-08'00x200**
						250	100	**BR7319-08'00x250**
						315	125	**BR7319-08'00x315**
						450	158	**BR7319-08'00x450**
	7			16	**10**	**160**	63	**BR7319-10'00x160**
						200	80	**BR7319-10'00x200**
						250	100	**BR7319-10'00x250**
						315	125	**BR7319-10'00x315**
						450	158	**BR7319-10'00x450**
		0,8	7	18	**12**	**160**	63	**BR7319-12'00x160**
						200	80	**BR7319-12'00x200**
						250	100	**BR7319-12'00x250**
						315	125	**BR7319-12'00x315**

*Optimization of the mold through ventilation of the cavity
*High-precision, self-cleaning propeller geometry ensures reliable operation
*Less surface wear increases useful life
*Interchangeable with standard ejectors
*Wide range of dimensions (Ø 2 to 12 mm)
*Friction coefficient ~ 0.1-0.15
*Suitable for dry working

*Optimización del molde mediante la ventilacion de la cavidad
*La geometría de hélice de alta precisión y autolimpiante garantiza un funcionamiento fiable
*El menor desgaste de la superficie aumenta la vida útil
*Intercambiable con expulsores estándar
*Amplia gama de dimensiones (Ø 2 a 12 mm)
*Coeficiente de fricción ~ 0,1-0,15
*Adecuado para trabajo en seco

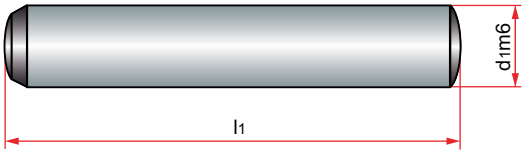
Dowel pin
Pasador cilíndrico
Kołek walcowy
Cavilha cilindrica
Goupille cylindrique



Hardness: 58 ± 2 HRC. DIN 6325.

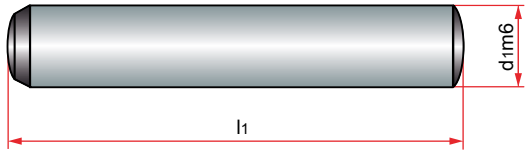
d1	l1	REF.
2	10	PAS-02x010
	12	PAS-02x012
	14	PAS-02x014
	16	PAS-02x016
	18	PAS-02x018
	20	PAS-02x020
	24	PAS-02x024
	28	PAS-02x028
3	10	PAS-03x010
	12	PAS-03x012
	14	PAS-03x014
	16	PAS-03x016
	18	PAS-03x018
	20	PAS-03x020
	24	PAS-03x024
	28	PAS-03x028
	30	PAS-03x030
	32	PAS-03x032
	36	PAS-03x036
	40	PAS-03x040
	45	PAS-03x045
	50	PAS-03x050
4	10	PAS-04x010
	12	PAS-04x012
	14	PAS-04x014
	16	PAS-04x016
	18	PAS-04x018

d1	l1	REF.
4	20	PAS-04x020
	24	PAS-04x024
	28	PAS-04x028
	30	PAS-04x030
	32	PAS-04x032
	36	PAS-04x036
	40	PAS-04x040
	45	PAS-04x045
	50	PAS-04x050
	60	PAS-04x060
5	10	PAS-05x010
	12	PAS-05x012
	14	PAS-05x014
	16	PAS-05x016
	18	PAS-05x018
	20	PAS-05x020
	24	PAS-05x024
	28	PAS-05x028
	30	PAS-05x030
	32	PAS-05x032
	36	PAS-05x036
	40	PAS-05x040
	45	PAS-05x045
	50	PAS-05x050
	55	PAS-05x055
	60	PAS-05x060
	70	PAS-05x070



d1	l1	REF.
5	80	PAS-05x080
6	10	PAS-06x010
	12	PAS-06x012
	14	PAS-06x014
	16	PAS-06x016
	18	PAS-06x018
	20	PAS-06x020
	24	PAS-06x024
	28	PAS-06x028
	30	PAS-06x030
	32	PAS-06x032
	36	PAS-06x036
	40	PAS-06x040
	45	PAS-06x045
	50	PAS-06x050
	55	PAS-06x055
	60	PAS-06x060
	70	PAS-06x070
	80	PAS-06x080
	90	PAS-06x090
	100	PAS-06x100
7	20	PAS-07x020
	24	PAS-07x024
	28	PAS-07x028
	30	PAS-07x030
	32	PAS-07x032
	36	PAS-07x036
	40	PAS-07x040
	45	PAS-07x045
	50	PAS-07x050
	55	PAS-07x055
	60	PAS-07x060
	70	PAS-07x070
	80	PAS-07x080

d1	l1	REF.
7	90	PAS-07x090
	100	PAS-07x100
8	16	PAS-08x016
	20	PAS-08x020
	24	PAS-08x024
	28	PAS-08x028
	30	PAS-08x030
	32	PAS-08x032
	36	PAS-08x036
	40	PAS-08x040
	45	PAS-08x045
	50	PAS-08x050
	55	PAS-08x055
	60	PAS-08x060
	70	PAS-08x070
	80	PAS-08x080
	90	PAS-08x090
	100	PAS-08x100
	120	PAS-08x120
10	20	PAS-10x020
	24	PAS-10x024
	28	PAS-10x028
	30	PAS-10x030
	32	PAS-10x032
	36	PAS-10x036
	40	PAS-10x040
	45	PAS-10x045
	50	PAS-10x050
	55	PAS-10x055
	60	PAS-10x060
	70	PAS-10x070
	80	PAS-10x080
	90	PAS-10x090
	100	PAS-10x100



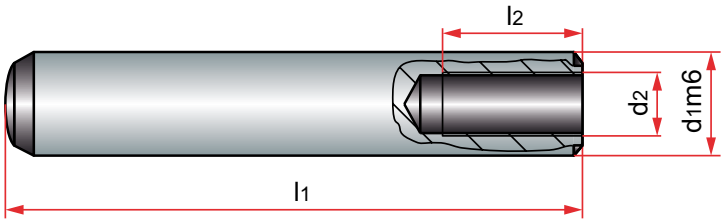
d1	l1	REF.
10	120	PAS-10x120
12	28	PAS-12x028
	30	PAS-12x030
	32	PAS-12x032
	36	PAS-12x036
	40	PAS-12x040
	45	PAS-12x045
	50	PAS-12x050
	55	PAS-12x055
	60	PAS-12x060
	70	PAS-12x070
	80	PAS-12x080
	90	PAS-12x090
	100	PAS-12x100
	120	PAS-12x120
	130	PAS-12x130
	140	PAS-12x140
	150	PAS-12x150
14	40	PAS-14x040
	45	PAS-14x045
	50	PAS-14x050
	55	PAS-14x055
	60	PAS-14x060
	70	PAS-14x070
	80	PAS-14x080
	90	PAS-14x090
	100	PAS-14x100

d1	l1	REF.
14	120	PAS-14x120
	130	PAS-14x130
	140	PAS-14x140
	150	PAS-14x150
16	36	PAS-16x036
	40	PAS-16x040
	45	PAS-16x045
	50	PAS-16x050
	55	PAS-16x055
	60	PAS-16x060
	70	PAS-16x070
	80	PAS-16x080
	90	PAS-16x090
	100	PAS-16x100
	120	PAS-16x120
	130	PAS-16x130
	140	PAS-16x140
	150	PAS-16x150
20	60	PAS-20x060
	70	PAS-20x070
	80	PAS-20x080
	90	PAS-20x090
	100	PAS-20x100
	120	PAS-20x120
	130	PAS-20x130
	140	PAS-20x140
	150	PAS-20x150

PASR

E 1302, Z 26

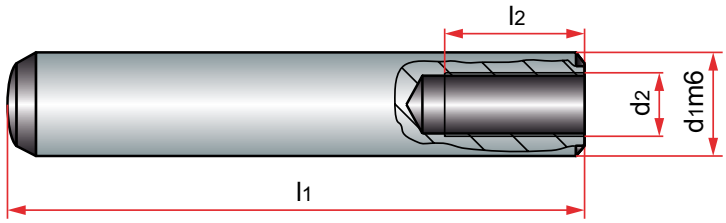
Dowel pin with extracting thread
Pasador cilíndrico roscado
Kołek walcowy z gwintem wewnętrznym
Cavilha cilindrica com furo roscado
Goupille cylindrique a truot turaude



Hardness: 58 ± 2 HRC. DIN 7979.

d2	l2	d1	l1	REF.
M4	6	**6**	**16**	**PASR-06x016**
			20	**PASR-06x020**
			24	**PASR-06x024**
			28	**PASR-06x028**
			32	**PASR-06x032**
			36	**PASR-06x036**
			40	**PASR-06x040**
			45	**PASR-06x045**
			50	**PASR-06x050**
			55	**PASR-06x055**
			60	**PASR-06x060**
			70	**PASR-06x070**
M5	8	**8**	**20**	**PASR-08x020**
			24	**PASR-08x024**
			28	**PASR-08x028**
			32	**PASR-08x032**
			36	**PASR-08x036**
			40	**PASR-08x040**
			45	**PASR-08x045**
			50	**PASR-08x050**
			55	**PASR-08x055**
			60	**PASR-08x060**
			70	**PASR-08x070**
			80	**PASR-08x080**
M6	10	**10**	**24**	**PASR-10x024**

d2	l2	d1	l1	REF.
M6	10	**10**	**28**	**PASR-10x028**
			32	**PASR-10x032**
			36	**PASR-10x036**
			40	**PASR-10x040**
			45	**PASR-10x045**
			50	**PASR-10x050**
			55	**PASR-10x055**
			60	**PASR-10x060**
			70	**PASR-10x070**
			80	**PASR-10x080**
			90	**PASR-10x090**
			100	**PASR-10x100**
			120	**PASR-10x120**
	12	**12**	**28**	**PASR-12x028**
			32	**PASR-12x032**
			36	**PASR-12x036**
			40	**PASR-12x040**
			45	**PASR-12x045**
			50	**PASR-12x050**
			55	**PASR-12x055**
			60	**PASR-12x060**
			70	**PASR-12x070**
			80	**PASR-12x080**
			90	**PASR-12x090**
			100	**PASR-12x100**

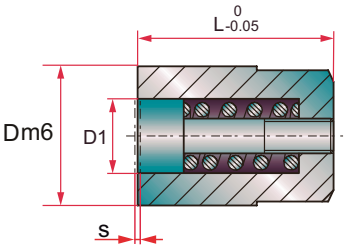


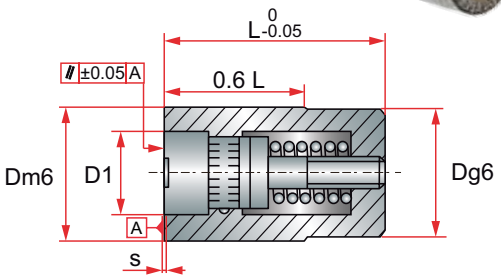
d2	l2	d1	l1	REF.
M6	12	**12**	**120**	**PASR-12x120**
M8		**14**	**32**	**PASR-14x032**
			36	**PASR-14x036**
			40	**PASR-14x040**
			45	**PASR-14x045**
			50	**PASR-14x050**
			55	**PASR-14x055**
			60	**PASR-14x060**
			70	**PASR-14x070**
			80	**PASR-14x080**
			90	**PASR-14x090**
			100	**PASR-14x100**
			120	**PASR-14x120**
	16	**16**	**40**	**PASR-16x040**
			45	**PASR-16x045**
			50	**PASR-16x050**

d2	l2	d1	l1	REF.
M8	16	**16**	**55**	**PASR-16x055**
			60	**PASR-16x060**
			70	**PASR-16x070**
			80	**PASR-16x080**
			90	**PASR-16x090**
			100	**PASR-16x100**
			120	**PASR-16x120**
M10	20	**20**	**50**	**PASR-20x050**
			55	**PASR-20x055**
			60	**PASR-20x060**
			70	**PASR-20x070**
			80	**PASR-20x080**
			90	**PASR-20x090**
			100	**PASR-20x100**
			120	**PASR-20x120**

D/S

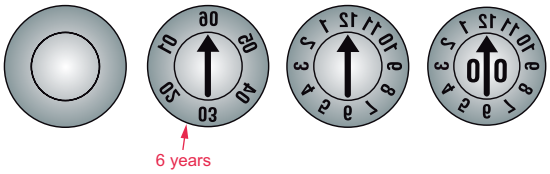
Short date stamp
Fechador anual corto
Datownik krótki
Datador anual curto
Corps dateur court





Only D: 4Ø

Blank/S **DA/S** **DF/S** **DM/S**



Mat. : INOX. 1.4034. Hardness: 51 ± 3 HRC. Maximum temperature at work: 150º C.

s	D1	D	L	REF.
0,20	2,2	4	5	Blank/ 4S
				DA/ 4S
				DF/ 4S
				DM/ 4S
0	2,9	5	8	Blank/ 5S
				DA/ 5S
				DF/ 5S
				DM/ 5S
	3,7	6		Blank/ 6S
				DA/ 6S
				DF/ 6S
				DM/ 6S
	5	8	10	Blank/ 8S
				DA/ 8S
				DF/ 8S
				DM/ 8S

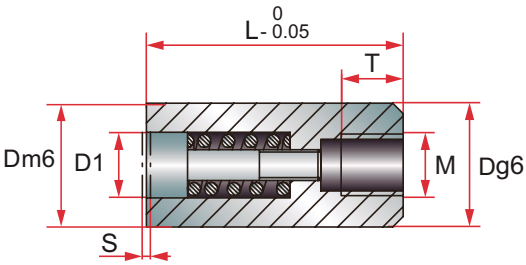
s	D1	D	L	REF.
0	6,3	10	12	Blank/ 10S
				DA/ 10S
				DF/ 10S
				DM/ 10S
	7,5	12	14	Blank/ 12S
				DA/ 12S
				DF/ 12S
				DM/ 12S
	8,7	16	20	Blank/ 16S
				DA/ 16S
				DF/ 16S
				DM/ 16S
	10,7	20		Blank/ 20S
				DA/ 20S
				DF/ 20S
				DM/ 20S

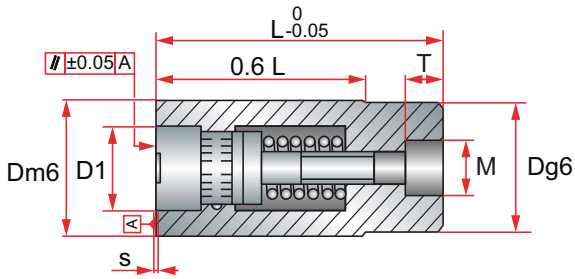
IMPORTANT

Special engraving available under request.
Grabados especiales bajo demanda.

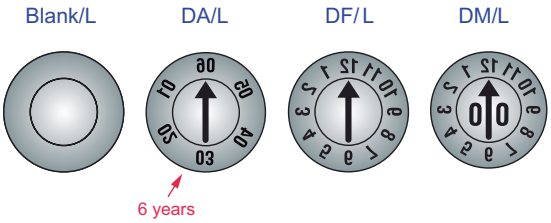
D/L

Long date stamp
Fechador anual largo
Datownik długi
Datador anual longo
Corps dateur longue





Only D: 4Ø



Mat. : INOX. 1.4034. Hardness: 51 ± 3 HRC. Maximum temperature at work: 150º C.

s	T	M	D1	D	L	REF.
0,2	3,5	M2	2,2	**4**	**12**	**Blank/ 4L**
						DA/ 4L
						DF/ 4L
						DM/ 4L
0		M3	2,9	**5**		**Blank/ 5L**
						DA/ 5L
						DF/ 5L
						DM/ 5L
			3,7	**6**	**20**	**Blank/ 6L**
						DA/ 6L
						DF/ 6L
						DM/ 6L

s	T	M	D1	D	L	REF.
0	4	M4	5	**8**	**20**	**Blank/ 8L**
						DA/ 8L
						DF/ 8L
						DM/ 8L
		M5	6,3	**10**		**Blank/ 10L**
						DA/ 10L
						DF/ 10L
						DM/ 10L
	6	M6	7,5	**12**		**Blank/ 12L**
						DA/ 12L
						DF/ 12L
						DM/ 12L

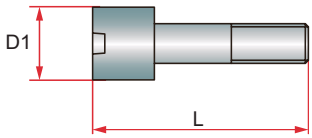
IMPORTANT

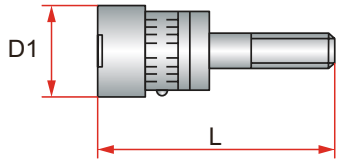
Special engraving available under request.
Grabados especiales bajo demanda.

IF/IA

Date insert
Indicador anual
Wkładka datownika
Inserto anual
Insert dateur

Only: 2,2 Ø

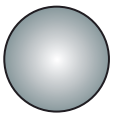




IF

IA

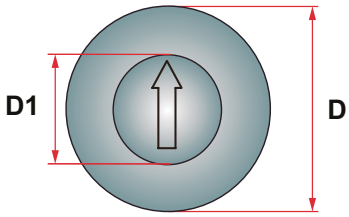
Blank



Mat. : INOX. 1.4034. Hardness: 51 ± 3 HRC. Maximum temperature at work: 150º C.

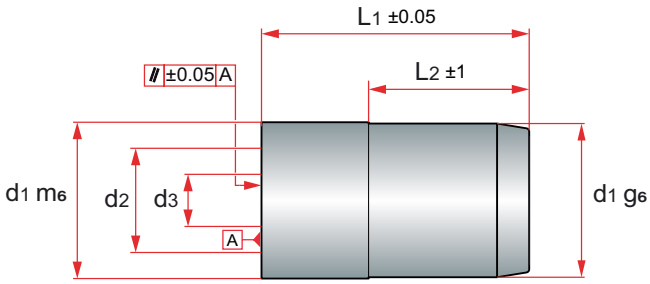
D	L	D1	REF.
4	5	2,2	IA/ 4+YEAR
			IF/ 4
			BLANK/ 4
5	8	2,9	IA/ 5+YEAR
			IF/ 5
			BLANK/ 5
6		3,7	IA/ 6+YEAR
			IF/ 6
			BLANK/ 6
8	10	5	IA/ 8+YEAR
			IF/ 8
			BLANK/ 8

D	L	D1	REF.
10	12	6,3	IA/ 10+YEAR
			IF/ 10
			BLANK/ 10
12	14	7,5	IA/ 12+YEAR
			IF/ 12
			BLANK/ 12
16	20	8,7	IA/ 16+YEAR
			IF/ 16
			BLANK/ 16
20		10,7	IA/ 20+YEAR
			IF/ 20
			BLANK/ 20

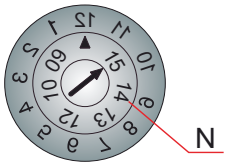


DD

Double date stamp
Fechador doble
Datownik podwójny
Datador duplo
Dateur double



12 Months + Years



N° of years
Nº años
Liczba lat
Nº de anos

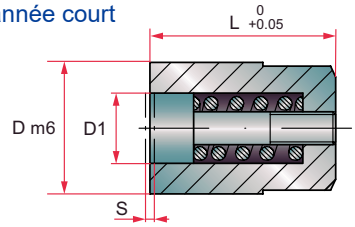
Mat. : INOX. 1.4034. Hardness: 51 ± 3 HRC. Maximum temperature at work: 150º C.

N	L2	d3	d2	d1	L1	REF.
6	5	2,5	5	**8**	20	**DD/ 8**
		3	6	**10**		**DD/ 10**
		4	8	**12**		**DD/ 12**
		5	10	**16**		**DD/ 16**

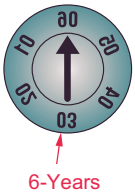
IMPORTANT

Special engraving available under request.
Grabados especiales bajo demanda.

Short date stamp
Fechador anual corto
Datownik krótki
Datador anual curto
Dateur année court



DA/1301

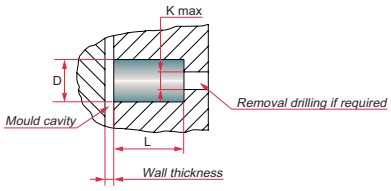


DF/1301

DM/1301

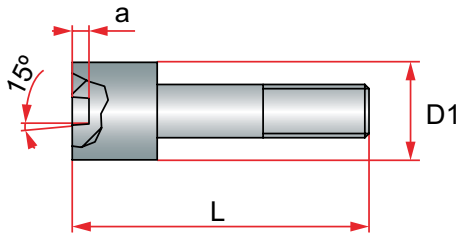
Mat. : INOX. 1.4034. Hardness: 56 ± 2 HRC. Stainless.

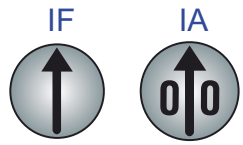
D	D1	K	L	S	REF.
4	2,1	2,6	5	0,25	BR1301- 4- DA
					BR1301- 4- DF
					BR1301- 4-DM
5	3,1	3,2	8	0,2	BR1301- 5- DA
					BR1301- 5- DF
					BR1301- 5-DM
6					BR1301- 6- DA
					BR1301- 6- DF
					BR1301- 6-DM
8	4,4	5,2	10	0,25	BR1301- 8- DA
					BR1301- 8- DF
					BR1301- 8-DM
10	5,2	6,2	12	0,35	BR1301-10- DA
					BR1301-10- DF
					BR1301-10-DM
12	6,2	7,2	14		BR1301-12- DA
					BR1301-12- DF
					BR1301-12-DM
16	8,2	8,2			BR1301-16- DA
					BR1301-16- DF
					BR1301-16-DM



BR1302

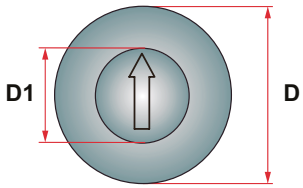
Date insert
Indicador anual
Wkładka datownika
Inserto anual
Insert année





Mat. : INOX. 1.4034. Hardness: 56 ± 2 HRC. Stainless.

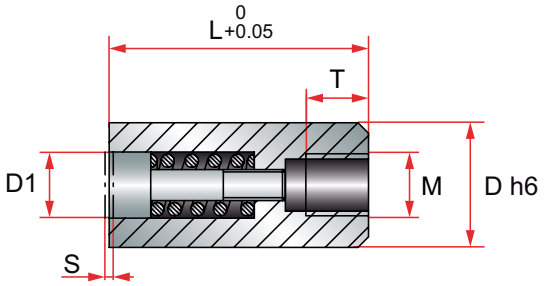
D	D1	L	a	REF.
4	2,1	4,8	0,3	BR1302- 4-IF
				BR1302- 4-IA
5	3,1	7,8	0,4	BR1302- 5-IF
				BR1302- 5-IA
6				BR1302- 6-IF
				BR1302- 6-IA
8	4,4	9,8		BR1302- 8-IF
				BR1302- 8-IA
10	5,2	11,8		BR1302-10-IF
				BR1302-10-IA
12	6,2	13,8	0,6	BR1302-12-IF
				BR1302-12-IA
16	8,2			BR1302-16-IF
				BR1302-16-IA

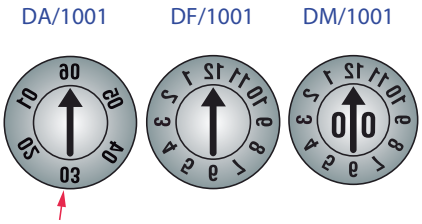


BR1001

OP 1000

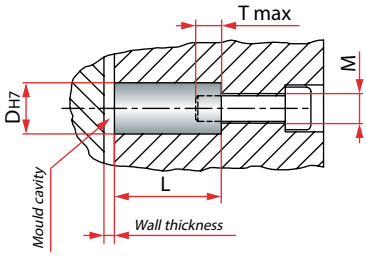
Long date stamp
Fechador anual largo
Datownik długi
Datador anual longo
Dateur année long





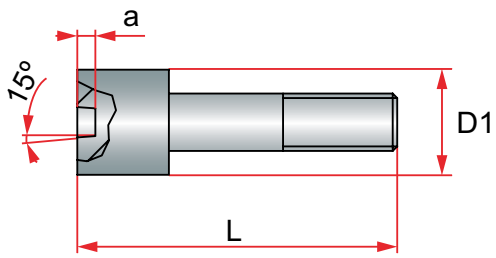
Mat. : INOX. 1.4034. Hardness: 56 ± 2 HRC. Stainless.

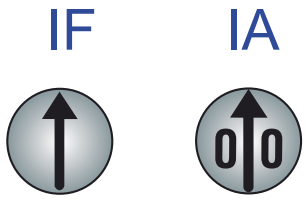
D	D1	M	T	L	S	REF.
4	2,5	2	3	14	0,3	BR1001- 4-DF
						BR1001- 4-DA
						BR1001- 4-DM
5	3,1	3		17	0,4	BR1001- 5-DF
						BR1001- 5-DA
						BR1001- 5-DM
6						BR1001- 6-DF
						BR1001- 6-DA
						BR1001- 6-DM
8	4,6	4	4	20		BR1001- 8-DF
						BR1001- 8-DA
						BR1001- 8-DM
10		5				BR1001-10-DF
						BR1001-10-DA
						BR1001-10-DM
12	6,4	6	6	25	0,6	BR1001-12-DF
						BR1001-12-DA
						BR1001-12-DM
16	8,4	8	8	33		BR1001-16-DF
						BR1001-16-DA
						BR1001-16-DM



BR1002

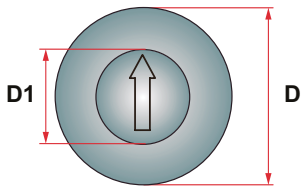
Date insert
Indicador anual
Wkładka datownika
Inserto anual
Insert année





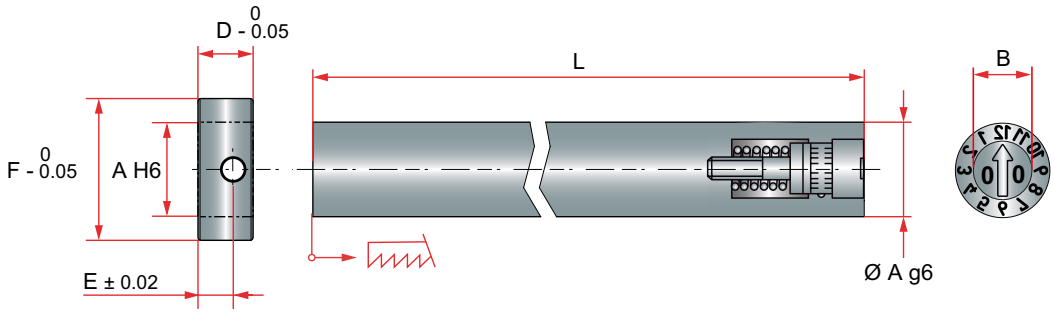
Mat. : INOX. 1.4034. Hardness: 56 ± 2 HRC. Stainless.

D	D1	L	a	REF.
4	2,5	10,5	0,3	**BR1002- 4-IF**
				BR1002- 4-IA
5	3,1	13	0,4	**BR1002- 5-IF**
				BR1002- 5-IA
6				**BR1002- 6-IF**
				BR1002- 6-IA
8	4,6	14		**BR1002- 8-IF**
				BR1002- 8-IA
10				**BR1002-10-IF**
				BR1002-10-IA
12	6,4	17	0,6	**BR1002-12-IF**
				BR1002-12-IA
16	8,4	23		**BR1002-16-IF**
				BR1002-16-IA



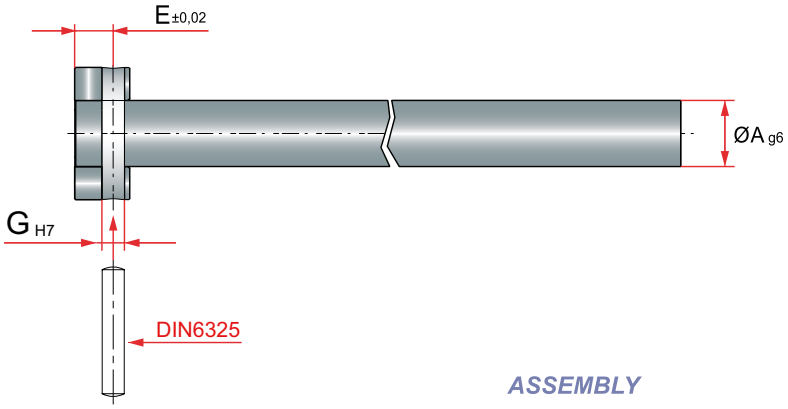
BR2500

Date stamp with ejector pin
Fechador con expulsor
Datownik z wypychaczem
Datador con extrator
Dateur avec éjecteur



Mat. : 1.2344 58 HRC ±3

A	B	D	F	G	E	L	REF.
4	2,2	5	10	2	3,5	400	**BR2500-4**
5	2,9						**BR2500-5**
6	3,7		12				**BR2500-6**
8	5		14				**BR2500-8**
10	6,3		16				**BR2500-10**
12	7,5	7	18	3	4		**BR2500-12**
16	8,7	7	22				**BR2500-16**

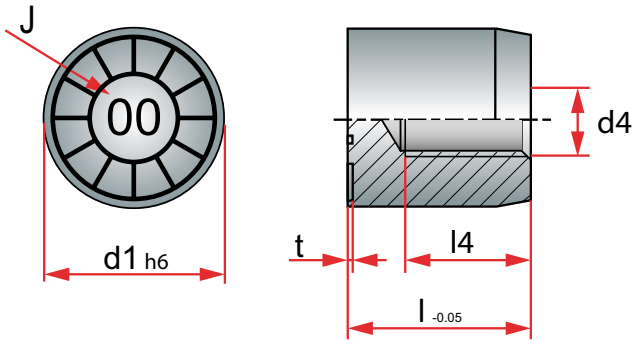


ASSEMBLY

Machine on the ejector rod the hole to fit the head-holding pin.
Insert the ejector head and fix it with the pin code

BR24760

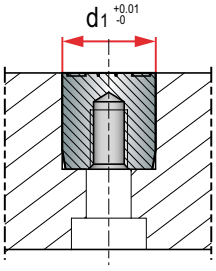
Month stamp markable
Fechador mes marcable
Datownik znakowalny
Datador marcável
Dateur marquable



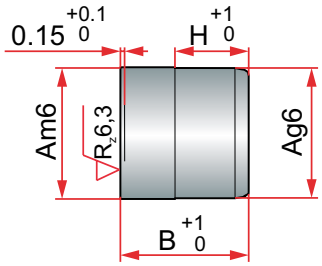
Mat. : 1.2343 43 HRC ±3

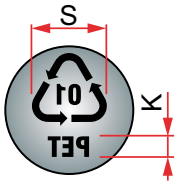
t	l_4	l	d_4	d_1	J	REF.
0,2	6	10	M4	**6**	YEAR/AÑO	**BR24760-06-J**
				8		**BR24760-08-J**
				10		**BR24760-10-J**
0,25			M6	**12**		**BR24760-12-J**
0,3				**16**		**BR24760-16-J**

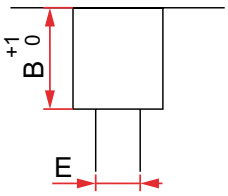
Marked/Marcado



Reference insert
Inserto referencia
Wkładka znakownika recyklingu
Indicadores de reciclagem
Pion de recyclage







01 02 03 04 05 06 07 (Others)

Mat. : INOX. 1.4034. Hardness: 51 ± 3 HRC. Maximum temperature at work: 150º C.

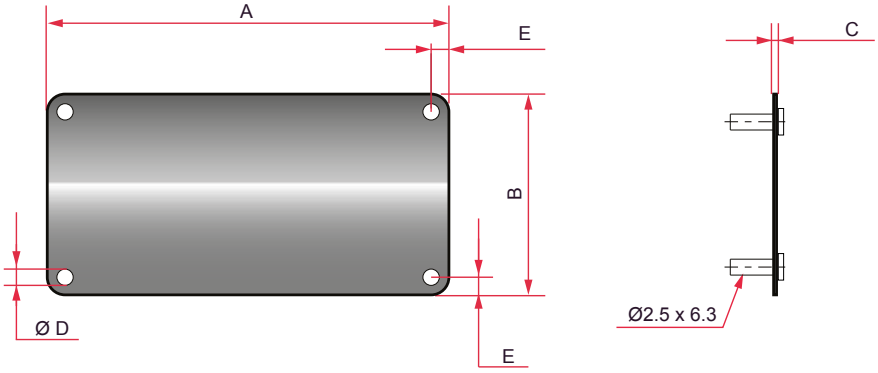
S	K	E	H	A	B	REF.
5,6	1,5	8	7	**10**	**12**	**IR-1012-01 (PET)**
						IR-1012-02 (PE-HD)
						IR-1012-03 (PVC)
						IR-1012-04 (PE-LD)
						IR-1012-05 (PP)
						IR-1012-06 (PS)
						IR-1012-07
6,8	1,8	10		**12**		**IR-1212-01 (PET)**
						IR-1212-02 (PE-HD)
						IR-1212-03 (PVC)
						IR-1212-04 (PE-LD)
						IR-1212-05 (PP)
						IR-1212-06 (PS)
						IR-1212-07

S	K	E	H	A	B	REF.
9	2,4	12	9	**16**	**16**	**IR-1616-01 (PET)**
						IR-1616-02 (PE-HD)
						IR-1616-03 (PVC)
						IR-1616-04 (PE-LD)
						IR-1616-05 (PP)
						IR-1616-06 (PS)
						IR-1616-07
11,5	3,2	16		**20**		**IR-2016-01 (PET)**
						IR-2016-02 (PE-HD)
						IR-2016-03 (PVC)
						IR-2016-04 (PE-LD)
						IR-2016-05 (PP)
						IR-2016-06 (PS)
						IR-2016-07

* Indicate the desired model after the reference.
* Indiquer le sigle demandé après la référence.
* Indicar o modelo desejado depois da referência.
* Indicar el modelo deseado después de la referencia.

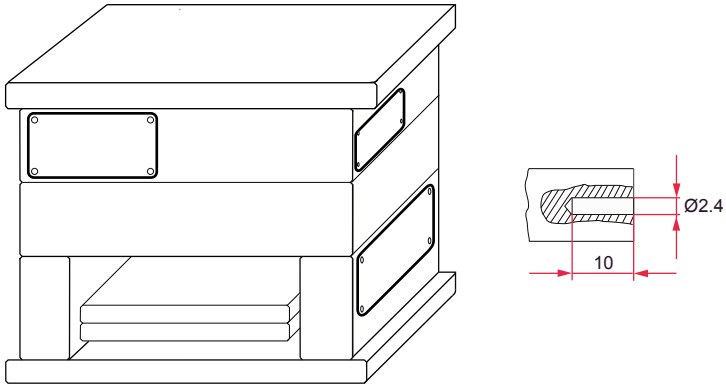
BR1034P

Name Plate, with mounting hole
Placa de identificacion con agujeros de montaje
Tabliczki znamionowe
Etiquetas
Plaquettes signalétiques



Mat. aluminium.

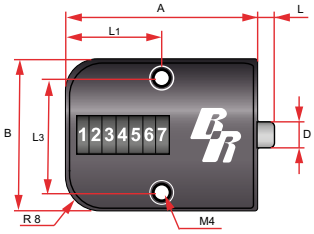
A	B	C	D	E	REF.
50	25	1	2,8	5	BR1034P- 2550
70	40				BR1034P- 4070
90	50				BR1034P- 5090
120	60				BR1034P-60120



BR110

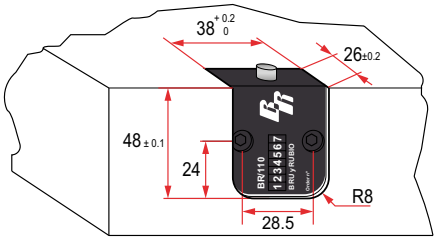
A5730

Cycle counter
Contador de ciclos
Licznik cykli
Contador de ciclos
Compteur de cycles



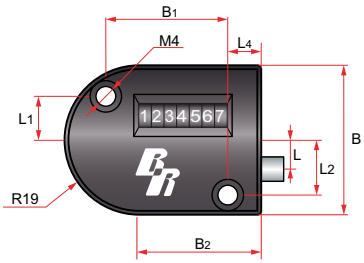
Maximum temperature at work: 120º C.

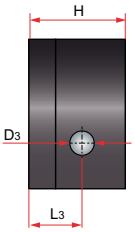
A	B	C	D	L	L1	L2	L3	REF.
48	38	25	6,3	4	24	12	28,5	**BR110**



BR111

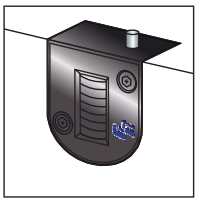
Cycle counter
Contador de ciclos
Licznik cykli
Contador de ciclos
Compteur de cycles

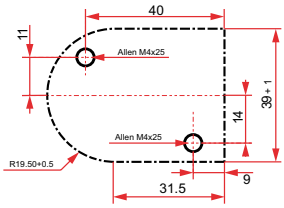




Maximum temperature at work: 120º C.

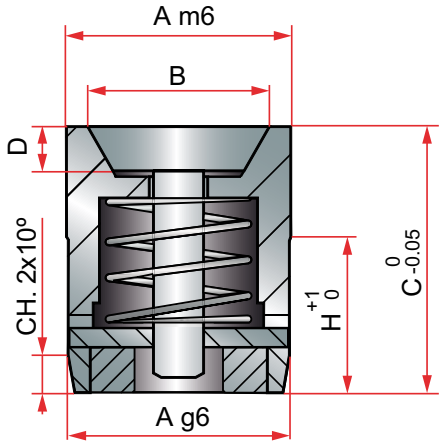
L	L_1	L_2	L_3	L_4	D_3	B	B_1	B_2	H	REF.
7,5	11	14	13,4	8,5	6,2	38	31	31	24,5	**BR111**





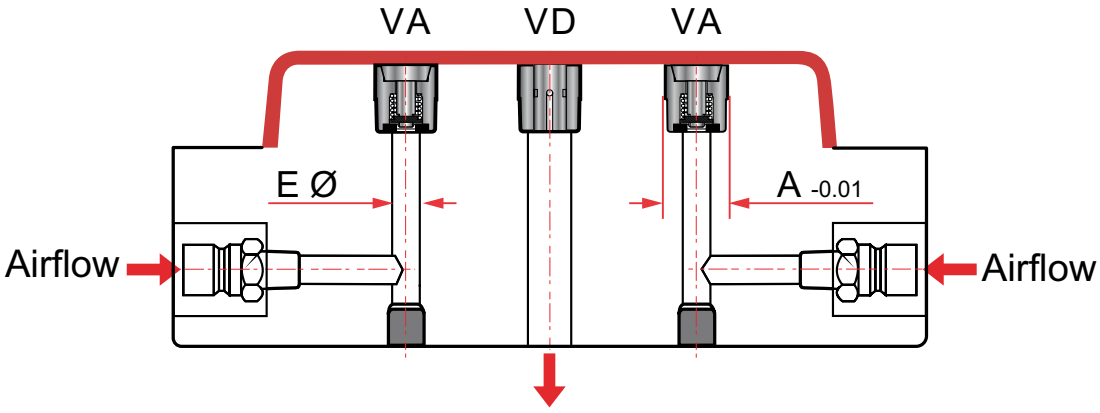
SCHEEM OF FASTENING
ESQUEMA DE FIJACIÓN

Air valve with anti spin system
Válvula de aire con sistema anti-rotación
Zawór powietrzny
Valvula de ar con sistema antigiro
Soupape a air avec système anti-tour



Mat. : INOX. 1.4034./ Hardness: 56 ± 2 HRC. Working pressure 1,5-6 BARS.

B	D	E	H	A	C	REF.
3,8	1,5	3,5	7	**5**	12	**VA-05**
5				**6**		**VA-06**
6,5	2,5	4		**8**		**VA-08**
8		6		**10**		**VA-10**
10		8		**12**		**VA-12**
13	4	10	12	**16**	20	**VA-16**
16,8	4,5	12		**20**		**VA-20**

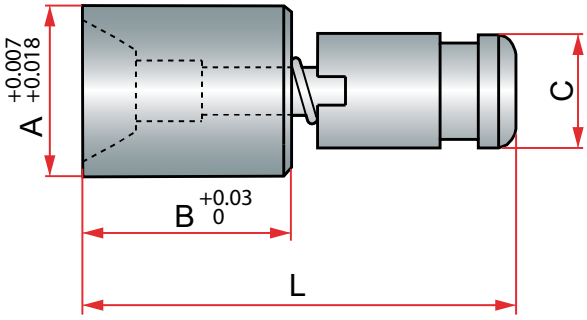


* No es conveniente instalar la valvula cerca del punto de inyección. Debido a las altas presiones y temperaturas los componentes de la válvula podrían verse afectados disminuyendo su vida útil.

* It is not advisable to install the valve near the injection point. Due to high pressures and temperatures, the valve components could be affected, reducing their service life.

VAB

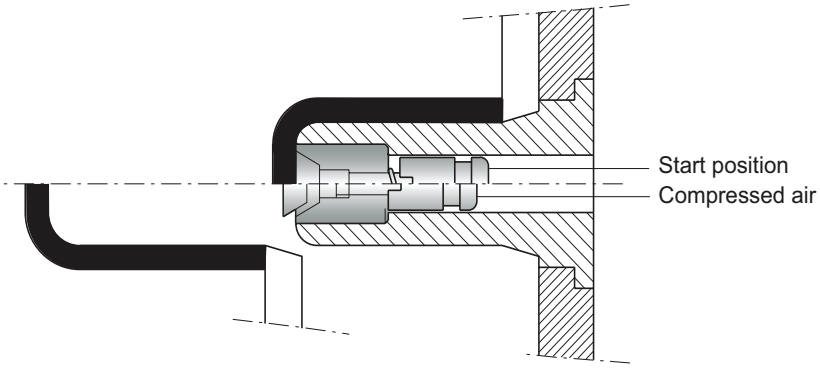
Air valve
Válvula de aire
Zawór powietrzny
Valvula de ar
Soupape a air



7

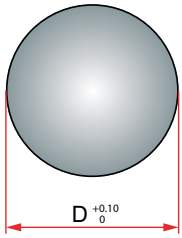
Mat. : INOX. 1.4034./ Hardness: 56 ± 2 HRC. Working pressure 1,5-6 BARS.

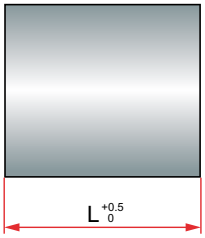
B	C	A	L	REF.
11	6	**8**	24	**VAB-08**
18	8	**12**	34	**VAB-12**
22	12	**18**	45,5	**VAB-18**



VPS

Porous insert
Inserto poroso
Wkładka porowata
Inserção porosa
Events





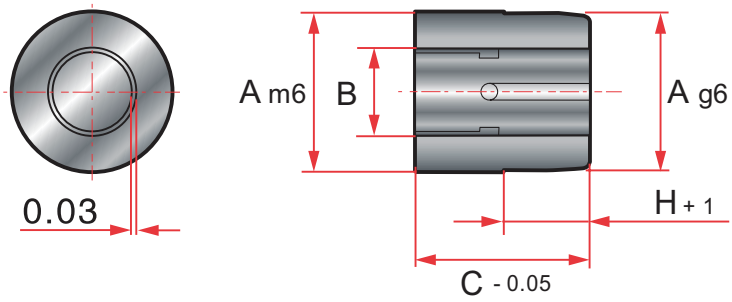
d	L	REF.
4	10	VPS-04x10
6		VPS-06x10
8		VPS-08x10
10	12	VPS-10x12
12		VPS-12x12
16	14	VPS-16x14
18	15	VPS-18x15
20		VPS-20x15

Porous Insert Made of Sintered Steel - Key Features:
-Material & Construction: Made from sintered steel, compacted metal particles create a solid structure with pores, enabling gas to pass through while maintaining strength.
- Primary Use: Ideal for injection molds to improve ventilation, allowing trapped gases to escape. This prevents defects (like bubbles or burn marks) and enhances molded part quality and precision.
-Benefits: Increases mold lifespan by reducing internal pressure and wear.
-Thermal Resistance: Withstands temperatures up to 400-500°C, depending on steel quality and process.
- Limitations: Not suitable for EDM (electrical discharge machining) due to pore structure, which can absorb dielectric fluid, affecting process efficiency and potentially damaging the insert.
- Recommendation: If EDM processing is required, testing on a sample first

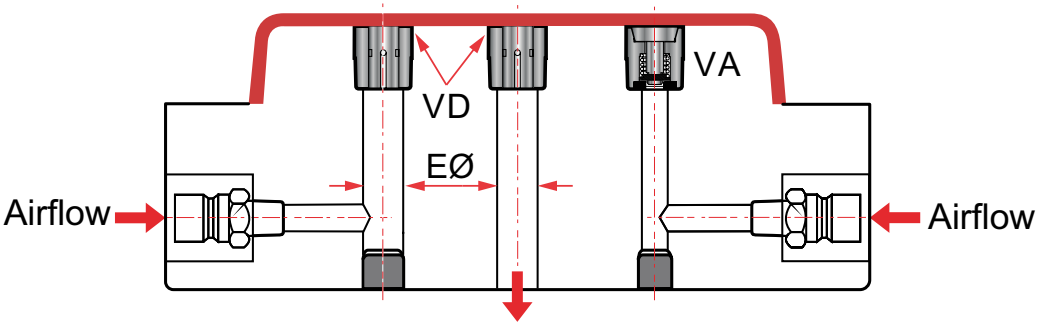
Inserto Poroso de Acero Sinterizado - Características Clave:
- Material y Construcción: Fabricado en acero sinterizado; las partículas metálicas compactadas forman una estructura sólida con poros, permitiendo el paso de gases sin comprometer su resistencia.
- Uso Principal: Ideal para moldes de inyección, mejora la ventilación permitiendo que los gases atrapados se liberen, esto evita defectos (como burbujas o marcas de quemado) y mejora la calidad y precisión de las piezas moldeadas.
- Beneficios: Aumenta la vida útil del molde al reducir la presión interna y el desgaste.
- Resistencia Térmica: Soporta temperaturas de hasta 400-500°C, dependiendo de la calidad del acero y el proceso.
- Limitaciones: No es adecuado para el mecanizado por electroerosión (EDM) debido a su estructura porosa, que puede absorber el fluido dieléctrico, afectando la eficiencia y dañando el inserto.
- Recomendación: Si se requiere el proceso EDM, se recomienda hacer pruebas en una muestra primero.

VD

Double valve
Válvula doble
Podwójny zawór
Valvula dupla
Double soupape



A	B	C	E	H	REF.
8	**5**	12	4	7	**VD-08**
10	**6**		5		**VD-10**
12	**8**		7		**VD-12**
16	**10**	20	9	12	**VD-16**

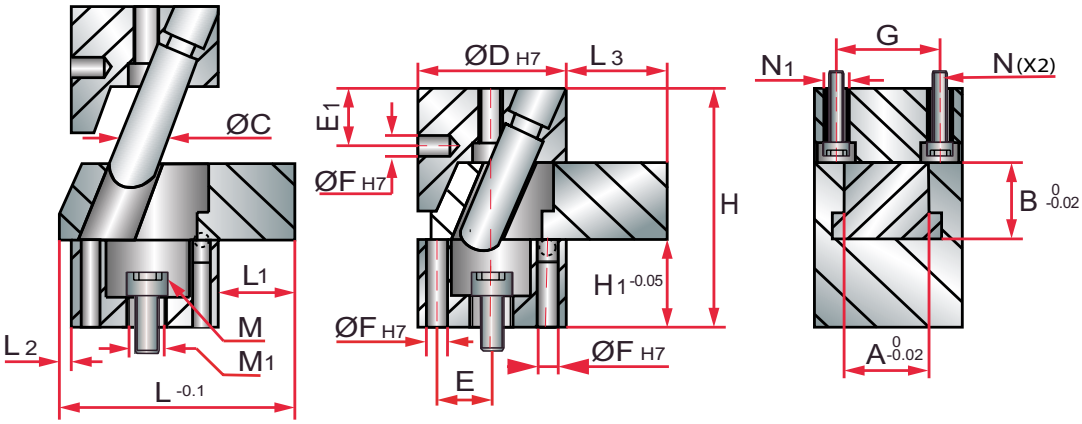


* No es conveniente instalar la valvula cerca del punto de inyección. Debido a las altas presiones y temperaturas los componentes de la válvula podrían verse afectados disminuyendo su vida útil.

* It is not advisable to install the valve near the injection point. Due to high pressures and temperatures, the valve components could be affected, reducing their service life.

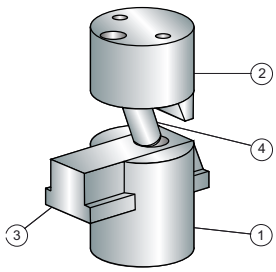
CC

Cylindrical slide
Corredera cilíndrica
Zespół suwaka okrągły
Deslizando cilindrico
Tiroirs standard



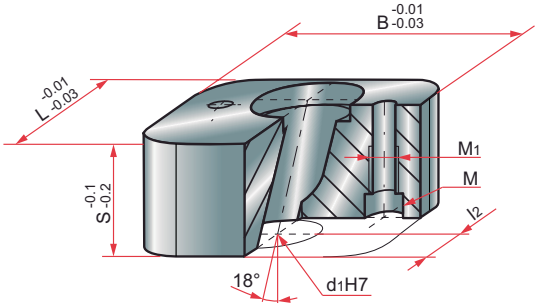
H1	H	G	F	E1	E	D	C	B	A	REF.
10	35,5	14	4	11,5	7,5	**22**	6	**10**	**10**	**CC-101022**
16	51	19	5	15,5	10,5	**30**	8	**15**	**15**	**CC-151530**
23	63	24			13	**35**	10	**20**	**20**	**CC-202035**

L	L1	L2	L3	M	M1	N	N1	Stroke
25	12,5	1,8	15	M5	M6	M3	M4	2,5
45	15,4	1,2	20	M6	M8	M4	M5	4,6
55,5	17,9	2,6	25	M8	M10	M5	M6	7,1



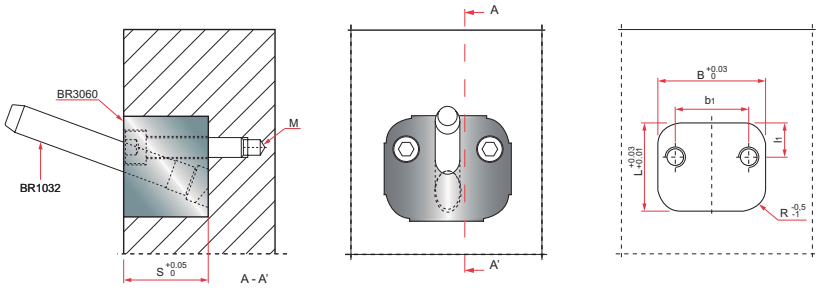
Part.	Mat.	Treatment		
1	1.2312	Nitrired		
2				
3	1.2343	Hardened 52-54 HRC		
4	C53 DIN7979	REF.101022	PASR-6x20	Hardened 58±2 HRC
		REF.151530	PASR-8x32	
		REF.202035	PASR-10x36	

Retainer for inclined pin
Alojamiento para guía inclinada
Oprawa bolców skośnych
Alojamento para guia inclinada
Logement pour doigt de démoulage



Mat. : 1.2312 ≈ 1080 N/mm².

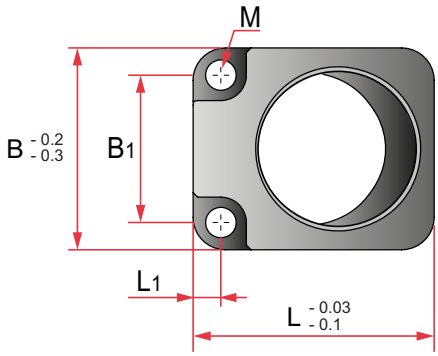
B	S	b1	l1	l2	M	M1	R	d1	L	REF.
40	18	24	8	6,8	M6	M8	8	10	18	BR3060/10x18
			8,5	10			10		26	BR3060/10x26
	24	26	10	8,5				12	23	BR3060/12x23
			10	11					30	BR3060/12x30
44	28	28	10	9,45				14	26	BR3060/14x26
			12	12					34	BR3060/14x34
52	32	34	12	11	M8	M10	12	16	30	BR3060/16x30
			14	13					38	BR3060/16x38
54	36	36	12	12				18	33	BR3060/18x33
			16	15					42	BR3060/18x42
56	40	38	12	13				20	36	BR3060/20x36
			18	17					46	BR3060/20x46
62	44	42	12	14,8				22	40	BR3060/22x40
			20	19					50	BR3060/22x50
66	46	44	12	15,3	M10	M12		24	42	BR3060/24x42
			22	19					52	BR3060/24x52
74	56	52	24	22			16	30	62	BR3060/30x62

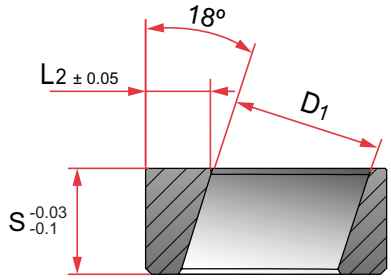


BR3064

E3064

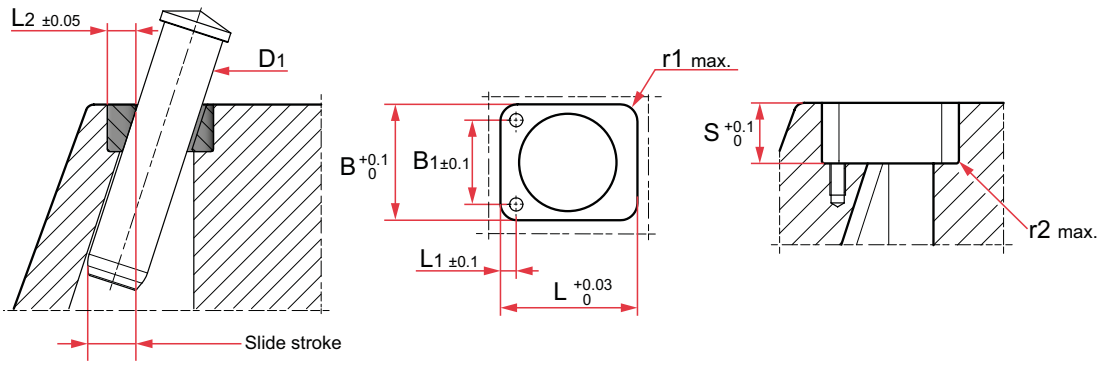
Guide for inclined pin
Guia para columna inclinada
Prowadzenie słupa skośnego
Guia para coluna inclinada
Guide pour doigt de démoulage





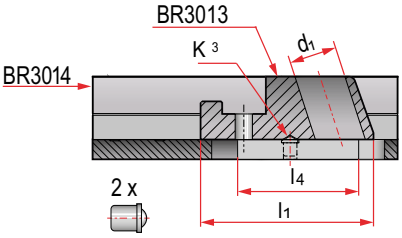
Mat. : 1.2363 ≈ 58 HRC

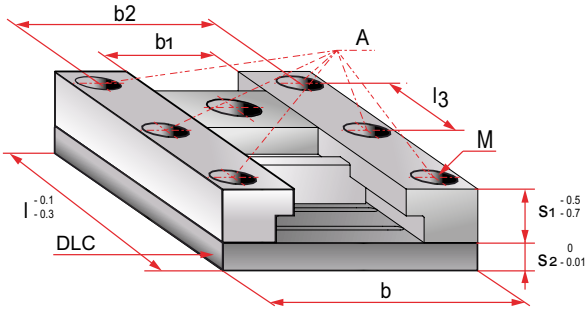
r1	r2	B1	L1	L2	M	S	B	L	D1	REF.
4,5	0,5	-	5,5	16,0	M5	11	22	**33,50**	**12**	**BR3064/12**
5,5				16,5		13	24	**36,50**	**14**	**BR3064/14**
		15		14,0		15	27		**16**	**BR3064/16**
		18		13,5		16	30	**38,00**	**18**	**BR3064/18**
		20		13,0		17	32	**40,00**	**20**	**BR3064/20**
		23		12,5		18	35	**41,50**	**22**	**BR3064/22**
6,5	1,0	24	6	15,0	M6	21	37	**46,50**	**24**	**BR3064/24**
		31		14,0		23	44	**52,00**	**30**	**BR3064/30**



BR3012

Slide guiding kit
Conjunto de corredera
Suwak do zabudowy modułowej
Conjunto de elemento móvel
Kit ensemble tiroir





A	b	d_1	l_1	b_2	M	s_2	l_3	b_4	l_4	s_1	b_1	l	REF.
4	52	11	40	40	M5	8	34	12	16	**12**	**20**	**50**	**BR3012-12-20- 50**
							47		22			**63**	**BR3012-12-20- 63**
6							32		28			**80**	**BR3012-12-20- 80**
4	57			45			34		16		**25**	**50**	**BR3012-12-25- 50**
							47		22			**63**	**BR3012-12-25- 63**
6							32		28			**80**	**BR3012-12-25- 80**
4	64			52			34		16		**32**	**50**	**BR3012-12-32- 50**
							47		22			**63**	**BR3012-12-32- 63**
6							32		28			**80**	**BR3012-12-32- 80**
4	52		42	40			34		16	**16**	**20**	**50**	**BR3012-16-20- 50**
							47		22			**63**	**BR3012-16-20- 63**
6							32		28			**80**	**BR3012-16-20- 80**
4	57			45			34		16		**25**	**50**	**BR3012-16-25- 50**
							47		22			**63**	**BR3012-16-25- 63**
6							32		28			**80**	**BR3012-16-25- 80**
4	64			52			34		16		**32**	**50**	**BR3012-16-32- 50**
							47		22			**63**	**BR3012-16-32- 63**
6							32		28			**80**	**BR3012-16-32- 80**

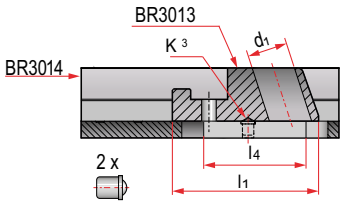
(1) A: Number of screwholes
(1) A: Num. de agujeros

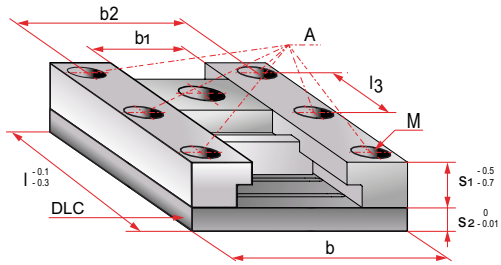
(2) l4: Maximum stroke
(2) l4: Carrera max.

(3) K: Slot for thrust piece to be machined by the customer
(3) K: Ranura para pieza de empuje, a mecanizar por el cliente

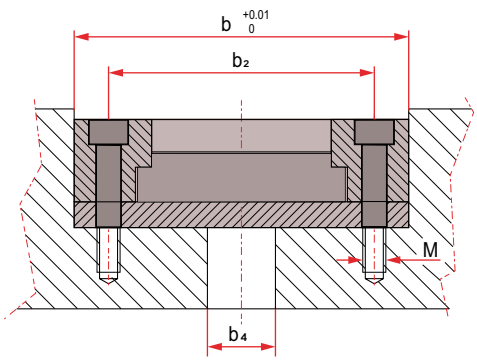
BR3012

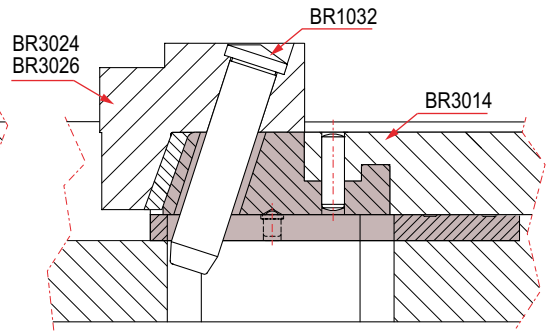
E3012





A	b	d_1	l_1	b_2	M	s_2	l_3	b_4	l_4	s_1	b_1	l	REF.
4	65	13	46	47	M6	8	43	14	20	**20**	**25**	**63**	**BR3012-20-25- 63**
							60		28			**80**	**BR3012-20-25- 80**
6							40		38			**100**	**BR3012-20-25-100**
4	72			54			43		20		**32**	**63**	**BR3012-20-32- 63**
							60		28			**80**	**BR3012-20-32- 80**
6							40		38			**100**	**BR3012-20-32-100**
4	80			62			43		20		**40**	**63**	**BR3012-20-40- 63**
							60		28			**80**	**BR3012-20-40- 80**
6							40		38			**100**	**BR3012-20-40-100**
4	65		52	47			60		28	**25**	**25**	**80**	**BR3012-25-25- 80**
6							40		38			**100**	**BR3012-25-25-100**
4	72			54			60		28		**32**	**80**	**BR3012-25-32- 80**
6							40		38			**100**	**BR3012-25-32-100**
4	80			62			60		28		**40**	**80**	**BR3012-25-40- 80**
6							40		38			**100**	**BR3012-25-40-100**
4	82	15	60	60	M8	10	76	16	38	**32**	**32**		**BR3012-32-32-100**
	90			68							**40**		**BR3012-32-40-100**
	100			78							**50**		**BR3012-32-50-100**
6							50,5					**125**	**BR3012-32-50-125**

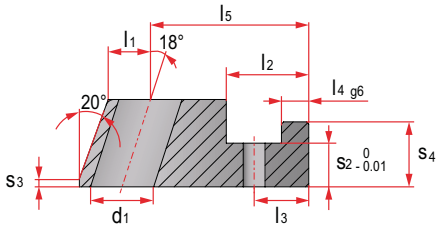


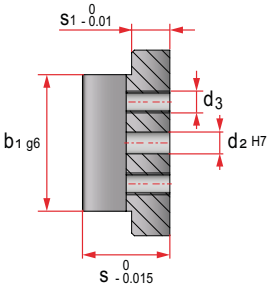


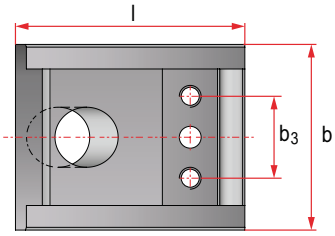
BR3013

E3013

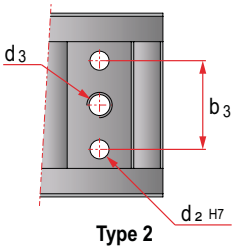
Slidefor core
Corredera
Suwak do wkładki formującej
Corpo de elemento móvel
Tiroir pour insert-noyau







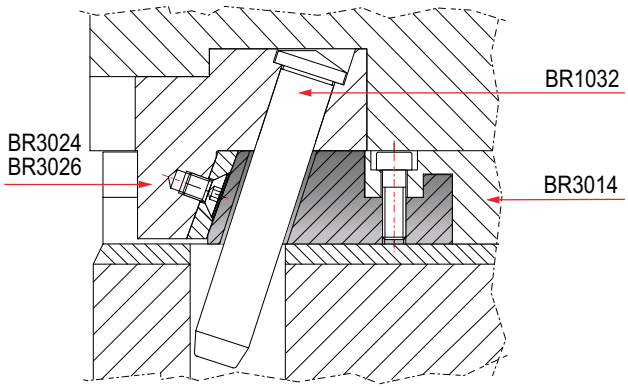
Type 1



Type 2

Mat. : 1.2343 ≈ 54 HRC

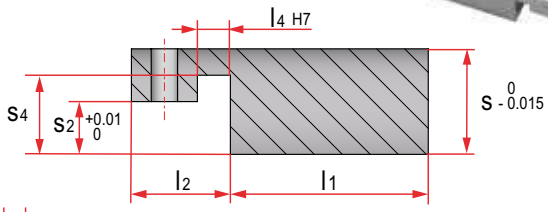
Type	b	l	d_1	l_1	s_1	d_2	l_2	s_2	b_3	d_3	l_3	s_3	l_4	s_4	l_5	s	b_1	REF.
2	27	40	11	7,75	6	3	15,1	6	14	M4	10	1,5	5	8,9	28,44	**12**	**20**	**BR3013-12-20**
1	32					4			15								**25**	**BR3013-12-25**
	39								20								**32**	**BR3013-12-32**
2	29	42			8	3		8	14					11,9	28,98	**16**	**20**	**BR3013-16-20**
1	34					4			15								**25**	**BR3013-16-25**
	41								20								**32**	**BR3013-16-32**
	34	46	13	9,75			18,1	9	15		13	2	8	13,9	29,71	**20**	**25**	**BR3013-20-25**
	41								20								**32**	**BR3013-20-32**
	49								25								**40**	**BR3013-20-40**
	34	52					22,1	10	15		16		10	15,9	33,89	**25**	**25**	**BR3013-25-25**
	41								20	M5							**32**	**BR3013-25-32**
	49								25								**40**	**BR3013-25-40**
	43	60	15	11,6	10	6	26,1	12	20		19		12	19,9	37,47	**32**	**32**	**BR3013-32-32**
	51								25								**40**	**BR3013-32-40**
	61								30								**50**	**BR3013-32-50**

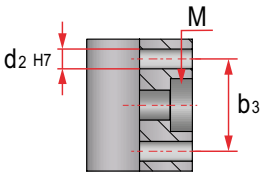


BR3014

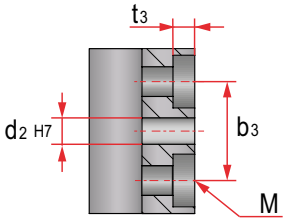
E3014

Core for slidefor
Noyo para corredera
Wkładka formująca do suwaka
Postiço moldante para elemento móvel
Insert-noyau pour tiroir

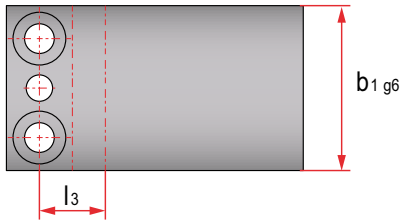




Type 2

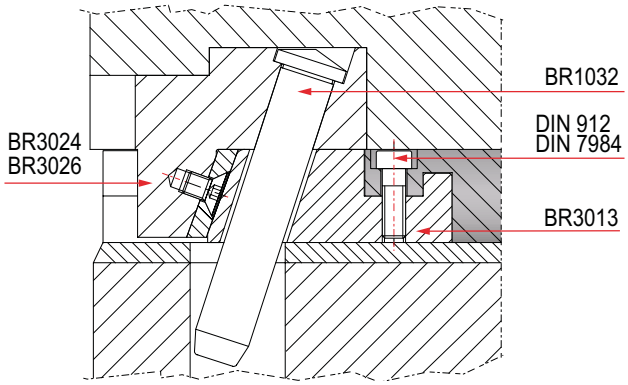


Type 1



Mat. : 1.2343 ≈ 54 HRC

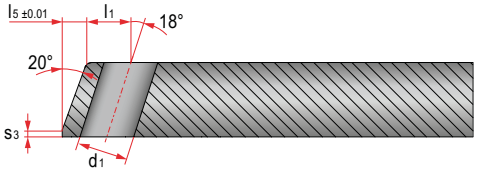
Type	l_1	d_2	l_2	s_2	b_3	M	l_3	t_3	l_4	s_4	s	b_1	REF.
2	30	3	15	6	14	M4 DIN7984	10	3,3	5	9	**12**	**20**	**BR3014-12-20**
1		4			15							**25**	**BR3014-12-25**
					20							**32**	**BR3014-12-32**
2		3		8	14					12	**16**	**20**	**BR3014-16-20**
1		4			15							**25**	**BR3014-16-25**
					20							**32**	**BR3014-16-32**
	40		18	9	15	M4 DIN912	13	4,5	8	14	**20**	**25**	**BR3014-20-25**
					20							**32**	**BR3014-20-32**
					25							**40**	**BR3014-20-40**
			22	10	15		16		10	16	**25**	**25**	**BR3014-25-25**
					20	M5 DIN912		6				**32**	**BR3014-25-32**
					25							**40**	**BR3014-25-40**
	50	6	26	12	20		19		12	20	**32**	**32**	**BR3014-32-32**
					25							**40**	**BR3014-32-40**
					30							**50**	**BR3014-32-50**

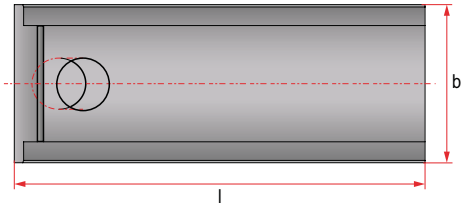


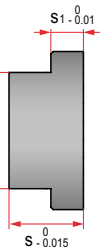
BR3016

E3016

Slide
Corredera
Suwak
Elemento móvel
Tiroir

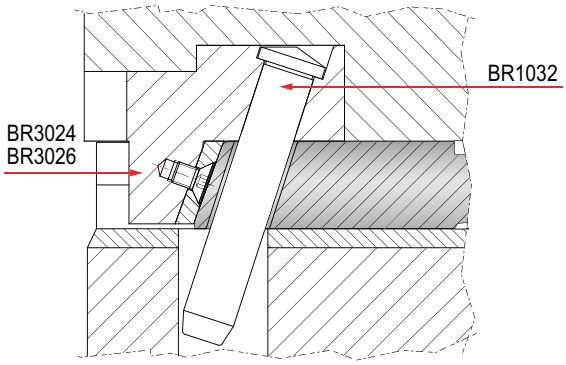






Mat. : 1.2344 ≈ 54 HRC

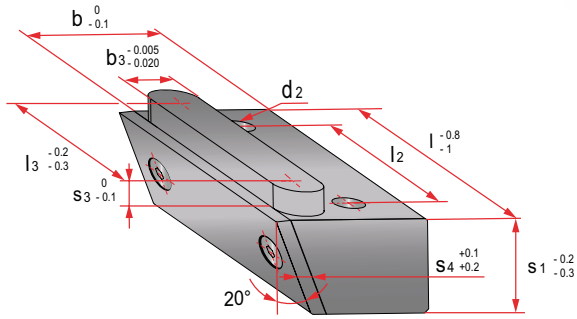
b	b_1	l	d_1	l_1	s	s_1	s_3	l_5	REF.
27	**20**	76	11	7,75	**12**	6	1,5	3,82	**BR3016/12/20**
32	**25**								**BR3016/12/25**
39	**32**								**BR3016/12/32**
29	**20**	78			**16**	8		5,28	**BR3016/16/20**
34	**25**								**BR3016/16/25**
41	**32**								**BR3016/16/32**
34	**25**	92	13	9,75	**20**		2	6,55	**BR3016/20/25**
41	**32**								**BR3016/20/32**
49	**40**								**BR3016/20/40**
34	**25**	98			**25**			8,37	**BR3016/25/25**
41	**32**								**BR3016/25/32**
49	**40**								**BR3016/25/40**
43	**32**	116	15	11,62	**32**	10		10,92	**BR3016/32/32**
51	**40**								**BR3016/32/40**
61	**50**								**BR3016/32/50**



BR3024

E3024

Cotter with wear plate
Cuña de cierre con placa sufridera
Klin zamykający z płytką dociskową
Bloco de encosto com chapa de ajuste
Coin de verrouillage avec plaquette de frottement



* (l_2) One screw hole centred
* (l_2) Solo un agujero centrado

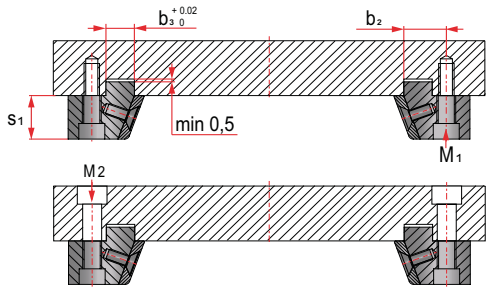
Mat. : 1.2312 ≈ 1080 N/mm²

b	b_3	s_3	s_4	d_2	l_2^*	l_3	s_1	l	REF.
18	8	5	4	M6	-	10	**11**	**20**	**BR3024/11/20**
						18		**28**	**BR3024/11/28**
					24	30		**40**	**BR3024/11/40**
					34	46		**56**	**BR3024/11/56**
22	10	6		M8	-	8	**15**	**20**	**BR3024/15/20**
						16		**28**	**BR3024/15/28**
					24	28		**40**	**BR3024/15/40**
					32	44		**56**	**BR3024/15/56**
28	12				-	10	**19**	**24**	**BR3024/19/24**
						22		**36**	**BR3024/19/36**
						26		**40**	**BR3024/19/40**
					32	36		**50**	**BR3024/19/50**
					36	46		**60**	**BR3024/19/60**
					44	58		**72**	**BR3024/19/72**
32				M10	-	10	**24**	**24**	**BR3024/24/24**
						22		**36**	**BR3024/24/36**
						26		**40**	**BR3024/24/40**
					30	36		**50**	**BR3024/24/50**
					36	46		**60**	**BR3024/24/60**
					44	58		**72**	**BR3024/24/72**
					48	66		**80**	**BR3024/24/80**
40	16	8	6		-	22	**28**	**40**	**BR3024/28/40**
					26	32		**50**	**BR3024/28/50**
					36	42		**60**	**BR3024/28/60**
					48	62		**80**	**BR3024/28/80**
					64	82		**100**	**BR3024/28/100**
					74	102		**120**	**BR3024/28/120**
					-	14	**31**	**32**	**BR3024/31/32**
						22		**40**	**BR3024/31/40**

* (l_2) One screw hole centred * (l_2) Solo un agujero centrado

b	b_3	s_3	s_4	d_2	l_2^*	l_3	s_1	l	REF.
40	16	8	6	M10	24	28	**31**	**46**	**BR3024/31/46**
					26	32		**50**	**BR3024/31/50**
					36	42		**60**	**BR3024/31/60**
					40	46		**64**	**BR3024/31/64**
					48	62		**80**	**BR3024/31/80**
					52	68		**86**	**BR3024/31/86**
					64	82		**100**	**BR3024/31/100**
50				M12	-	22	**39**	**40**	**BR3024/39/40**
					32	38		**56**	**BR3024/39/56**
					52	62		**80**	**BR3024/39/80**
					68	94		**112**	**BR3024/39/112**
63	20	10		M16	-	18	**49**	**40**	**BR3024/49/40**
						28		**50**	**BR3024/49/50**
					32	38		**60**	**BR3024/49/60**
					40	50		**72**	**BR3024/49/72**
					46	58		**80**	**BR3024/49/80**
					64	78		**100**	**BR3024/49/100**
					74	98		**120**	**BR3024/49/120**
					84	118		**140**	**BR3024/49/140**
70					-	18	**60**	**40**	**BR3024/60/40**
						28		**50**	**BR3024/60/50**
					32	38		**60**	**BR3024/60/60**
					46	58		**80**	**BR3024/60/80**
					64	78		**100**	**BR3024/60/100**
					74	98		**120**	**BR3024/60/120**
80	25	12			-	23	**75**	**50**	**BR3024/75/50**
					32	33		**60**	**BR3024/75/60**
					46	53		**80**	**BR3024/75/80**
					64	73		**100**	**BR3024/75/100**
					74	93		**120**	**BR3024/75/120**

s_1	M_1	M_2	b_2
11	M 4	M 6	13
15	M 6	M 8	15
19	M 6	M 8	18
24	M 8	M10	20
28	M 8	M10	24
31	M 8	M10	24
39	M10	M12	26
49	M12	M16	32
60	M12	M16	36
75	M12	M16	42

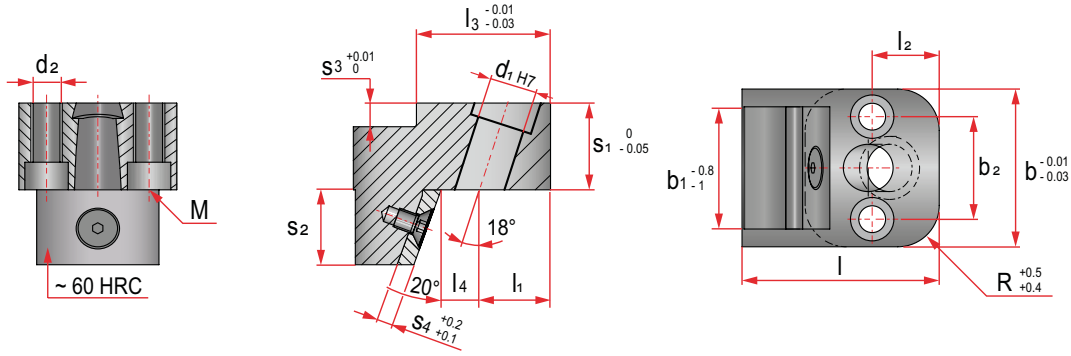


7

BR3026

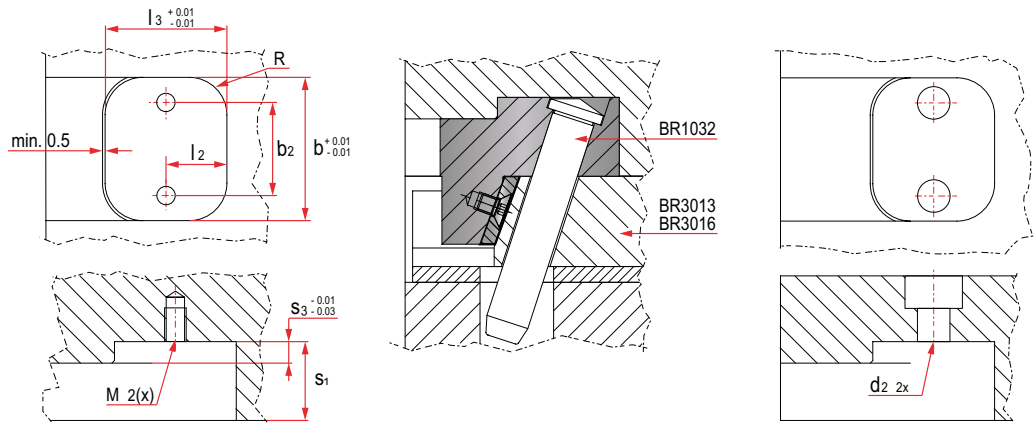
E3026

Cotter with inclined pin retainer
Cuña de cierre con alojamiento guia inclinada
Klin zamykający z prowadzeniem dla trzpieni skośnych
Bloco de encosto com alojamento para guia inclinada
Coin de fermeture avec logement de colonne oblique



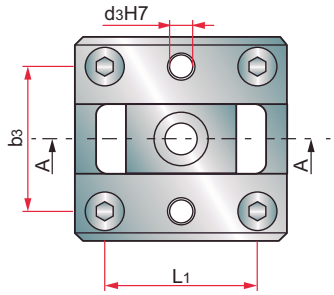
Mat. : 1.2312 ≈ 1080 N/mm²

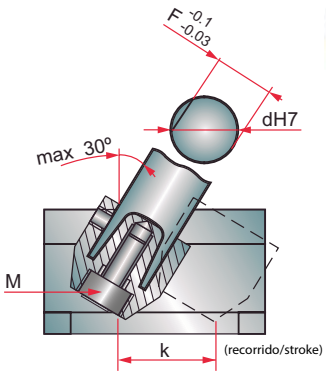
M	R	b	l	d_2	d_1	l_4	l_3	l_2	l_1	s_4	s_3	s_2	s_1	b_2	b_1	REF.
M5	8	32	38	M6	10	7,75	26	13	13	4	6	**11**	16	21	**20**	**BR3026/11/20**
															24	**BR3026/11/24**
															32	**BR3026/11/32**
			42						14			**15**	18		**20**	**BR3026/15/20**
															24	**BR3026/15/24**
															32	**BR3026/15/32**
M6	10	40	50	M8	12	9,75	34	17	18		8	**19**	22	26	**24**	**BR3026/19/24**
															32	**BR3026/19/32**
															40	**BR3026/19/40**
			54									**24**	24		**24**	**BR3026/24/24**
															32	**BR3026/24/32**
															40	**BR3026/24/40**
M8		50	65	M10	14	11,6	40	20	20	6		**31**	26	32	**32**	**BR3026/31/32**
															40	**BR3026/31/40**
															50	**BR3026/31/50**

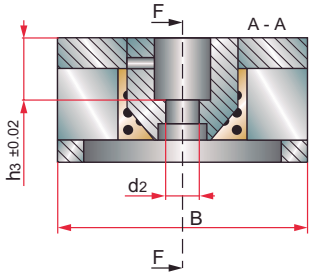


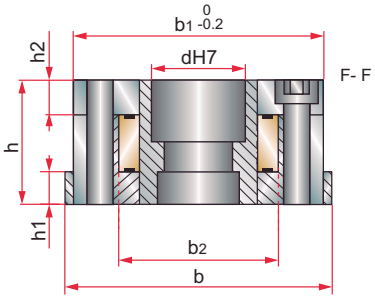
S10

Sliding carriages
Carro para corredera
Obsada wypychacza skośnego
Deslizador
Tiroir articule

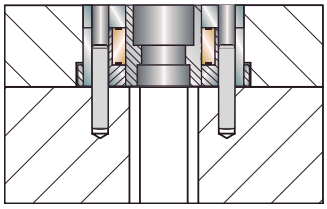








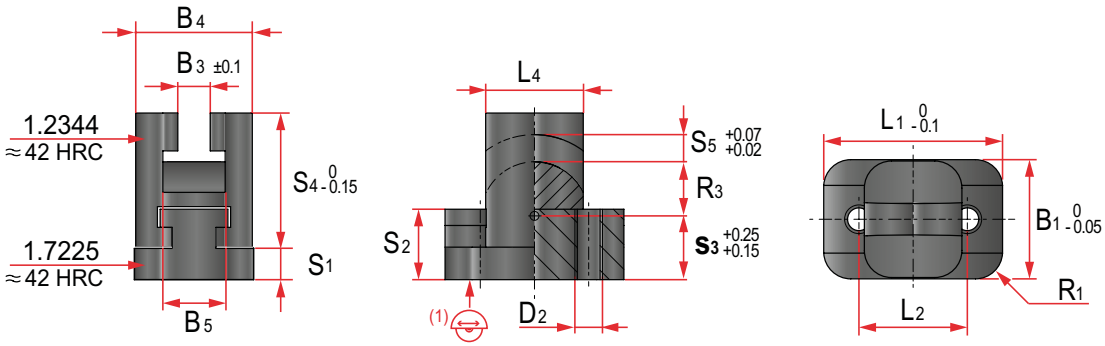
h	b1	b2	b3	L1	h1	h2	h3	M	d2	d3	F	k	b	B	d	REF.
22	30	19	24	20	5	7	8	M4	4,5	3	7	10	33	32	**8**	**S10-08**
27	40	25	32	30		8	10	M5	5,5	4	9	18	45	45	**10**	**S10-10**
32	51	31	39	35	7	10	12	M6	7	6	11	20	57	50	**12**	**S10-12**
36	58	38	46	40	8		16	M8	9		14,5	25	65	65	**16**	**S10-16**
42	72	44	56	55	11	12	20	M10	11	8	18	30	80	80	**20**	**S10-20**
50	85	52	66	65	15	15	25	M12	14	10	22,5	35	93	90	**25**	**S10-25**
55	93	60	74	70			30				27	40	101	100	**30**	**S10-30**
62	110	70	85	80		18	35				32	45	120	120	**35**	**S10-35**
70	120	80	95	90			40	M16	17,5		36	50	130	135	**40**	**S10-40**



BR7532

E 3240

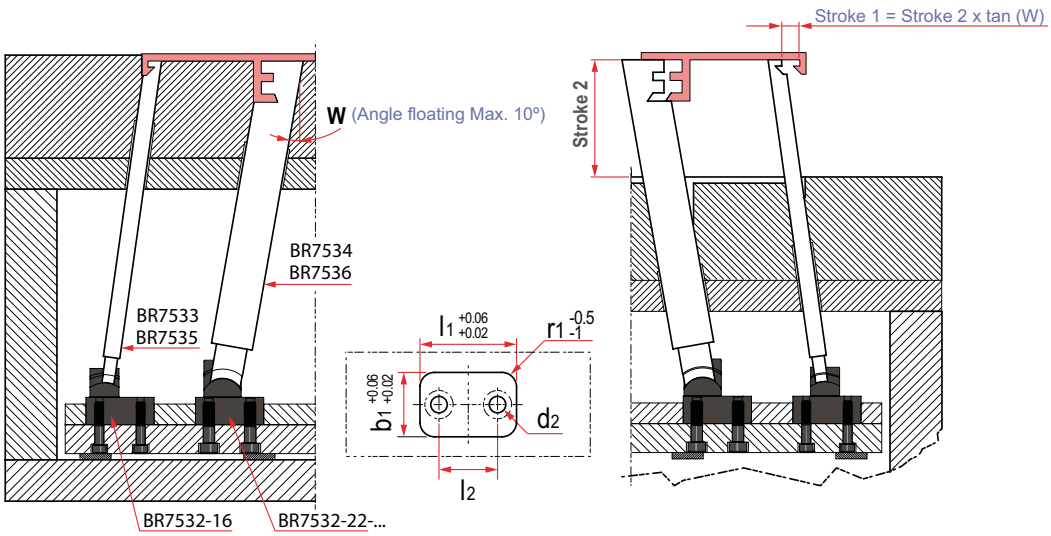
Inclined ejector unit
Base expulsor inclinado
Zespół mocujący do wypychacza skośnego
Base de expulsor inclinado
Unité d´ejection inclinée



Surface Hardness: 60 ± 2 HRC.

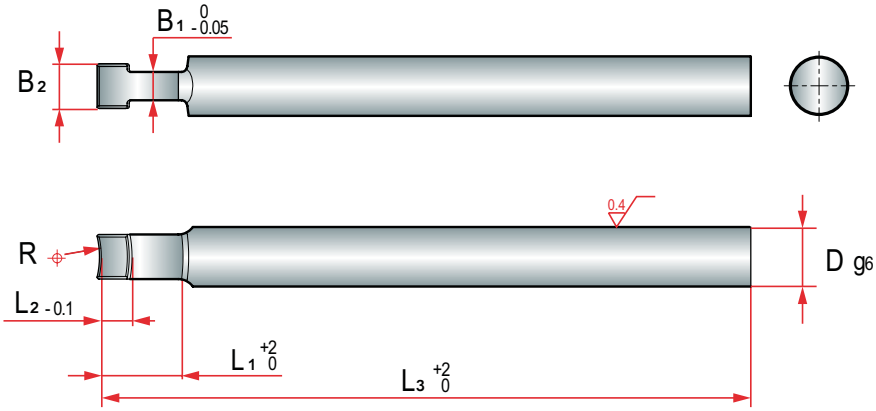
(1) S_3 With allowance for adjusting

Stroke$_1$	R_1	R_3	D_2	L_1	L_2	L_4	S_1	S_2	S_3 (1)	S_4	S_5	B_1	B_3	B_4	B_5	REF.
16	2,5	12	M4	**33**	20	14	6	13	8	21	4	**16**	4	15,9	6,6	**BR7532-16-33**
12	5	10	M5			18			12	25	5	**22**	6,1	21,5	11,5	**BR7532-22-33**
30				**52**	30											**BR7532-22-52**



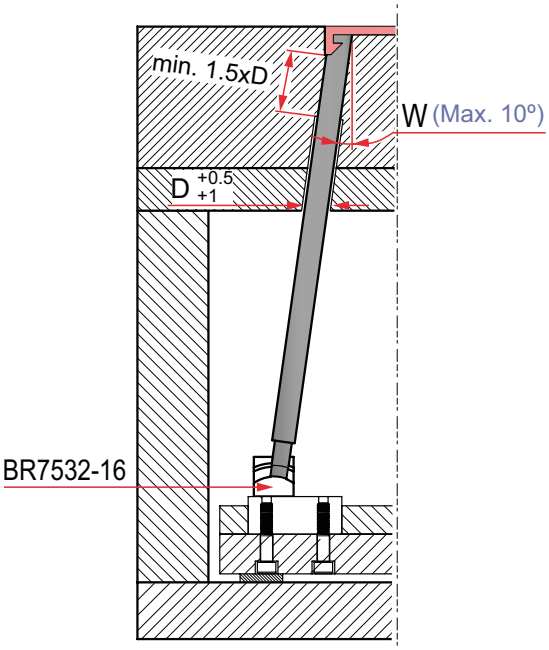
BR7533

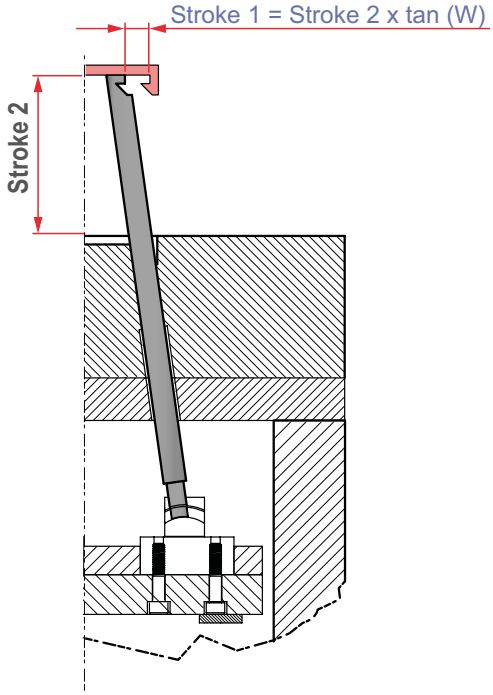
Inclined round ejector core
Expulsor inclinado
Wypychacz skośny okrągły
Expulsor inclinado
Éjecteur incliné rond



Mat. : 1.2343./ Hardness: 48-50 HRC.

B_1	B_2	R	D	L_1	L_2	L_3	REF.
3,81	6	12	**8**	12	4	**200**	**BR7533-8-200**

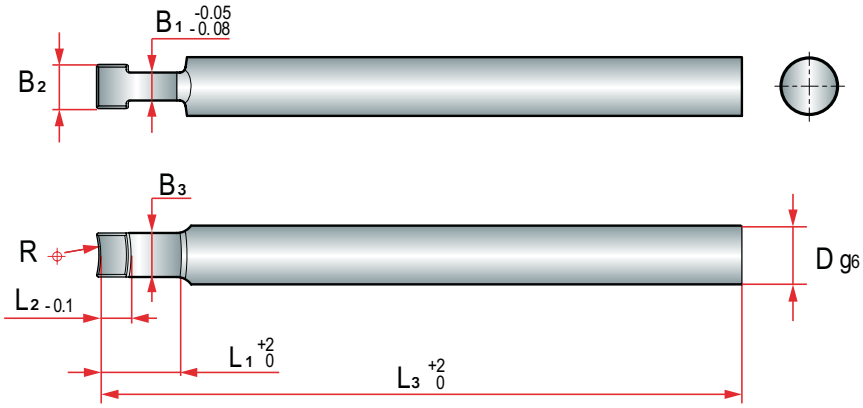




BR7534

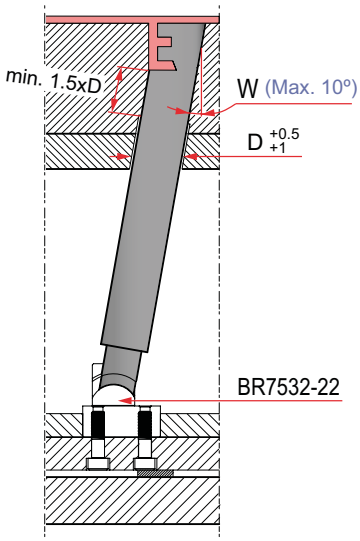
E 3244

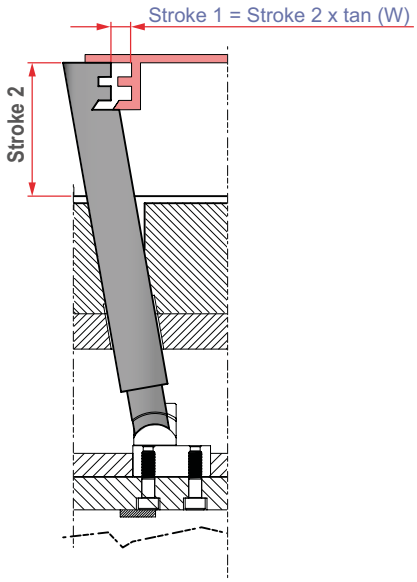
Inclined round ejector core
Expulsor inclinado
Wypychacz skośny okrągły
Expulsor inclinado
Éjecteur incliné rond



Mat. : 1.2344./ Hardness: 38-40 HRC.

B_1	B_2	B_3	R	D	L_1	L_2	L_3	REF.
6,1	10	10	10	**10**	14	5	**250**	**BR7534-10-250**
				15				**BR7534-15-250**

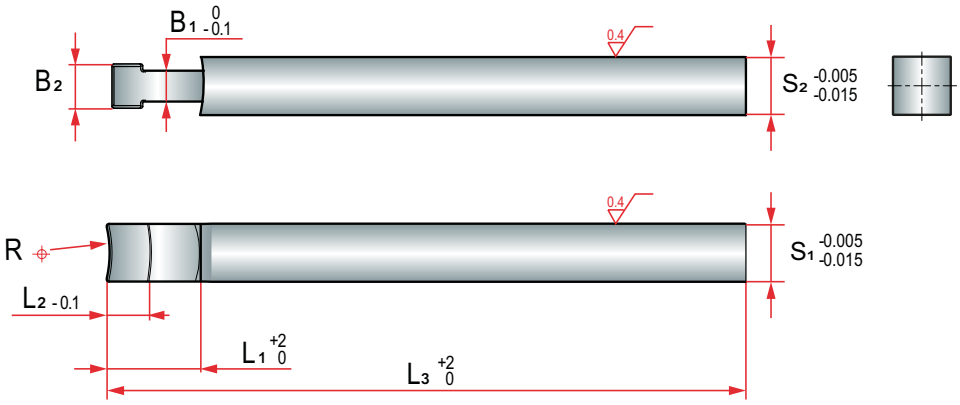




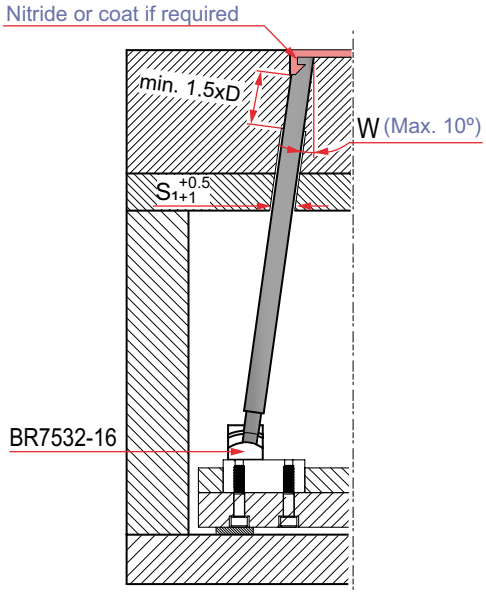
BR7535

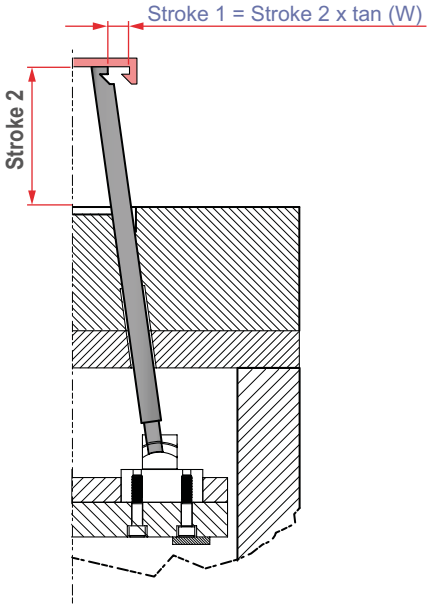
E 3245

Inclined ejector rectangular
Expulsor inclinado rectangular
Wypychacz skośny, kątowy
Expulsor inclinado retangular
Éjecteur incliné rectangulaire



B_1	B_2	R	L_1	L_2	S_1	S_2	L_3	REF.
3,81	6	12	12	4	6	6	200	BR7535-6- 6- 200
						10		BR7535-6-10-200
					8	6		BR7535-8-6-200
						8		BR7535-8- 8- 200
					10			BR7535-10-8-200

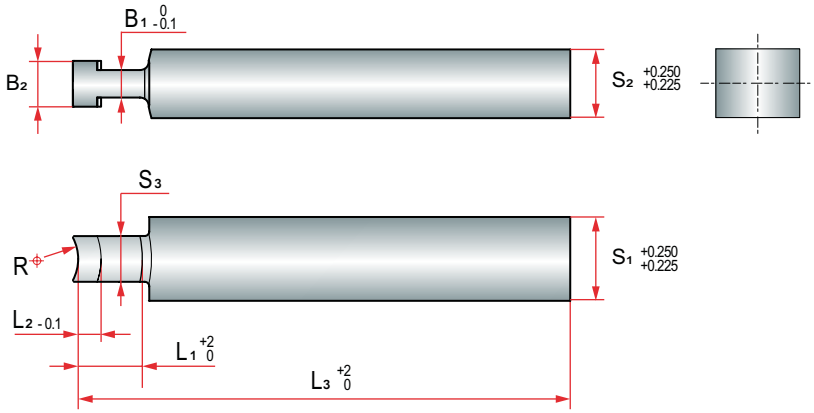




BR7536

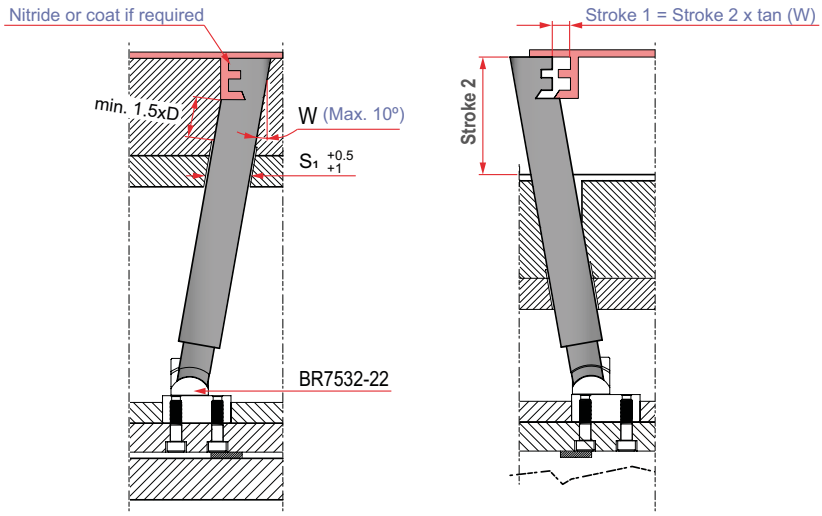
E 3246

Inclined ejector rectangular
Expulsor inclinado rectangular
Wypychacz skośny, kątowy
Expulsor inclinado retangular
Éjecteur incliné rectangulaire



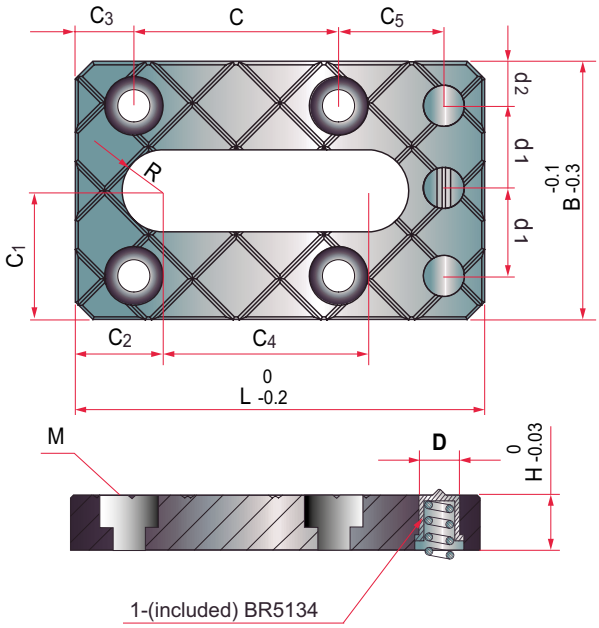
Mat. : 1.2344./ Hardness: 38-40 HRC.

B_1	B_2	R	L_1	L_2	S_1	S_2	S_3	L_3	REF.
6	10	10	14	5	**10**	**10**	10	**250**	**BR7536-10-10-250**
						20			**BR7536-10-20-250**
					20	**10**	15		**BR7536-20-10-250**
					15	**15**			**BR7536-15-15-250**
						30		**400**	**BR7536-15-30-400**
					30	**15**			**BR7536-30-15-400**
					20	**20**			**BR7536-20-20-400**



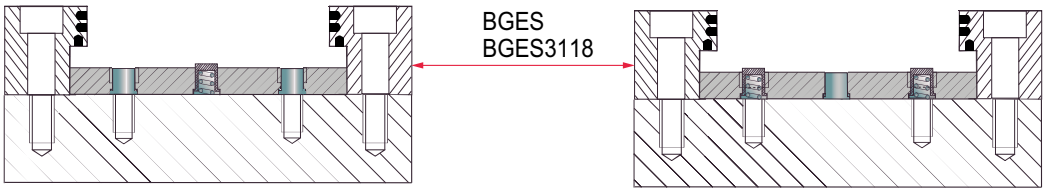
BR5135

Slip plate with thrust piece
Placa deslizamiento corredera
Płytka ślizgowa z zatrzaskiem
Chapa de deslize com elemento de pressâo
Plaque de frottement chariot



Mat. : 12842 ≈ 58 HRC.

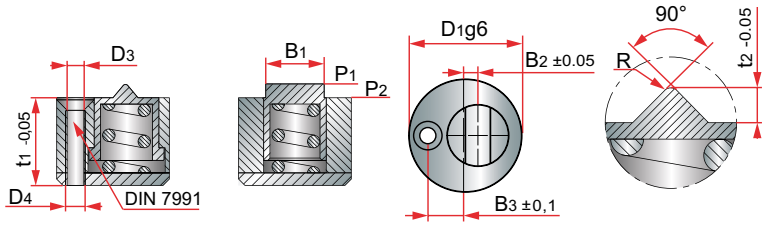
C	C1	C2	C3	C4	C5	d1	d2	R	B	L	H	M	D	REF.
35	22	29	10	35	18	14,5	7,5	7	44	70	9,4	M5	**7**	**BR5135-07**
57	32	42	19	37	12	21	11	10	64	100	12,2	M6	**10**	**BR5135-10**
61	42	60	25	40	17	30	12	12	84	120	17,9	M8	**15**	**BR5135-15**



BR5130

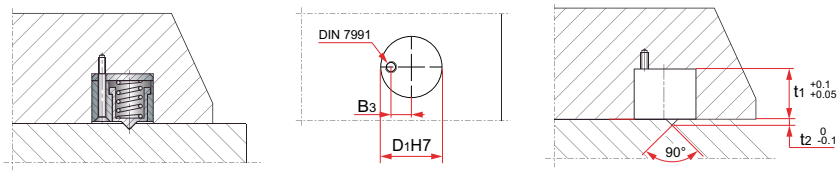
E 3046

Slide holding devices
Posicionador
Zatrzask
Posicionador
Verrous de tiroirs



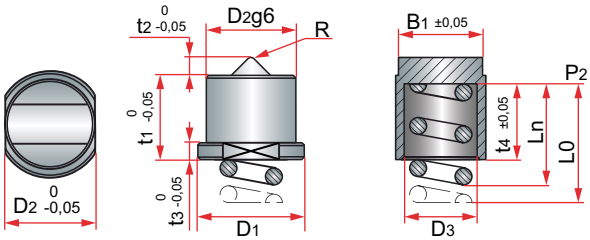
Body mat. : 1.2344. Insert mat. : 1.2379. Hardness: 54 ± 2 HRC. Maximum temperature at work: 100º C.

P1 (N)	P2 (N)	D3	D4	R	t2	B3	B2	B1	t1	D1	REF.
28	34	M2	M3	0,4	1	4,3	1,4	6,6	10	**13**	**BR5130-13**
38	42	M3	M4	0,55	1,8	6	2	9,6	14	**18**	**BR5130-18**
	92	M4	M5	0,7	2,8	9	3	14,4	21	**27**	**BR5130-27**



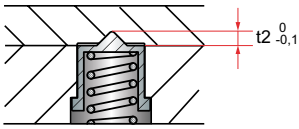
BR5134

Slide holding devices
Posicionador
Zatrzask
Posicionador
Verrous de tiroirs



Mat. : 1.2379. Hardness: 54 ± 2 HRC. Maximum temperature at work: 100º C.

P2 (N)	LO	Ln	R	t4	t3	t2	B1	D3	D1	t1	D2	REF.
34	12	7,5	0,4	6,3	1,4	1	6,6	5,3	8,4	7	**7**	**BR5134- 7**
42	16	10	0,55	9	2	1,8	9,6	8,3	12	10	**10**	**BR5134-10**
92	18	16	0,7	13,5	3	2,8	14,4	12,4	18	15	**15**	**BR5134-15**

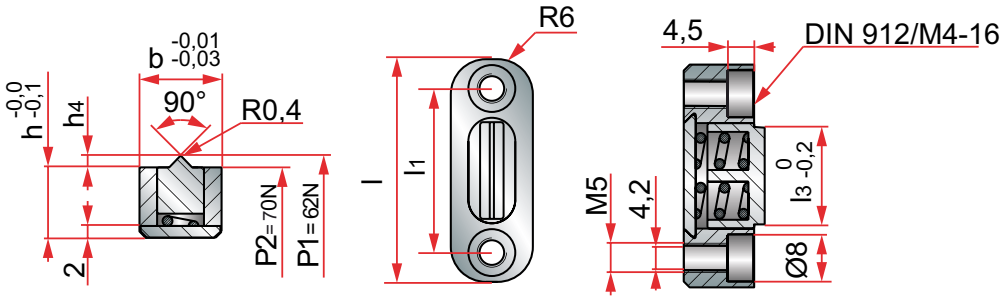


BR5140/0-1

E 3048

Slide holding devices
Posicionador
Zatrzask
Posicionador
Verrous de tiroirs

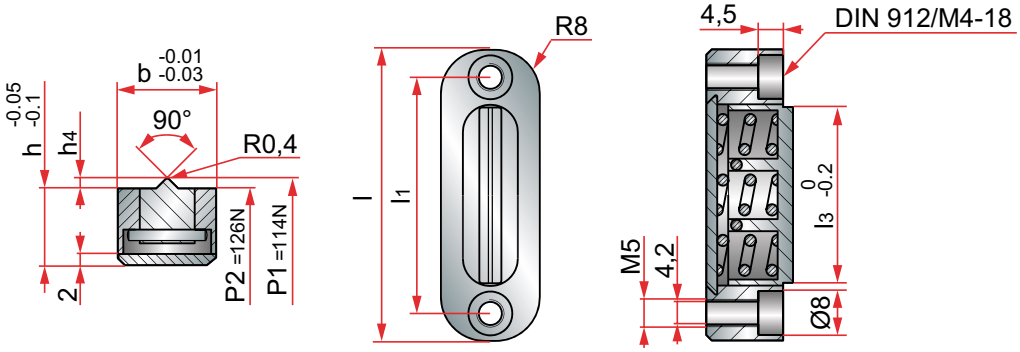
BR5140/0



Body mat. : 1.2344. Insert mat. : 1.2379. Hardness: 54 ± 2 HRC. Maximum temperature at work: 100º C.

l1	l3	h4	h	b	l	REF.
28	16,5	1,8	12	14	38	**BR5140-0**

BR5140/1



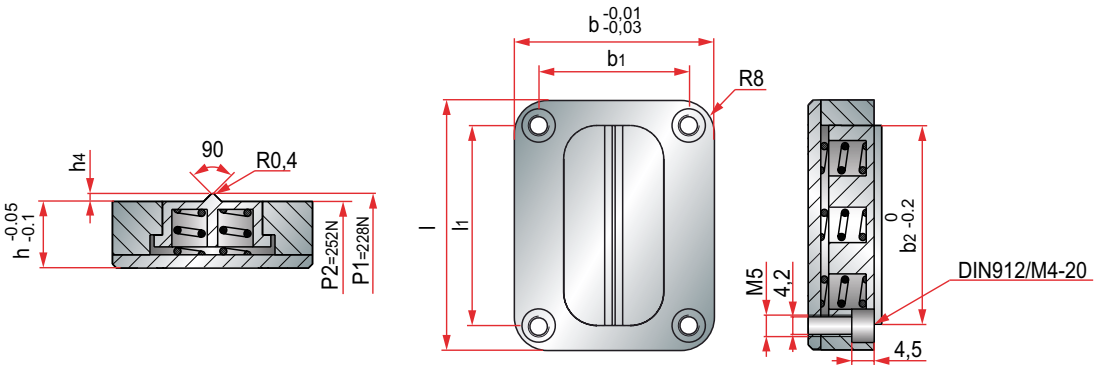
Body mat. : 1.2344. Insert mat. : 1.2379. Hardness: 54 ± 2 HRC. Maximum temperature at work: 100º C.

l1	l3	h4	h	b	l	REF.
43	32	1,8	14	18	53	**BR5140-1**

BR5140/2

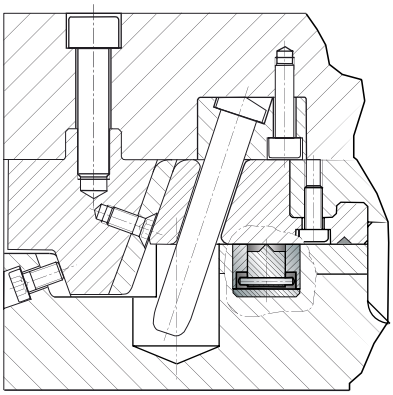
E 3048

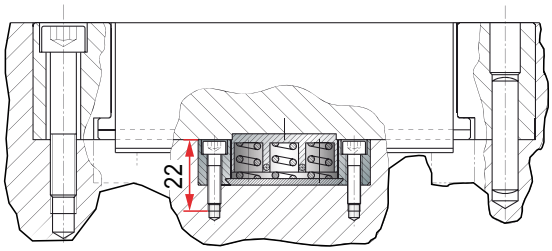
Slide holding devices
Posicionador
Zatrzask
Posicionador
Verrous de tiroirs



Body mat. : 1.2344. Insert mat. : 1.2379. Hardness: 54 ± 2 HRC. Maximum temperature at work: 100º C.

l1	b1	b2	h4	h	b	l	REF.
44	36	44	1,8	16	48	56	**BR5140-2**

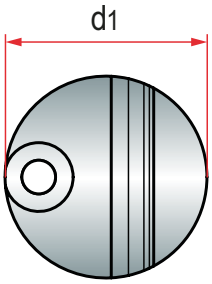


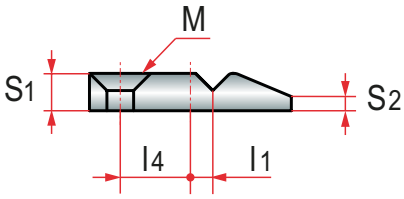


BR3047

E 3047

Snap-in plate for slide stopper with circular body
Placa de enclavamiento circular para tope de corredera
Płytka zatrzaskowa do zatrzasku z obudową okrągłą
Posicionador para limitador de curso redondo
Plaquette d'enclenchement pour butée de tiroir avec corps cylindrique

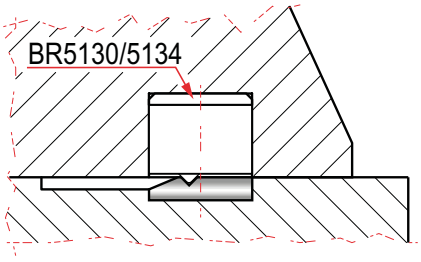


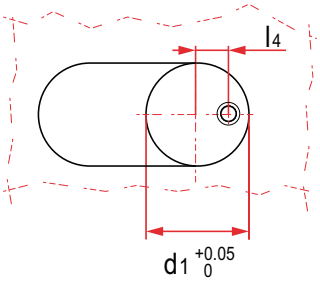


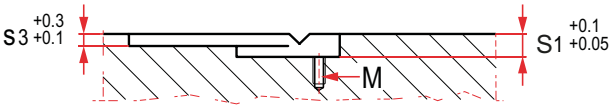
7

Mat.: 1.2162 ~ 60HRC

s1	s2	s3	M	l1	l4	d1	Descripción
3	1,7	1,3	M2	1,4	4,3	**13**	**BR3047-13**
4	1,9	2,1	M3	2	6	**18**	**BR3047-18**
5	1,9	3,1	M4	3	9	**27**	**BR3047-27**





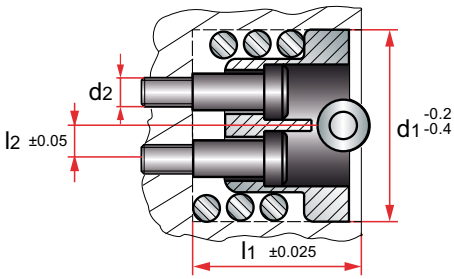


BR1892/BR1893

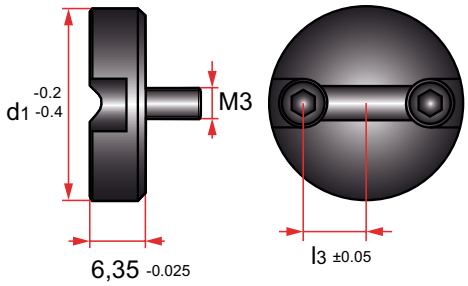
Z 1892, Z 1893

Slide retainer
Retensor de corredera
Rolkowy zatrzask
Retentores de movimentos
Butée de tiroir

BR1892

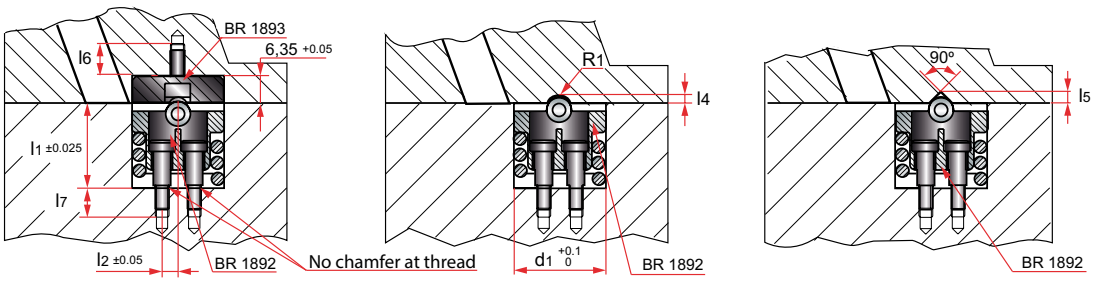


BR1893



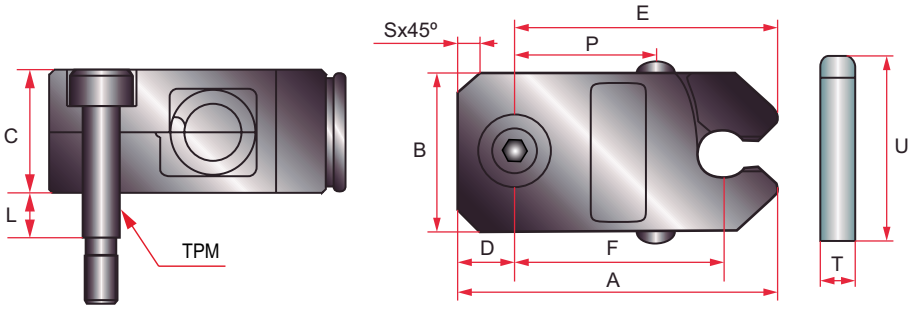
Maximum temperature = 200º C.

d2	R1	l7	l6	l5	l4	l3	l2	l1	d1	REF.
M3	2	1,90	-	1	0,23	-	3,95	4,06	**16**	**BR1892-16**
M4	3	4,80	-	2	0,75	-	3,80	12,70	**19**	**BR1892-19**
		6,20	-			-		19,05	**22**	**BR1892-22**
M3	2	-	6,5	1	0,23	4,85	-	-	**16**	**BR1893-16**
	3	-		2	0,75	6,35	-	-	**19**	**BR1893-19**
		-				7,60	-	-	**22**	**BR1893-22**



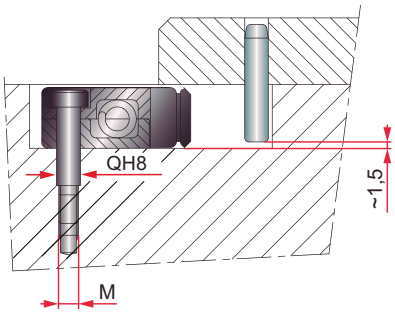
PPSM

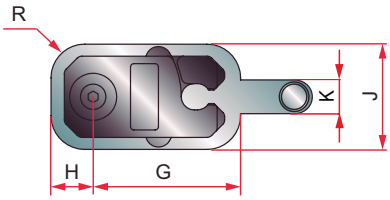
Slide retainers
Retensor de corredera
Zatrzask suwaka
Retentores de movimentos
Verrous de tiroirs



Mat. : Cast from 8620 steel. Maximum temperature at work: 150º C.

A	B	C	D	E	F	L	P	S	T	U	TPM	REF.
38	19	16	7	31,5	24,89	9	15,5	3,5	6	32	5x20	**PPSM-0001**
54	32	20	11	43	34,93	11	22,5	6,35	8	40	6x25	**PPSM-0002**
86	45	30	19	67	53,98	17	40	9,65	10	60	8x40	**PPSM-0003**

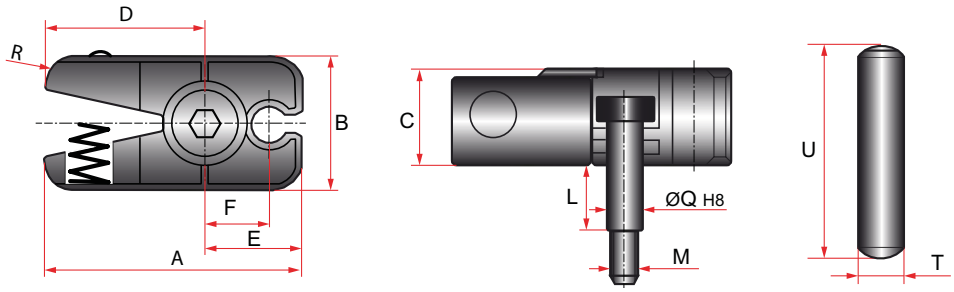




G	H	J	K	R	M	Q	REF.
34,3	9,9	25,4	8	7,5	M5	6	**PPSM-0001**
45,9	14,2	38	10	9	M6	8	**PPSM-0002**
69,8	22,3	50,8	12	12,7	M8	10	**PPSM-0003**

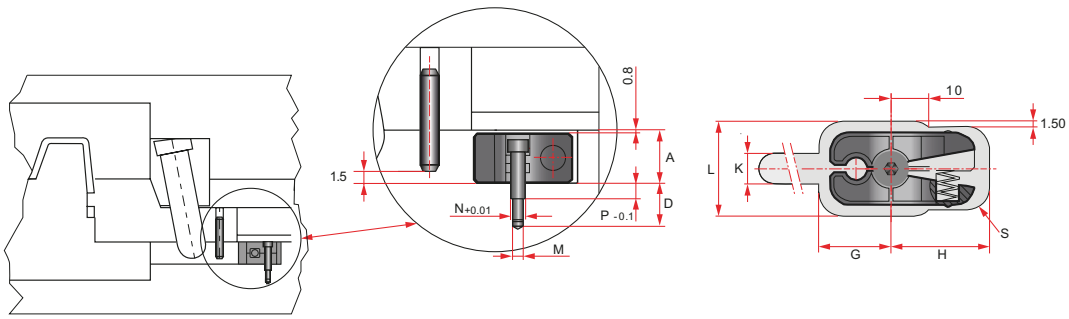
MRT

Slide retainers
Retensor de corredera
Zatrzask suwaka
Retentores de movimentos
Verrous de tiroirs



Mat. : Cast from 8620 steel. Maximum temperature at work: 150º C.

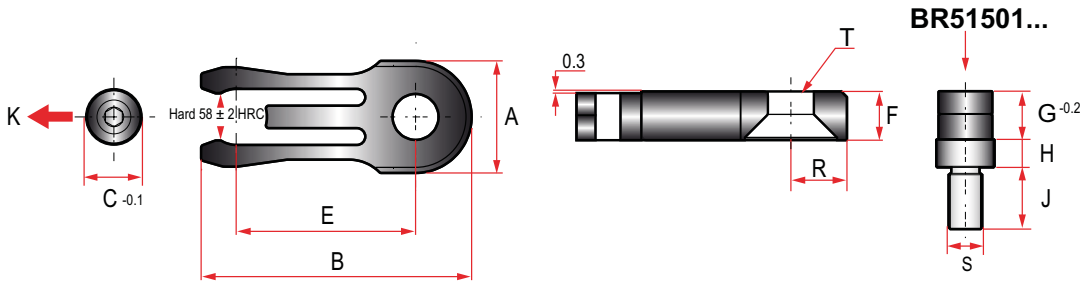
A	B	C	D	E	F	Q	R	M	T	L	U	Max. Slide weight(Kg)	TPM	REF.
38	19	16	22	16	9,15	6	5	M5	6	6	30	**10**	5x16	**MRT-10M**
54	32	20	33	21	12,7	8	6	M6	8	8	40	**20**	6x20	**MRT-20M**
86	45	30	53	33	20,3	10	10	M8	10	10	60	**40**	8x30	**MRT-40M**



L	K	G	H	S	A	P	D	N	M	REF.
25	8	19	26	8	17	6	15,5	6	M5	**MRT-10M**
38	10	24	36	10	21	8,1	20,5	8	M6	**MRT-20M**
51	12	36	56	13	31	10	25	10	M8	**MRT-40M**

BR5150

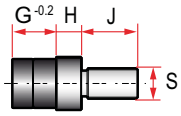
Slide retainers
Retensor de corredera
Zatrzask suwaka
Retentores de movimentos
Verrous de tiroirs



Mat. 1.8159 Hardness 45±3

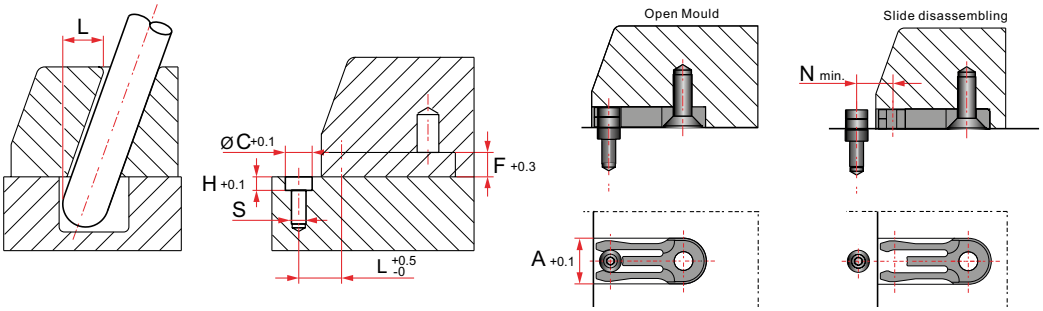
K = Force to release the retainer
K = Fuerza de desenganche del retensor.

A	B	C	E	F	G	H	J	N	R	S	T	K	REF.
16	**38**	**8**	25	7,6	7,6	4	10	7	8	M5	M6	100 N	**BR5150-16-38**
20	**48**	**10**	32	8,7	8,6	5	11	8	10	M6	M8	140 N	**BR5150-20-48**
24	**57**	**12**	37,5	9,6	9,6	6	12	9	12	M8	M10	180 N	**BR5150-24-57**



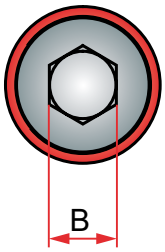
Spare part / Recambio

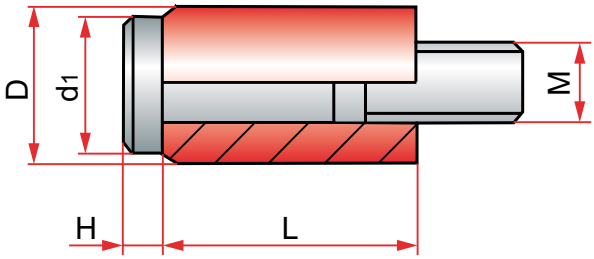
C	G	H	J	S	REF.
8	7,6	4	10	M5	**BR51501- 8**
10	8,6	5	11	M6	**BR51501-10**
12	9,6	6	12	M8	**BR51501-12**



BR314

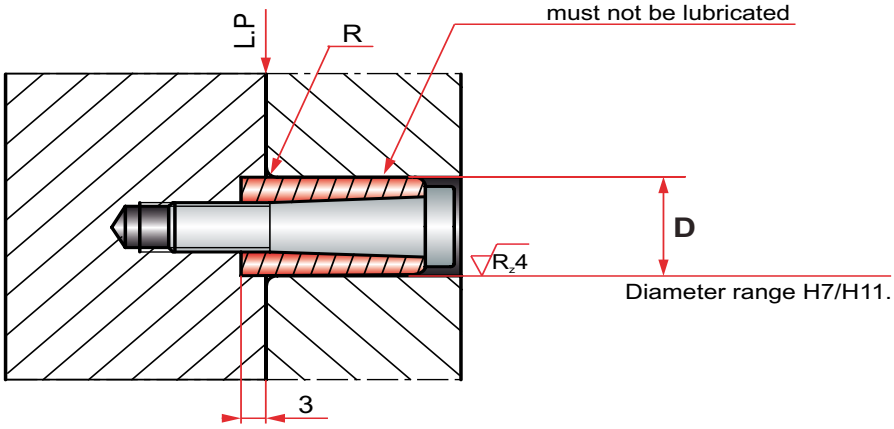
Frictional puller
Tiradores por expansión
Ściągacz cierny
Extrator de atrito
Extracteur de frottement





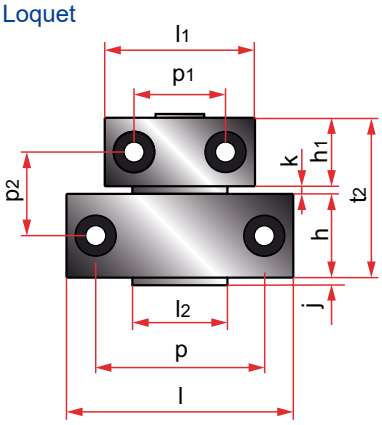
High Strength alloy Steel / Nylon resin. Maximum temperature at work: 80º C.

B	H	M	d1	D	L	REF.
4	3	M5	8,5	**10**	18	**BR314-10**
5	3,5	M6	11	**12**	20	**BR314-12**
				13		**BR314-13**
6	4	M8	14	**16**	25	**BR314-16**
8	5	M10	16	**20**	30	**BR314-20**

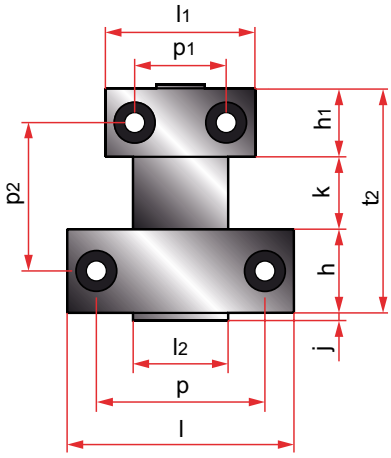


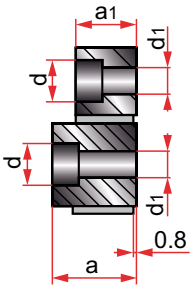
BR1031

Latch locking unit
Tirante
Mechanizm dwustopniowego otwarcia
Trinco
Loquet

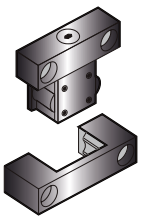


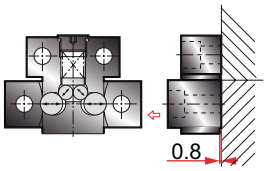
L SERIES

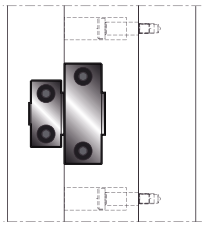


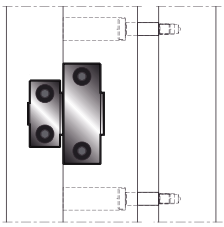


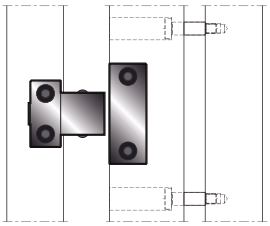
Max. (N)	d1	d	a1	a	p2	p1	p	k	j	h1	h	t2	l2	l1	l	REF.
981	6,5	11	16	24	22	24	36	2	2	18	22	42	25	36	**48**	**BR1031/ 10**
1961						28	40							42	**54**	**BR1031/ 20**
2942			19	27	26	31	50	3,5	3,5	20	25	48,5	35	46	**65**	**BR1031/ 30**
5884	9	14				33	52							50	**73**	**BR1031/ 60**
					57			34,5				79,5				**BR1031/ 60L**
7845					34			11,5				56,5				**BR1031/ 80**
					65			42,5				87,5				**BR1031/ 80L**
9807	11	17	25	34	31	42	76	4	4	24	30	58	48	65	**103**	**BR1031/100**
					62			35				89				**BR1031/100L**





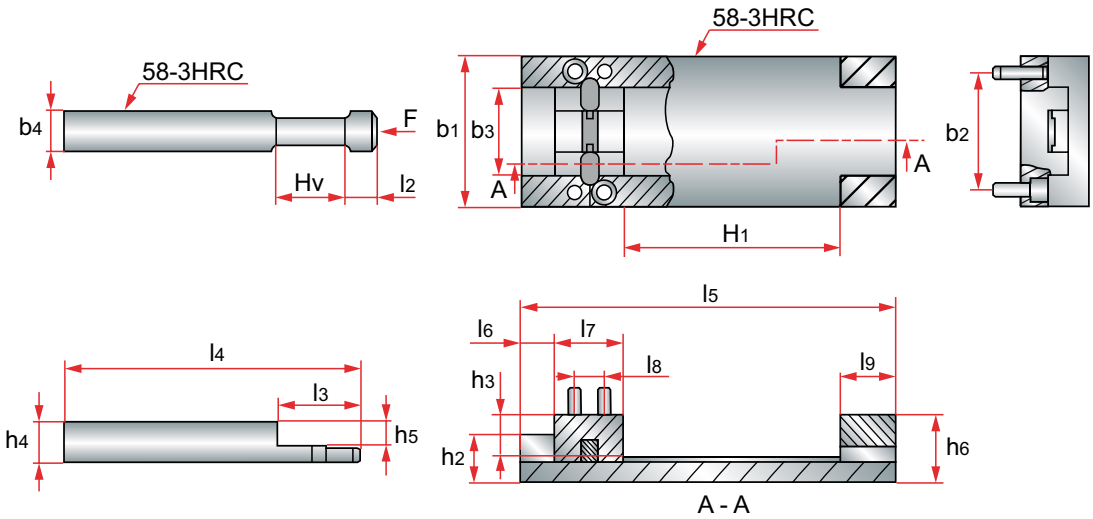




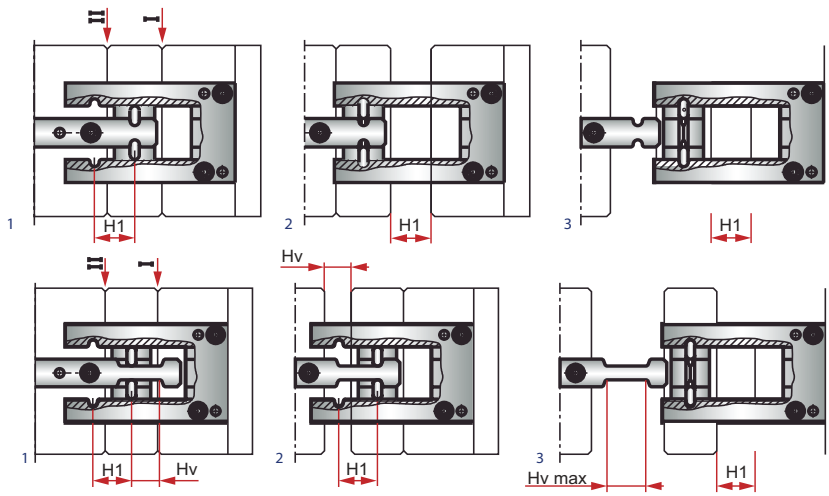


BR174

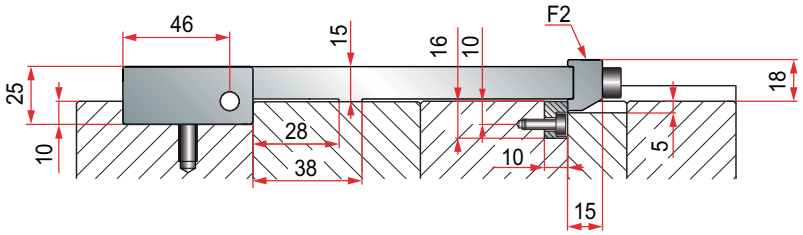
Latch locking unit
Tirante
Mechanizm dwustopniowego otwarcia
Trinco
Loquet

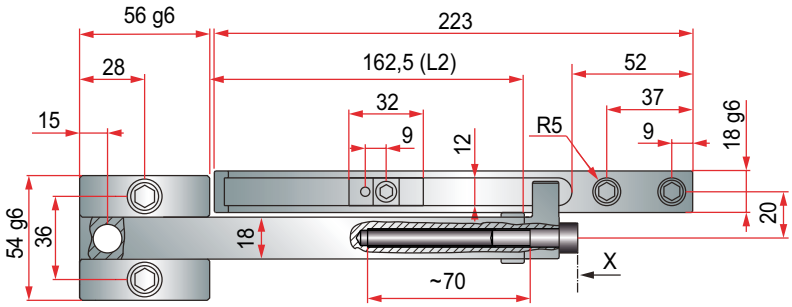


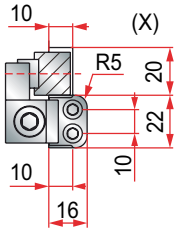
F(N)	h6	h5	h4	h3	h2	b4	b3	b2	l9	l8	l7	l6	l5	l4	l3	l2	b1	H1 Min.	H1 Max.	Hv	REF.
16000	22,3	10	16	9,3	16	15	30,05	40	20	10	20	10	140	140	20	9,75	**50**	4	**90**	**0**	**BR174-050x90x 0**
															40					**20**	**BR174-050x90x20**
27000	30,3	13	21	12,3	22	20	45,05	60	34	16	34	15	200	200	34	16,75	**80**	5,50	**117**	**0**	**BR174-80x117x 0**
															66					**32**	**BR174-80x117x32**
48000	37,5	16	27	15,5	27	25	60,05	80	45	22	45		250	250	45	22,25	**100**	7	**145**	**0**	**BR174-100x145x0**
															95					**50**	**BR174-100x145x50**



Latch locks
Mecanismo de doble apertura
Mechanizm dwustopniowego otwarcia
Mecanismo de abertura dupla
Mécanisme à double ouverture

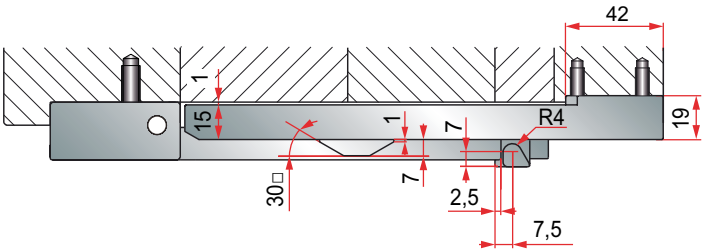




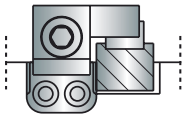


L2 = 110,5	F2 = ~ 48 N
L2 = 162,5	F2 = ~ 30 N

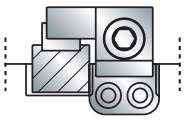
max. 180°C



* Set includes right and left
* Incluido derecha e izquierda



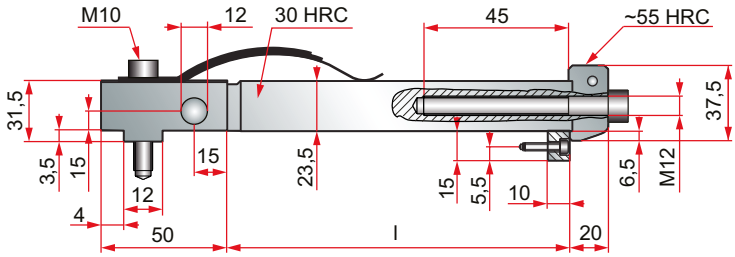
PEDIDO/ORDER: REF. BR531

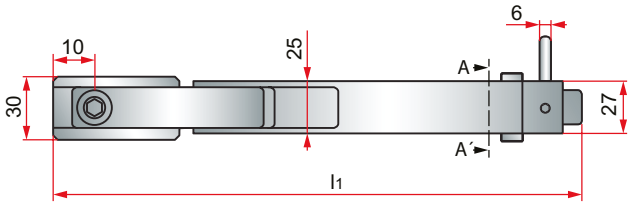


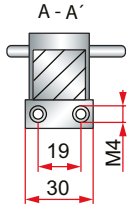
PEDIDO/ORDER: REF. BR532

TEN 070

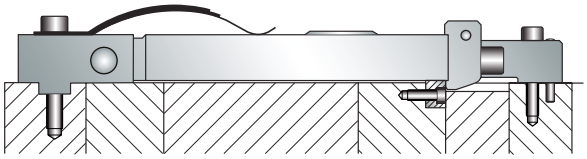
Elevation bar
Tirantes de enclavamiento de placas
Mechanizm dwustopniowego otwarcia
Barra de trinco
Barre de levée

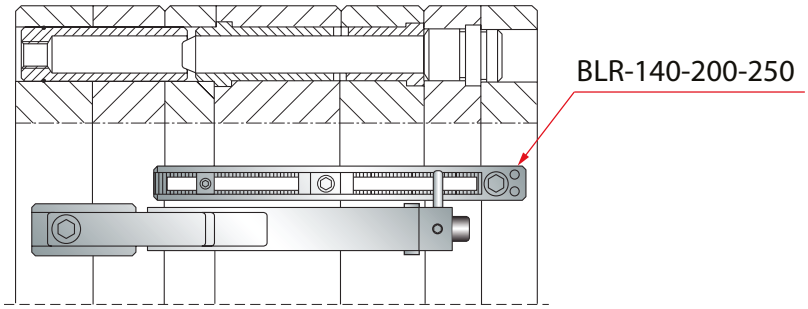






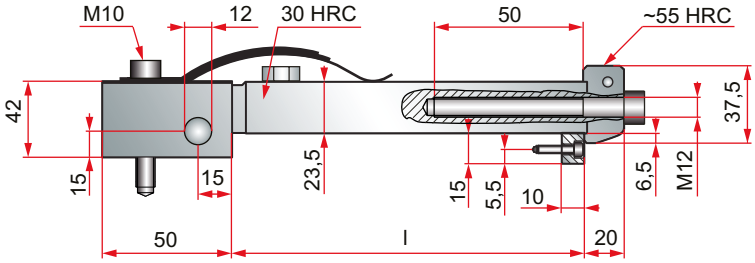
l1	l	REF.
152	**70**	**TEN-070**

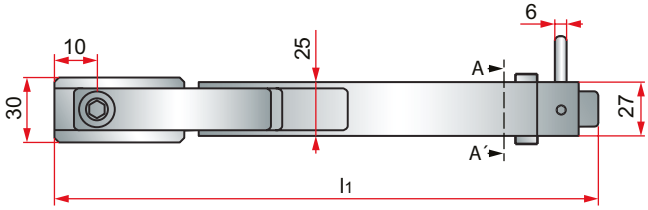


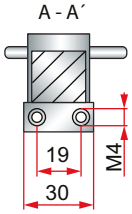


TEN 090/170/220/270

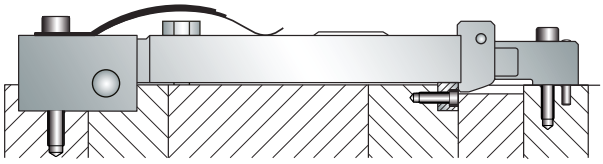
Elevation bar
Tirantes de enclavamiento de placas
Mechanism dwustopniowego otwarcia
Barra de trinco
Barre de levée

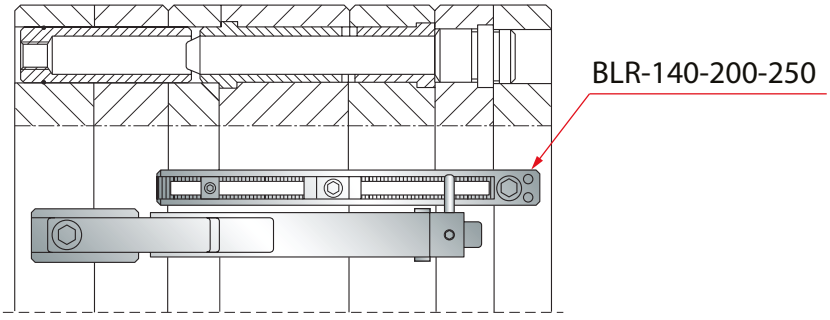






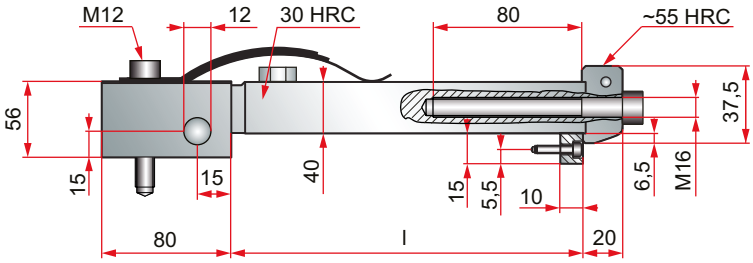
l1	l	REF.
172	**90**	**TEN-090**
252	**170**	**TEN-170**
302	**220**	**TEN-220**
352	**270**	**TEN-270**

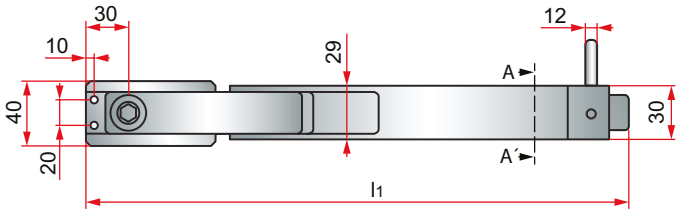


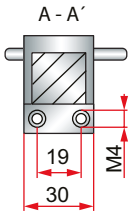


TEN 256

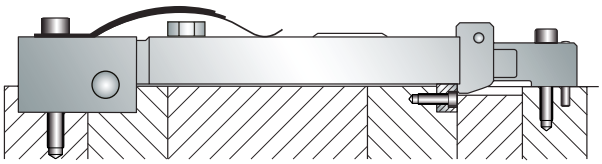
Elevation bar
Tirantes de enclavamiento de placas
Mechanism dwustopniowego otwarcia
Barra de trinco
Barre de levée

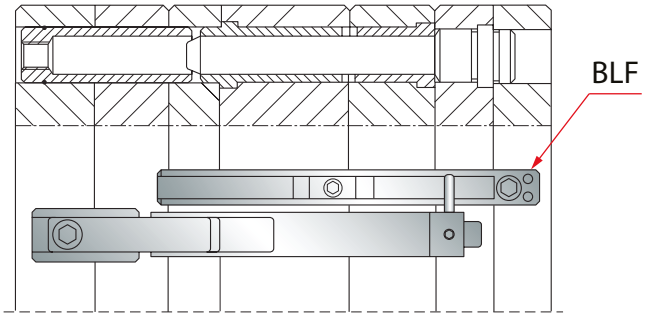






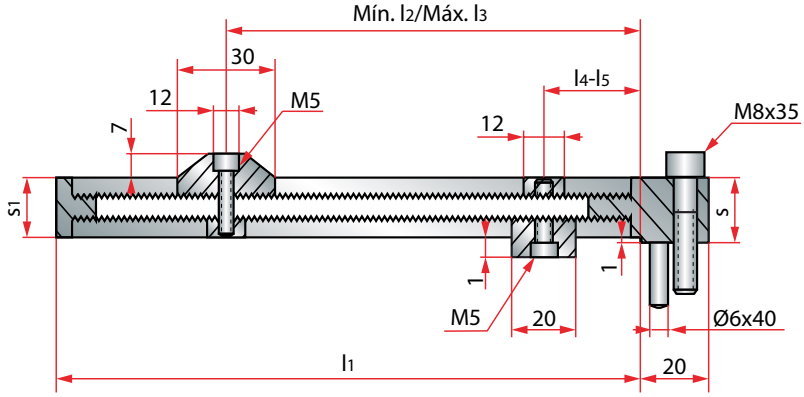
l1	l	REF.
379	**256**	**TEN-256**

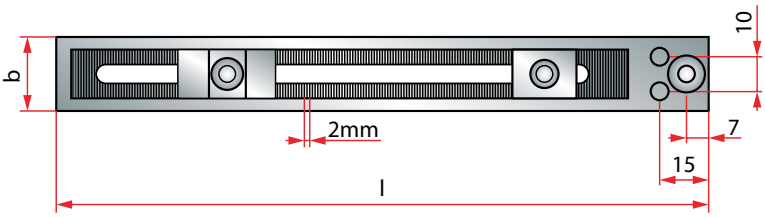




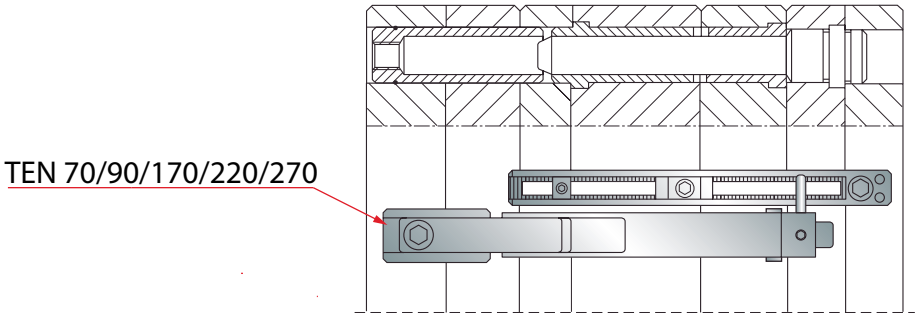
BLR

Adjustable base bar
Barra de liberación regulable
Listwa uwalniająca regulowana
Barra de base regulavel
Barre d´appui reglable



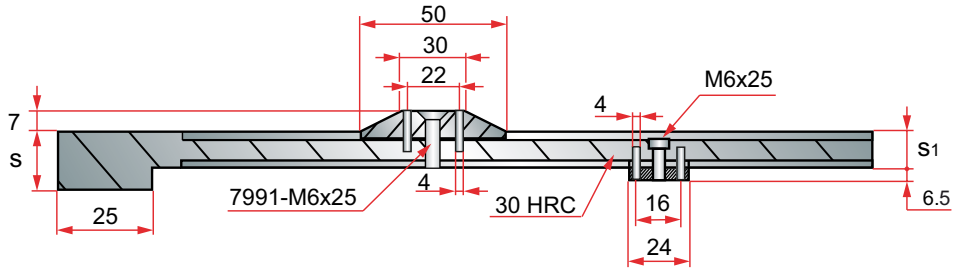


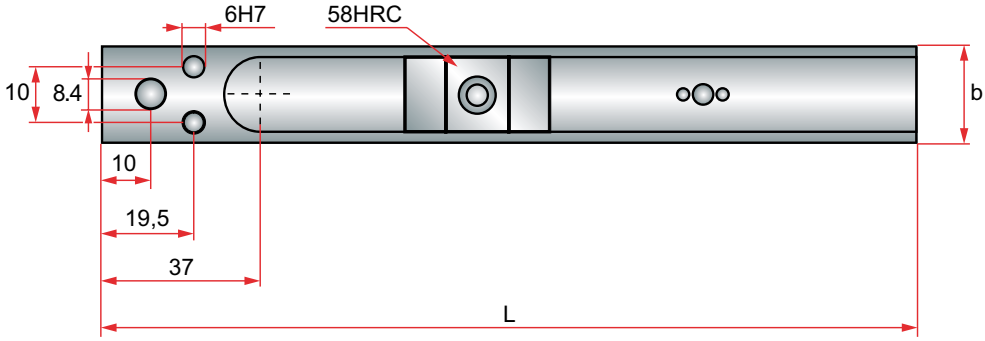
l1	l2	l3	l4	l5	s1	s	b	l	REF.
120	20	100	20	104	19	20	21,5	**140**	**BLR-140**
184		164		168				**204**	**BLR-200**
234		214		218				**254**	**BLR-250**



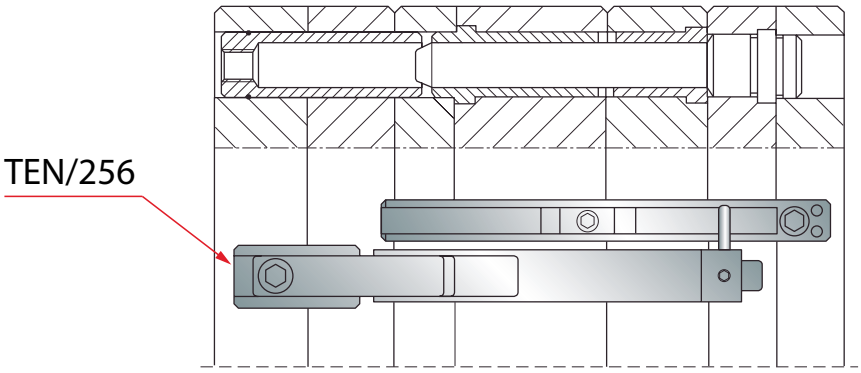
BLF

Fixed base bar
Barra de liberación fija
Listwa stała
Barra de base fixa
Barre d´appui fixe



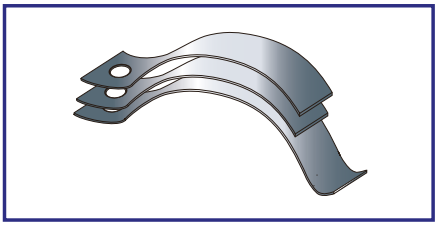


s1	s	b	L	REF.
29	30	20	396	**BLF**

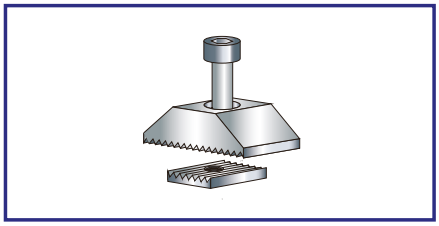


SPARE PARTS TEN/BLR

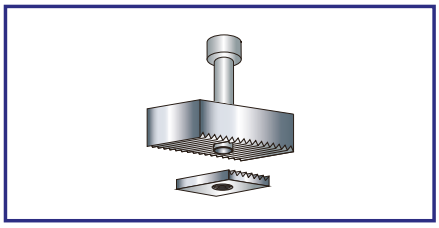
Spare parts TEN/BLR
Recambios TEN/BLR
Części zamienne TEN/BLR
Partes TEN/BLR
Eléments pour système d'ouverture TEN/BLR



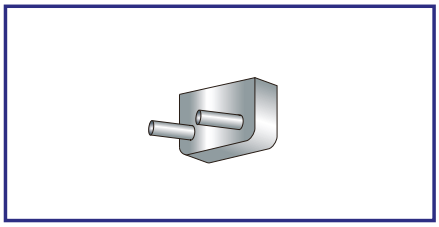
Ref. : MEP



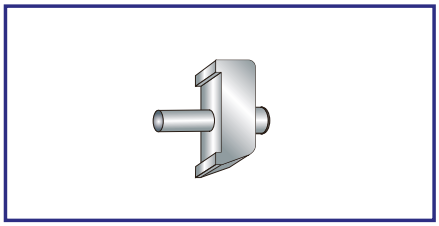
Ref. : LER



Ref. : TOR



Ref. : UEP

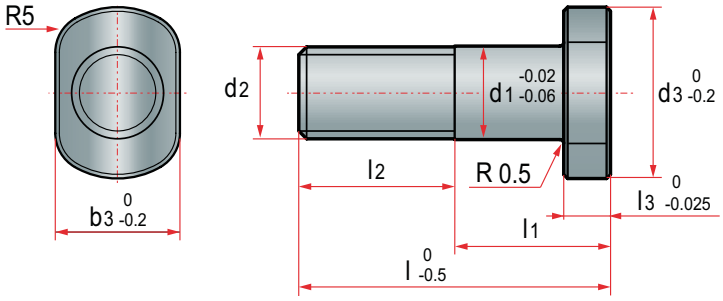


Ref. : CEP

BR1514

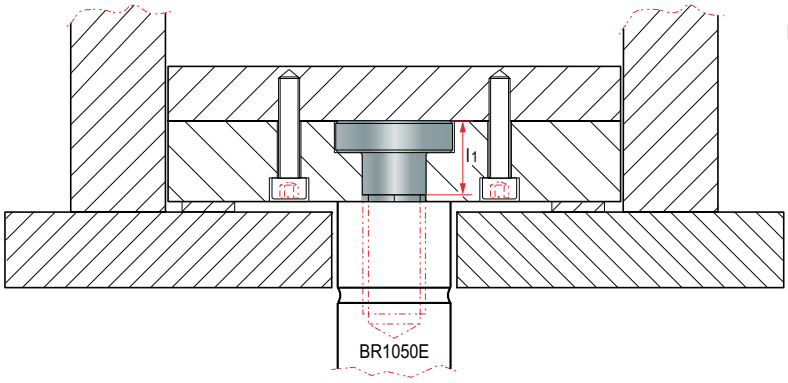
E1514

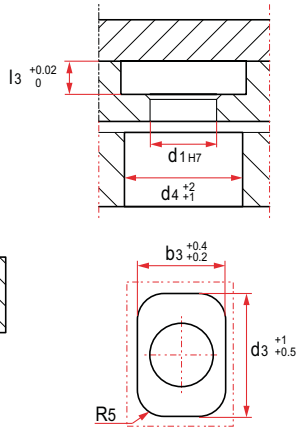
Threaded bolt for ejector set
Perno roscado para paquete de expulsión
Kołek gwintowany do zestawu płyt wypychaczy
Adaptador K.O. roscado
Boulon fileté pour batterie d'éjection



Mat. : 1.2312 ≈ 1080 N/mm².

b3	l1	l2	l3	d4	d3	d2	d1	l	REF.
11	11	12	6	14	14	M 8	8	23	BR1514- 8-23
	16							28	BR1514- 8-28
14	11	15		18	18	M 10	10	26	BR1514-10-26
	15	16						31	BR1514-10-31
	20							36	BR1514-10-36
16	15	20		24	22	M 12	12	35	BR1514-12-35
	20							40	BR1514-12-40
	25							45	BR1514-12-45
	34							54	BR1514-12-54
22	25	26	8	30	28	M 16	16	51	BR1514-16-51
	34							60	BR1514-16-60
	44							70	BR1514-16-70

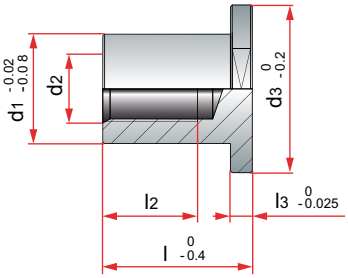


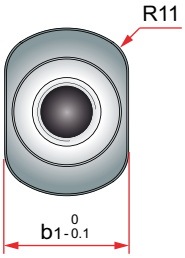


BR1515

E 1515

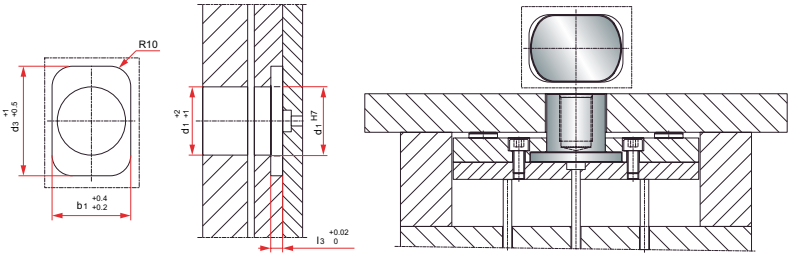
Threaded insert for ejector set
Inserto roscado para paquete de expulsión
Wkładka gwintowana do zestawu płyt wypychaczy
Adapatador K. O. com faces
Insert fileté pour attelage batterie





Mat. : 1.7131 ≈ 660 N/mm².

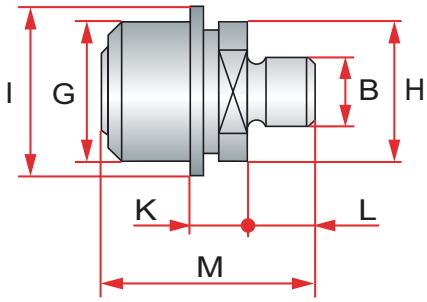
b1	d1	d3	l2	l3	d2	l	REF.
34	30	46	24	6	M12	42	BR1515-12x42
						47	BR1515-12x47
						52	BR1515-12x52
						61	BR1515-12x61
					M16	42	BR1515-16x42
						47	BR1515-16x47
						52	BR1515-16x52
						61	BR1515-16x61
						66	BR1515-16x66
						71	BR1515-16x71
						76	BR1515-16x76
						85	BR1515-16x85
46	40	56	28		M20	42	BR1515-20x42
			30			47	BR1515-20x47
						52	BR1515-20x52
						61	BR1515-20x61
						66	BR1515-20x66
						71	BR1515-20x71
						76	BR1515-20x76
						85	BR1515-20x85
						95	BR1515-20x95



7

RA

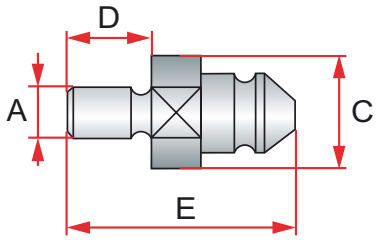
Bushed ejector rod
Recuperación adelantada
Sprzęgło
Adaptador de extacção
Attelage d´ejection



RA302
RA402
RA412

Hardness: 54 ± 2 HRC.

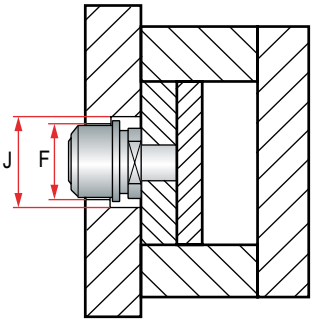
B	F	H	J	K	L	M	I	G	Strength (Kg)	REF.
M16X150	34	32	43	9	15	42,5	39	32	1500	**RA302-M16X150**
M16X150	40	38	53	13	15	52	48	38	2400	**RA402-M16X150**
M16X150	58	52	70	17	18	68	65	56	3200	**RA412-M16X150**
M20X150										**RA412-M20X150**
M24X150										**RA412-M24X150**



RA301
RA401
RA411

Hardness: 54 ± 2 HRC.

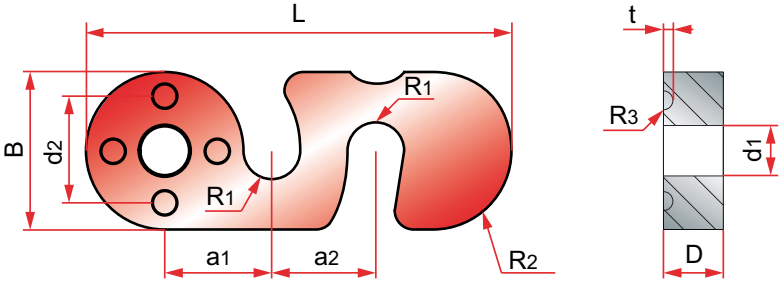
A	C	D	E	Strength (Kg)	REF.
M10x150	22,8	20	45,5	1500	**RA301-M10X150**
M12x175					**RA301-M12X175**
M14x200					**RA301-M14X200**
M10x150	25,8		55	2400	**RA401-M10X150**
M12x175					**RA401-M12X175**
M14x200					**RA401-M14X200**
M16x200	35	25	68	3200	**RA411-M16X200**
M20x250					**RA411-M20X250**
M24x300					**RA411-M24X300**



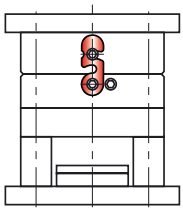
Male / Macho Type:		Female / Hembra Type:
RA301	← →	**RA302**
RA401	← →	**RA402**
RA411	← →	**RA412**

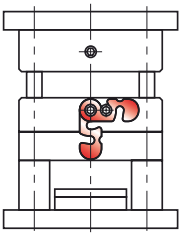
BR6040

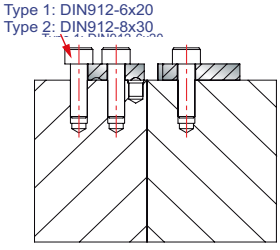
Safety hooks
Gatillo de seguridad
Zabezpieczenie formy
Trinco
Crochet de securite

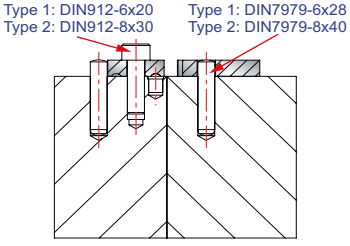


F (kN)	T	R3	R2	R1	a2	a1	d2	d1	D	B	L	REF.
9,8	1	2	10	3,3	11,75	13,25	14	6,5	6	20	54	**BR6040/1**
17,6	2	2,5	15	5	20	20	20	9	10	30	80	**BR6040/2**









- These safety hooks devices prevent the injection mould being opended by accident during the transportation, installation or removal.
- All the safety precautions stipulated can be guaranteed for.
- Simple construction and diverse applications.
- No searching for hooks and screws as these safety hooks always remain on the mould.

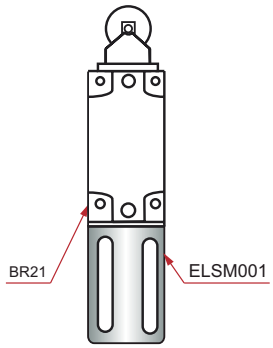
ATTENTION!
The hooks should be turned to the inoperative position before opening the injection mould in the injection moulding machine.

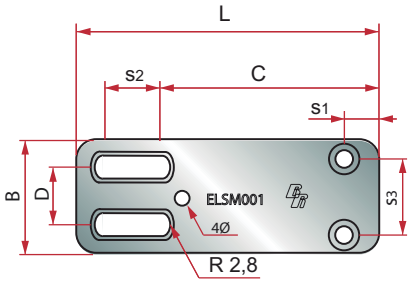
- Este gatillo de seguridad previene que el molde se abra por accidente durante el transporte, instalación o bien durante el desmontaje de la máquina de inyección.
- Todas las condiciones de seguridad están garantizadas.
- Fácil montaje y con diferentes posibilidades.
- Evita sistemas complejos de seguridad ya que este permanece siempre instalado en el molde.

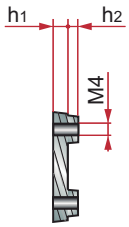
¡ATENCIÓN!
El gatillo debe ser girado a la posición inoperativa antes de abrir el molde en la máquina de inyección.

ELSM001

Clamp for Telemecanique micros
Soporto para Microcontactores
Mocowanie wyłącznika krańcowego Telemecanique
Suporte para micros
Plaquette de fixation pour interrupteurs xcmd





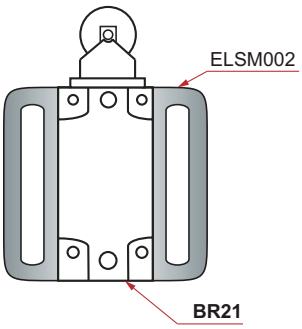


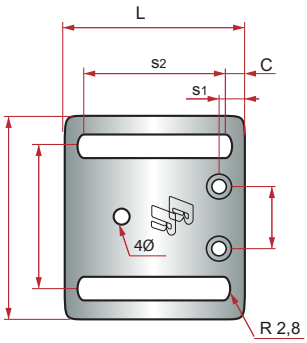
Mat. : Zamak.

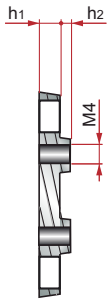
B	L	C	D	S1	S2	S3	h1	h2	REF.
31,5	83,5	58	15,6	9	14	20	4	3	**ELSM001**

ELSM002

Clamp for Telemecanique micros
Soporte para Microcontactores
Mocowanie wyłącznika krańcowego Telemecanique
Suporte para micros
Plaquette de fixation pour interrupteurs xcmd





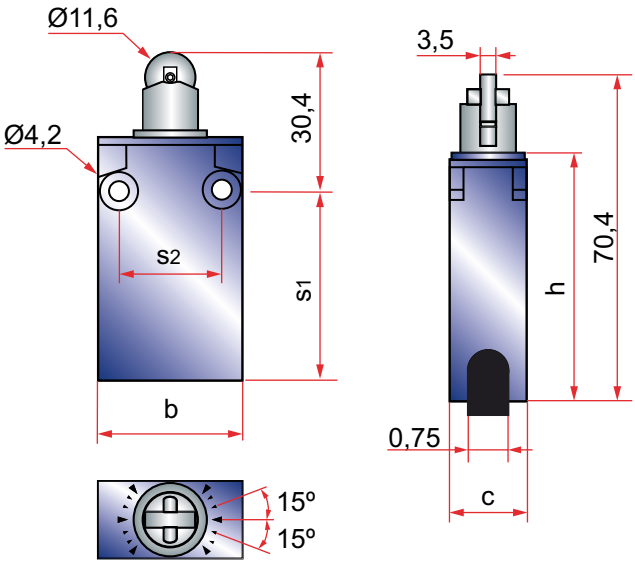


Mat. : Zamak.

B	L	C	D	s1	s2	s3	h1	h2	REF.
56,5	51	8	43,6	9	32	20	4	3	**ELSM002**

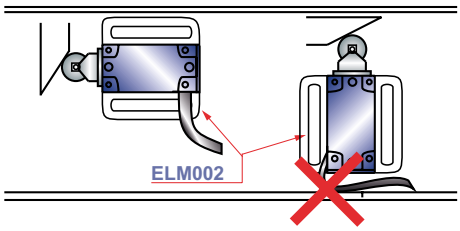
BR21

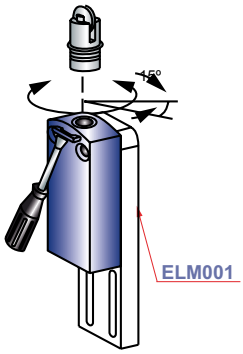
Micro
Microcontactor
Wyłącznik krańcowy Telemecanique
Micro
Micro-compteur



Operating temperature: -25º to 70º C. Operates in all positions. Maximum power: 6A.

b	c	h	s1	s2	REF.
30	16	50	40	20 ± 0,1	BR21

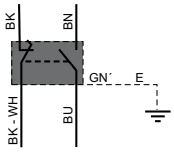




Wiring Diagram

(BK) Black
(BKWH)Black White
(BU) Blue
(BN) Brown
(GNYE) Green Yellow

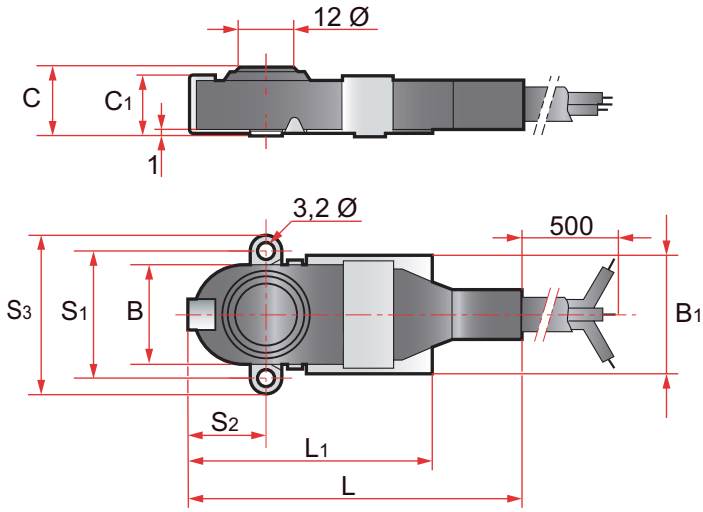
2-pole NC + NO Snap Action



7

BR22

Micro
Microcontactor
Wyłącznik krańcowy
Micro
Micro-compteur



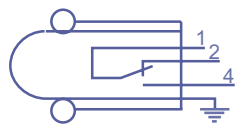
IP 66 / Casing: Nitrile / Contacts: Silver / Contact holder: Polyamide / Mounting plate: Zinc

B	B_1	C	C_1	L	L_1	S_1	S_2	S_3	REF.
20	24	12,3	10,3	71	49	26	16	32	**BR22**

Maximum operating force (N)	7.5
Min. Release force (N)	1.5
Maximum total travel force (N)	8
Max. permitted overtravel force (N)	30
Tripping point (mm)	$11.4^{\pm 0.4}$
Maximum differential travel (mm)	0.2
Min. overtravel (mm)	0.25
Ambient operating temperature (°C)	0 →
Mechanical life (operations)	2×10^{6}
Contact gap (mm)	0.5
Weight (g)	45

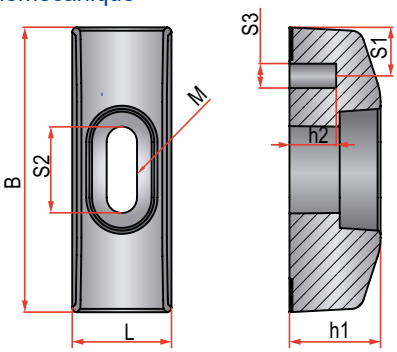
Common (1) : black
Normally closed (2) : brown
Normally open (4) : grey

Double break changeover switch



BR012501-1

Jum for telemecanique micros
Rampa para microcontactores
Rampy wyłącznika krańcowego telemecanique
Rampa para micros
Came de contrôle

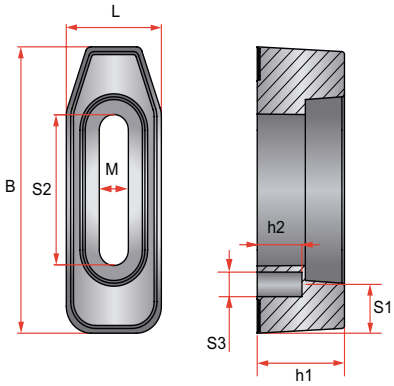


Mat. : Zamak

B	L	M	S_1	S_2	S_3	h_1	h_2	REF.
47,8	17	5	8,15	14	4	15,6	8	**BR012501-1**

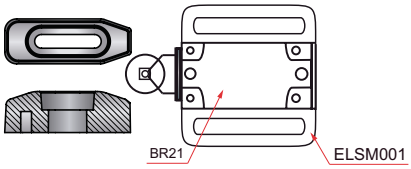
BR012501-2

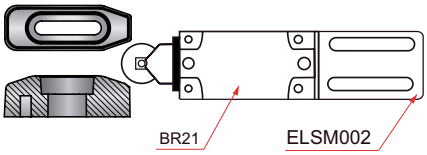
Jum for telemecanique micros
Rampa para microcontactores
Rampy wyłącznika krańcowego telemecanique
Rampa para micros
Came de contrôle



Mat. : Zamak.

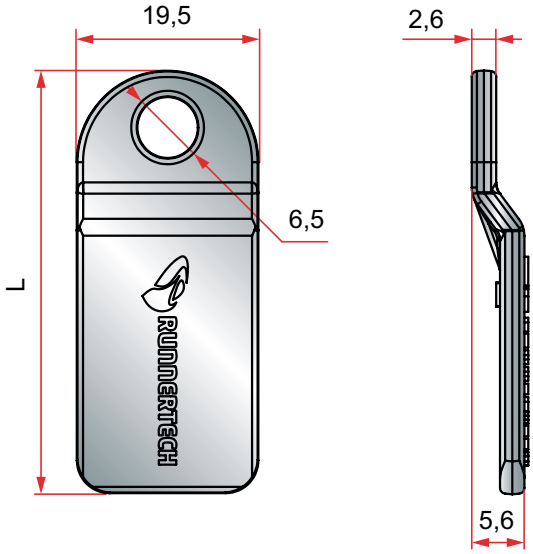
B	L	M	S_1	S_2	S_3	h_1	h_2	REF.
47,8	17	5	8,10	25	4	15,6	8	**BR012501-2**





BR55132

Wire slot clip
Clip de sujeción cable
Uchwyt montażowy
Presilha de cabo
Maintien de cable



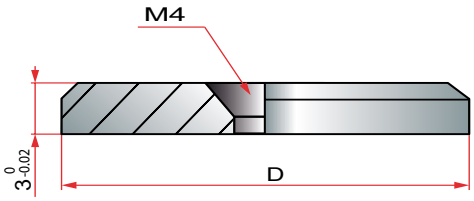
Mat. : Zamak.

L	REF.
30	BR55132/30
45	BR55132/45
60	BR55132/60

TPS

E 1500, Z 55

Stop pin
Topes placa
Podkładka oporowa
Botão de encosto
Butee de course d`ejection



Hardness: 54 ± 2 HRC.

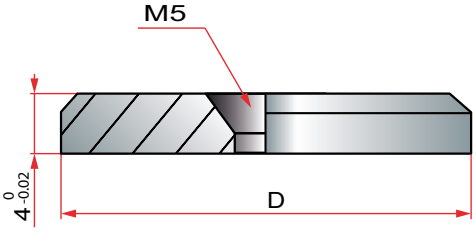
D	REF.
18	TPS / 18
28	TPS / 28

7

TPS 1730

E 1500, Z 55

Stop pin
Topes placa
Podkładka oporowa
Botão de encosto
Butee de course d`ejection

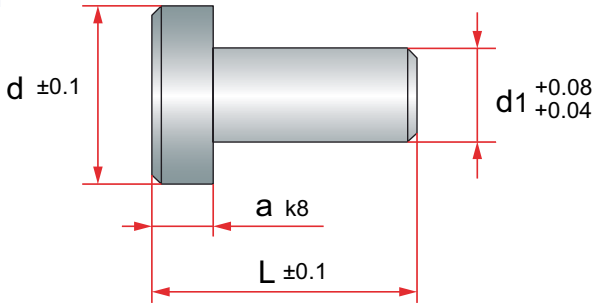


Mat. 1.1730

D	REF.
20	TPS 1730 / 20
30	TPS 1730 / 30

TP

Stop pin
Topes placa
Kołek dystansowy
Botão de encosto
Butee de course d`ejection



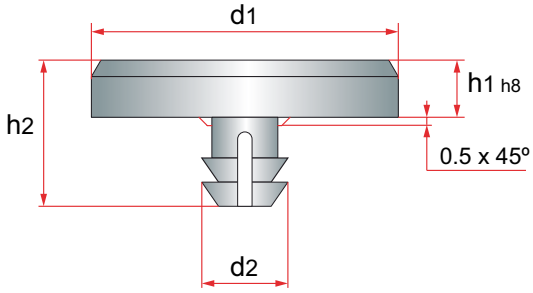
Hardness: 54 ± 2 HRC.

d1	a	L	d	REF.
8	4,5	**20**	**15**	**TP/ 15**
10	5	**15**	**20**	**TP/ 20**

TP551

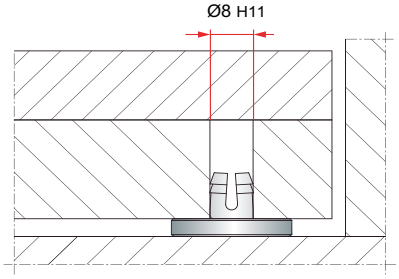
E 1505, Z 551

Stop pin
Topes placa
Kołek dystansowy
Botão de encosto
Butee de course d`ejection



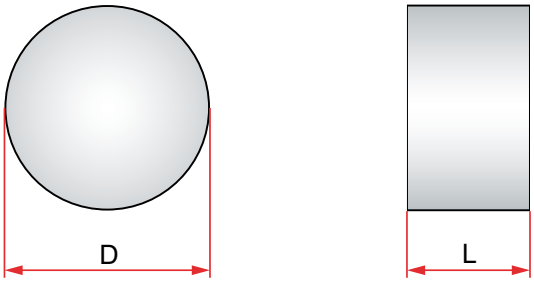
Mat:1.8159 46 + 2 HRC

d2	h1	d1	h2	REF.
8,2	3	**16**	11	**TP551/ 16**
		25		**TP551/ 25**



BR23113

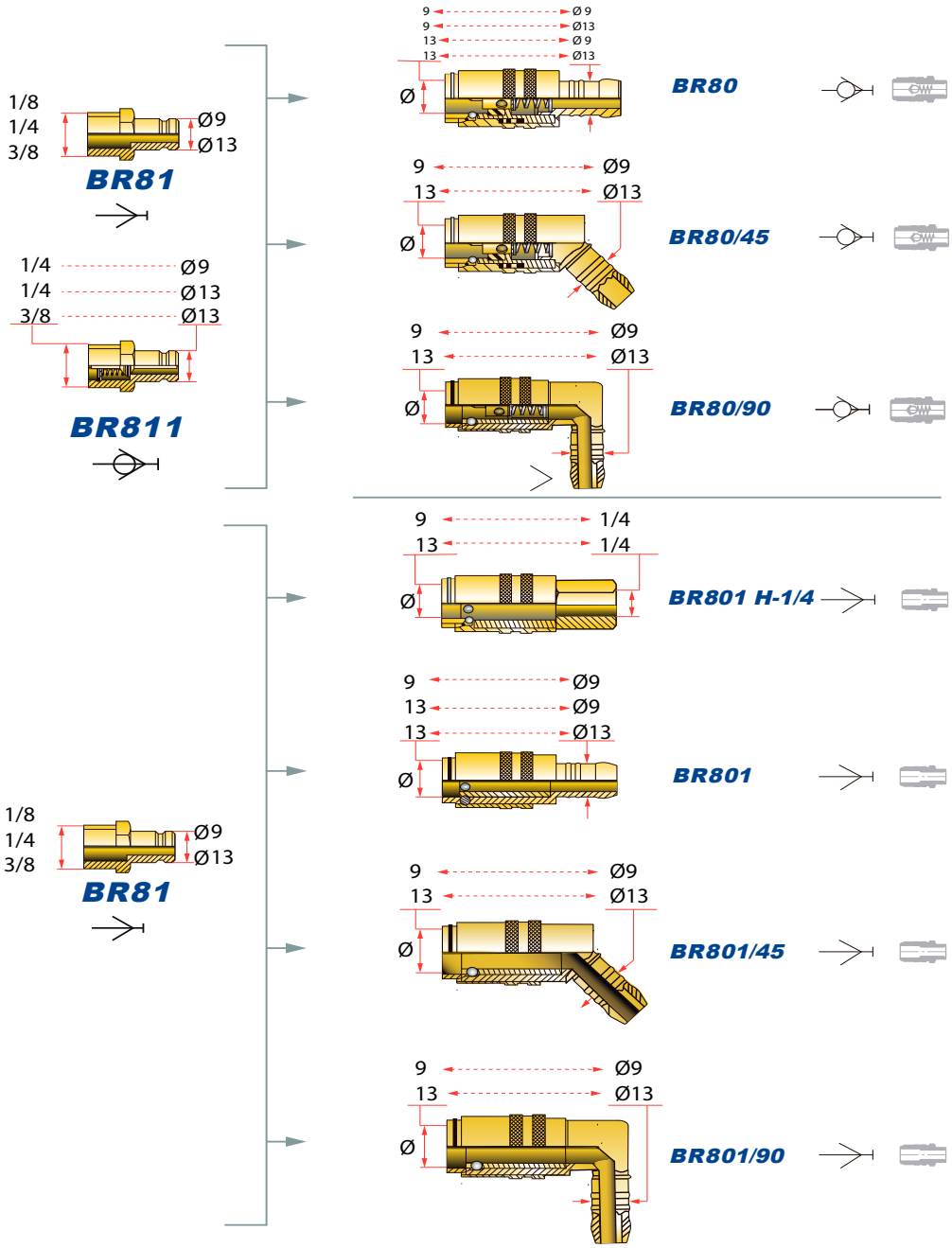
Neodymium magnets
Imanes de neodimio
Magnesy neodymowe
Ímãs de neodimio
Aimants en néodyme



Grado N35 max. 230ºC

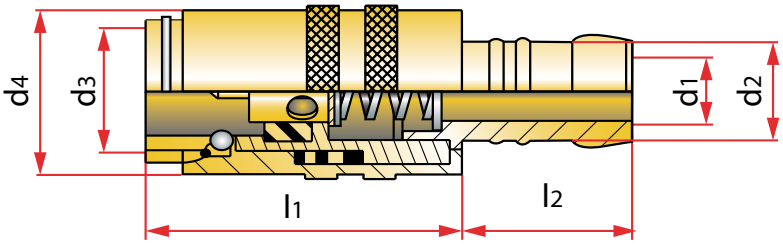
D	L	REF.
2	6	BR23113/ 2X 6 IMAN REDONDO NEODIMIO-35
3	3	BR23113/ 3X 3 IMAN REDONDO NEODIMIO-35
4	3	BR23113/ 4X 3 IMAN REDONDO NEODIMIO-35
4	10	BR23113/ 4X10 IMAN REDONDO NEODIMIO-35
5	5	BR23113/ 5X 5 IMAN REDONDO NEODIMIO-35
6	5	BR23113/ 6X 5 IMAN REDONDO NEODIMIO-35
6	10	BR23113/ 6X10 IMAN REDONDO NEODIMIO-35
8	5	BR23113/ 8X 5 IMAN REDONDO NEODIMIO-35
8	10	BR23113/ 8X10 IMAN REDONDO NEODIMIO-35
10	5	BR23113/10X 5 IMAN REDONDO NEODIMIO-35
10	10	BR23113/10X10 IMAN REDONDO NEODIMIO-35
12	5	BR23113/12X 5 IMAN REDONDO NEODIMIO-35
12	1	BR23113/12X10 IMAN REDONDO NEODIMIO-35
20	10	BR23113/20X10 IMAN REDONDO NEODIMIO-35
25	5	BR23113/25x 5 IMAN REDONDO NEODIMIO-35
25	10	BR23113/25X10 IMAN REDONDO NEODIMIO-35

Couplings EU



Compatible EU

Couplin with valve
Enchufe rápido con válvula
Szybkozłącze z zaworem
Acoplador rapido com valvula
Raccord avec vanne d'arrêt



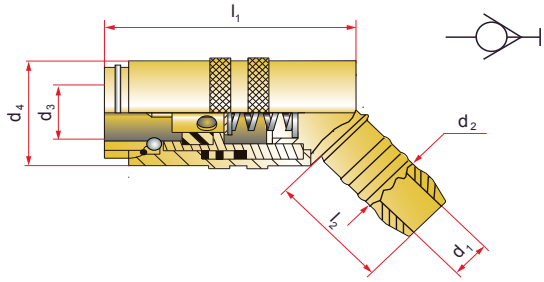
Mat. : Brass / Latón / Mosiądz / Latão.

l1	l2	d4	d1	d3	d2	REF.
31	22	17	6	**9**	**9**	**BR80-09-09**
			9		**13**	**BR80-09-13**
37	25	23	6	**13**	**9**	**BR80-13-09**
			9		**13**	**BR80-13-13**

BR80/45º

Z 80

Coupling with valve 45º
Cierre rápido con válvula de cierre ángulo 45º
Szybkozłącze z zaworem 45º
Acoplador rapido com valvula 45º
Raccord avec vanne d'arrêt 45º



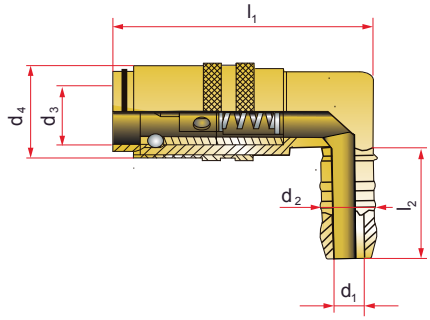
Mat. : Brass / Latón / Mosiądz / Latão.

l1	l2	d4	d1	d3	d2	REF.
41	28	17	6	9	**9**	**BR80-09-45**
51		22	9	13	**13**	**BR80-13-45**

BR80/90º

Z 80

Coupling with valve 90º
Cierre rápido con válvula de cierre ángulo 90º
Szybkozłącze z zaworem 90º
Acoplador rapido com valvula 90º
Raccord avec vanne d'arrêt 90º



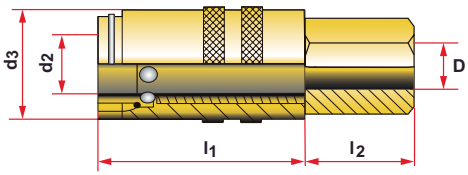
Mat. : Brass / Latón / Mosiądz / Latão.

l1	l2	d4	d1	d3	d2	REF.
41	24	17	6	9	**9**	**BR80-09-90**
51	28	22	9	13	**13**	**BR80-13-90**

BR801 H1/4

Z 80

Coupling open flow
Acoplamiento rápido paso libre
Szybkozłącze z zaworem
Acoplador rapido
Raccord avec passage libre



Mat. : Brass / Latón / Mosiądz / Latão.

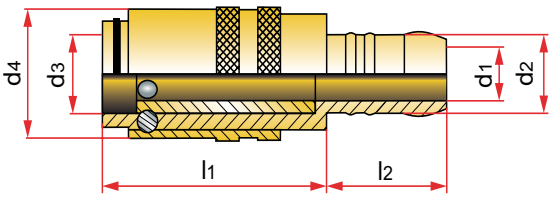
l1	l2	d3	D	d2	REF.
31	20	17	G1/4	9	BR801-09-H1/4
37		23		13	BR801-13-H1/4

BR801

Z 80

8

Coupling, open flow
Enchufe rápido
Szybkozłącze bez zaworu
Acoplador rapido
Raccord avec passage libre



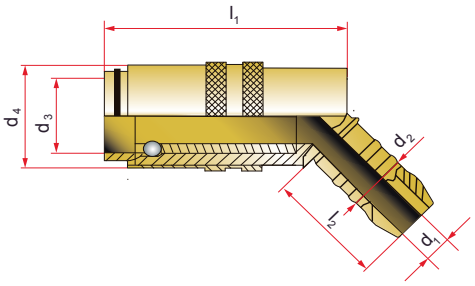
Mat. : Brass / Latón / Mosiądz / Latão.

l1	l2	d4	d1	d3	d2	REF.
31	22	17	6	9	9	BR801-09-09
37	25	23		13		BR801-13-09
			9		13	BR801-13-13

BR801/45º

Z 80

Coupling open flow 45º
Acoplamiento rápido paso libre. Angulo de 45º
Szybkozłącze z zaworem 45º
Acoplador rapido 45º
Raccord avec passage libre 45º



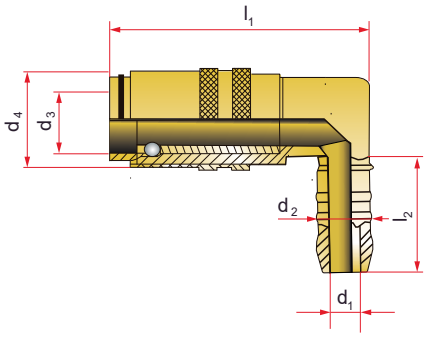
Mat. : Brass / Latón / Mosiądz / Latão.

l1	l2	d4	d1	d3	d1	REF.
41	28	17	6	**9**	9	**BR801-09-45**
51		22	9	**13**	13	**BR801-13-45**

BR801/90º

Z 80

Coupling open flow 90º
Acoplamiento rápido paso libre, Angulo de 90º
Szybkozłącze z zaworem 90º
Acoplador rapido 90º
Raccord avec passage libre 90º



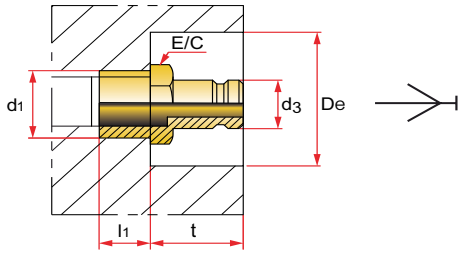
Mat. : Brass / Latón / Mosiądz / Latão.

l1	l2	d4	d1	d3	d1	REF.
41	24	17	6	**9**	9	**BR801-09-90**
51	28	22	9	**13**	13	**BR801-13-90**

BR81

Z 81

Nipple, open flow
Conector sin válvula
Końcówka szybkozłącza
Racord rapido sem valvula
Nipple avec passage libre



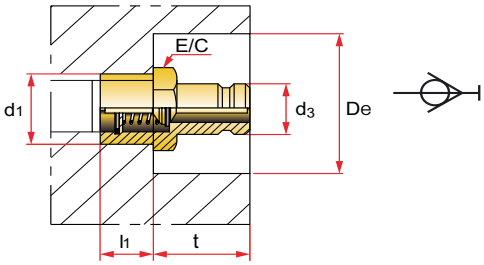
Mat. : Brass / Latón / Mosiądz / Latão.

De	E/C	t	l1	d3	d1	REF.
19	11	18	7	9	G1/8"	BR81-09 - 1/8
22	15		9		G1/4"	BR81-09 - 1/4
25				13	G1/4"	BR81-13 - 1/4
	17				G3/8"	BR81-13 - 3/8
19	11		7	9	M-10x1.00	BR81- 9-M-10
22	15		9		M-14x1.50	BR81- 9-M-14
25				13	M-10x1.00	BR81-13-M-10
					M-14x1.50	BR81-13-M-14
	17				M-16x1.50	BR81-13-M-16

BR811

Z 811

Nipple with valve
Conector con válvula
Końcówka szybkozłącza
Racord rapido com valvula
Nipple avec vanne d'arrêt



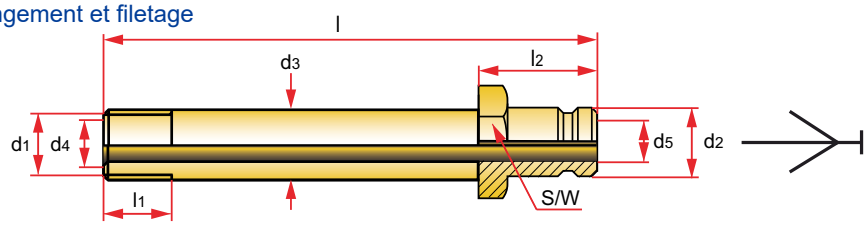
Mat. : Brass / Latón / Mosiądz / Latão.

De	E/C	t	l1	d3	d1	REF.
22	15	18	12	9	G1/4"	BR811-09 - 1/4
25	17			13	G3/8"	BR811-13 - 3/8
22	15			9	M-14x1.50	BR811-09-M14
25				13	M-14x1.50	BR811-13-M14
	17				M-16x1.50	BR811-13-M16

BR2016

E2016

Fitting with extension and thread
Racor con prolongación y rosca
Końcówka szybkozłącza
Conector de água longo com rosca
Raccord avec allongement et filetage



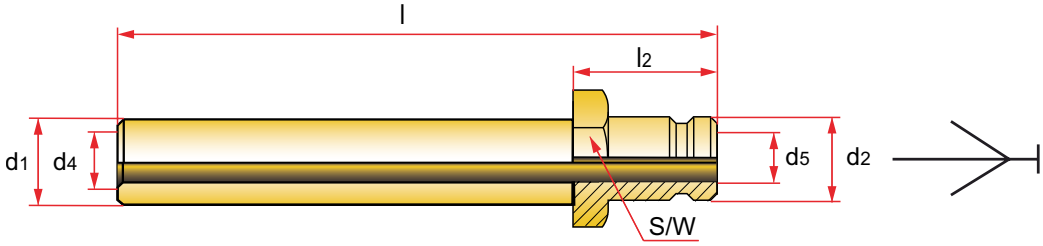
Mat.: 2.0401 (CuZn)

SW	l1	l2	d3	d4	d5	d2	d1	l	REF.
10	7	21	8	4,5	4,5	9	**M 8x0,75**	100	**BR2016-09-08-100**
								120	**BR2016-09-08-120**
11			10	6	6		**M10x1**	80	**BR2016-09-10-080**
								100	**BR2016-09-10-100**
								120	**BR2016-09-10-120**
								140	**BR2016-09-10-140**
								160	**BR2016-09-10-160**
							G 1/8”	80	**BR2016-09-1/8-080**
								100	**BR2016-09-1/8-100**
								120	**BR2016-09-1/8-120**
								140	**BR2016-09-1/8-140**
								160	**BR2016-09-1/8-160**
15	10	22	14	9	9	13	**M14x1,5**	60	**BR2016-13-14-060**
								80	**BR2016-13-14-080**
								100	**BR2016-13-14-100**
								120	**BR2016-13-14-120**
								140	**BR2016-13-14-140**
								160	**BR2016-13-14-160**
								180	**BR2016-13-14-180**
14			13	8	8		**G 1/4”**	80	**BR2016-13-1/4-080**
								100	**BR2016-13-1/4-100**
								120	**BR2016-13-1/4-120**
								140	**BR2016-13-1/4-140**
								160	**BR2016-13-1/4-160**
								180	**BR2016-13-1/4-180**
								200	**BR2016-13-1/4-200**
22	12	37	21	13	13	19	**G 1/2”**	100	**BR2016-19-1/2-100**
								150	**BR2016-19-1/2-150**
								250	**BR2016-19-1/2-250**

BR2018

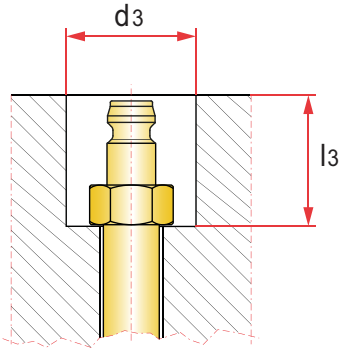
E2018

Fitting with extension
Racor con prolongación
Końcówka złącza wydłużona
Conector de água longo
Raccord avec allongement



Mat.: 2.0401 (CuZn)

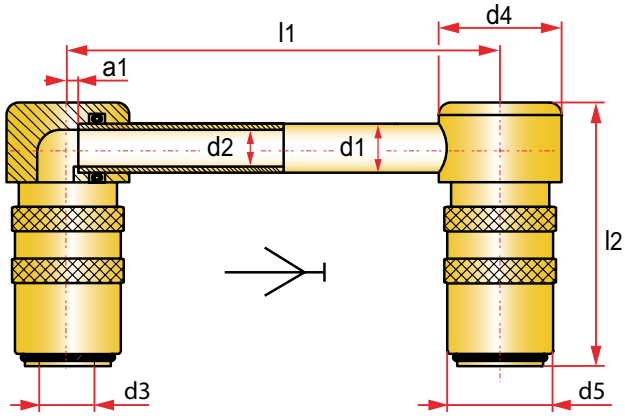
SW	l2	l3 min.	d3	d4	d5	d2	d1	l	REF.
9	21	25	22	5	5	9	8	63	BR2018-09-08-063
								100	BR2018-09-08-100
11				6	6		10	120	BR2018-09-10-120
								240	BR2018-09-10-240
								360	BR2018-09-10-360
15	23	28	26		9	13	12	150	BR2018-13-12-150
				9			14	150	BR2018-13-14-150
								300	BR2018-13-14-300



BR8051

E2252 / Z8051

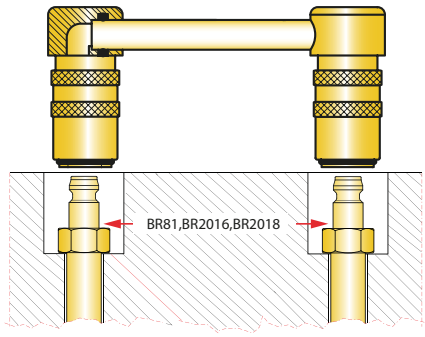
Bridge, plug-in type, with couplers
Puente de refrigeración
Mostek z szybkozłączami
Ponte de refrigeração de acoplamento rápido
Pont enfichable, avec coupleurs



Mat.: 2.0401 (CuZn)

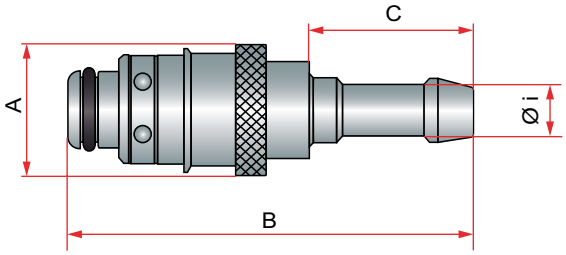
Max.: Air-200 Cº / Oil-200 Cº / Water-150 Cº

p (bar)	a1	d1	d2	d3	d4	d5	l2	l1	REF.
25	2	8	6	**9**	20	17	43	**125**	**BR8051-09-125**
								250	**BR8051-09-250**
								500	**BR8051-09-500**
		10	8	**13**	26	22	53	**125**	**BR8051-13-125**
								250	**BR8051-13-250**
								500	**BR8051-13-500**



BR804

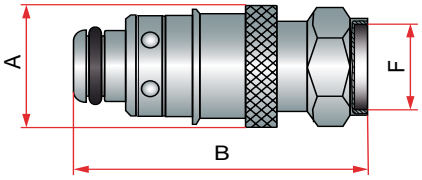
Straight quick coupling
Enchufe rápido
Szybkozłącze
Acoplador rapido
Fiche droite pour tuyau



B	C	A	Ø i	REF.
66	28	20	**10**	**BR804-08.6810**
65			**12,5**	**BR804-08.6812**

BR807

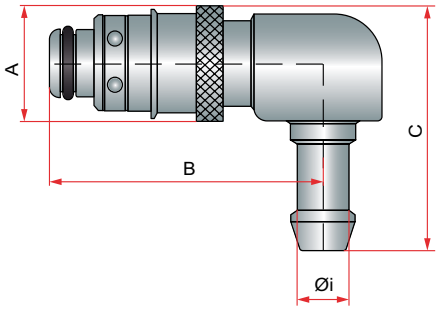
Straight quick coupling female
Enchufe rápido rosca hembra
Szybkozłącze
Acoplador rapido
Fiche droite filetage femelle



B	A	F	REF.
48,5	20	**G1/4**	**BR807-08.6101**

BR804/90º

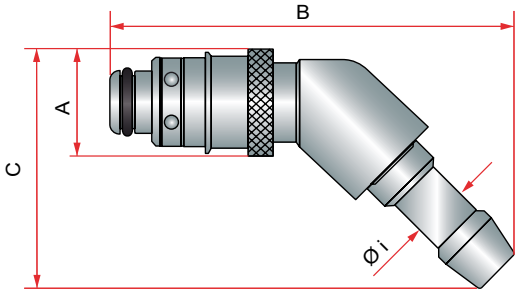
Quick coupling 90º
Enchufe rápido 90º
Szybkozłącze kątowe 90º
Acoplador rapido 90º
Fiche droite pour tuyau 90º



B	C	A	Ø i	REF.
48,5	48	20	**12,5**	**BR804-08.6812-90**

BR804/135º

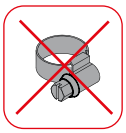
Quick coupling 135º
Enchufe rápido 135º
Szybkozłącze kątowe 135º
Acoplador rapido 135º
Fiche droite pour tuyau 135º

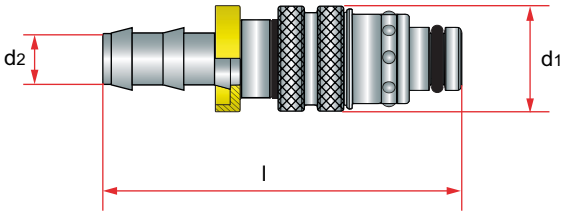


B	C	A	Ø i	REF.
82	49	20	**12,5**	**BR804-08.6812-135**

BR85

Coupler with quick-t nozzle
Enchufe exprés
Wtyk samozaciskowy
Acoplamento rápido, auto-aperto
Coupleur droit rapide

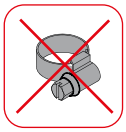


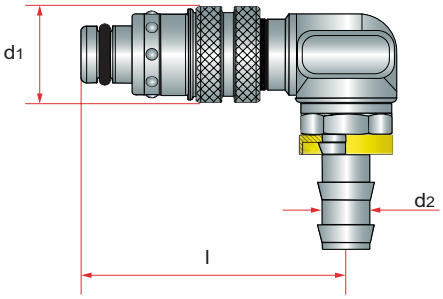


l	d1	d2	REF.
65	20	10	BR85-08.FG10
		13	BR85-08.FG13

BR85/90

Coupler with quick-t nozzle 90º
Enchufe exprés 90º
Wtyk samozaciskowy 90º
Acoplamento rápido, auto-aperto 90º
Coupleur droit rapide 90º

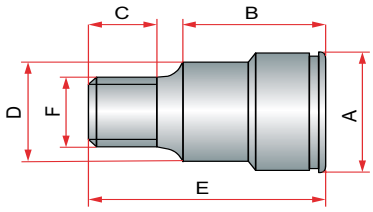


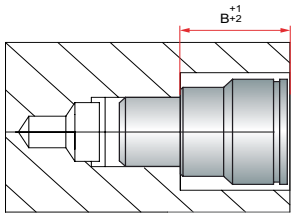


l	d1	d2	REF.
45,5	20	10	BR85-08.FG10-90
		13	BR85-08.FG13-90

BR84

Straight quick coupling male
Racor recto macho
Szybkozłącze proste męskie
Acoplador rapido
Prise droite filetage mâle



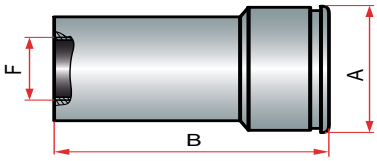


B	E	D	C	A	F	REF.
22	32	17,5	8	21	G1/8	BR84-08.1150
21	33		10		G1/4	BR84-08.1151
11	24		11		G3/8	BR84-08.1152
					G3/8	BR84-08.1152-ON-JV

*With flow stop - Con obturador - Prosta wtyczka - Con obturador - á obturation

BR841

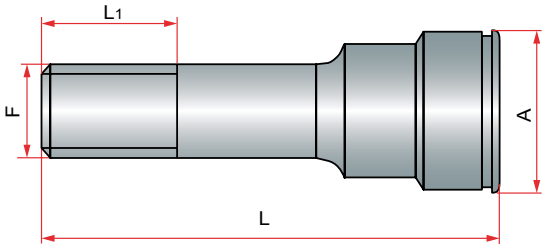
Straight quick coupling female
Racor recto hembra
Szybkozłącze proste żeńskie
Acoplador rapido
Prise droite filetage femelle



B	A	F	REF.
35	21	G 1/8	BR841-08.1100
39		G 1/4	BR841-08.1101

BR84L

Straight quick coupling male
Racor recto macho
Szybkozłącze proste męskie wydłużone
Acoplador rapido
Prise droite filetage mâle

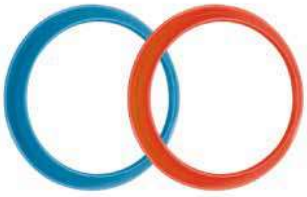


L1	L	Ø A	F	REF.
26	**50**	21	**G1/8**	**BR84-08.1150-050**
60	**100**			**BR84-08.1150-100**
	150			**BR84-08.1150-150**
26,5	**50**		**G1/4**	**BR84-08.1151-050**
60	**100**			**BR84-08.1151-100**
	150			**BR84-08.1151-150**
	200			**BR84-08.1151-200**

8

BR84-08

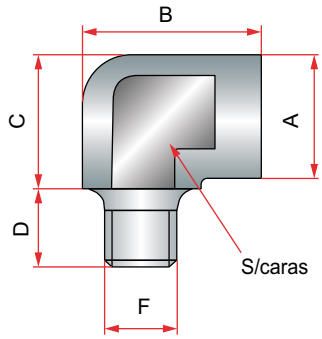
ID ring
Anillo identificación
Pierścień do identyfikacji
Anel para identificação
Bague d'identification



Colour	REF.
Blue	**BR84-08-B**
Red	**BR84-08-R**

BR84/90º

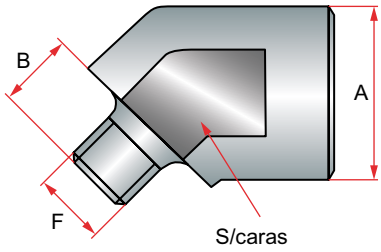
90º quick coupling
Racor rápido 90º
Szybkozłącze kątowe 90º
Acoplador rapido 90º
Prise 90º filetage mâle



D	S/caras	C	B	A	F	REF.
10	19	24	33	22	**G1/8**	**BR84-08.1150-90**
12					**G1/4**	**BR84-08.1151-90**
13					**G3/8**	**BR84-08.1152-90**

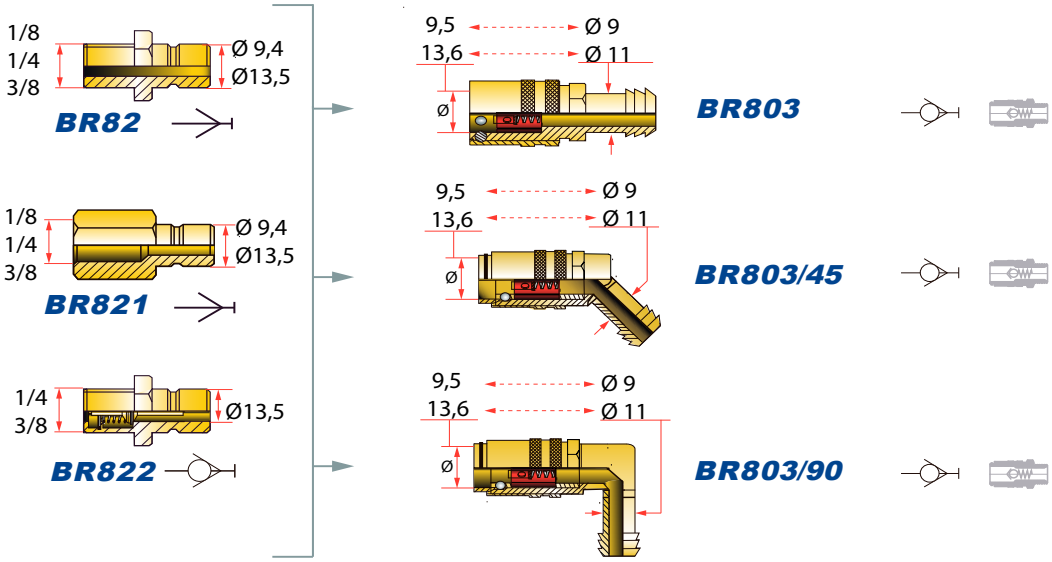
BR84/135º

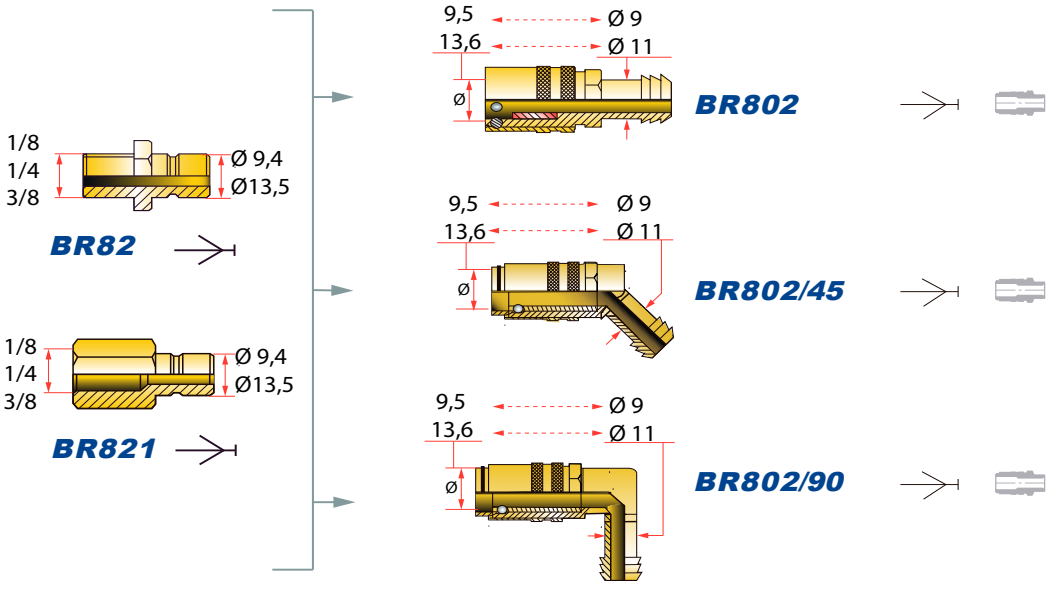
135º quick coupling
Racor rápido 135º
Szybkozłącze kątowe 135º
Acoplador rapido 135º
Prise 135º filetage mâle



S/caras	B	A	F	REF.
19	10	22	**G1/8**	**BR84-08.1150-135**
	12		**G1/4**	**BR84-08.1151-135**
	13		**G3/8**	**BR84-08.1152-135**

Couplings US



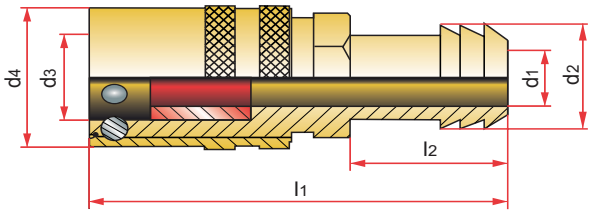


8

Compatible US

BR802

Quick-release coupling
Enchufe rápido
Szybkozłącze bez zaworu
Acoplador rapido
Coupleur rapide

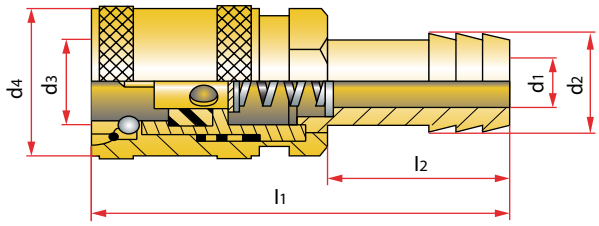


Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

l_1	l_2	d_4	d_1	d_3	d_2	REF.
52	25	17	6	9,5	**10,5**	**BR802-09**
62		22,6	9	13,6	**13,5**	**BR802-11**

BR803

Quick-release coupling with valve
Enchufe rápido con válvula
Szybkozłącze z zaworem
Acoplador rapido com valvula
Coupleur rapide a obturateur

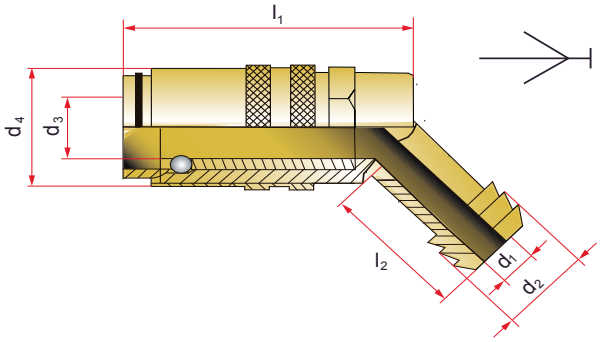


Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

l1	l2	d4	d1	d3	d2	REF.
57	25	17	6	9,5	**10,5**	**BR803-09**
68		22,6	9	13,6	**13,5**	**BR803-11**

BR802/45º

Quick release coupling.45º
Acoplamiento rápido paso libre.45º
Końcówka szybkozłącza. 45º
Acoplador rapido.45º
Coupleur rapide 45º

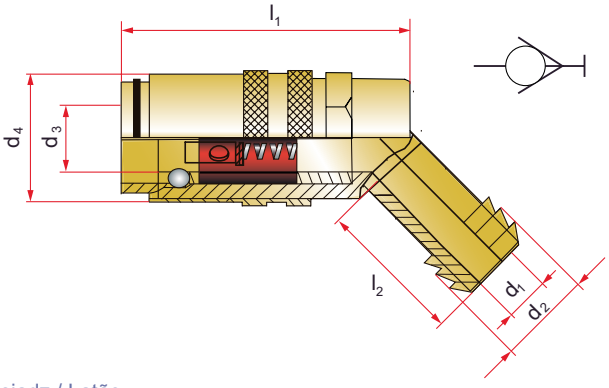


Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

l_1	l_2	d_4	d_1	d_3	d_2	REF.
38	28	17	6	9,5	**10,5**	**BR802-09-45**
52		22,6	9	13,6	**13,5**	**BR802-11-45**

BR803/45º

Quick release coupling with valve. 45º
Acoplamiento rápido con válvula 45º
Końcówka szybkozłącza.45º
Acoplador rápido com válvula.45º
Coupleur 45º rapide a obturateur

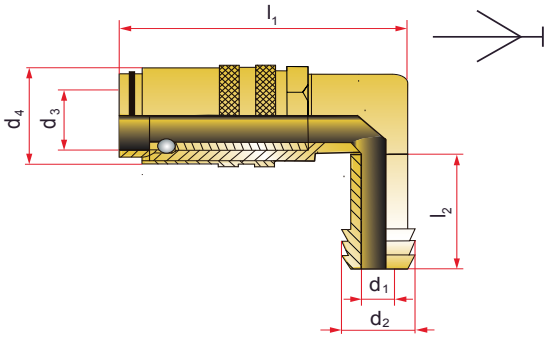


Mat. : Brass / Latón / Mosiądz / Latão.

l1	l2	d4	d1	**d3**	**d2**	REF.
38	28	17	6	9,5	10,5	**BR803-09-45**
52		22,6	9	13,6	13,5	**BR803-11-45**

BR802/90º

Quick release coupling.90º
Acoplamiento rápido paso libre.90º
Końcówka szybkozłącza. 90º
Acoplador rapido.90º
Coupleur rapide 90º

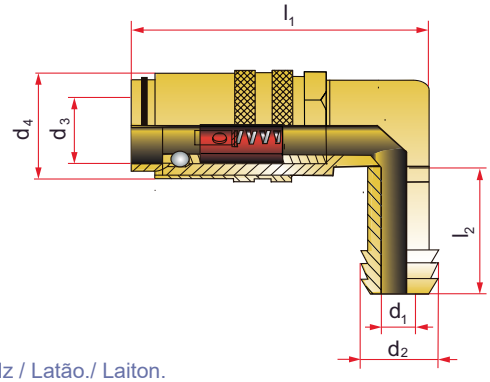


Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

l_1	l_2	d_4	d_1	d_3	d_2	REF.
38	28	17	6	9,5	**10,5**	**BR802-09-90**
52		22,6	9	13,6	**13,5**	**BR802-11-90**

BR803/90º

Quick release coupling with valve. 90º
Acoplamiento rápido con válvula 90º
Końcówka szybkozłącza.90º
Acoplador rápido com válvula.90º
Coupleur 90º rapide a obturateur

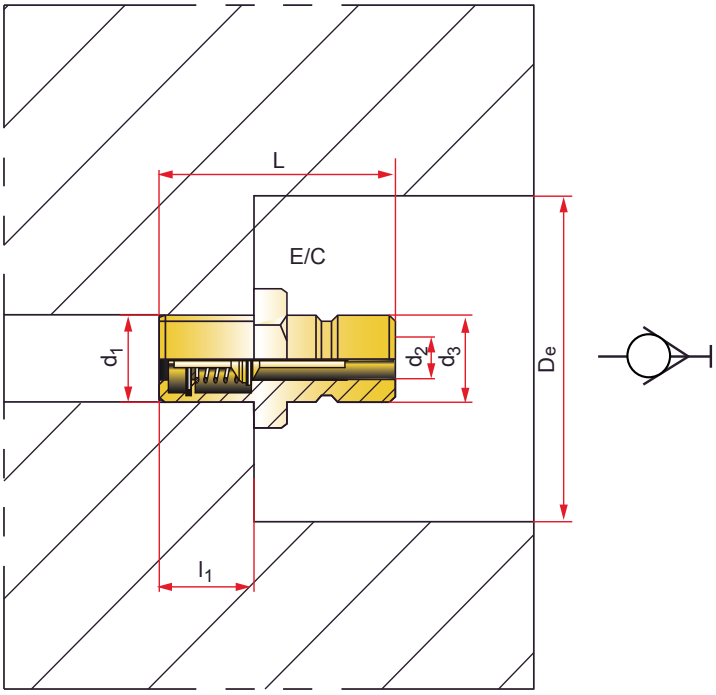


Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

l1	l2	d4	d1	**d3**	**d2**	REF.
38	28	17	6	9,5	**10,5**	**BR803-09-90**
52		22,6	9	13,6	**13,5**	**BR803-11-90**

BR822

Quick-release coupling male
Racor de enchufe rápido macho
Końcówka szybkozłącza
Racord rapido
Racord mâle rapide

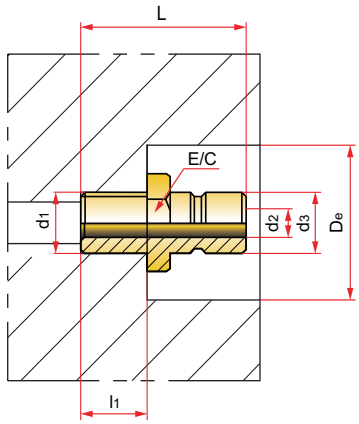


Mat. : Brass / Latón / Mosiądz / Latão / Laiton.

E/C	L	l1	d2	d3	d1	De	REF.
16	34	10	9	13,5	**G1/4"**	25	**BR822-9-1/4**
19					**G3/8"**	30	**BR822-9-3/8**

BR82

Quick-release coupling male
Racor de enchufe rápido macho
Końcówka szybkozłącza
Racord rapido
About de raccordement mâle

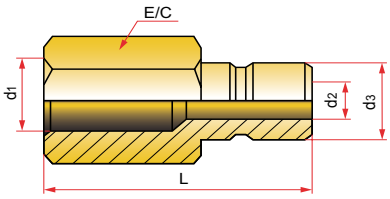


Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

E/C	L	l1	d2	d3	d1	De	REF.
11	24	10	**6**	9,4	**G1/8"**	22	**BR82-6-1/8**
14	29				**G1/4"**	26	**BR82-6-1/4**
17	30				**G3/8"**	30	**BR82-6-3/8**
14			**9**	13,5	**G1/8"**	25	**BR82-9-1/8**
14	34				**G1/4"**		**BR82-9-1/4**
17					**G3/8"**	30	**BR82-9-3/8**

BR821

Quick-release coupling female
Racor de enchufe rápido hembra
Końcówka szybkozłącza
Racord rapido
About de raccordement femelle

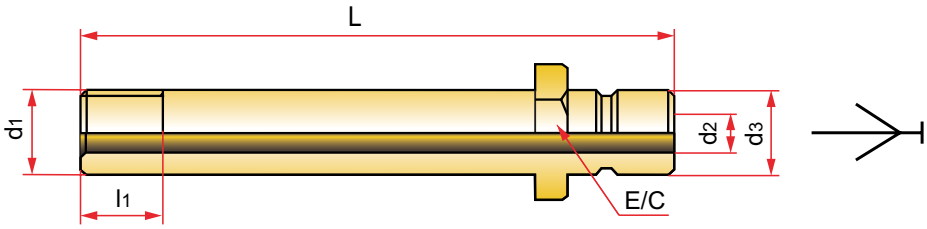


Mat. : Brass / Latón / Mosiądz / Latão / Laiton.

E/C	L	d3	d2	d1	REF.
13	28	9,4	**6**	**G1/8"**	**BR821-6-1/8**
16	32			**G1/4"**	**BR821-6-1/4**
19	34			**G3/8"**	**BR821-6-3/8**
14	28	13,5	**9**	**G1/8"**	**BR821-9-1/8**
16	37			**G1/4"**	**BR821-9-1/4**
19	39			**G3/8"**	**BR821-9-3/8**

BR823

Fitting with extension and thread
Racor con prolongación y rosca
Końcówka szybkozłącza
Conector de água longo com rosca
Raccord avec allongement et filetage



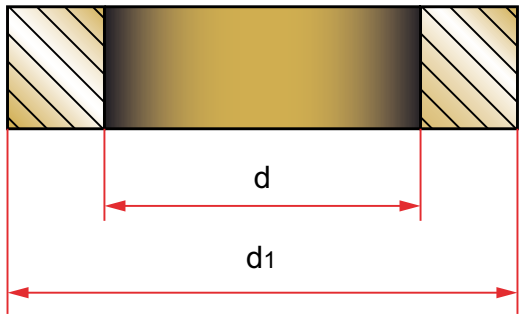
Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

E/C	L	l1	d2	d3	d1	REF.
14	**50**	16	**6**	9,4	**G1/4"**	**BR823-06-050-1/4**
11		11			**G1/8"**	**BR823-06-050-1/8**
17		16			**G3/8"**	**BR823-06-050-3/8**
14	**75**	16			**G1/4"**	**BR823-06-075-1/4**
11		11			**G1/8"**	**BR823-06-075-1/8**
17		16			**G3/8"**	**BR823-06-075-3/8**
14	**100**	16			**G1/4"**	**BR823-06-100-1/4**
11		11			**G1/8"**	**BR823-06-100-1/8**
17		16			**G3/8"**	**BR823-06-100-3/8**
14	**125**	16			**G1/4"**	**BR823-06-125-1/4**
11		11			**G1/8"**	**BR823-06-125-1/8**
17		16			**G3/8"**	**BR823-06-125-3/8**
14	**150**	16			**G1/4"**	**BR823-06-150-1/4**
11		11			**G1/8"**	**BR823-06-150-1/8**
17		16			**G3/8"**	**BR823-06-150-3/8**
14	**200**	16			**G1/4"**	**BR823-06-200-1/4**
11		11			**G1/8"**	**BR823-06-200-1/8**
17		16			**G3/8"**	**BR823-06-200-3/8**
14	**250**	16			**G1/4"**	**BR823-06-250-1/4**
11		11			**G1/8"**	**BR823-06-250-1/8**
17		16			**G3/8"**	**BR823-06-250-3/8**

E/C	L	l1	d2	d3	d1	REF.
14	**50**	16	**9**	13,5	**G1/4"**	**BR823-09-050-1/4**
11		11			**G1/8"**	**BR823-09-050-1/8**
17		16			**G3/8"**	**BR823-09-050-3/8**
14	**75**	16			**G1/4"**	**BR823-09-075-1/4**
11		11			**G1/8"**	**BR823-09-075-1/8**
17		16			**G3/8"**	**BR823-09-075-3/8**
14	**100**	16			**G1/4"**	**BR823-09-100-1/4**
11		11			**G1/8"**	**BR823-09-100-1/8**
17		16			**G3/8"**	**BR823-09-100-3/8**
14	**125**	16			**G1/4"**	**BR823-09-125-1/4**
11		11			**G1/8"**	**BR823-09-125-1/8**
17		16			**G3/8"**	**BR823-09-125-3/8**
14	**150**	16			**G1/4"**	**BR823-09-150-1/4**
11		11			**G1/8"**	**BR823-09-150-1/8**
17		16			**G3/8"**	**BR823-09-150-3/8**
14	**200**	16			**G1/4"**	**BR823-09-200-1/4**
11		11			**G1/8"**	**BR823-09-200-1/8**
17		16			**G3/8"**	**BR823-09-200-3/8**
14	**250**	16			**G1/4"**	**BR823-09-250-1/4**
11		11			**G1/8"**	**BR823-09-250-1/8**
17		16			**G3/8"**	**BR823-09-250-3/8**

BR842

Silicon joint for quick-release coupling BR802/BR803
Junta para enchufe rápido BR802/BR803
Podkładka silikonowa
Anel para aclopador rapido BR802/BR803
Joint pour coupleur rapide BR802/BR803

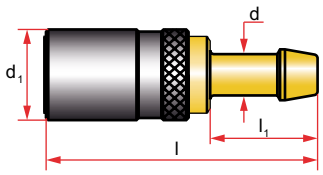


Mat. : Silicone / Silicona / Silikon / Silicone.

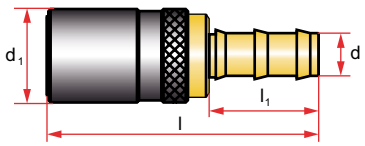
d	d1	H	REF.
7	11	4	**BR842-09**
9	14,5	6,5	**BR842-11**

BR601

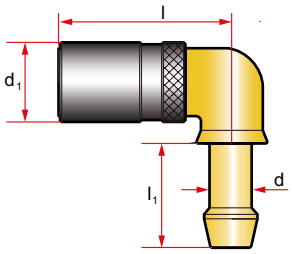
Quick-release coupling
Enchufe rápido
Szybkozłącze bez zaworu
Acoplador rapido
Coupleur rapide



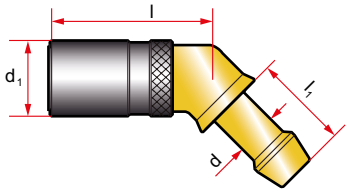
d	d1	l	l1	with valve / con valvula REF.	without valve /sin valvula REF.
8	19	60	23	BR601.06 HGB 08	BR601.06 HG 08
12	25	69,5	28	BR601.09 HGB 12	BR601.09 HG 12
13	31	82	28	BR601.09 HGB 13	BR601.09 HG 13
16	31	82	28	BR601.12 HGB 16	BR601.12 HG 16
16	32	109	28	BR601.16 HGB 16	BR601.16 HG 16
19	38	114	33	BR601.16 HGB 19	BR601.16 HG 19



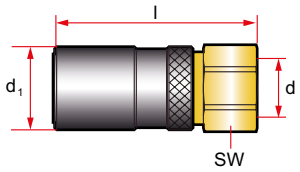
d	d1	l	l1	with valve / con valvula REF.	without valve /sin valvula REF.
10	19	60	24	BR601.06 FGB 10	BR601.06 FG 10
10	25	69,5	24	BR601.09 FGB 10	BR601.09 FG 10
13	25	69,5	28	BR601.09 FGB 13	BR601.09 FG 13
13	31	92	38	BR601.12 FGB 13	BR601.12 FG 13
16	38	109	38	BR601.16 FGB 16	BR601.16 FG 16
19	38	109	38	BR601.16 FGB 19	BR601.16 FG 19



d	d1	l	l1	with valve / con valvula REF.	without valve /sin valvula REF.
8	19	59	23	BR601.06 HGB 08-90°	BR601.06 HG 08-90°
10	25	60	28	BR601.09 HGB 10-90°	BR601.09 HG 10-90°
12	25	65	28	BR601.09 HGB 12-90°	BR601.09 HG 12-90°
16	31	82	28	BR601.12 HGB 16-90°	BR601.12 HG 16-90°
19	38	132	60	BR601.16 HGB 19-90°	BR601.16 HG 19-90°



d	d1	l	l1	with valve / con valvula REF.	without valve /sin valvula REF.
8	19	59	23	BR601.06 HGB 8-45º	BR601.06 HG 8-45º



d	d1	l	SW	with valve / con valvula REF.	without valve /sin valvula REF.
G 1/4"	19	46	17	BR601.06 DGB 13	BR601.06 DG 13
G 3/8"	25	53	22	BR601.09 DGB 17	BR601.09 DG 17
G 1/2"	31	67	27	BR601.12 DGB 21	BR601.12 DG 21
G 3/4"	38	90	35	BR601.16 DGB 26	BR601.16 DG 26

BSP Threads - Cylindrical = “G” Conical = “R” Roscas BSP - Cilindrica = “G” Cónica = “R”

Mat: Brass
Mat: Latón

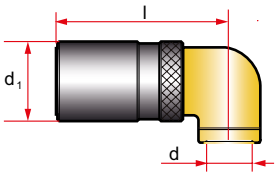
O-ring: Viton®
Junta: Vitón®

Temperature range: -20ºC +100ºC
Rango de temperatura: -20ºc + 100ºC

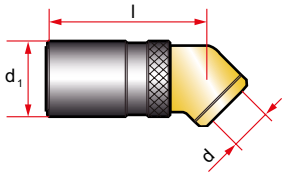
Working pressure: 16 bar
Presión de trabajo : 16 bar

BR601

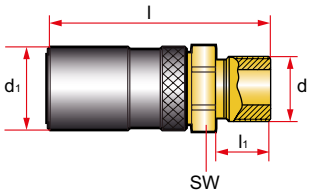
Quick-release coupling
Enchufe rápido
Szybkozłącze bez zaworu
Acoplador rapido
Coupleur rapide



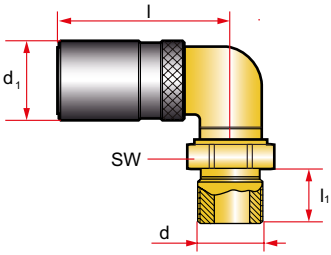
d	d1	l	with valve/con valvula	without valve/sin valvula
			REF.	REF.
G 1/4"	19	24	BR601.06 DGB 13-90°	BR601.06 DG 13-90°
G 3/8"	25	24	BR601.09 DGB 17-90°	BR601.09 DG 17-90°
G 1/2"	31	28	BR601.12 DGB 21-90°	BR601.12 DG 21-90°



d	d1	l1	with valve / con valvula	without valve /sin valvula
			REF.	REF.
G 1/4"	19	59	BR601.06 DGB 13-45°	BR601.06 DG 13-45°



d	d1	l	l_1	SW	with valve / con valvula	without valve /sin valvula
					REF.	REF.
G 1/4"	19	55	10	17	BR601.06 EGB 13	BR601.06 EG 13
G 3/8"	25	61	11	22	BR601.09 EGB 17	BR601.09 EG 17
G 1/2"	31	72	14	27	BR601.12 EGB 21	BR601.12 EG 21
G 3/4"	38	115,5	14	32	BR601.16 EGB 26	BR601.16 EG 26



d	d1	l	l_1	SW	with valve / con valvula	without valve /sin valvula
					REF.	REF.
G 1/4"	19	55	10	17	BR601.06 EGB 13-90º	BR601.06 EG 13-90º
G 3/8"	25	61	11	22	BR601.09 EGB 17-90º	BR601.09 EG 17-90º
G 1/2"	31	72	14	27	BR601.12 EGB 21-90º	BR601.12 EG 21-90º
G 3/4"	38	115,5	14	32	BR601.16 EGB 26-90º	BR601.16 EG 26-90º

BSP Threads - Cylindrical = "G" Conical = "R" Roscas BSP - Cilindrica = "G" Cónica = "R"

Mat: Brass
Mat: Latón

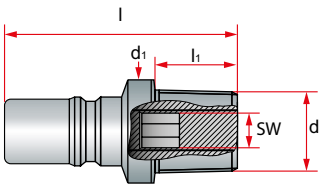
O-ring: Viton®
Junta: Vitón®

Temperature range: -20ºC +100ºC
Rango de temperatura: -20ºc + 100ºC

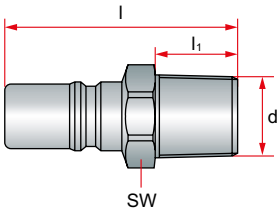
Working pressure: 16 bar
Presión de trabajo : 16 bar

BR601

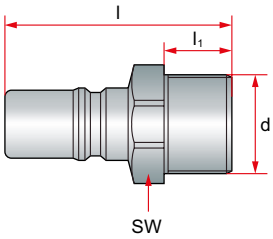
Quick-release coupling male
Racord rapido
Końcówka szybkozłącza
Racord rapido
Racord mâle rapide



d	d1	l	l_1	SW	without valve /sin valvula REF.
R 1/8"	10	31	7,5	5	**BR601.06 ER 10**
R 1/4"	13	35	13	5	**BR601.06 ER 13**
R 1/4"	13	34	10	8	**BR601.09 ER 13**
R 3/8"	17	36	11	8	**BR601.09 ER 17**
R 3/8"	17	39	13	10	**BR601.12 ER 17**



d	l	l_1	SW	without valve /sin valvula REF.
R 1/2"	41	13	24	**BR601.12 ER 21**
R 1/2"	63	16,5	22	**BR601.16 ER 21**
R 3/4"	63	16,5	27	**BR601.16 ER 26**



d	l	l_1	SW	without valve /sin valvula REF.
G 1/2"	41	13	22	**BR601.09 ER 21**
G 3/4"	63	16	27	**BR601.12 ER 26**
G 1"	63	16	35	**BR601.16 ER 33**

BSP Threads - Cylindrical = “G” Conical = “R”

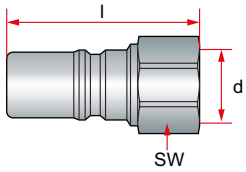
Roscas BSP - Cilindrica = “G” Cónica = “R”

Mat: Brass **Temperature range: -20ºC +100º C** **Working pressure: 16 bar**

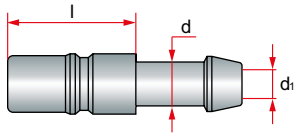
Mat: Latón Rango de temperatura: -20ºc + 100º C Presión de trabajo : 16 bar

BR601

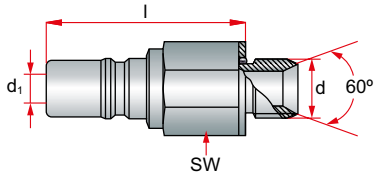
Quick-release coupling male
Racord rapido
Końcówka szybkozłącza
Racord rapido
Racord mâle rapide



d	l	SW	without valve /sin valvula REF.
G 1/4"	34	17	**BR601.06 DR 13**
G 3/8"	37	22	**BR601.09 DR 17**
G 1/2"	45	27	**BR601.12 DR 21**
G 3/4"	58	32	**BR601.16 DR 26**



d	d_1	l	without valve /sin valvula REF.
8	8	24,5	**BR601.06 HR 08**
12	12	53	**BR601.09 HR 12**
16	16	30	**BR601.12 HR 16**
20	19	37	**BR601.16 HR 19**



d	d1	l	SW	without valve /sin valvula REF.
G 1/8	10	38	17	**BR601.06 ORB 10-38**
G 1/4	13	36	17	**BR601.06 ORB 13-36**
G 1/4	13	38	19	**BR601.06 ORB 13-38**
G 3/8	17	38	20	**BR601.06 ORB 17-38**
G 3/8	17	53,5	24	**BR601.06 ORB 17-53,5**
G 1/2	21	50	24	**BR601.06 ORB 21-50**
G 3/4	26	67	32	**BR601.06 ORB 26-67**

BSP Threads - Cylindrical = “G” Conical = “R”

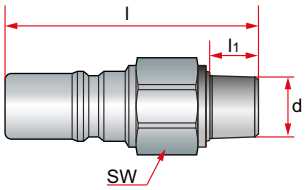
Roscas BSP - Cilindrica = “G” Cónica = “R”

Mat: Brass **Temperature range: -20ºC +100º C** **Working pressure: 16 bar**

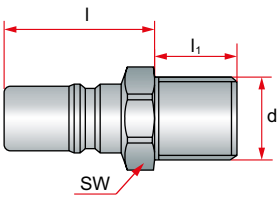
Mat: Latón Rango de temperatura: -20ºc + 100º C Presión de trabajo : 16 bar

BR601

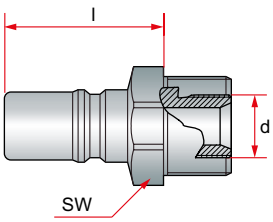
Quick-release coupling male
Racord rapido
Końcówka szybkozłącza
Racord rapido
Racord mâle rapide



d	l	l_1	SW	with valve /con valvula REF.
R 1/8"	45	7	17	**BR601.06 RRB 10**
R 1/4"	45	9	17	**BR601.06 RRB 13**
R 1/4"	51	9	19	**BR601.09 RRB 13**
R 3/8"	48	10	20	**BR601.09 RRB 17**
R 3/8"	63,5	10	24	**BR601.12 RRB 17**
R 1/2"	62	12	24	**BR601.12 RRB 21**
R 3/4"	81	14	32	**BR601.16 RRB 26**



d	l	l_1	SW	with valve /con valvula REF.
G 3/8"	26	10	19	**BR601.06 ERB 17**
G 1/2"	25	12	22	**BR601.09 ERB 21**
G 3/4"	30	16	27	**BR601.12 ERB 26**
G 1"	38	24	32	**BR601.16 RRB 33**



d	l	SW	with valve /con valvula REF.
G 1/4"	47	17	**BR601.06 DRB 13**
G 1/4"	48,5	19	**BR601.09 DRB 13**
G 3/8"	49	22	**BR601.09 DRB 17**
G 3/4"	81	32	**BR601.16 DRB 26**

BSP Threads - Cylindrical = "G" Conical = "R"

Roscas BSP - Cilindrica = "G" Cónica = "R"

Mat: Brass
Mat: Latón

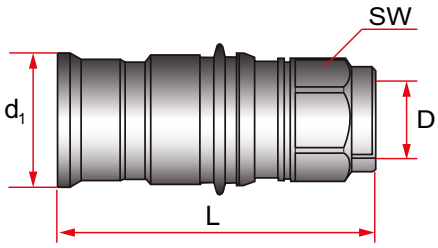
O-ring: Viton®
Junta: Vitón®

Temperature range: -20ºC +100ºC
Rango de temperatura: -20ºc + 100ºC

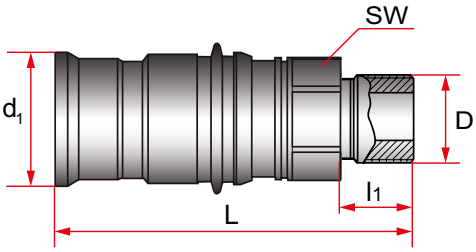
Working pressure: 16 bar
Presión de trabajo : 16 bar

BR601

Quick-release coupling
Enchufe rápido
Szybkozłącze bez zaworu
Acoplador rapido
Coupleur rapide



D	d_1	L	SW	whit valve/con valvula REF.
G 3/4"	53	119,5	42	**BR601.20 DGB 26**
G 1"	60	140	50	**BR601.25 DGB 33**
G 1"-1/4	60	140	50	**BR601.25 DGB 42**
G 1"-1/2	82	158	70	**BR601.38 DGB 48**
G 2"	82	158	70	**BR601.38 DGB 60**



D	d_1	L	l_1	SW	whit valve/con valvula REF.
G 1"	53	132	20	42	**BR601.20 EGB 33**
G 1"	60	144	20	50	**BR601.25 EGB 33**
G 1"-1/4	60	144	21	50	**BR601.25 EGB 42**
G 1"-1/2	82	167	24	70	**BR601.38 EGB 48**

BSP Threads - Cylindrical = “G” Conical = “R”

Roscas BSP - Cilindrica = “G” Cónica = “R”

Mat: Brass
Mat: Latón

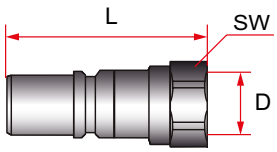
O-ring: Viton®
Junta: Vitón®

Temperature range: -20ºC +100ºC
Rango de temperatura: -20ºc + 100ºC

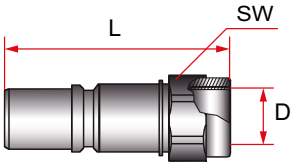
Working pressure: 16 bar
Presión de trabajo : 16 bar

BR601

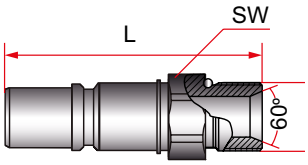
Quick-release coupling
Racord rapido
Końcówka szybkozłącza
Racord rapido
Racord rapide



D	L	SW	without valve /sin valvula REF.
G 1"	92	41	**BR601.20 DR 33**
G 1"	100	41	**BR601.25 DR 33**
G 1"-1/2	110	65	**BR601.38 DR 48**



D	L	SW	whit valve/con valvula REF.
G 3/4"	126,5	42	**BR601.20 DRB 26**
G 1"	126,5	42	**BR601.20 DRB 33**
G 1"	148,5	50	**BR601.25 DRB 33**
G 1"-1/4	158	50	**BR601.25 DRB 42**
G 1"-1/2	156	70	**BR601.38 DRB 48**
G 2"	156	70	**BR601.38 DRB 60**



D	L	SW	whit valve/con valvula REF.
G 1"	120	42	**BR601.20 ERB 33**
G 1"	127	50	**BR601.25 ERB 33**
G 1"-1/4	131,5	50	**BR601.25 ERB 42**
G 1"-1/2	156	70	**BR601.38 ERB 48**
G 2"	161	70	**BR601.38 ERB 60**

BSP Threads - Cylindrical = “G” Conical = “R”

Roscas BSP - Cilindrica = “G” Cónica = “R”

Mat: Brass
Mat: Latón

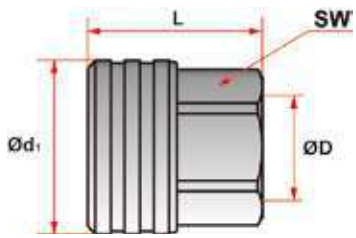
O-ring: Viton®
Junta: Vitón®

Temperature range: -20ºC +100ºC
Rango de temperatura: -20ºc + 100ºC

Working pressure: 16 bar
Presión de trabajo : 16 bar

BR606 DG

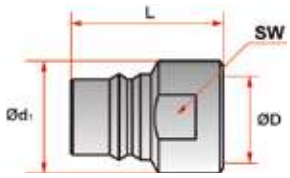
Quick-release coupling
Enchufe rápido
Szybkozłącze bez zaworu
Acoplador rapido
Coupleur rapide



D	d1	L	SW	without valve /sin valvula REF.
1"	57	57	46	**BR606.25 DG 33**
1"1/4	65	62	54	**BR606.33 DG 42**
2"	89	70	77	**BR606.50 DG 60**
2"1/2	109	84	90	**BR606.63 DG 75**

BR606 DR

Quick-release coupling
Racord rapido
Końcówka szybkozłącza
Racord rapido
Racord rapide



D	d1	L	SW	without valve /sin valvula REF.
1"	45	61	41	**BR606.25 DR 33**
1"1/4	55	66	50	**BR606.33 DR 42**
2"	75	78	71	**BR606.50 DR 60**
2"1/2	90	83	84	**BR606.63 DR 75**

BSP Threads - Cylindrical = “G” Conical = “R”

Roscas BSP - Cilindrica = “G” Cónica = “R”

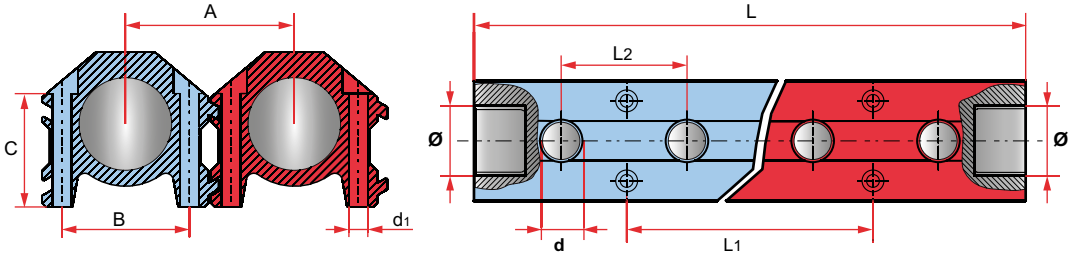
Mat: Brass
Mat: Latón

Temperature range: -20ºC +100ºC
Rango de temperatura: -20ºc + 100ºC

Working pressure: 10 bar
Presión de trabajo : 10 bar

BR116

Water manifolds
Distribuidores de aluminio
Rozdzielacz
Coletor de água
Bloc de distribution en aluminium



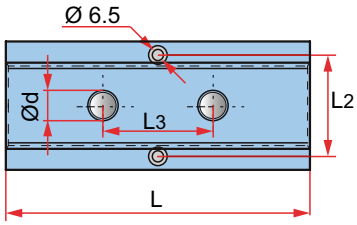
INLET THREAD Ø ENTRADA	d_1	A	B	C	d	L	L_1	L_2	Nº EXITS / Nº DE SALIDAS	REF.
G3/4"	4,5	45	31	30	**G1/4"**	190	76	38	**4**	**BR116-04-13-26**
						266	152		**6**	**BR116-06-13-26**
						342	228		**8**	**BR116-08-13-26**
					G3/8"	229	102	51	**4**	**BR116-04-17-26**
						331	204		**6**	**BR116-06-17-26**
						433	306		**8**	**BR116-08-17-26**
G 1"	7,2	53	40,5	36,5	**G1/4"**	190	76	38	**4**	**BR116-04-13-33**
						266	152		**6**	**BR116-06-13-33**
						342	228		**8**	**BR116-08-13-33**
						418	304		**10**	**BR116-10-13-33**
						494	380		**12**	**BR116-12-13-33**
						646	532		**16**	**BR116-16-13-33**
					G3/8"	229	102	51	**4**	**BR116-04-17-33**
						331	204		**6**	**BR116-06-17-33**
						433	306		**8**	**BR116-08-17-33**
						535	408		**10**	**BR116-10-17-33**
						637	510		**12**	**BR116-12-17-33**
						841	714		**16**	**BR116-16-17-33**
					G1/2"	229	102		**4**	**BR116-04-21-33**
						331	204		**6**	**BR116-06-21-33**
						433	306		**8**	**BR116-08-21-33**
						535	408		**10**	**BR116-10-21-33**
						637	510		**12**	**BR116-12-21-33**

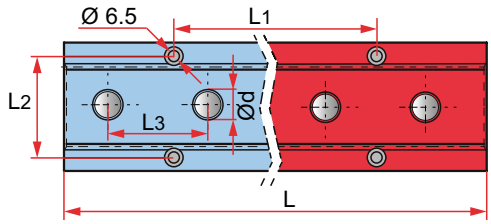
How to order: REF+Red/Blue Example: BR116-04-13-33-R
Forma pedido: REF+Rojo/Azul Ejemplo: BR116-04-13-33-R

BSP Threads - Cylindrical = "G" Conical = "R"
Roscas BSP - Cilindrica = "G" Cónica = "R"

BR118

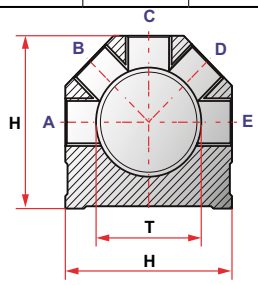
Water manifolds
Distribuidores de aluminio
Rozdzielacz
Coletor de água
Bloc de distribution en aluminium

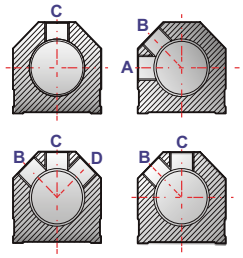


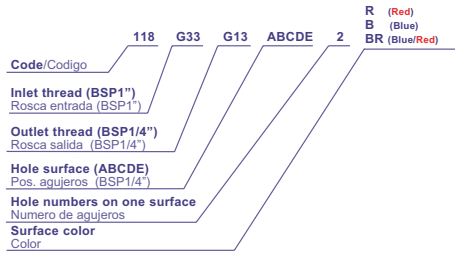


Ø T Inlet Thread / Rosca entrada	Ø d Outlet Thread / Rosca salida	Number of Holes on one Surface/ Num. Agujeros	L	L1	L2	L3	H
G 3/4	G 1/8 G 1/4	2	74	0	35	31	44,5
		4	132	62			
		6	194	124			
		8	256	186			
G 1	G 1/4 G 3/8	2	103	0	38	40	51
		4	183	80			
		6	263	160			
		8	343	240			
G 1-1/4	G 1/4 G 3/8 G 1/2	2	152	0	57	51	65
		4	254	101,6			
		6	355	203,2			
		8	457	304,8			
G 1-1/2	G 3/8 G 1/2	2	152	0	57	51	76
		4	254	101,6			
		6	355	203,2			
		8	457	304,8			
G 2	G 3/8 G 1/2 G 3/4	2	203	0	72,5	63,5	89
		4	305	127			
		6	432	254			
		8	559	381			

Thread size explanations Codigos de la roscas
BSP
1/4 = G13
3/8 = G17
1/2 = G21
3/4 = G26
1" = G33
1-1/4 = G42
1-1/2 = G48
2" = G60



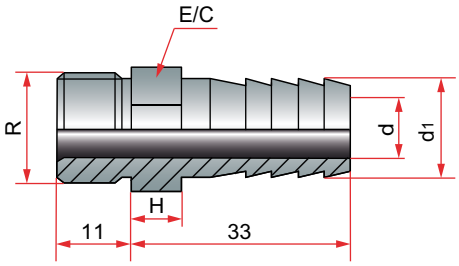




BR87

E 2040

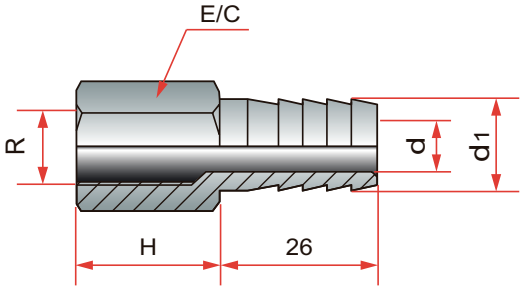
Cooling coupling male
Boquilla de refrigeración macho
Końcówka szybkozłącza męska
Acoplador refrigeração
About fileté mâle



E/C	H	d	d1	R	REF.
14	7	6	13	G 1/8”	BR87/ 1/8
		7		G 1/4”	BR87/ 1/4
17				G 3/8”	BR87/ 3/8

BR875

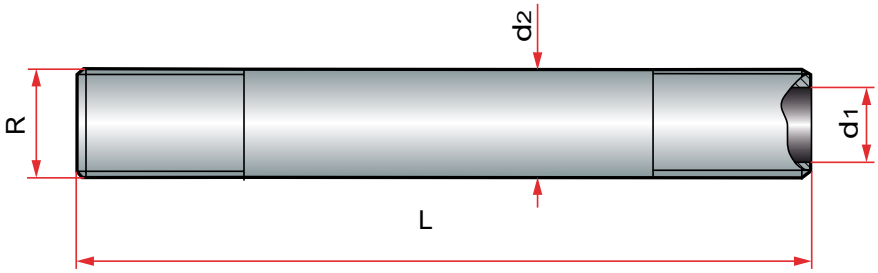
Cooling coupling female
Boquilla de refrigeración hembra
Końcówka szybkozłącza żeńska
Acoplador refrigeração
About fileté femelle



E/C	H	d	d1	R	REF.
14	18	7	13	G 1/8”	BR875/ 1/8
16				G 1/4”	BR875/ 1/4
19	20			G 3/8”	BR875/ 3/8

BR88

Threaded extension pipes
Tubo roscado
Tulejka przedłużająca z gwintem
Tubo roscado
Allongues



Mat. : Galvanized steel / Acero galvanizado / Stal ocynkowana / Aço galvanizado./ Acier galvanisé.

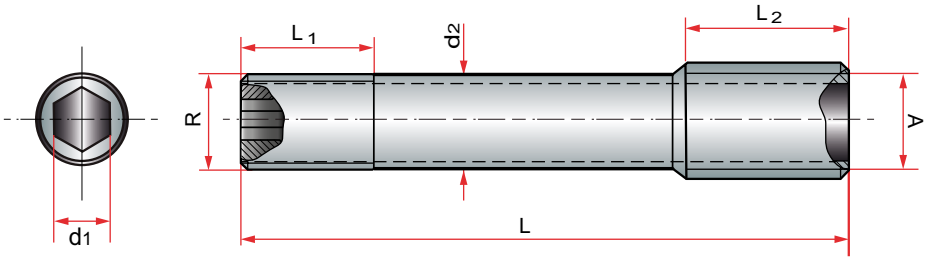
d2	d1	R	L	REF.
10	7	G1/8"	50	BR88/ 1/8" x 50
			75	BR88/ 1/8" x 75
			100	BR88/ 1/8" x 100
			150	BR88/ 1/8" x 150
			200	BR88/ 1/8" x 200
			250	BR88/ 1/8" x 250
			300	BR88/ 1/8" x 300
13	9	G1/4"	50	BR88/ 1/4" x 50
			75	BR88/ 1/4" x 75
			100	BR88/ 1/4" x 100
			150	BR88/ 1/4" x 150
			200	BR88/ 1/4" x 200
			250	BR88/ 1/4" x 250
			300	BR88/ 1/4" x 300

BSP Threads - Cylindrical = “G” Conical = “R”

Roscas BSP - Cilindrica = “G” Cónica = “R”

BR89

Threaded extension pipes
Tubo roscado
Tulejka przedłużająca z gwintem
Tubo roscado
Allongues



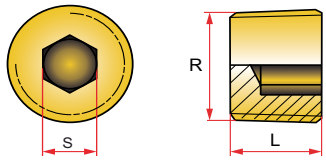
Mat. : Galvanized steel / Acero galvanizado / Stal ocynkowana / Aço galvanizado./ Acier galvanisé.

d_2	L_1	L_2	d_1	R/A	L	REF.
10	10	12	5	G1/8"	50	BR89/ 1/8" x 50
					75	BR89/ 1/8" x 75
					100	BR89/ 1/8" x 100
					125	BR89/ 1/8" x 125
14	11		8	G1/4"	50	BR89/ 1/4" x 50
					75	BR89/ 1/4" x 75
					100	BR89/ 1/4" x 100
					125	BR89/ 1/4" x 125
					150	BR89/ 1/4" x 150

BR94

E2074. Z94

Taper threaded plug
Tapón con rosca cónica
Korek stożkowy
Tampão conico
Bouchon filete conique



Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

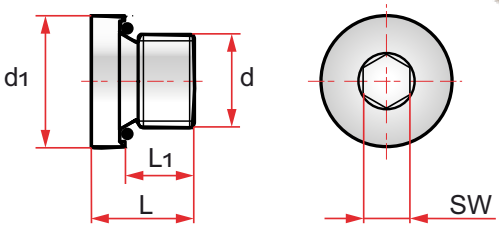
S	L	R	REF.
5	8	R1/8"	BR94 - 1/8"
7	10	R1/4"	BR94 - 1/4"
8		R3/8"	BR94 - 3/8"
10		R1/2"	BR94 - 1/2"
12	12	R3/4"	BR94 - 3/4"
5	8	M10x1	BR94-M10 x 1
6		M12x1,5	BR94-M12x1,5
7	10	M14x1,5	BR94-M14x1,5

BSP Threads : Cylindrical = “G” / Conical = “R” Roscas BSP: Cilindrica = “G” / Cónica = “R”

BR948

E7140. Z9410

Cooling circuit plugs
Tapones para circuito de refrigeración
Zaślepka rozprężna
Tampões para refrigeração
Bouchon pour circuit refroidissement



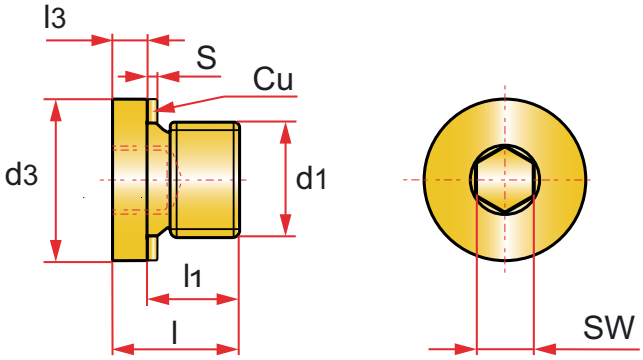
Mat. : Brass / NBR Ring

d	d_1	L	L_1	SW	REF.
M10x1,00	14	10	7	5	BR948- 10
M12x1,50	17	11	8	6	BR948- 12
M14x1,50	19	12	9	8	BR948- 14
M16x1,50	21		9,5	10	BR948- 16
M22x1,50	27	13	11,5	14	BR948- 22
G1/8	14	10	7	5	BR948-1/8”
G1/4	18	11	8	7	BR948-1/4”
G3/8	22	12	9	8	BR948-3/8”
G1/2	24	13	9,5	10	BR948-1/2”
G3/4	32	15	11,5	12	BR948-3/4”
G1	39			14	BR948- 1”

BR2076

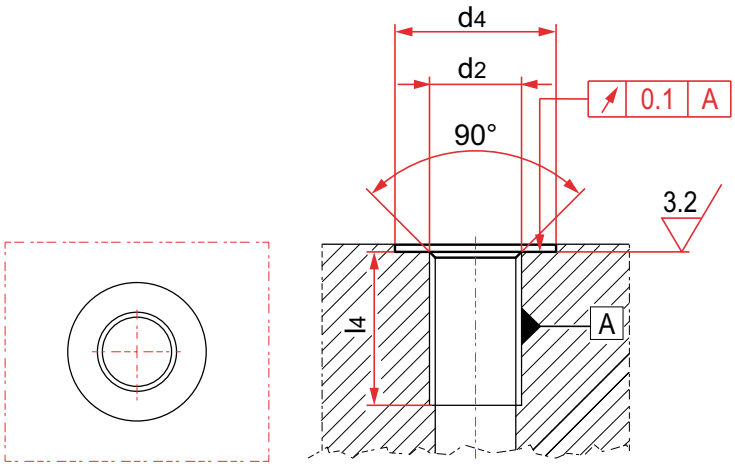
E2076

Screw plug with collar and copper sealing washer
Tapón roscado con junta de Cu
Korek zamykający z kołnierzem i podkładką miedzianą pod klucz imbusowy
Tampão roscado com anilha em cobre
Bouchon fileté avec collerette et joint plat en cuivre



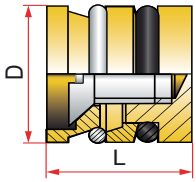
Mat. : 2.0401 (CuZn) DIN908 p max. = 16 bar t max. = 250º

sw	Nm max.	l4 min.	d2	s	l	l1	l3	d4	d3	d1	REF.
4	5Nm	8	9	1	11	8	3	14	13	**M9x1**	**BR2076- 9X1**
5	6Nm	8	10	1	11	8	3	15	14	**M10x1**	**BR2076-10X1**
5	9Nm	8	11	1	11	8	3	16	15	**M11x1**	**BR2076-11X1**
6	12Nm	12	12	1,5	15	12	3	18	17	**M12x1,5**	**BR2076-12X1,5**
6	22Nm	12	14	1,5	15	12	3	20	19	**M14x1,5**	**BR2076-14X1,5**
5	6Nm	8	9,73	1	11	8	3	15	14	**G1/8”**	**BR2076-1-8**
6	22Nm	12	13,16	1,5	15	12	3	20	18	**G1/4”**	**BR2076-1-4**
8	30Nm	12	16,66	1,5	15	12	3	23	22	**G3/8”**	**BR2076-3-8**
10	42Nm	14	20,96	1,5	18	14	4	28	26	**G1/2”**	**BR2076-1-2**
12	50Nm	16	26,44	2	20	16	4	33	32	**G3/4”**	**BR2076-3-4**



TCR

Cooling circuit plugs
Tapones para circuito de refrigeración
Zaślepka rozprężna
Tampões para refrigeração
Bouchon pour circuit refroidissement

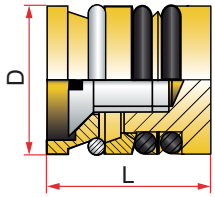


Mat. : Brass + alloy steel. 1- VITON RING

D	L	REF.
6	10	TCR/ 6
8		TCR/ 8
10	11	TCR/ 10
12	12	TCR/ 12

TCR2

Cooling circuit plugs
Tapones para circuito de refrigeración
Zaślepka rozprężna
Tampões para refrigeração
Bouchon pour circuit refroidissement

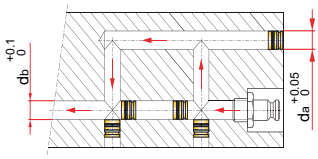


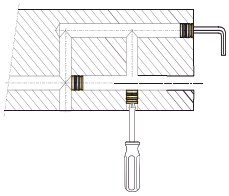
Mat. : Brass + alloy steel. 1 - VITON RING, 1-NBR RING

D	L	REF.
6	11	TCR2/ 6
8	12	TCR2/ 8
10	12	TCR/2 10
12	13	TCR2/ 12
14	16	TCR2/ 14
16	17	TCR2/ 16

da
-Holes tolerances for tapping
-Tolerancias del agujero para el cierre

db
-Holes tolerances for deviating
-Tolerancias del agujero para el circuito

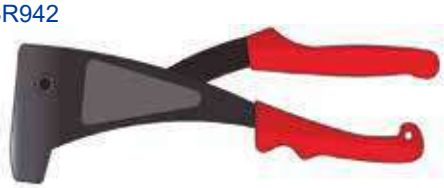




BR945

E 2077, Z 945/1

Pliers set with BR942 sealing plugs
Juego de pinzas para tapones BR942
Zestaw kluczy do zaślepek BR942
Equiàmento para montagem do tampão BR942
Set de pince pour bouchon BR942



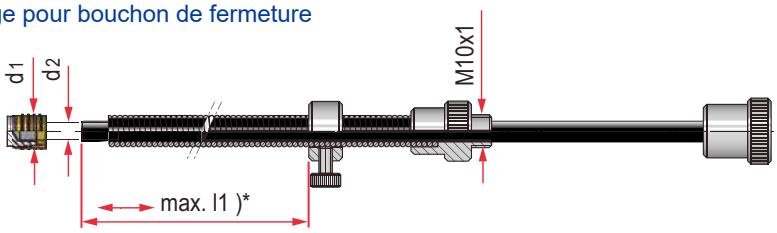
*Tope ajustable.

l1	d2	d1	REF.
8	M3	**6**	**BR945**
	M4	**8**	
10	M6	**10**	
		12	

BR947

E 20772, Z 947/1

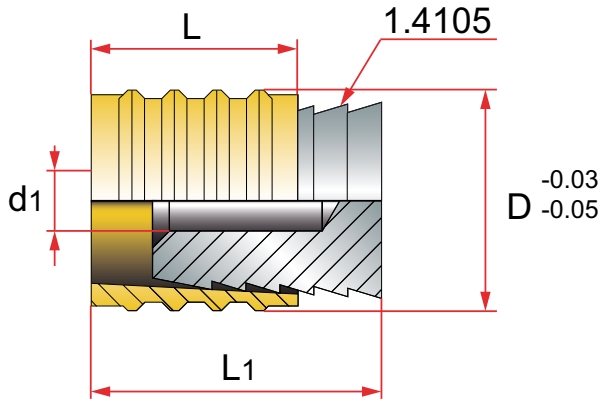
Mounting rod for sealing plug BR942
Barra para el montaje del tapón BR942
Przyrząd montażowy do korków zaślepiających
Haste parr montagem do tampão BR942
Tige de montage pour bouchon de fermeture



*Tope ajustable.

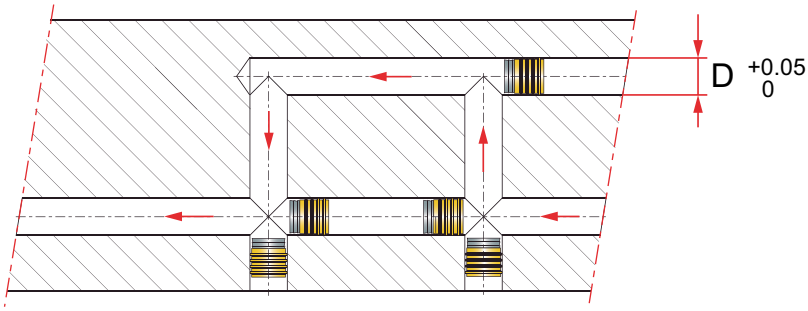
d2	d1	l1	REF.
M3	6	**270**	**BR947/ 6X270**
		440	**BR947/ 6X440**
M4	8	**270**	**BR947/ 8X270**
		440	**BR947/ 8X440**
M6	10	**270**	**BR947/ 10X270**
		440	**BR947/ 10X440**
	12	**270**	**BR947/ 12X270**
		440	**BR947/ 12X440**

Sealing plug
Obturador de circuito
Zaślepka rozprężna
Circuito do obturador
Circuit d'obturation



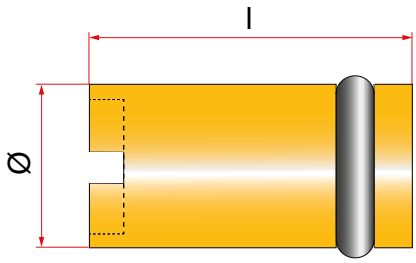
Mat. : Brass + steel 1.4105.

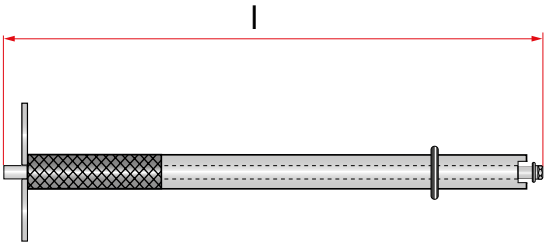
d_1	L_1	D	L	REF.
M3	11,5	**6**	8	**BR942/ 06**
M4		**8**		**BR942/ 08**
M6	14	**10**	10	**BR942/ 10**
M6		**12**		**BR942/ 12**



BRWV

Taper plug brass + viton
Tapón de latón + vitón
Zaślepka + viton
Tampão latão + viton
Bouchon laiton + viton

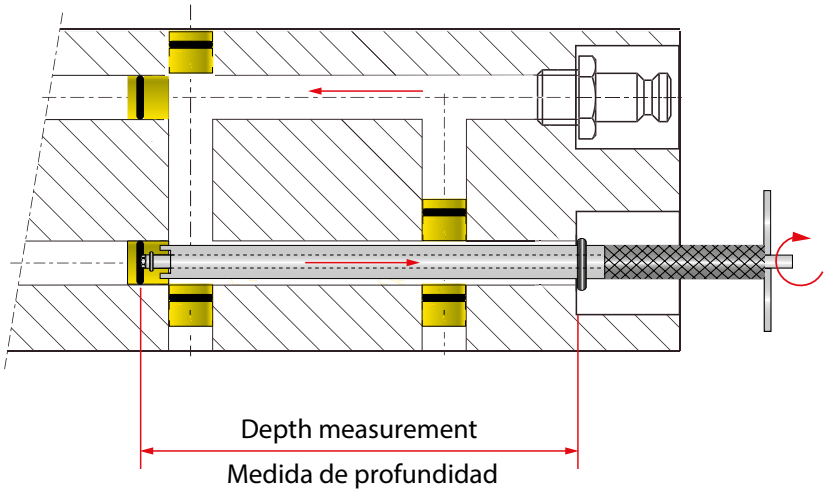




Mat. : Brass. O-ring: viton.

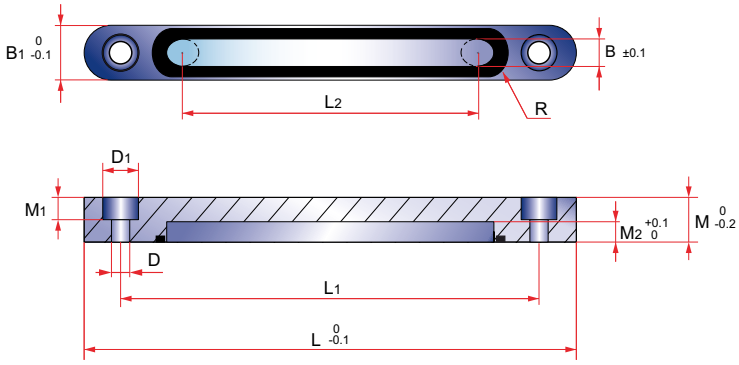
Ø	l	REF.
6	15	BRWV/ 6
8		BRWV/ 8
10		BRWV/ 10
12		BRWV/ 12

Ø	l	REF.
6	150	BRWV/ 106
	300	BRWV/ 306
8	150	BRWV/ 108
	300	BRWV/ 308
10	150	BRWV/ 110
	300	BRWV/ 310
12	150	BRWV/ 112
	300	BRWV/ 312



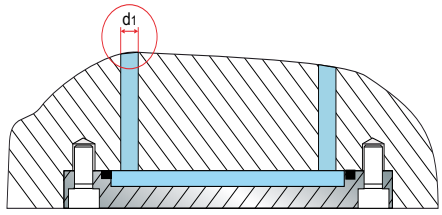
BR7740

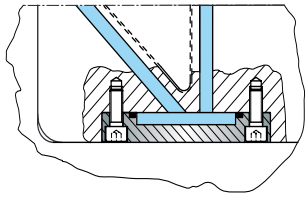
Deflection element
Puente de refrigeración
Kanałouszczelka
Ponte de refrigeração
Element de deviation

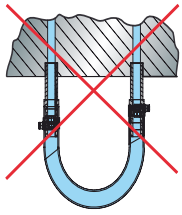


Mat. : Aluminium.

d1	D1	D	M2	M1	M	L1	B1	L	L2	B	REF.
≤6	13	8,5	6,5	8	18	89	22	111	**53**	**8**	**BR7740 - 8 x 53**
						134		156	**98**		**BR7740 - 8 x 98**
≤8						91	24	115	**53**	**10**	**BR7740 - 10 x 53**
						136		160	**98**		**BR7740 - 10 x 98**
≤10						95	28	123	**53**	**14**	**BR7740 - 14 x 53**
						140		168	**98**		**BR7740 - 14 x 98**



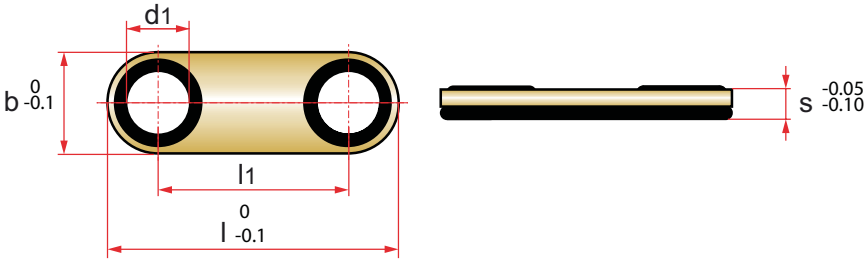




BR2137

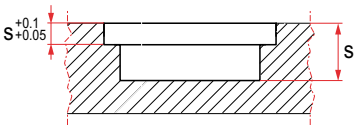
E 2137 Z9642

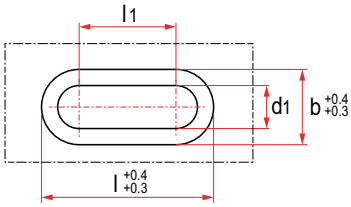
Deflection element
Puente de refrigeración
Kanałouszczelka
Ponte de refrigeração
Element de deviation

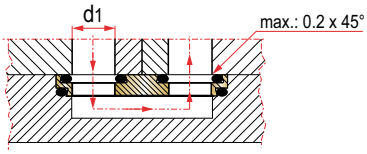


Mat. : 2.0401 - FKM (Viton) p max. = 6 bar max. t = water 100º / oil 180º

1xBR21311	2xBR21311	b	s	s1	l	d1	l1	REF.
BR21311-14x2	BR21311-5x2	11	4	8	26	5	15	BR2137-05-15
BR21311-18x2					33		22	BR2137-05-22
BR21311-22x2					41		30	BR2137-05-30
BR21311-15,5x2	BR21311-6x2	12		9	28	6	16	BR2137-06-16
BR21311-20x2					36		24	BR2137-06-24
BR21311-24x2					44		32	BR2137-06-32
BR21311-18x2	BR21311-8x2	14		11	32	8	18	BR2137-08-18
BR21311-23,5x2					42		28	BR2137-08-28
BR21311-28x2					50		36	BR2137-08-36
BR21311-21x2	BR21311-10x2	16		12	36	10	20	BR2137-10-20
BR21311-26x2					46		30	BR2137-10-30
BR21311-32x2					56		40	BR2137-10-40
BR21311-24x2	BR21311-12x2	18		14	40	12	22	BR2137-12-22
BR21311-29x2					50		32	BR2137-12-32
BR21311-36x2					62		44	BR2137-12-44
BR21311-29x2	BR21311-16x2	22		18	48	16	26	BR2137-16-26
BR21311-37x2					62		40	BR2137-16-40
BR21311-43x2					74		52	BR2137-16-52

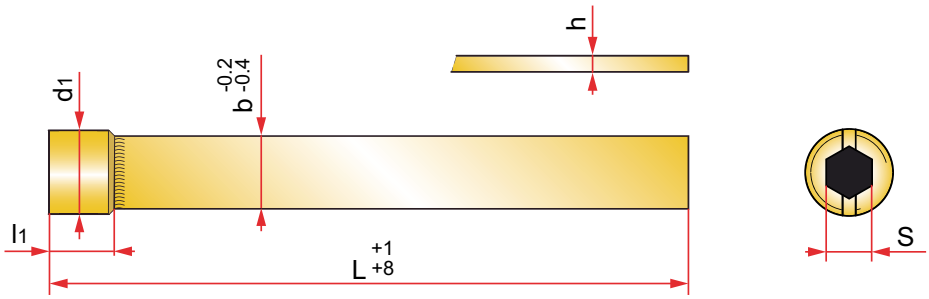






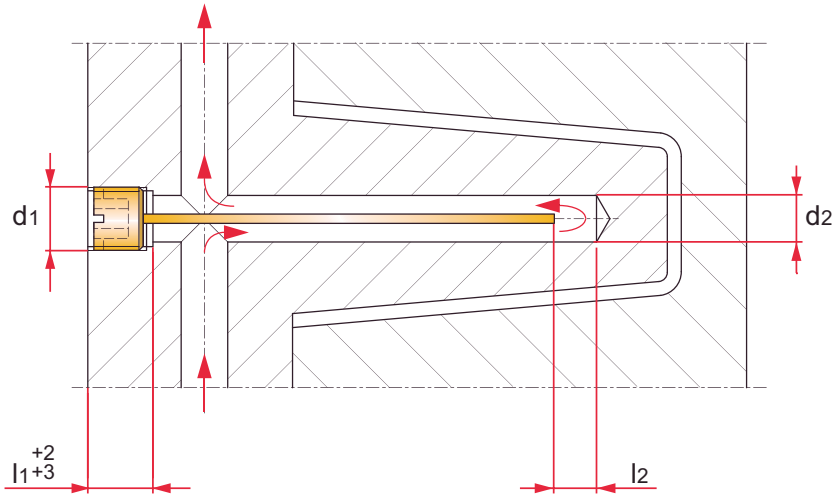
8

Threaded straight plug baffles
Refrigerador de lámina
Przegroda
Refrigerador de lamina
Bloc de refroidissement a lame



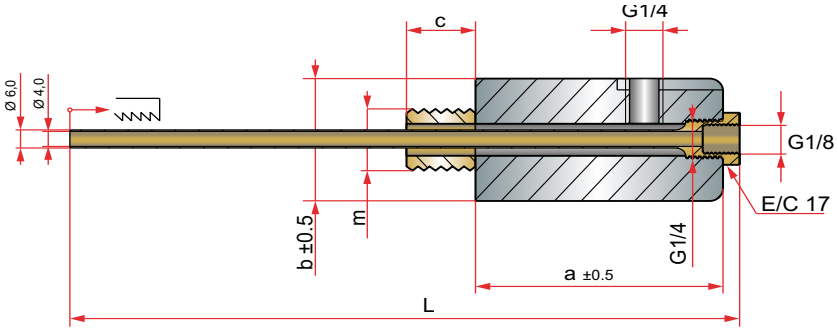
Mat. : Brass / Latón / Mosiądz / Latão./ Laiton.

l2	S	d2	l1	b	h	d1	L	REF.
8	5	8	8	8	2	G1/8	100	BR965/ 1/8-100
						G1/8	200	BR965/ 1/8-200
11	6	11	10	11		G1/4	125	BR965/ 1/4-125
						G1/4	150	BR965/ 1/4-150
						G1/4	250	BR965/ 1/4-250
15	8	14,7		14,7		G3/8	150	BR965/ 3/8-150
						G3/8	300	BR965/ 3/8-300



BR96

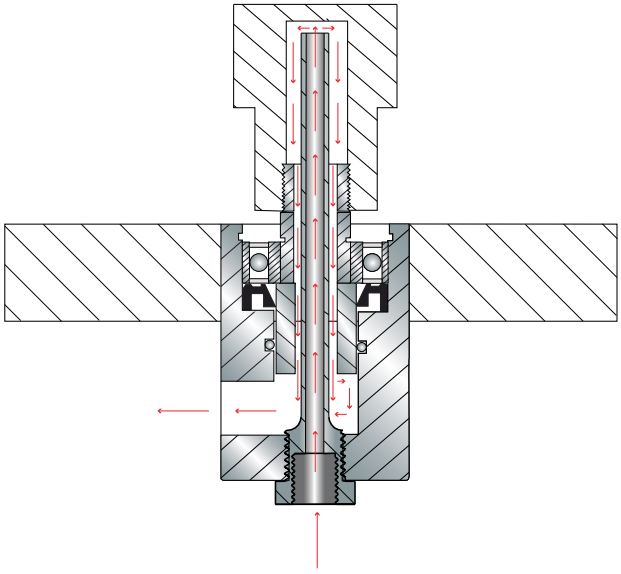
Rotating cooling plug
Fuente de refrigeración rotativa
Obrotowy system chłodzenia
Fonte de refrigeração rotativa
Systeme de refroidissement rotative



Temp. C: 0-90º C. R. P. M. : 0-500.

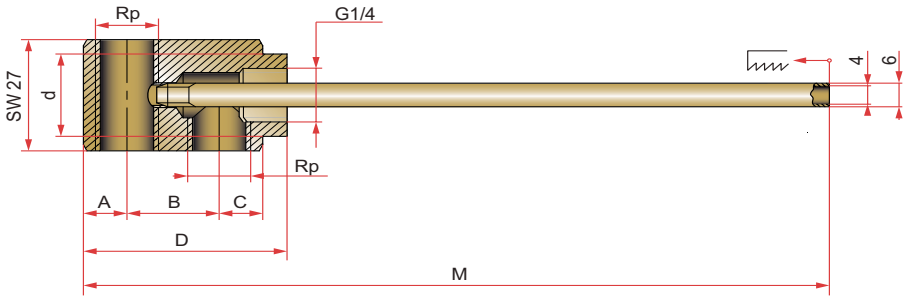
L	c	b	a	m	REF.
200	16	40	50	G1/4	BR96/ 1/4
				G3/8	BR96/ 3/8

8



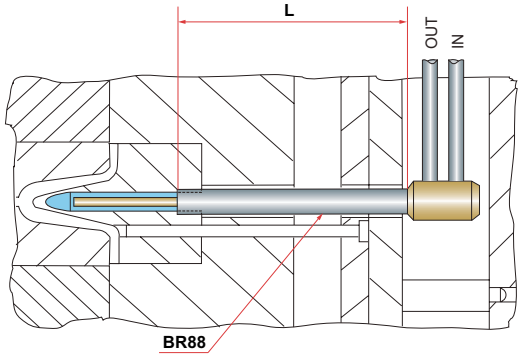
BR485

Cooling plug
Fuente de refrigeración
System chłodzenia
Fonte de refrigeração
Systeme de refroidissement



Mat. : Brass.

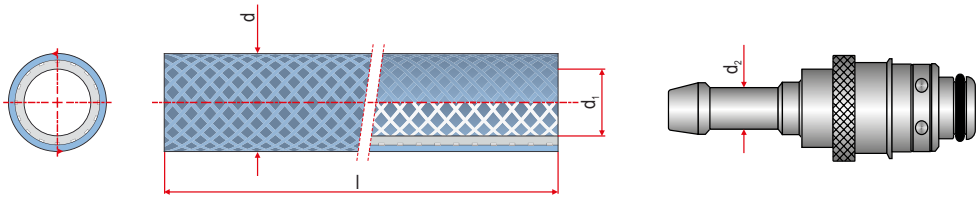
Rp	M	A	B	C	D	d	L*	REF.
G1/4	356	9	19	9	42	20	50	**BR485-1/4**
							100	
							150	
							175	
							200	
							250	
G1/8	356	9	19	9	42	20	50	**BR485-1/8**
							100	
							150	
							175	
							200	
							250	



L	REF.
50	BR88/ 1/4"x 50
75	BR88/ 1/4"x 75
100	BR88/ 1/4"x100
150	BR88/ 1/4"x150
200	BR88/ 1/4"x200
250	BR88/ 1/4"x250
300	BR88/ 1/4"x300

BR1814

Hosepipe
Manguera
Wąż do systemu chłodzącego
Mangueira
Tuyau PVC pour liquide de refroidissement

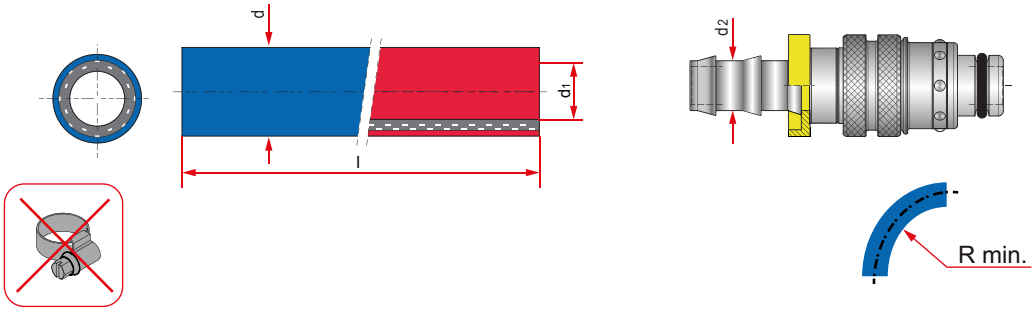


Mat. : PVC. Maximum pressure: 12 bar. Maximum temperature: 60º C.

d	d1	d2	l	Colour	REF.
16	10	10	50	Blue	BR1814/10/50/B
				Red	BR1814/10/50/R
19	12	12,5		Blue	BR1814/12/50/B
				Red	BR1814/12/50/R

BR1815

Quick - t coolant hose
Manguera de refrigeración, conexión rápida
W do systemu ch odz cego do z cz Szybkoblokuj cych
Mangueira de refrigeração com sistema PL
Tuyau PVC pour liquide de refroidissement



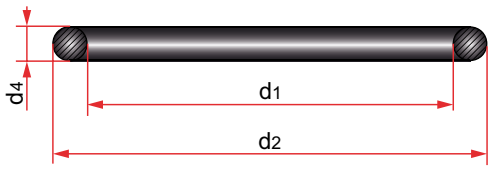
Mat: Synthetic rubber/caucho sintético Water/Agua Oil/Aceite Air/Aire- P. max. = 28 bar T. max. = 90ºC

R min.	d	d_1	d_2	l	Colour	REF.
80	16	9,5	**10**	…mts.	Blue	BR1815/10/B
					Red	BR1815/10/R
90	20	12,7	**13**		Blue	BR1815/13/B
					Red	BR1815/13/R

BR2130 Set-10

E 2130, Z 98

O-ring seal
Junta tórica
O-ring
Vedante
Anneau torique

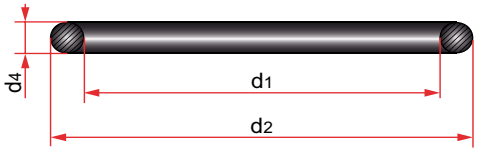


Mat. : NBR

d2	d1	d4	REF.
5,00	3,00	1,00	BR2130/03,00x1,00
6,50		1,75	BR2130/03,00x1,75
7,20	3,40	1,90	BR2130/03,40x1,90
7,10	3,50	1,80	BR2130/03,50x1,80
6,00	4,00	1,00	BR2130/04,00x1,00
8,00		2,00	BR2130/04,00x2,00
9,00		2,50	BR2130/04,00x2,50
10,00		3,00	BR2130/04,00x3,00
8,00	4,20	1,90	BR2130/04,20x1,90
	5,00	1,50	BR2130/05,00x1,50
9,00		2,00	BR2130/05,00x2,00
10,00		2,50	BR2130/05,00x2,50
8,00	6,00	1,00	BR2130/06,00x1,00
9,00		1,50	BR2130/06,00x1,50
10,00		2,00	BR2130/06,00x2,00
11,00		2,50	BR2130/06,00x2,50
13,00		3,50	BR2130/06,00x3,50
10,00	6,50	1,75	BR2130/06,50x1,75
10,31	6,75	1,78	BR2130/06,75x1,78
10,00	7,00	1,50	BR2130/07,00x1,50
11,00		2,00	BR2130/07,00x2,00
12,00		2,50	BR2130/07,00x2,50
13,00		3,00	BR2130/07,00x3,00
11,00	7,20	1,90	BR2130/07,20x1,90
12,50	7,50	2,50	BR2130/07,50x2,50
14,50		3,50	BR2130/07,50x3,50
14,58	7,52	3,53	BR2130/07,52x3,53
11,21	7,65	1,78	BR2130/07,65x1,78
10,78	7,74	1,50	BR2130/07,74x1,52
11,40	7,80	1,80	BR2130/07,80x1,80
12,64	7,92	2,36	BR2130/07,92x2,36
11,00	8,00	1,50	BR2130/08,00x1,50
12,00		2,00	BR2130/08,00x2,00

d2	d1	d4	REF.
13,00	8,00	2,50	BR2130/08,00x2,50
14,00		3,00	BR2130/08,00x3,00
11,00	9,00	1,00	BR2130/09,00x1,00
12,00		1,50	BR2130/09,00x1,50
13,00		2,00	BR2130/09,00x2,00
13,50		2,25	BR2130/09,00x2,25
14,00		2,50	BR2130/09,00x2,50
13,00	10,00	1,50	BR2130/10,00x1,50
14,00		2,00	BR2130/10,00x2,00
15,00		2,50	BR2130/10,00x2,50
15,40		2,70	BR2130/10,00x2,70
16,00		3,00	BR2130/10,00x3,00
16,40		3,20	BR2130/10,00x3,20
18,00		4,00	BR2130/10,00x4,00
14,38	10,82	1,78	BR2130/10,82x1,78
15,00	11,00	2,00	BR2130/11,00x2,00
16,00		2,50	BR2130/11,00x2,50
17,00		3,00	BR2130/11,00x3,00
18,00		3,50	BR2130/11,00x3,50
14,67	11,11	1,78	BR2130/11,11x1,78
15,00	11,20	1,90	BR2130/11,20x1,90
14,00	12,00	1,00	BR2130/12,00x1,00
15,00		1,50	BR2130/12,00x1,50
15,60		1,80	BR2130/12,00x1,80
16,00		2,00	BR2130/12,00x2,00
17,00		2,50	BR2130/12,00x2,50
18,00		3,00	BR2130/12,00x3,00
20,00		4,00	BR2130/12,00x4,00
17,50	12,10	2,70	BR2130/12,10x2,70
17,61	12,37	2,62	BR2130/12,37x2,62
16,00	12,40	1,80	BR2130/12,40x1,80
17,50	12,50	2,50	BR2130/12,50x2,50
17,00	13,00	2,00	BR2130/13,00x2,00

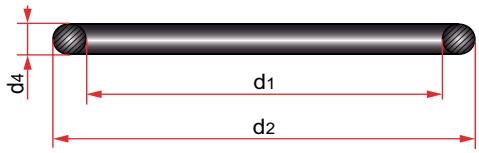
BR2130 Set-10



d2	d1	d4	REF.
18,00	**13,00**	**2,50**	**BR2130/13,00x2,50**
19,00		**3,00**	**BR2130/13,00x3,00**
20,00		**3,50**	**BR2130/13,00x3,50**
21,00		**4,00**	**BR2130/13,00x4,00**
18,34	**13,10**	**2,62**	**BR2130/13,10x2,62**
18,70	**13,50**	**2,60**	**BR2130/13,50x2,60**
17,00	**14,00**	**1,50**	**BR2130/14,00x1,50**
18,00		**2,00**	**BR2130/14,00x2,00**
19,00		**2,50**	**BR2130/14,00x2,50**
20,00		**3,00**	**BR2130/14,00x3,00**
22,00		**4,00**	**BR2130/14,00x4,00**
18,00	**15**	**1,50**	**BR2130/15,00x1,50**
19,00		**2,00**	**BR2130/15,00x2,00**
20,00		**2,50**	**BR2130/15,00x2,50**
21,00		**3,00**	**BR2130/15,00x3,00**
22,00		**3,50**	**BR2130/15,00x3,50**
18,80	**15,20**	**1,80**	**BR2130/15,20x1,80**
20,10	**15,30**	**2,40**	**BR2130/15,30x2,40**
19,16	**15,60**	**1,78**	**BR2130/15,60x1,78**
21,12	**15,88**	**2,62**	**BR2130/15,88x2,62**
19,00	**16,00**	**1,50**	**BR2130/16,00x1,50**
20,00		**2,00**	**BR2130/16,00x2,00**
20,50		**2,25**	**BR2130/16,00x2,25**
21,00		**2,50**	**BR2130/16,00x2,50**
22,00		**3,00**	**BR2130/16,00x3,00**
24,00		**4,00**	**BR2130/16,00x4,00**
25,00		**4,50**	**BR2130/16,00x4,50**
19,30	**16,10**	**1,60**	**BR2130/16,10x1,60**
23,10	**16,30**	**3,40**	**BR2130/16,30x3,40**
22,30	**16,90**	**2,70**	**BR2130/16,90x2,70**
21,00	**17,00**	**2,00**	**BR2130/17,00x2,00**
22,00		**2,50**	**BR2130/17,00x2,50**
23,00		**3,00**	**BR2130/17,00x3,00**

d2	d1	d4	REF.
25,00	**17,00**	**4,00**	**BR2130/17,00x4,00**
20,73	**17,17**	**1,78**	**BR2130/17,17x1,78**
22,10	**17,30**	**2,40**	**BR2130/17,30x2,40**
24,50		**3,60**	**BR2130/17,30x3,60**
22,50	**17,50**	**2,50**	**BR2130/17,50x2,50**
25,50		**4,00**	**BR2130/17,50x4,00**
23,10	**17,86**	**2,62**	**BR2130/17,86x2,62**
20,00	**18,00**	**1,00**	**BR2130/18,00x1,00**
21,00		**1,50**	**BR2130/18,00x1,50**
22,00		**2,00**	**BR2130/18,00x2,00**
23,00		**2,50**	**BR2130/18,00x2,50**
24,00		**3,00**	**BR2130/18,00x3,00**
25,00		**3,50**	**BR2130/18,00x3,50**
26,00		**4,00**	**BR2130/18,00x4,00**
25,50	**18,30**	**3,60**	**BR2130/18,30x3,60**
25,80	**18,40**	**3,70**	**BR2130/18,40x3,70**
25,70	**18,64**	**3,53**	**BR2130/18,64x3,53**
23,96	**18,72**	**2,62**	**BR2130/18,72x2,62**
22,60	**19,00**	**1,80**	**BR2130/19,00x1,80**
23,00		**2,00**	**BR2130/19,00x2,00**
24,00		**2,50**	**BR2130/19,00x2,50**
25,00		**3,00**	**BR2130/19,00x3,00**
27,00		**4,00**	**BR2130/19,00x4,00**
23,50	**19,50**	**2,00**	**BR2130/19,50x2,00**
26,60	**19,60**	**3,50**	**BR2130/19,60x3,50**
27,00	**19,80**	**3,60**	**BR2130/19,80x3,60**
22,00	**20,00**	**1,00**	**BR2130/20,00x1,00**
23,00		**1,50**	**BR2130/20,00x1,50**
24,00		**2,00**	**BR2130/20,00x2,00**
25,00		**2,50**	**BR2130/20,00x2,50**
26,00		**3,00**	**BR2130/20,00x3,00**
26,50		**3,25**	**BR2130/20,00x3,25**
27,00		**3,50**	**BR2130/20,00x3,50**

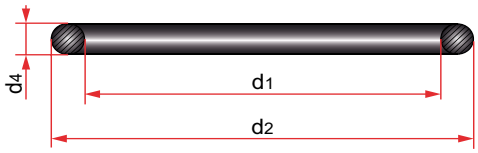
BR2130 Set-10



d2	d1	d4	REF.
25,50	**20,50**	**2,50**	**BR2130/20,50x2,50**
27,50		**3,50**	**BR2130/20,50x3,50**
25,00	**21,00**	**2,00**	**BR2130/21,00x2,00**
27,00		**3,00**	**BR2130/21,00x3,00**
28,00		**3,50**	**BR2130/21,00x3,50**
29,00		**4,00**	**BR2130/21,00x4,00**
26,50	**21,50**	**2,50**	**BR2130/21,50x2,50**
25,20	**22,00**	**1,60**	**BR2130/22,00x1,60**
26,00		**2,00**	**BR2130/22,00x2,00**
27,00		**2,50**	**BR2130/22,00x2,50**
28,00		**3,00**	**BR2130/22,00x3,00**
29,00		**3,50**	**BR2130/22,00x3,50**
27,46	**22,22**	**2,62**	**BR2130/22,22x2,62**
26,50	**22,50**	**2,00**	**BR2130/22,50x2,00**
27,00	**23,00**		**BR2130/23,00x2,00**
28,00		**2,50**	**BR2130/23,00x2,50**
29,00		**3,00**	**BR2130/23,00x3,00**
30,20		**3,60**	**BR2130/23,00x3,60**
31,00		**4,00**	**BR2130/23,00x4,00**
28,00	**24,00**	**2,00**	**BR2130/24,00x2,00**
29,00		**2,50**	**BR2130/24,00x2,50**
30,00		**3,00**	**BR2130/24,00x3,00**
31,00		**3,50**	**BR2130/24,00x3,50**
32,00		**4,00**	**BR2130/24,00x4,00**
31,80	**24,60**	**3,60**	**BR2130/24,60x3,60**
32,05	**24,99**	**3,50**	**BR2130/24,99x3,53**
29,00	**25,00**	**2,00**	**BR2130/25,00x2,00**
30,00		**2,50**	**BR2130/25,00x2,50**
31,00		**3,00**	**BR2130/25,00x3,00**
32,00		**3,50**	**BR2130/25,00x3,50**
32,20		**3,60**	**BR2130/25,00x3,60**
28,68	**25,12**	**1,78**	**BR2130/25,12x1,78**
30,10	**25,30**	**2,40**	**BR2130/25,30x2,40**

d2	d1	d4	REF.
28,50	**25,50**	**1,50**	**BR2130/25,50x1,50**
30,00	**26,00**	**2,00**	**BR2130/26,00x2,00**
31,00		**2,50**	**BR2130/26,00x2,50**
32,00		**3,00**	**BR2130/26,00x3,00**
30,20	**26,70**	**1,75**	**BR2130/26,70x1,75**
31,00	**27,00**	**2,00**	**BR2130/27,00x2,00**
32,00		**2,50**	**BR2130/27,00x2,50**
33,00		**3,00**	**BR2130/27,00x3,00**
30,50	**27,30**	**1,60**	**BR2130/27,30x1,60**
33,00	**27,50**	**2,75**	**BR2130/27,50x2,75**
34,50		**3,50**	**BR2130/27,50x3,50**
32,00	**28,00**	**2,00**	**BR2130/28,00x2,00**
33,00		**2,50**	**BR2130/28,00x2,50**
34,00		**3,00**	**BR2130/28,00x3,00**
35,00		**3,50**	**BR2130/28,00x3,50**
36,00		**4,00**	**BR2130/28,00x4,00**
32,50	**28,50**	**2,00**	**BR2130/28,50x2,00**
33,74		**2,62**	**BR2130/28,50x2,62**
34,00	**29,00**	**2,50**	**BR2130/29,00x2,50**
33,00		**2,00**	**BR2130/29,00x2,00**
35,20	**29,20**	**3,00**	**BR2130/29,20x3,00**
36,50	**29,30**	**3,60**	**BR2130/29,30x3,60**
36,80	**29,74**	**3,53**	**BR2130/29,74x3,53**
35,06	**29,82**	**2,62**	**BR2130/29,82x2,62**
35,00	**30,00**	**2,50**	**BR2130/30,00x2,50**
36,00		**3,00**	**BR2130/30,00x3,00**
38,00		**4,00**	**BR2130/30,00x4,00**
	30,80	**3,60**	**BR2130/30,80x3,60**
35,00	**31,00**	**2,00**	**BR2130/31,00x2,00**
36,00		**2,50**	**BR2130/31,00x2,50**
37,00		**3,00**	**BR2130/31,00x3,00**
38,00		**3,50**	**BR2130/31,00x3,50**
34,88	**31,34**	**1,77**	**BR2130/31,34x1,77**

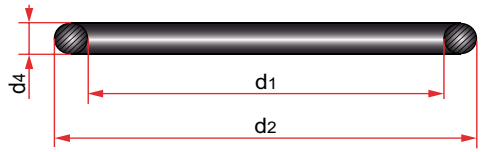
BR2130 Set-10



d2	d1	d4	REF.
38,40	31,34	3,53	BR2130/31,34x3,53
34,98	31,42	1,78	BR2130/31,42x1,78
38,50	31,50	3,50	BR2130/31,50x3,50
36,00	32,00	2,00	BR2130/32,00x2,00
39,00		3,50	BR2130/32,00x3,50
37,00	33,00	2,00	BR2130/33,00x2,00
38,00		2,50	BR2130/33,00x2,50
41,00		4,00	BR2130/33,00x4,00
39,00	34,00	2,50	BR2130/34,00x2,50
40,00		3,00	BR2130/34,00x3,00
39,00	35,00	2,00	BR2130/35,00x2,00
41,00		3,00	BR2130/35,00x3,00
41,00	36,00	2,50	BR2130/36,00x2,50
42,00		3,00	BR2130/36,00x3,00
41,50	36,20	2,65	BR2130/36,20x2,65
40,00	37,00	1,50	BR2130/37,00x1,50
41,00		2,00	BR2130/37,00x2,00
42,00		2,50	BR2130/37,00x2,50
43,00		3,00	BR2130/37,00x3,00
44,75	37,69	3,53	BR2130/37,69x3,53
42,00	38,00	2,00	BR2130/38,00x2,00
44,00		3,00	BR2130/38,00x3,00
45,00		3,50	BR2130/38,00x3,50
44,00	39,00	2,50	BR2130/39,00x2,50
45,00		3,00	BR2130/39,00x3,00
46,00		3,50	BR2130/39,00x3,50
44,58	39,34	2,62	BR2130/39,34x2,62
45,00	39,50	2,75	BR2130/39,50x2,75
44,00	40,00	2,00	BR2130/40,00x2,00
47,00		3,50	BR2130/40,00x3,50
47,00	41,00	3,00	BR2130/41,00x3,00
51,00		5,00	BR2130/41,00x5,00
49,00	44,00	2,50	BR2130/44,00x2,50

d2	d1	d4	REF.
51,00	44,00	3,50	BR2130/44,00x3,50
50,00		3,00	BR2130/44,00x3,00
	45,00	2,50	BR2130/45,00x2,50
51,00		3,00	BR2130/45,00x3,00
52,00		3,50	BR2130/45,00x3,50
50,00	46,00	2,00	BR2130/46,00x2,00
51,00		2,50	BR2130/46,00x2,50
52,00		3,00	BR2130/46,00x3,00
52,50	46,50		BR2130/46,50x3,00
57,65	46,99	5,33	BR2130/46,99x5,33
54,50	47,50	3,50	BR2130/47,50x3,50
55,50		4,00	BR2130/47,50x4,00
60,00	48,00	6,00	BR2130/48,00x6,00
54,00	49,00	2,50	BR2130/49,00x2,50
56,00		3,50	BR2130/49,00x3,50
	50,00	3,00	BR2130/50,00x3,00
57,00		3,50	BR2130/50,00x3,50
	52,00	2,50	BR2130/52,00x2,50
59,00	53,00	3,00	BR2130/53,00x3,00
64,00	53,34	5,33	BR2130/53,34x5,33
58,00	55,00	1,50	BR2130/55,00x1,50
59,00		2,00	BR2130/55,00x2,00
61,00		3,00	BR2130/55,00x3,00
	55,80	2,60	BR2130/55,80x2,60
59,20	56,20	1,50	BR2130/56,20x1,50
61,20	56,20	2,50	BR2130/56,20x2,50
64,00	57,00	3,50	BR2130/57,00x3,50
62,00	58,00	2,00	BR2130/58,00x2,00
64,00		3,00	BR2130/58,00x3,00
65,50	58,50	3,50	BR2130/58,50x3,50
65,00	59,00	3,00	BR2130/59,00x3,00
66,00	60,00		BR2130/60,00x3,00
67,00	60,00	3,50	BR2130/60,00x3,50

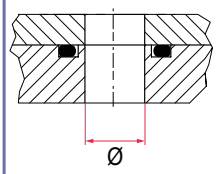
BR2130 Set-10



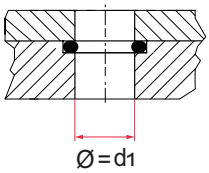
d2	d1	d4	REF.
68,00	**60,00**	**4,00**	**BR2130/60,00x4,00**
	61,00	**3,50**	**BR2130/61,00x3,50**
66,00	**62,00**	**2,00**	**BR2130/62,00x2,00**
68,00		**3,00**	**BR2130/62,00x3,00**
71,00	**65,00**		**BR2130/65,00x3,00**
73,00	**66,00**	**3,50**	**BR2130/66,00x3,50**
76,70	**66,04**	**5,33**	**BR2130/66,04x5,33**
75,00	**68,00**	**3,50**	**BR2130/68,00x3,50**
80,00	**70,00**	**5,00**	**BR2130/70,00x5,00**
75,00		**2,50**	**BR2130/70,00x2,50**

d2	d1	d4	REF.
77,00	**71,00**	**3,00**	**BR2130/71,00x3,00**
79,00	**73,00**		**BR2130/73,00x3,00**
81,00	**75,00**		**BR2130/75,00x3,00**
82,00		**3,50**	**BR2130/75,00x3,50**
84,00	**77,00**		**BR2130/77,00x3,50**
83,00	**78,00**	**2,50**	**BR2130/78,00x2,50**
85,00		**3,50**	**BR2130/78,00x3,50**
86,00	**80,00**	**3,00**	**BR2130/80,00x3,00**
89,00	**85,00**	**2,00**	**BR2130/85,00x2,00**
93,00	**87,00**	**3,00**	**BR2130/87,00x3,00**

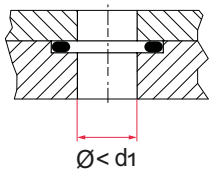
Optimal solution

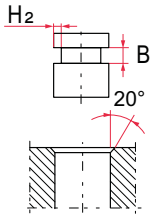


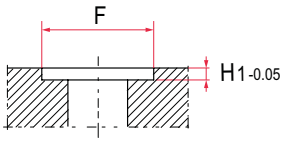
space-saving

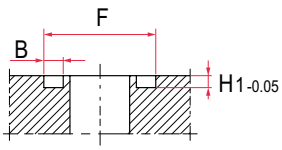


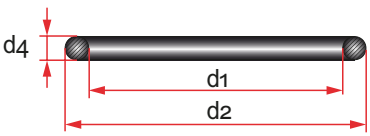
more safety











INSTALLATION

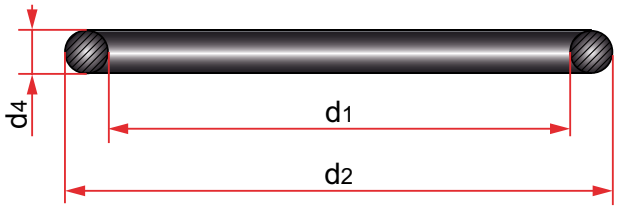
d_4	B	H_1	H_2
1.5	1.9	1.20	1.3
1.6	2.2	1.25	1.4
1.8	2.6	1.40	1.5
2.0	2.6	1.60	1.7
2.4	3.1	1.90	2.1
2.5	3.2	2.00	2.2
2.6	3.6	2.10	2.2
3.0	3.9	2.40	2.6
4.0	5.2	3.20	3.5

(F) can be max. 3% smaller than d2 so that the O-ring seal is securely fixed in the plate.
(F) Puede ser hasta un max. de 3% mas pequeño que d2 para la fijación de la junta.

BR21311 Set-10

E 21311

O-ring seal
Junta tórica
O-ring
Vedante
Anneau torique

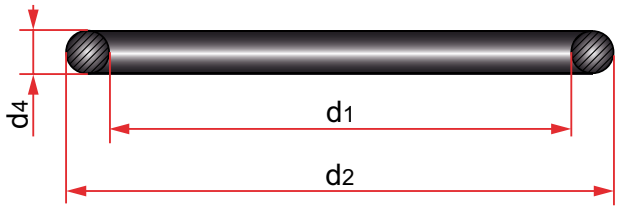


Mat. FKM , 75-80 Shore A 180°C (peak 200°C) water/oil 180°C (picos 200°C) agua/aceite

d2	d1	d4	REF.
6,0	**3,0**	**1,5**	**BR21311-03,00x1,50**
6,5	**3,5**	**1,5**	**BR21311-03,50x1,50**
7,0	**4,0**	**1,5**	**BR21311-04.00X1.50**
7,5	**4,5**	**1,5**	**BR21311-04.50X1.50**
8,0	**5,0**	**1,5**	**BR21311-05.00X1.50**
9,0	**5,0**	**2,0**	**BR21311-05.00X2.00**
8,5	**5,5**	**1,5**	**BR21311-05.50X1.50**
9,0	**6,0**	**1,5**	**BR21311-06,00x1,50**
10,0	**6,0**	**2,0**	**BR21311-06,00x2,00**
11,0	**6,0**	**2,5**	**BR21311-06,00x2,50**
9,5	**6,5**	**1,5**	**BR21311-06,50x1,50**
10,5	**6,5**	**2,0**	**BR21311-06,50x2,00**
10,0	**7,0**	**1,5**	**BR21311-07,00x1,50**
11,0	**7,0**	**2,0**	**BR21311-07,00x2,00**
12,0	**7,0**	**2,5**	**BR21311-07,00x2,50**
10,5	**7,5**	**1,5**	**BR21311-07,50x1,50**
11,5	**7,5**	**2,0**	**BR21311-07,50x2,00**
11,0	**8,0**	**1,5**	**BR21311-08,00x1,50**
12,0	**8,0**	**2,0**	**BR21311-08,00x2,00**
13,0	**8,0**	**2,5**	**BR21311-08,00x2,50**
11,5	**8,5**	**1,5**	**BR21311-08,50x1,50**
12,5	**8,5**	**2,0**	**BR21311-08,50x2,00**
11,0	**9,0**	**1,0**	**BR21311-09,00x1,00**
12,0	**9,0**	**1,5**	**BR21311-09,00x1,50**
13,0	**9,0**	**2,0**	**BR21311-09,00x2,00**
14,0	**9,0**	**2,5**	**BR21311-09,00x2,50**
12,5	**9,5**	**1,5**	**BR21311-09,50x1,50**

d2	d1	d4	REF.
13,5	**9,5**	**2,0**	**BR21311-09,50x2,00**
14,4	**9,6**	**2,4**	**BR21311-09,60x2,40**
13,0	**10,0**	**1,5**	**BR21311-10,00x1,50**
14,0	**10,0**	**2,0**	**BR21311-10,00x2,00**
15,0	**10,0**	**2,5**	**BR21311-10,00x2,50**
13,5	**10,5**	**1,5**	**BR21311-10,50x1,50**
14,5	**10,5**	**2,0**	**BR21311-10,50x2,00**
14,0	**11,0**	**1,5**	**BR21311-11,00x1,50**
15,0	**11,0**	**2,0**	**BR21311-11,00x2,00**
16,0	**11,0**	**2,5**	**BR21311-11,00x2,50**
16,4	**11,6**	**2,4**	**BR21311-11,60x2,40**
15,0	**12,0**	**1,5**	**BR21311-12,00x1,50**
16,0	**12,0**	**2,0**	**BR21311-12,00x2,00**
17,0	**12,0**	**2,5**	**BR21311-12,00x2,50**
18,0	**12,0**	**3,0**	**BR21311-12,00x3,00**
14,5	**12,5**	**1,0**	**BR21311-12,50x1,00**
16,1	**12,5**	**1,8**	**BR21311-12,50x1,80**
16,5	**12,5**	**2,0**	**BR21311-12,50x2,00**
16,0	**13,0**	**1,5**	**BR21311-13,00x1,50**
17,0	**13,0**	**2,0**	**BR21311-13,00x2,00**
18,1	**13,3**	**2,4**	**BR21311-13,30x2,40**
18,4	**13,6**	**2,4**	**BR21311-13,60x2,40**
17,0	**14,0**	**1,5**	**BR21311-14,00x1,50**
18,0	**14,0**	**2,0**	**BR21311-14,00x2,00**
19,0	**14,0**	**2,5**	**BR21311-14,00x2,50**
20,0	**14,0**	**3,0**	**BR21311-14,00x3,00**
18,0	**15,0**	**1,5**	**BR21311-15,00x1,50**

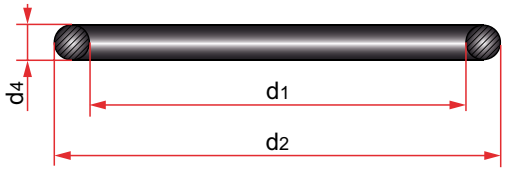
BR21311 Set-10



d2	d1	d4	REF.
18,6	**15,0**	**1,8**	**BR21311-15,00x1,80**
19,0	**15,0**	**2,0**	**BR21311-15,00x2,00**
20,0	**15,0**	**2,5**	**BR21311-15,00x2,50**
20,1	**15,3**	**2,4**	**BR21311-15,30x2,40**
19,5	**15,5**	**2,0**	**BR21311-15,50x2,00**
20,0	**16,0**	**2,0**	**BR21311-16,00x2,00**
21,0	**16,0**	**2,5**	**BR21311-16,00x2,50**
22,0	**16,0**	**3,0**	**BR21311-16,00x3,00**
20,0	**17,0**	**1,5**	**BR21311-17,00x1,50**
21,0	**17,0**	**2,0**	**BR21311-17,00x2,00**
22,0	**17,0**	**2,5**	**BR21311-17,00x2,50**
22,3	**17,5**	**2,4**	**BR21311-17,50x2,40**
22,4	**17,6**	**2,4**	**BR21311-17,60x2,40**
22,0	**18,0**	**2,0**	**BR21311-18,00x2,00**
23,0	**18,0**	**2,5**	**BR21311-18,00x2,50**
24,0	**18,0**	**3,0**	**BR21311-18,00x3,00**
23,0	**19,0**	**2,0**	**BR21311-19,00x2,00**
24,1	**19,3**	**2,4**	**BR21311-19,30x2,40**
23,0	**20,0**	**1,5**	**BR21311-20,00x1,50**
24,0	**20,0**	**2,0**	**BR21311-20,00x2,00**
25,0	**20,0**	**2,5**	**BR21311-20,00x2,50**
26,0	**20,0**	**3,0**	**BR21311-20,00x3,00**
25,0	**21,0**	**2,0**	**BR21311-21,00x2,00**
26,1	**21,3**	**2,4**	**BR21311-21,30x2,40**
26,0	**22,0**	**2,0**	**BR21311-22,00x2,00**
27,0	**22,0**	**2,5**	**BR21311-22,00x2,50**
28,0	**22,0**	**3,0**	**BR21311-22,00x3,00**

d2	d1	d4	REF.
28,3	**23,5**	**2,4**	**BR21311-23,30x2,40**
27,5	**23,5**	**2,0**	**BR21311-23,50x2,00**
28,0	**24,0**	**2,0**	**BR21311-24,00x2,00**
29,0	**24,0**	**2,5**	**BR21311-24,00x2,50**
30,0	**24,0**	**3,0**	**BR21311-24,00x3,00**
28,0	**25,0**	**1,5**	**BR21311-25,00x1,50**
29,0	**25,0**	**2,0**	**BR21311-25,00x2,00**
30,0	**25,0**	**2,5**	**BR21311-25,00x2,50**
30,1	**25,3**	**2,4**	**BR21311-25,30x2,40**
30,0	**26,0**	**2,0**	**BR21311-26,00x2,00**
31,0	**26,0**	**2,5**	**BR21311-26,00x2,50**
32,0	**26,0**	**3,0**	**BR21311-26,00x3,00**
31,0	**27,0**	**2,0**	**BR21311-27,00x2,00**
32,1	**27,3**	**2,4**	**BR21311-27,30x2,40**
32,0	**28,0**	**2,0**	**BR21311-28,00x2,00**
33,0	**28,0**	**2,5**	**BR21311-28,00x2,50**
34,0	**28,0**	**3,0**	**BR21311-28,00x3,00**
33,0	**29,0**	**2,0**	**BR21311-29,00x2,00**
34,0	**30,0**	**2,0**	**BR21311-30,00x2,00**
35,0	**30,0**	**2,5**	**BR21311-30,00x2,50**
36,0	**30,0**	**3,0**	**BR21311-30,00x3,00**
36,0	**32,0**	**2,0**	**BR21311-32,00X2,00**
37,0	**32,0**	**2,5**	**BR21311-32,00X2,50**
38,2	**32,2**	**3,0**	**BR21311-32,20X3,00**
38,0	**34,0**	**2,0**	**BR21311-34,00X2,00**
39,0	**34,0**	**2,5**	**BR21311-34,00X2,50**
40,2	**34,2**	**3,0**	**BR21311-34,20X3,00**

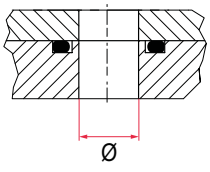
BR21311 Set-10



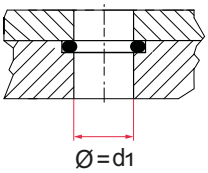
d2	d1	d4	REF.
39,0	**35,0**	**2,0**	**BR21311-35,00X2,00**
40,0	**36,0**	**2,0**	**BR21311-36,00X2,00**
41,0	**36,0**	**2,5**	**BR21311-36,00X2,50**
42,0	**36,0**	**3,0**	**BR21311-36,00X3,00**
41,0	**37,0**	**2,0**	**BR21311-37,00X2,00**
43,0	**37,0**	**3,0**	**BR21311-37,00X3,00**
43,0	**38,0**	**2,5**	**BR21311-38,00X2,50**
45,0	**40,0**	**2,5**	**BR21311-40,00X2,50**
46,0	**42,0**	**2,0**	**BR21311-42,00X2,00**
47,0	**42,0**	**2,5**	**BR21311-42,00X2,50**
48,0	**42,0**	**3,0**	**BR21311-42,00X3,00**
48,0	**44,0**	**2,0**	**BR21311-44,00X2,00**
49,0	**44,0**	**2,5**	**BR21311-44,00X2,50**
50,0	**44,0**	**3,0**	**BR21311-44,00X3,00**
50,0	**46,0**	**2,0**	**BR21311-46,00X2,00**
51,0	**46,0**	**2,5**	**BR21311-46,00X2,50**

d2	d1	d4	REF.
52,0	**46,0**	**3,0**	**BR21311-46,00X3,00**
53,0	**48,0**	**2,5**	**BR21311-48,00X2,50**
55,0	**49,0**	**3,0**	**BR21311-49,00X3,00**
54,0	**50,0**	**2,0**	**BR21311-50,00X2,00**
55,0	**50,0**	**2,5**	**BR21311-50,00X2,50**
58,0	**52,0**	**3,0**	**BR21311-52,00X3,00**
60,0	**54,0**	**3,0**	**BR21311-54,00X3,00**
59,0	**55,0**	**2,0**	**BR21311-55,00X2,00**
62,0	**56,0**	**3,0**	**BR21311-56,00X3,00**
64,0	**58,0**	**3,0**	**BR21311-58,00X3,00**
66,0	**60,0**	**3,0**	**BR21311-60,00X3,00**
68,0	**62,0**	**3,0**	**BR21311-62,00X3,00**
72,0	**66,0**	**3,0**	**BR21311-66,00X3,00**
76,0	**70,0**	**3,0**	**BR21311-70,00X3,00**
79,0	**73,0**	**3,0**	**BR21311-73,00X3,00**
86,0	**80,0**	**3,0**	**BR21311-80,00X3,00**

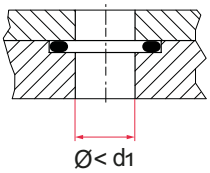
Optimal solution

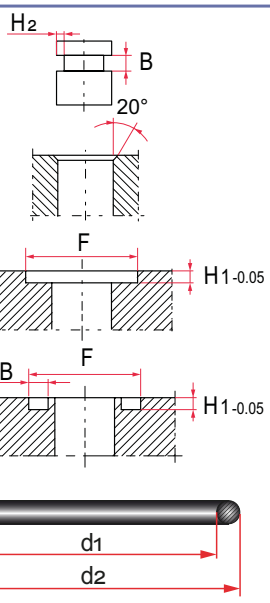


space-saving



more safety



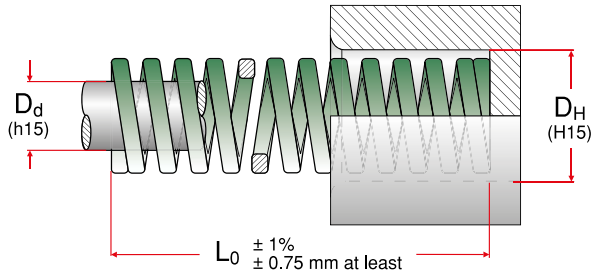


INSTALLATION

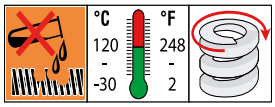
d_4	B	H_1	H_2
1.5	1.9	1.20	1.3
1.6	2.2	1.25	1.4
1.8	2.6	1.40	1.5
2.0	2.6	1.60	1.7
2.4	3.1	1.90	2.1
2.5	3.2	2.00	2.2
2.6	3.6	2.10	2.2
3.0	3.9	2.40	2.6
4.0	5.2	3.20	3.5

(F) can be max. 3% smaller than d2 so that the O-ring seal is securely fixed in the plate.
(F) Puede ser hasta un max. de 3% mas pequeño que d2 para la fijación de la junta.

Light load spring
Muelles de carga ligera
Sprężyna do lekkich obciążeń
Mola carga ligera
Ressort charge legere

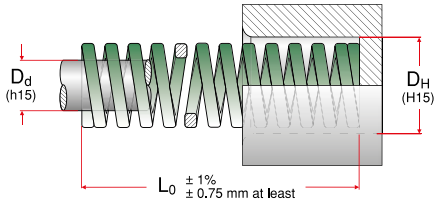


ISO 10243

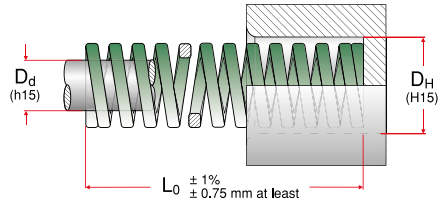


D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 35%L_o 300-500.000		D 40%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
10	5	25	10	6,3	63	7,5	75	8,8	88	10	100	13,5
		32	8,5	8	68	9,6	82	11,2	95	12,8	109	17,5
		38	6,8	9,5	65	11,4	78	13,3	90	15,2	103	20,8
		44	6	11	66	13,2	79	15,4	92	17,6	106	23,9
		51	5	12,8	64	15,3	77	17,9	89	20,4	102	28,9
		64	4,3	16	69	19,2	83	22,4	96	25,6	110	36,1
		76	3,2	19	61	22,8	73	26,6	85	30,4	97	43,2
		305	1,1	76,3	84	91,5	101	107	117	122	134	178
12,5	6,3	25	17,9	6,3	113	7,5	134	8,8	157	10	179	13,2
		32	16,4	8	131	9,6	157	11,2	184	12,8	210	18
		38	13,6	9,5	129	11,4	155	13,3	181	15,2	207	21
		44	12,1	11	133	13,2	160	15,4	186	17,6	213	24
		51	11,4	12,8	146	15,3	174	17,9	203	20,4	233	28,7
		64	9,3	16	149	19,2	179	22,4	208	25,6	238	35,8
		76	7,1	19	135	22,8	162	26,6	189	30,4	216	42,7
		89	5,4	22,3	120	26,7	144	31,2	168	35,6	192	50,4
		102	4,1	25,5	105	30,6	125	35,7	146	40,8	167	58,4
		305	1,4	76,3	107	91,5	128	107	149	122	171	172
16	8	25	23,4	6,3	147	7,5	176	8,8	205	10	234	12,6

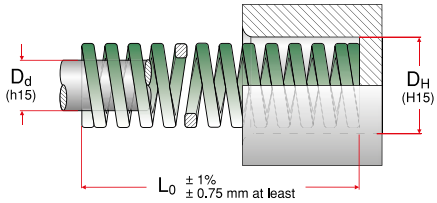
How to order: BRV-D_H x L_o
Forma de pedio: BRV-D_H x L_o



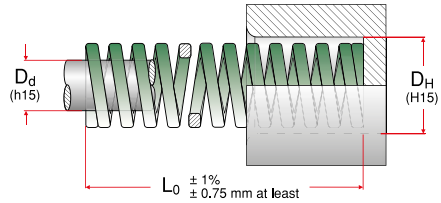
D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 35%L_o 300-500.000		D 40%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
16	8	32	22,9	8	183	9,6	220	11,2	256	12,8	293	16,4
		38	19,3	9,5	183	11,4	220	13,3	257	15,2	293	19,7
		44	17,1	11	188	13,2	226	15,4	263	17,6	301	22,5
		51	15,7	12,8	201	15,3	240	17,9	280	20,4	320	26,3
		64	10,7	16	171	19,2	205	22,4	240	25,6	274	33,3
		76	10	19	190	22,8	228	26,6	266	30,4	304	40,2
		89	8,6	22,3	192	26,7	230	31,2	268	35,6	306	47,6
		102	7,8	25,5	199	30,6	239	35,7	278	40,8	318	55,4
		115	6,6	28,8	190	34,5	228	40,3	266	46	304	60,8
		305	2,5	76,3	191	91,5	229	107	267	122	305	165
20	10	25	55,8	6,3	352	7,5	419	8,8	488	10	558	12,1
		32	45	8	360	9,6	432	11,2	504	12,8	576	15,3
		38	33,3	9,5	316	11,4	380	13,3	443	15,2	506	18,9
		44	30	11	330	13,2	396	15,4	462	17,6	528	21,5
		51	24,5	12,8	314	15,3	375	17,9	437	20,4	500	25
		64	20	16	320	19,2	384	22,4	448	25,6	512	31,1
		76	16	19	304	22,8	365	26,6	426	30,4	486	37,3
		89	14	22,3	312	26,7	374	31,2	436	35,6	498	44,5
		102	12	25,5	306	30,6	367	35,7	428	40,8	490	51,1
		115	10,9	28,8	314	34,5	376	40,3	439	46	501	58,2
		127	9,5	31,8	302	38,1	362	44,5	422	50,8	483	64,9
		139	8,4	35	294	42	353	48,7	409	56	470	71,5
		152	7,5	38	285	45,6	342	53,2	399	60,8	456	78,8



D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 35%L_o 300-500.000		D 40%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
20	10	305	4	76,3	305	91,5	366	107	427	122	488	157
25	12,5	25	100	6,3	630	7,5	750	8,8	875	10	1000	11,9
		32	80,3	8	642	9,6	771	11,2	899	12,8	1028	16
		38	62	9,5	589	11,4	707	13,3	825	15,2	942	18,3
		44	52,9	11	582	13,2	698	15,4	815	17,6	931	21,4
		51	44	12,8	563	15,3	673	17,9	785	20,4	898	24,9
		64	35,2	16	563	19,2	676	22,4	788	25,6	901	31,4
		76	28	19	532	22,8	638	26,6	745	30,4	851	37,5
		89	24	22,3	535	26,7	641	31,2	748	35,6	854	43,5
		102	21,1	25,5	538	30,6	646	35,7	753	40,8	861	51,1
		115	18,7	28,8	539	34,5	645	40,3	753	46	860	58,1
		127	16,7	31,8	531	38,1	636	44,5	742	50,8	848	64,1
		139	15,3	35	536	42	643	48,7	744	56	857	70,4
		152	14	38	532	45,6	638	53,2	745	60,8	851	77,1
		178	12,5	44,5	556	53,4	668	62,3	779	71,2	890	93,1
		203	10,4	50,8	528	60,9	633	71,1	739	81,2	844	103
		305	7	76,3	534	91,5	641	107	747	122	854	156
32	16	38	94	9,5	893	11,4	1072	13,3	1250	15,2	1429	18,3
		44	79,5	11	875	13,2	1049	15,4	1224	17,6	1399	21,5
		51	67	12,8	858	15,3	1025	17,9	1196	20,4	1367	25,5
		64	53	16	848	19,2	1018	22,4	1187	25,6	1357	31,9
		76	44	19	836	22,8	1003	26,6	1170	30,4	1338	38,6
		89	37,2	22,3	830	26,7	993	31,2	1159	35,6	1324	46,5

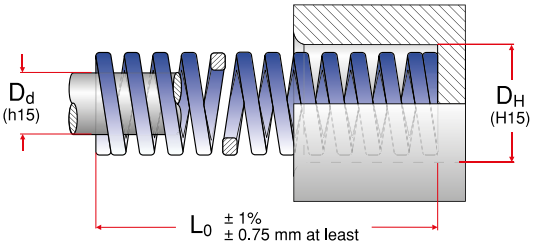


D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 35%L_o 300-500.000		D 40%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
32	16	102	32	25,5	816	30,6	979	35,7	1142	40,8	1306	53,2
		115	29	28,8	835	34,5	1001	40,3	1167	46	1334	60
		127	25	31,8	795	38,1	953	44,5	1111	50,8	1270	66,7
		139	23	35	805	42	966	48,7	1119	56	1288	71,8
		152	21,5	38	817	45,6	980	53,2	1144	60,8	1307	78,5
		178	18,2	44,5	810	53,4	972	62,3	1134	71,2	1296	94,4
		203	15,8	50,8	803	60,9	962	71,1	1123	81,2	1283	107
		254	12,5	63,5	794	76,2	953	88,9	1111	102	1270	136
		305	10,3	76,3	786	91,5	942	107	1100	122	1257	163
40	20	51	92	12,8	1178	15.3	1408	17.9	1642	20.4	1877	25,5
		64	73	16	1168	19.2	1402	22.4	1635	25.6	1869	31,4
		76	63	19	1197	22,8	1436	26,6	1676	30,4	1915	37,8
		89	51	22,3	1137	26,7	1362	31,2	1589	35,6	1816	44,3
		102	43	25,5	1097	30,6	1316	35,7	1535	40,8	1754	50,7
		115	39,6	28,8	1140	34,5	1366	40,3	1594	46	1822	58,1
		127	37	31,8	1177	38,1	1410	44,5	1645	50,8	1880	64,6
		139	32	35	1120	42	1344	48,7	1557	56	1792	70,1
		152	28	38	1064	45,6	1277	53,2	1490	60,8	1702	76,6
		178	25,2	44,5	1121	53,4	1346	62,3	1570	71,2	1794	90,4
		203	22,7	50,8	1153	60,9	1382	71,1	1613	81,2	1843	102
		254	17	63,5	1080	76,2	1295	88,9	1511	102	1727	129
		305	14,8	76,3	1129	91,5	1354	107	1580	122	1806	156
50	25	64	156	16	2496	19.2	2995	22.4	3494	25.6	3994	31

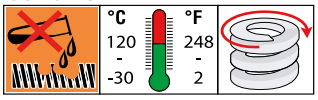


D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 35%L_o 300-500.000		D 40%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
50	25	76	125	19	2375	22,8	2850	26,6	3325	30,4	3800	37,2
		89	109	22,3	2431	26,7	2910	31,2	3395	35,6	3880	43,6
		102	94	25,5	2397	30,6	2876	35,7	3356	40,8	3835	50,3
		115	81	28,8	2333	34,5	2795	40,3	3260	46	3726	58,1
		127	71	31,8	2258	38,1	2705	44,5	3156	50,8	3607	63,7
		139	66,5	35	2328	42	2793	48,7	3235	56	3724	69,5
		152	60	38	2280	45,6	2736	53,2	3192	60,8	3648	76,5
		178	52	44,5	2314	53,4	2777	62,3	3240	71,2	3702	91,9
		203	44	50,8	2235	60,9	2680	71,1	3126	81,2	3573	105
		254	35	63,5	2223	76,2	2667	88,9	3112	102	3556	131
		305	28,5	76,3	2175	91,5	2608	107	3042	122	3477	155
63	38	76	189	19	3591	22,8	4309	26,6	5027	30,4	5746	36,5
		89	158	22,3	3523	26,7	4219	31,2	4922	35,6	5625	43,4
		102	131	25,5	3341	30,6	4009	35,7	4677	40,8	5345	49,7
		115	116	28,8	3341	34,5	4002	40,3	4669	46	5336	55,6
		127	103	31,8	3275	38,1	3924	44,5	4578	50,8	5232	62,7
		152	84,3	38	3203	45,6	3844	53,2	4485	60,8	5125	77,1
		178	71,5	44,5	3182	53,4	3818	62,3	4454	71,2	5091	92,2
		203	61,7	50,8	3134	60,9	3758	71,1	4384	81,2	5010	103
		254	47	63,5	2985	76,2	3581	88,9	4178	102	4775	130
		305	38,2	76,3	2915	91,5	3495	107	4078	122	4660	157

Medium load spring
Muelles de carga media
Sprężyna do średnich obciążeń
Mola carga media
Ressort charge moyenne

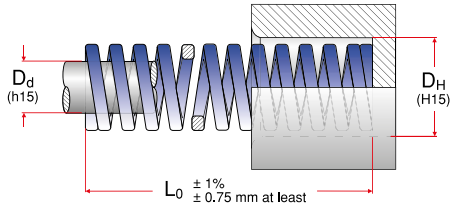


ISO 10243

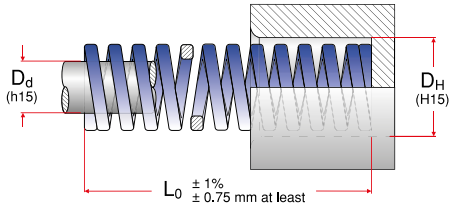


D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 33.75%L_o 300-500.000		D 37.5%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
10	5	25	16	6,3	101	7,5	120	8,4	135	9,4	150	10,2
		32	13	8	104	9,6	125	10,8	140	12	156	14,2
		38	11,9	9,5	113	11,4	136	12,8	153	14,3	170	16,8
		44	10,3	11	113	13,2	136	14,9	153	16,5	170	19,4
		51	8,9	12,8	114	15,3	136	17,2	153	19,1	170	23,4
		64	7,5	16	120	19,2	144	21,6	162	24	180	28,2
		76	5,3	19	101	22,8	121	25,7	136	28,5	151	34,2
		305	1,6	76,3	122	91,5	146	103	165	114	183	134
12,5	6,3	25	30	6,3	189	7,5	225	8,4	253	9,4	282	11,9
		32	24,8	8	198	9,6	238	10,8	268	12	298	16,2
		38	21,4	9,5	203	11,4	244	12,8	274	14,3	306	18,7
		44	18,5	11	204	13,2	244	14,9	275	16,5	305	21,3
		51	15,5	12,8	198	15,3	237	17,2	267	19,1	296	25,6
		64	12,1	16	194	19,2	232	21,6	261	24	290	32,4
		76	10,2	19	194	22,8	233	25,7	262	28,5	291	39
		89	8,4	22,3	187	26,7	224	30	252	33,4	281	45,9
		102	6,3	25,5	161	30,6	193	34,4	217	38,3	241	52,3
		305	2,1	76,3	160	91,5	192	103	216	114	240	153
16	8	25	49,4	6,3	311	7,5	371	8,4	417	9,4	464	10,5
		32	37,1	8	297	9,6	356	10,8	401	12	445	13,2

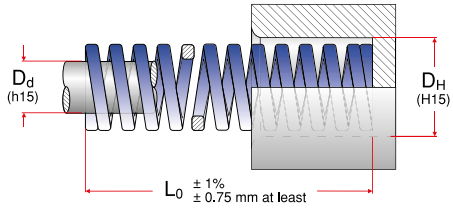
How to order: BRS-D_H x L_o
Forma de pedio: BRS-D_H x L_o



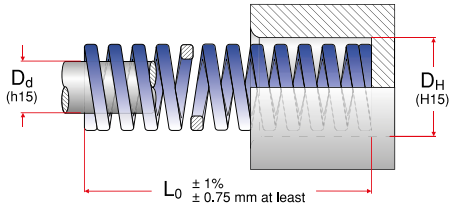
D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 33.75%L_o 300-500.000		D 37.5%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
16	8	38	33,9	9,5	322	11,4	386	12,8	435	14,3	485	17,2
		44	30	11	330	13,2	396	14,9	446	16,5	495	19,4
		51	26,4	12,8	338	15,3	404	17,2	454	19,1	504	24,2
		64	20,5	16	328	19,2	394	21,6	443	24	492	29,2
		76	17,8	19	338	22,8	406	25,7	457	28,5	507	36,3
		89	15,2	22,3	339	26,7	406	30	457	33,4	508	41,7
		102	13,5	25,5	344	30,6	413	34,4	465	38,3	517	48,9
		115	11,8	28,8	340	34,5	407	38,8	458	43,1	509	53,1
		305	4,8	76,3	366	91,5	439	103	494	114	549	142
20	10	25	98	6,3	617	7,5	735	8,4	827	9,4	921	10,5
		32	72,6	8	581	9,6	697	10,8	784	12	871	13,9
		38	56	9,5	532	11,4	638	12,8	717	14,3	801	16,6
		44	47,5	11	523	13,2	627	14,9	705	16,5	784	18,8
		51	41,7	12,8	534	15,3	638	17,2	717	19,1	796	23,1
		64	32,3	16	517	19,2	620	21,6	698	24	775	27,5
		76	25,1	19	477	22,8	572	25,7	644	28,5	715	33,8
		89	22	22,3	491	26,7	587	30	661	33,4	735	39,7
		102	19,8	25,5	505	30,6	606	34,4	682	38,3	758	47,3
		115	18,1	28,8	521	34,5	624	38,8	703	43,1	780	52,5
		127	16,6	31,8	528	38,1	632	42,9	712	47,6	790	56,9
		139	15,1	35	529	42	634	46,9	708	52,5	793	62,1
		152	13,2	38	500	45,6	600	51,3	677	57	750	67,6
		305	6,1	76,3	465	91,5	558	103	628	114	698	143
25	12,5	25	147	6,3	926	7,5	1103	8,4	1240	9,4	1382	10,2



D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 33.75%L_o 300-500.000		D 37.5%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
25	12,5	32	118	8	944	9,6	1133	10,8	1274	12	1416	13,7
		38	93	9,5	884	11,4	1060	12,8	1193	14,3	1330	15,7
		44	80,8	11	889	13,2	1067	14,9	1200	16,5	1333	18,2
		51	68,6	12,8	878	15,3	1050	17,2	1181	19,1	1310	21,7
		64	53	16	848	19,2	1018	21,6	1145	24	1272	26
		76	43,2	19	821	22,8	985	25,7	1108	28,5	1231	32,3
		89	38,2	22,3	852	26,7	1020	30	1147	33,4	1276	38
		102	33	25,5	842	30,6	1010	34,4	1136	38,3	1264	43
		115	28	28,8	806	34,5	966	38,8	1087	43,1	1207	48,6
		127	25,9	31,8	824	38,1	987	42,9	1110	47,6	1233	53,7
		139	23,2	35	812	42	974	46,9	1088	52,5	1218	59,4
		152	20,8	38	790	45,6	948	51,3	1067	57	1186	63,8
		178	17,8	44,5	792	53,4	951	60,1	1069	66,8	1189	76,6
		203	15,8	50,8	803	60,9	962	68,5	1082	76,1	1202	88,4
		305	10,2	76,3	778	91,5	933	103	1050	114	1167	135
32	16	38	185	9,5	1758	11,4	2109	12,8	2373	14,3	2646	16,3
		44	158	11	1738	13,2	2086	14,9	2346	16,5	2607	18,9
		51	134	12,8	1715	15,3	2050	17,2	2306	19,1	2559	23,1
		64	99	16	1584	19,2	1901	21,6	2138	24	2376	28,5
		76	80,5	19	1530	22,8	1835	25,7	2065	28,5	2294	34,2
		89	69,1	22,3	1541	26,7	1845	30	2076	33,4	2308	40,4
		102	58,8	25,5	1499	30,6	1799	34,4	2024	38,3	2252	48
		115	51,5	28,8	1483	34,5	1777	38,8	1999	43,1	2220	54,3
		127	44,8	31,8	1425	38,1	1707	42,9	1920	47,6	2132	59,2

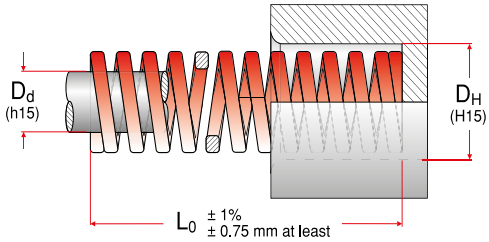


D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 33.75%L_o 300-500.000		D 37.5%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
32	16	139	42,3	35	1481	42	1777	46,9	1984	52,5	2221	65,3
		152	37,8	38	1436	45,6	1724	51,3	1939	57	2155	73
		178	32,5	44,5	1446	53,4	1736	60,1	1952	66,8	2171	84,5
		203	28,9	50,8	1468	60,9	1760	68,5	1980	76,1	2199	96,9
		254	21,4	63,5	1359	76,2	1631	85,7	1835	95,3	2039	121
		305	18,3	76,3	1396	91,5	1674	103	1884	114	2094	147
40	20	51	182	12,8	2330	15.3	2785	17,2	3130	19,1	3476	21,4
		64	140	16	2240	19.2	2688	21,6	3024	24	3360	26,8
		76	108	19	2052	22,8	2462	25,7	2770	28,5	3078	32,7
		89	90,7	22,3	2023	26,7	2422	30	2724	33,4	3029	39
		102	81	25,5	2066	30,6	2479	34,4	2788	38,3	3102	44,1
		115	71,8	28,8	2068	34,5	2477	38,8	2787	43,1	3095	50,6
		127	62,7	31,8	1994	38,1	2389	42,9	2687	47,6	2985	55,9
		139	57,5	35	2013	42	2415	46,9	2697	52,5	3019	61,8
		152	51,6	38	1961	45,6	2353	51,3	2647	57	2941	67,5
		178	44,1	44,5	1962	53,4	2355	60,1	2649	66,8	2946	77,2
		203	36,7	50,8	1864	60,9	2235	68,5	2514	76,1	2793	91,8
		254	30,1	63,5	1911	76,2	2294	85,7	2580	95,3	2869	113
		305	24,6	76,3	1877	91,5	2251	103	2532	114	2814	138
50	25	64	209	16	3344	19.2	4013	21,6	4514	24	5016	28,2
		76	168	19	3192	22,8	3830	25,7	4309	28,5	4788	34,9
		89	140	22,3	3122	26,7	3738	30	4205	33,4	4676	39,2
		102	119	25,5	3035	30,6	3641	34,4	4097	38,3	4558	47,3

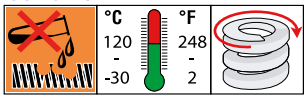


D_H Hole Diameter	D_d Rod Diameter	L_o Free Length	R Spring Constant ±10%	A 25%L_o +3.000.000		B 30%L_o -1.500.000		C 33.75%L_o 300-500.000		D 37.5%L_o 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
50	25	115	106	28,8	3053	34,5	3657	38,8	4114	43,1	4569	52,6
		127	97	31,8	3085	38,1	3696	42,9	4158	47,6	4617	59,8
		139	87	35	3045	42	3654	46,9	4081	52,5	4568	65,1
		152	80	38	3040	45,6	3648	51,3	4104	57	4560	70,8
		178	69,5	44,5	3093	53,4	3711	60,1	4175	66,8	4643	84,2
		203	59,8	50,8	3038	60,9	3642	68,5	4097	76,1	4551	96,5
		229	50,9	57,3	2917	68,7	3497	77,3	3934	85,9	4372	108
		254	43,9	63,5	2788	76,2	3345	85,7	3763	95,3	4184	122
		305	38,6	76,3	2945	91,5	3532	103	3973	114	4416	147
63	38	76	312	19	5928	22,8	7114	25,7	8003	28,5	8892	30,7
		89	260	22,3	5798	26,7	6942	30	7810	33,4	8684	36,5
		102	221	25,5	5636	30,6	6763	34,4	7608	38,3	8464	43,6
		115	187	28,8	5386	34,5	6452	38,8	7258	43,1	8060	48,9
		127	168	31,8	5342	38,1	6401	42,9	7201	47,6	7997	54,2
		152	136	38	5168	45,6	6202	51,3	6907	57	7752	65,7
		178	114	44,5	5073	53,4	6088	60,1	6849	66,8	7615	76,5
		203	100	50,8	5080	60,9	6090	68,5	6851	76,1	7610	88
		229	89,2	57,3	5111	68,7	6128	77,3	6894	85,9	7662	104
		254	78,4	63,5	4978	76,2	5974	85,7	6721	95,3	7472	112
		305	64,7	76,3	4937	91,5	5920	103	6660	114	7402	134

Heavy load spring
Muelles de carga fuerte
Sprężyna do wysokich obciążeń
Mola carga forte
Ressort charge forte

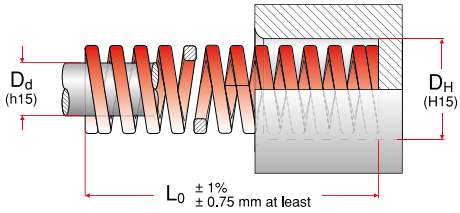


ISO 10243

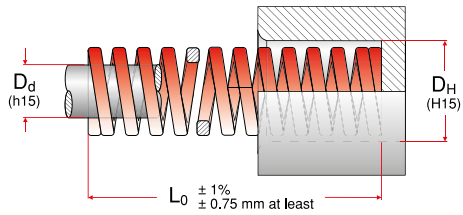


D_H Hole Diameter	D_d Rod Diameter	L_O Free Length	R Spring Constant ±10%	A 20%L_0 +3.000.000		B 25%L_0 ~1.500.000		C 27.5%L_0 300-500.000		D 30%L_0 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
10	5	25	22,1	5	111	6,3	139	6,9	152	7,5	166	9,2
		32	17,5	6,4	112	8	140	8,8	154	9,6	168	12,1
		38	17,1	7,6	130	9,5	162	10,5	179	11,4	195	13,2
		44	15	8,8	132	11	165	12,1	182	13,2	198	15,1
		51	12,8	10,2	131	12,8	164	14	180	15,3	196	19,5
		64	10,7	12,8	137	16	171	17,6	188	19,2	205	21,8
		76	7,5	15,2	114	19	143	20,9	157	22,8	171	27,9
		305	2,1	61	128	76,3	160	83,9	176	91,5	192	127
12,5	6,3	25	42,1	5	211	6,3	265	6,9	289	7,5	316	9,8
		32	33,2	6,4	212	8	266	8,8	292	9,6	319	13,6
		38	29,3	7,6	223	9,5	278	10,5	306	11,4	334	14,6
		44	24,6	8,8	216	11	271	12,1	298	13,2	325	18,1
		51	19,6	10,2	200	12,8	251	14	275	15,3	300	22,3
		64	15	12,8	192	16	240	17,6	264	19,2	288	27,3
		76	13,2	15,2	201	19	251	20,9	276	22,8	301	33,1
		89	11,4	17,8	203	22,3	254	24,5	279	26,7	304	38,9
		102	8,4	20,4	171	25,5	214	28,1	236	30,6	257	43,8
		305	2,8	61	171	76,3	214	83,9	235	91,5	256	140
16	8	25	75,7	5	379	6,3	477	6,9	520	7,5	568	8,4
		32	52,8	6,4	338	8	422	8,8	465	9,6	507	10,5

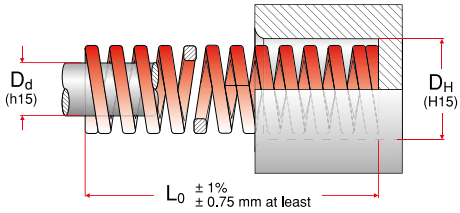
How to order: BRR-D_H x L_O
Forma de pedio: BRR-D_H x L_O



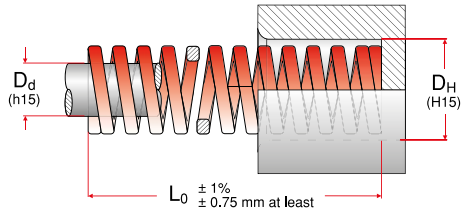
D_H Hole Diameter	D_d Rod Diameter	L_0 Free Length	R Spring Constant ±10%	A 20%L_0 +3.000.000		B 25%L_0 ~1.500.000		C 27.5%L_0 300-500.000		D 30%L_0 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
16	8	38	48,5	7,6	369	9,5	461	10,5	507	11,4	553	13,6
		44	42,8	8,8	377	11	471	12,1	518	13,2	565	15,9
		51	37,1	10,2	378	12,8	475	14	520	15,3	568	18,9
		64	30,3	12,8	388	16	485	17,6	533	19,2	582	24,9
		76	25,7	15,2	391	19	488	20,9	537	22,8	586	29,2
		89	21,7	17,8	386	22,3	484	24,5	531	26,7	579	34,5
		102	19,3	20,4	394	25,5	492	28,1	541	30,6	591	39,1
		115	15,7	23	361	28,8	452	31,6	497	34,5	542	44
		305	7,1	61	433	76,3	542	83,9	596	91,5	650	104
20	10	25	216	5	1080	6,3	1361	6,9	1485	7,5	1620	8,3
		32	168	6,4	1075	8	1344	8,8	1478	9,6	1613	10,9
		38	129	7,6	980	9,5	1226	10,5	1348	11,4	1471	12,5
		44	112	8,8	986	11	1232	12,1	1355	13,2	1478	15
		51	94	10,2	959	12,8	1203	14	1318	15,3	1438	17,6
		64	72,1	12,8	923	16	1154	17,6	1269	19,2	1384	22,6
		76	59,7	15,2	907	19	1134	20,9	1248	22,8	1361	27,5
		89	50,5	17,8	899	22,3	1126	24,5	1236	26,7	1348	31,7
		102	44,2	20,4	902	25,5	1127	28,1	1240	30,6	1353	37,5
		115	38,4	23	883	28,8	1106	31,6	1214	34,5	1325	42,6
		127	34,1	25,4	866	31,8	1084	34,9	1191	38,1	1299	45,5
		139	31	28	868	35	1085	38,2	1185	42	1302	50,1
		152	28,2	30,4	857	38	1072	41,8	1179	45,6	1286	55,8
		305	15	61	915	76,3	1145	83,9	1258	91,5	1373	114
25	12,5	25	375	5	1875	6,3	2363	6,9	2578	7,5	2813	8,5



D_H Hole Diameter	D_d Rod Diameter	L_O Free Length	R Spring Constant ±10%	A 20%L_0 +3.000.000		B 25%L_0 ~1.500.000		C 27.5%L_0 300-500.000		D 30%L_0 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
25	12,5	32	297	6,4	1901	8	2376	8,8	2614	9,6	2851	11
		38	219	7,6	1664	9,5	2081	10,5	2289	11,4	2497	12,6
		44	187	8,8	1646	11	2057	12,1	2263	13,2	2468	14,8
		51	156	10,2	1591	12,8	1997	14	2188	15,3	2387	17,9
		64	123	12,8	1574	16	1968	17,6	2165	19,2	2362	23,1
		76	99	15,2	1505	19	1881	20,9	2069	22,8	2257	26,3
		89	84	17,8	1495	22,3	1873	24,5	2056	26,7	2243	30,5
		102	73	20,4	1489	25,5	1862	28,1	2048	30,6	2234	37,3
		115	65	23	1495	28,8	1872	31,6	2056	34,5	2243	41,9
		127	57,7	25,4	1466	31,8	1835	34,9	2015	38,1	2198	46,2
		139	52,7	28	1476	35	1845	38,2	2014	42	2213	49,3
		152	47,8	30,4	1453	38	1816	41,8	1998	45,6	2180	55,7
		178	41	25,6	1460	44,5	1825	49	2007	53,4	2189	65,1
		203	35,8	40,6	1453	50,8	1819	55,8	1999	60,9	2180	74,5
		305	22,9	61	1397	76,3	1747	83,9	1921	91,5	2095	110
32	16	38	388	7,6	2949	9,5	3686	10,5	4055	11,4	4423	12,5
		44	324	8,8	2851	11	3564	12,1	3920	13,2	4277	14,9
		51	272	10,2	2774	12,8	3482	14	3815	15,3	4162	17,8
		64	212	12,8	2714	16	3392	17,6	3731	19,2	4070	22,4
		76	172	15,2	2614	19	3268	20,9	3595	22,8	3922	26,1
		89	141	17,8	2510	22,3	3144	24,5	3451	26,7	3765	30,8
		102	122	20,4	2489	25,5	3111	28,1	3422	30,6	3733	36,8
		115	107	23	2461	28,8	3082	31,6	3384	34,5	3692	41,4
		127	93	25,4	2362	31,8	2957	34,9	3248	38,1	3543	44,4



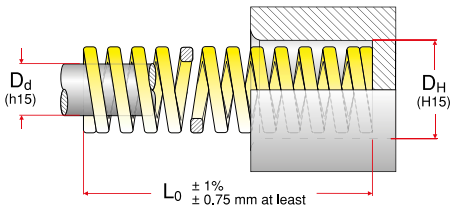
D_H Hole Diameter	D_d Rod Diameter	L_O Free Length	R Spring Constant ±10%	A 20%L_0 +3.000.000		B 25%L_0 ~1.500.000		C 27.5%L_0 300-500.000		D 30%L_0 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
32	16	139	86	28	2408	35	3010	38,2	3287	42	3612	48,5
		152	78	30,4	2371	38	2954	41,8	3260	45,6	3557	54,8
		178	67,2	25,6	2392	44,5	2990	49	3289	53,4	3588	63,6
		203	59,1	40,6	2399	50,8	3002	55,8	3299	60,9	3599	72,5
		254	46,4	50,8	2357	63,5	2946	69,9	3241	76,2	3536	92,8
		305	38	61	2318	76,3	2899	83,9	3187	91,5	3477	112
40	20	51	350	10,2	3570	12,8	4480	14	4909	15,3	5355	17
		64	269	12,8	3443	16	4304	17,6	4734	19,2	5165	21,9
		76	219	15,2	3329	19	4161	20,9	4577	22,8	4993	26,7
		89	190	17,8	3382	22,3	4237	24,5	4650	26,7	5073	31,3
		102	163	20,4	3325	25,5	4157	28,1	4572	30,6	4988	37,1
		115	142	23	3266	28,8	4090	31,6	4491	34,5	4899	41
		127	128	25,4	3251	31,8	4070	34,9	4470	38,1	4877	46,5
		139	115	28	3220	35	4025	38,2	4396	42	4830	53,1
		152	105	30,4	3192	38	3990	41,8	4389	45,6	4788	56,1
		178	89	35,6	3168	44,5	3961	49	4357	53,4	4753	67,4
		203	77	40,6	3126	50,8	3912	55,8	4299	60,9	4689	76,2
		254	61	50,8	3099	63,5	3874	69,9	4261	76,2	4648	96,2
		305	51	61	3111	76,3	3891	83,9	4278	91,5	4667	115
50	25	64	413	12,8	5286	16	4304	17,6	7269	19,2	7930	22,4
		76	339	15,2	5153	19	6441	20,9	7085	22,8	7729	26,5
		89	288	17,8	5126	22,3	6422	24,5	7049	26,7	7690	31,5
		102	245	20,4	4998	25,5	6248	28,1	6872	30,6	7497	37,6



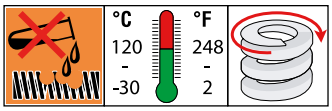
D_H Hole Diameter	D_d Rod Diameter	L_0 Free Length	R Spring Constant ±10%	A 20%L_0 +3.000.000		B 25%L_0 ~1.500.000		C 27.5%L_0 300-500.000		D 30%L_0 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
50	25	115	215	23	4945	28,8	6192	31,6	6799	34,5	7418	42,7
		127	192	25,4	4877	31,8	6106	34,9	6706	38,1	7315	47,5
		139	168	28	4704	35	5880	38,2	6422	42	7056	51,8
		152	154	30,4	4682	38	5852	41,8	6437	45,6	7022	57,8
		178	134	35,6	4770	44,5	5963	49	6559	53,4	7156	68,5
		203	117	40,6	4750	50,8	5944	55,8	6352	60,9	7125	77,6
		254	89	50,8	4521	63,5	5662	69,9	6217	76,2	6782	97,9
		305	73	61	4453	76,3	5570	83,9	6123	91,5	6680	121
63	38	76	618	15,2	9394	19	11742	20,9	12916	22,8	14090	24,7
		89	515	17,8	9167	22,3	11485	24,5	12605	26,7	13751	30
		102	438	20,4	8935	25,5	11169	28,1	12286	30,6	13403	35,1
		115	370	23	8510	28,8	10656	31,6	11701	34,5	12765	37,5
		127	333	25,4	8458	31,8	10589	34,9	11630	38,1	12687	45,9
		152	269	30,4	8178	38	10222	41,8	11244	45,6	12266	56,5
		178	226	35,6	8046	44,5	10057	49	11063	53,4	12068	66,8
		203	198	40,6	8039	50,8	10058	55,8	11053	60,9	12058	78,8
		254	155	50,8	7874	63,5	9843	69,9	10827	76,2	11811	102
		305	128	61	7808	76,3	9766	83,9	10736	91,5	11712	122

Estimated life 100.000 cycles / Vida estimada 100,000 ciclos

Extra-heavy load spring
Muelles de carga extrafuerte
Sprężyna do bardzo wysokich obciążeń
Mola carga extra-forte
Ressort charge extra-forte

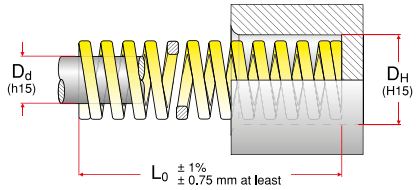


ISO 10243

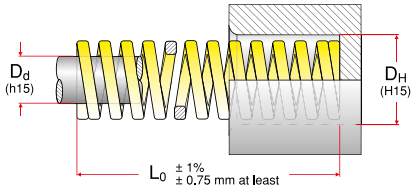


D_H Hole Diameter	D_d Rod Diameter	L_O Free Length	R Spring Constant ±10%	A 17%L_0 +3.000.000		B 20%L_0 ~1.500.000		C 22.5%L_0 300-500.000		D 25%L_0 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
10	5	25	36,8	4,3	158	5	184	5,6	207	6,3	232	7,7
		32	27,9	5,4	151	6,4	179	7,2	201	8	223	10,6
		38	23,7	6,5	154	7,6	180	8,6	203	9,5	225	12,6
		44	19,2	7,5	144	8,8	169	9,9	190	11	211	13,8
		51	16,5	8,7	144	10,2	168	11,5	189	12,8	211	16,2
		64	13,2	10,9	144	12,8	169	14,4	190	16	211	20,4
		76	10,9	12,9	141	15,2	166	17,1	186	19	207	25,2
		305	2,6	51,9	135	61	159	68,6	178	76,3	198	111
12,5	6,3	25	58,5	4,3	252	5	293	5,6	329	6,3	369	8,1
		32	43,9	5,4	237	6,4	281	7,2	316	8	351	9,9
		38	36	6,5	234	7,6	274	8,6	308	9,5	342	12,9
		44	30,3	7,5	227	8,8	267	9,9	300	11	333	14,1
		51	26,2	8,7	228	10,2	267	11,5	301	12,8	335	17,4
		64	21,2	10,9	231	12,8	271	14,4	305	16	339	21
		76	17,1	12,9	221	15,2	260	17,1	292	19	325	26,4
		89	14,5	15,1	219	17,8	258	20	290	22,3	323	31,5
		102	12,7	17,3	220	20,4	259	23	291	25,5	324	36
		305	4,3	51,9	223	61	262	68,6	295	76,3	328	111
16	8	25	118	4,3	507	5	590	5,6	664	6,3	743	8,5
		32	89	5,4	481	6,4	570	7,2	641	8	712	11

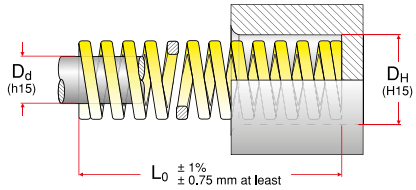
How to order: BRA-D_H x L_O
Forma de pedio: BRA-D_H x L_O



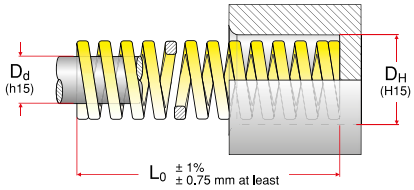
D_H Hole Diameter	D_d Rod Diameter	L_O Free Length	R Spring Constant ±10%	A 17%L_0 +3.000.000		B 20%L_0 ~1.500.000		C 22.5%L_0 300-500.000		D 25%L_0 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
16	8	38	72,1	6,5	469	7,6	548	8,6	616	9,5	685	13,2
		44	60,9	7,5	457	8,8	536	9,9	603	11	670	14,7
		51	52,3	8,7	455	10,2	533	11,5	600	12,8	669	17,7
		64	41,2	10,9	449	12,8	527	14,4	593	16	659	21,9
		76	34,1	12,9	440	15,2	518	17,1	583	19	648	27,8
		89	29,5	15,1	445	17,8	525	20	591	22,3	658	31,2
		102	25,6	17,3	443	20,4	522	23	588	25,5	653	37,9
		115	22,4	19,6	439	23	515	25,9	580	28,8	645	44,5
		305	8,4	51,9	436	61	512	68,6	576	76,3	641	113
20	10	25	293	4,3	1260	5	1465	5,6	1648	6,3	1846	6,9
		32	224	5,4	1210	6,4	1434	7,2	1613	8	1792	9,4
		38	177	6,5	1151	7,6	1345	8,6	1513	9,5	1682	12
		44	149	7,5	1118	8,8	1311	9,9	1475	11	1639	13,5
		51	128	8,7	1114	10,2	1306	11,5	1469	12,8	1638	16,2
		64	99	10,9	1079	12,8	1267	14,4	1426	16	1584	21,2
		76	81,7	12,9	1054	15,2	1242	17,1	1397	19	1552	24,7
		89	69,5	15,1	1049	17,8	1237	20	1392	22,3	1550	28,8
		102	60,6	17,3	1048	20,4	1236	23	1391	25,5	1545	34,8
		115	53	19,6	1039	23	1219	25,9	1371	28,8	1526	39
		127	47,5	21,6	1026	25,4	1207	28,6	1357	31,8	1511	43
		139	43	23,8	1023	28	1204	31,3	1345	35	1505	45,3
		152	39	25,8	1006	30,4	1186	34,2	1334	38	1482	50,4
		305	21,2	51,9	1100	61	1293	68,6	1455	76,3	1618	103
25	12,5	25	459	4,3	1974	5	2295	5,6	2582	6,3	2892	7,3



D_H Hole Diameter	D_d Rod Diameter	L_0 Free Length	R Spring Constant ±10%	A $17\%L_0$ +3.000.000		B $20\%L_0$ ~1.500.000		C $22.5\%L_0$ 300-500.000		D $25\%L_0$ 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
25	12,5	32	374	5,4	2020	6,4	2394	7,2	2693	8	2992	10,7
		38	300	6,5	1950	7,6	2280	8,6	2580	9,5	2850	12
		44	244	7,5	1830	8,8	2147	9,9	2416	11	2684	14,4
		51	208	8,7	1810	10,2	2122	11,5	2392	12,8	2662	17,4
		64	161	10,9	1755	12,8	2061	14,4	2318	16	2576	21,4
		76	131	12,9	1690	15,2	1991	17,1	2240	19	2489	26,9
		89	111	15,1	1676	17,8	1976	20	2220	22,3	2475	30,9
		102	96,3	17,3	1666	20,4	1965	23	2210	25,5	2456	36,7
		115	85,7	19,6	1680	23	1971	25,9	2217	28,8	2468	40,3
		127	76,3	21,6	1648	25,4	1938	28,6	2180	31,8	2426	45,1
		139	66	23,8	1571	28	1848	31,3	2066	35	2310	47,6
		152	63,5	25,8	1638	30,4	1930	34,2	2172	38	2413	53,5
		178	53,9	30,3	1633	35,6	1919	40,1	2159	44,5	2399	63,9
		203	47	34,5	1622	40,6	1908	45,7	2147	50,8	2388	70,2
		305	30,9	51,9	1604	61	1885	68,6	2121	76,3	2358	110
32	16	38	480	6,5	3120	7,6	3648	8,6	4128	9,5	4560	11,4
		44	390	7,5	2925	8,8	3432	9,9	3861	11	4290	13,7
		51	320	8,7	2784	10,2	3264	11,5	3680	12,8	4096	15,6
		64	269	10,9	2934	12,8	3446	14,4	3876	16	4307	20
		76	219	12,9	2825	15,2	3329	17,1	3745	19	4161	24,4
		89	180	15,1	2723	17,8	3209	20	3611	22,3	4021	29,7
		102	155	17,3	2682	20,4	3162	23	3557	25,5	3953	35,1
		115	140	19,6	2744	23	3220	25,9	3623	28,8	4032	39
		127	124	21,6	2678	25,4	3150	28,6	3543	31,8	3943	42,8



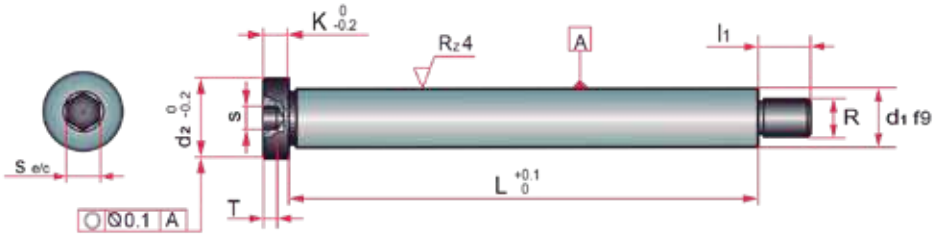
D_H Hole Diameter	D_d Rod Diameter	L_0 Free Length	R Spring Constant ±10%	A $17\%L_0$ +3.000.000		B $20\%L_0$ ~1.500.000		C $22.5\%L_0$ 300-500.000		D $25\%L_0$ 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
32	16	139	112	23,8	2673	28	3144	31,3	3512	35	3931	48,6
		152	102	25,8	2632	30,4	3101	34,2	3488	38	3876	52,4
		178	88,2	30,3	2672	35,6	3140	40,1	3532	44,5	3925	60,9
		203	76	34,5	2622	40,6	3086	45,7	3471	50,8	3861	69,2
		254	60,8	43,2	2627	50,8	3089	57,2	3475	63,5	3861	88,1
		305	49	51,9	2543	61	2989	68,6	3363	76,3	3739	104
40	20	51	628	8,7	5464	10,2	6406	11,5	7206	12,8	8038	15
		64	487	10,9	5308	12,8	6234	14,4	7013	16	7792	19,5
		76	379	12,9	4889	15,2	5761	17,1	6481	19	7201	23,3
		89	321	15,1	4847	17,8	5714	20	6428	22,3	7158	26,7
		102	281	17,3	4861	20,4	5732	23	6449	25,5	7166	33,8
		115	245	19,6	4802	23	5635	25,9	6339	28,8	7056	36,2
		127	221	21,6	4774	25,4	5613	28,6	6315	31,8	7028	40,7
		139	190	23,8	4641	28	5460	31,3	6103	35	6825	44,5
		152	168	25,8	4334	30,4	5107	34,2	5746	38	6384	49,6
		178	150	30,3	4545	35,6	5340	40,1	6015	44,5	6675	59,9
		203	132	34,5	4554	40,6	5359	45,7	6029	50,8	6706	67,1
		254	107	43,2	4622	50,8	5436	57,2	6115	63,5	6795	86,3
		305	87,8	51,9	4557	61	5356	68,6	6025	76,3	6699	104
50	25	64	709	10,9	7728	12,8	9075	14,4	10210	16	11344	19,3
		76	572	12,9	7379	15,2	8694	17,1	9781	19	10868	24,2
		89	475	15,1	7173	17,8	8455	20	9512	22,3	10593	28
		102	405	17,3	7007	20,4	8262	23	9295	25,5	10328	33,5
		115	352	19,6	6899	23	8096	25,9	9108	28,8	10138	38,6



D_H Hole Diameter	D_d Rod Diameter	L_O Free Length	R Spring Constant ±10%	A 17%L_0 +3.000.000		B 20%L_0 ~1.500.000		C 22.5%L_0 300-500.000		D 25%L_0 100-200.000		E approx. Do not use
mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm
50	25	127	316	21,6	6826	25,4	8026	28,6	9030	31,8	10049	41,4
		139	289	23,8	6878	28	8092	31,3	9046	35	10115	47,3
		152	168	25,8	6166	30,4	7266	34,2	8174	38	9082	50,2
		178	215	30,3	6515	35,6	7654	40,1	8611	44,5	9568	61,1
		203	187	34,5	6452	40,6	7592	45,7	8541	50,8	9500	67,7
		254	153	43,2	6610	50,8	7772	57,2	8744	63,5	9716	87
		305	127	51,9	6591	61	7747	68,6	8715	76,3	9690	104
63	38	76	952	12,9	12280	15,2	14470	n/a	n/a	n/a	n/a	15,5
		89	819	15,1	12360	17,8	14580	n/a	n/a	n/a	n/a	20
		102	700	17,3	12110	20,4	14280	23	16065	25,5	17850	30,7
		115	620	19,6	12152	23	14260	25,9	16043	28,8	17860	34,9
		127	565	21,6	12204	25,4	14351	28,6	16145	31,8	17967	38
		152	458	25,8	11816	30,4	13923	34,2	15664	38	17404	47,2
		178	384	30,3	11635	35,6	13670	40,1	15379	44,5	17088	55,8
		203	337	34,5	11627	40,6	13682	45,7	15392	50,8	17120	64,8
		254	263	43,2	11362	50,8	13360	57,2	15030	63,5	16701	86,7
		305	218	51,9	11314	61	13298	68,6	14960	76,3	16633	106

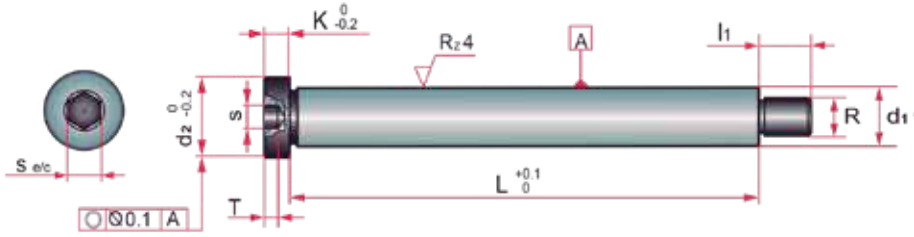
Estimated life 100.000 cycles / Vida estimada 100,000 ciclos

Shoulder bolt
Tornillo limitador
Śruba pasowana
Limitador de curso
Vis epaulee a 6 pans creux

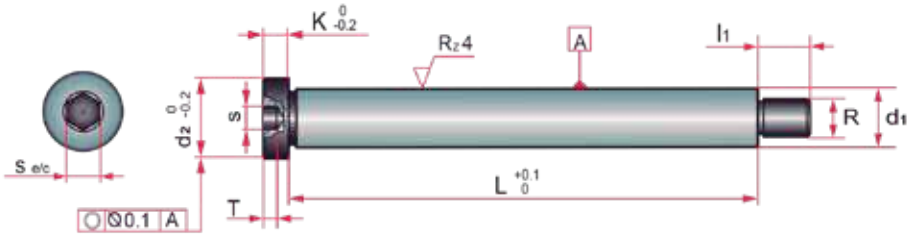


Mat. : Alloy steel. Hardness: HRC 38-42 - ISO 7379.

s	K	l1	d2	T	d1	R	L	REF.
3	4,5	9,5	10	3	6	M5	10	TPM/05x010
							12	TPM/05x012
							16	TPM/05x016
							20	TPM/05x020
							25	TPM/05x025
							30	TPM/05x030
							35	TPM/05x035
							40	TPM/05x040
							45	TPM/05x045
							50	TPM/05x050
							60	TPM/05x060
4	5,5	11	13	4	8	M6	12	TPM/06x012
							16	TPM/06x016
							20	TPM/06x020
							25	TPM/06x025
							30	TPM/06x030
							35	TPM/06x035
							40	TPM/06x040
							45	TPM/06x045
							50	TPM/06x050
							60	TPM/06x060
							70	TPM/06x070
							80	TPM/06x080
							90	TPM/06x090
							100	TPM/06x100



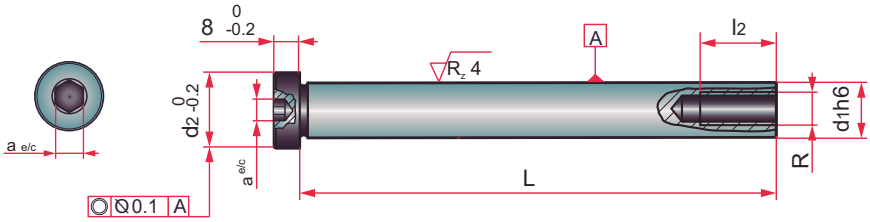
s	K	l1	d2	T	d1	R	L	REF.
5	7	13	16	5	**10**	**M8**	**16**	**TPM/08x016**
							20	**TPM/08x020**
							25	**TPM/08x025**
							30	**TPM/08x030**
							35	**TPM/08x035**
							40	**TPM/08x040**
							45	**TPM/08x045**
							50	**TPM/08x050**
							60	**TPM/08x060**
							70	**TPM/08x070**
							80	**TPM/08x080**
							90	**TPM/08x090**
							100	**TPM/08x100**
							110	**TPM/08x110**
							120	**TPM/08x120**
6	9	16	18	6	**12**	**M10**	**16**	**TPM/10x016**
							20	**TPM/10x020**
							25	**TPM/10x025**
							30	**TPM/10x030**
							35	**TPM/10x035**
							40	**TPM/10x040**
							45	**TPM/10x045**
							50	**TPM/10x050**
							60	**TPM/10x060**
							70	**TPM/10x070**
							80	**TPM/10x080**
							90	**TPM/10x090**
							100	**TPM/10x100**
							110	**TPM/10x110**
							120	**TPM/10x120**
							140	**TPM/10x140**



s	K	l1	d2	T	d1	R	L	REF.
8	11	18	24	8	**16**	**M12**	**30**	**TPM/12x030**
							35	**TPM/12x035**
							40	**TPM/12x040**
							45	**TPM/12x045**
							50	**TPM/12x050**
							60	**TPM/12x060**
							70	**TPM/12x070**
							80	**TPM/12x080**
							90	**TPM/12x090**
							100	**TPM/12x100**
							110	**TPM/12x110**
							120	**TPM/12x120**
							140	**TPM/12x140**
							160	**TPM/12x160**
10	14	22	30	10	**20**	**M16**	**40**	**TPM/16x040**
							50	**TPM/16x050**
							60	**TPM/16x060**
							70	**TPM/16x070**
							80	**TPM/16x080**
							90	**TPM/16x090**
							100	**TPM/16x100**
							120	**TPM/16x120**
							140	**TPM/16x140**
							160	**TPM/16x160**
12	16	27	36	12	**24**	**M20**	**80**	**TPM/20x080**
							100	**TPM/20x100**
							120	**TPM/20x120**
							140	**TPM/20x140**
							160	**TPM/20x160**
							200	**TPM/20x200**

TGH

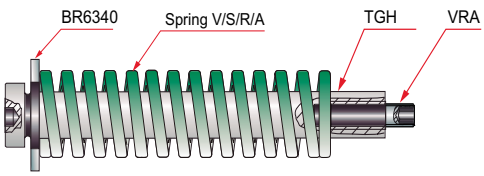
Tie bar with stop
Tope guía
Zderzak
Guia limitador
Colonne butee lisse



Mat.1.7264 - Case-hardned: 50-52 HRC.-0.8-1.2 m.m. depth

d1	d2	l2	a	R	L	REF.
14	20	18	8	M08	40	TGH/14x040-M08
					50	TGH/14x050-M08
					60	TGH/14x060-M08
					80	TGH/14x080-M08
					100	TGH/14x100-M08
					125	TGH/14x125-M08
					150	TGH/14x150-M08
					175	TGH/14x175-M08
					200	TGH/14x200-M08
				M10	40	TGH/14x040-M10
					50	TGH/14x050-M10
					60	TGH/14x060-M10
					80	TGH/14x080-M10
					100	TGH/14x100-M10
					125	TGH/14x125-M10
					150	TGH/14x150-M10
					175	TGH/14x175-M10
					200	TGH/14x200-M10

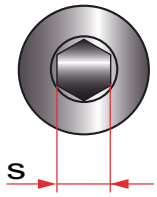
d1	d2	l2	a	R	L	REF.
20	26	25	10	M12	60	TGH/20x060-M12
					80	TGH/20x080-M12
					100	TGH/20x100-M12
					125	TGH/20x125-M12
					150	TGH/20x150-M12
					175	TGH/20x175-M12
					200	TGH/20x200-M12
					225	TGH/20x225-M12
					250	TGH/20x250-M12
				M14	60	TGH/20x060-M14
					80	TGH/20x080-M14
					100	TGH/20x100-M14
					125	TGH/20x125-M14
					150	TGH/20x150-M14
					175	TGH/20x175-M14
					200	TGH/20x200-M14
					225	TGH/20x225-M14
					250	TGH/20x250-M14

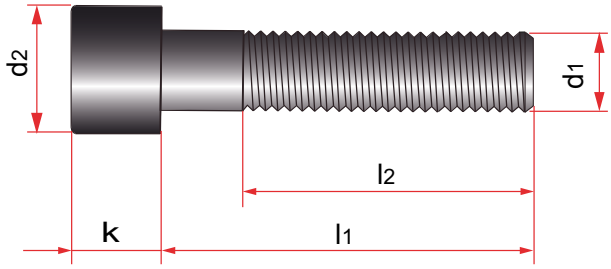


TA12.9

E1200. Z31

Socket head cap screw
Tornillo allen
Śruba z łbem walcowym
Parafuso cabeça cilindrica
Vis tete cylindrique a 6 pans creux





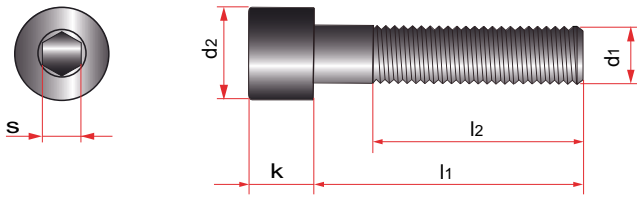
Mat. : Alloy steel. Hardness: HRC 38-42 - DIN 912/ISO 4762

s	l2	k	d2	d1	l1	REF.
2,5	4,5	3	5,5	M3	6	TA.12.9/03x006
	6,5				8	TA.12.9/03x008
	8,5				10	TA.12.9/03x010
	10,5				12	TA.12.9/03x012
	12,5				14	TA.12.9/03x014
	14,5				16	TA.12.9/03x016
	16,5				18	TA.12.9/03x018
	18				20	TA.12.9/03x020
					25	TA.12.9/03x025
					30	TA.12.9/03x030
					35	TA.12.9/03x035
					40	TA.12.9/03x040
3	6	4	7	M4	8	TA.12.9/04x008
	8				10	TA.12.9/04x010
	10				12	TA.12.9/04x012
	12				14	TA.12.9/04x014
	14				16	TA.12.9/04x016
	16				18	TA.12.9/04x018
	18				20	TA.12.9/04x020
	23				25	TA.12.9/04x025
	20				30	TA.12.9/04x030
					35	TA.12.9/04x035
					40	TA.12.9/04x040
					45	TA.12.9/04x045

s	l2	k	d2	d1	l1	REF.
3	20	4	7	M4	50	TA.12.9/04x050
					60	TA.12.9/04x060
					65	TA.12.9/04x065
					70	TA.12.9/04x070
4	4	5	8,5	M5	6	TA.12.9/05x006
	8				8	TA.12.9/05x008
	10				10	TA.12.9/05x010
	12				12	TA.12.9/05x012
	14				14	TA.12.9/05x014
	16				16	TA.12.9/05x016
	18				18	TA.12.9/05x018
	20				20	TA.12.9/05x020
	23				22	TA.12.9/05x022
	22				25	TA.12.9/05x025
					30	TA.12.9/05x030
					35	TA.12.9/05x035
					40	TA.12.9/05x040
					45	TA.12.9/05x045
					50	TA.12.9/05x050
					55	TA.12.9/05x055
					60	TA.12.9/05x060
					65	TA.12.9/05x065
					70	TA.12.9/05x070
					80	TA.12.9/05x080

TA12.9

E1200. Z31

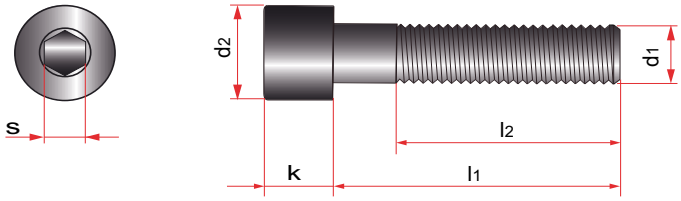


s	l2	k	d2	d1	l1	REF.
4	22	5	8,5	M5	90	TA.12.9/05x090
					100	TA.12.9/05x100
5	5	6	10	M6	8	TA.12.9/06x008
	7				10	TA.12.9/06x010
	9				12	TA.12.9/06x012
	11				14	TA.12.9/06x014
	13				16	TA.12.9/06x016
	15				18	TA.12.9/06x018
	17				20	TA.12.9/06x020
	19				22	TA.12.9/06x022
	22				25	TA.12.9/06x025
	27				30	TA.12.9/06x030
	24				35	TA.12.9/06x035
					40	TA.12.9/06x040
					45	TA.12.9/06x045
					50	TA.12.9/06x050
					55	TA.12.9/06x055
					60	TA.12.9/06x060
					65	TA.12.9/06x065
					70	TA.12.9/06x070
					75	TA.12.9/06x075
					80	TA.12.9/06x080
					90	TA.12.9/06x090
					100	TA.12.9/06x100
					110	TA.12.9/06x110
					120	TA.12.9/06x120
6	6	8	13	M8	10	TA.12.9/08x010
	8				12	TA.12.9/08x012
	10				14	TA.12.9/08x014
	12				16	TA.12.9/08x016
	14				18	TA.12.9/08x018
	16				20	TA.12.9/08x020

s	l2	k	d2	d1	l1	REF.
6	18	8	13	M8	22	TA.12.9/08x022
	21				25	TA.12.9/08x025
	26				30	TA.12.9/08x030
	31				35	TA.12.9/08x035
	28				40	TA.12.9/08x040
					45	TA.12.9/08x045
					50	TA.12.9/08x050
					55	TA.12.9/08x055
					60	TA.12.9/08x060
					65	TA.12.9/08x065
					70	TA.12.9/08x070
					75	TA.12.9/08x075
					80	TA.12.9/08x080
					90	TA.12.9/08x090
					100	TA.12.9/08x100
					110	TA.12.9/08x110
					120	TA.12.9/08x120
					130	TA.12.9/08x130
					140	TA.12.9/08x140
					150	TA.12.9/08x150
					160	TA.12.9/08x160
					170	TA.12.9/08x170
					180	TA.12.9/08x180
					190	TA.12.9/08x190
					200	TA.12.9/08x200
8	6	10	16	M10	10	TA.12.9/10x010
	8				12	TA.12.9/10x012
	10				14	TA.12.9/10x015
	12				16	TA.12.9/10x016
	14				18	TA.12.9/10x018
	16				20	TA.12.9/10x020
	18				22	TA.12.9/10x022

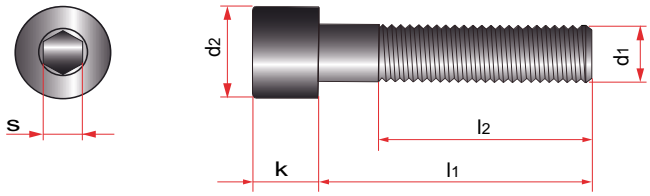
TA12.9

E1200. Z31



s	l2	k	d2	d1	l1	REF.
8	21	10	16	M10	25	TA.12.9/10x025
	26				30	TA.12.9/10x030
	31				35	TA.12.9/10x035
	36				40	TA.12.9/10x040
	32				45	TA.12.9/10x045
					50	TA.12.9/10x050
					55	TA.12.9/10x055
					60	TA.12.9/10x060
					65	TA.12.9/10x065
					70	TA.12.9/10x070
					75	TA.12.9/10x075
					80	TA.12.9/10x080
					90	TA.12.9/10x090
					100	TA.12.9/10x100
					110	TA.12.9/10x110
					120	TA.12.9/10x120
					130	TA.12.9/10x130
					140	TA.12.9/10x140
					150	TA.12.9/10x150
					160	TA.12.9/10x160
					170	TA.12.9/10x170
					180	TA.12.9/10x180
					190	TA.12.9/10x190
					200	TA.12.9/10x200
					220	TA.12.9/10x220
					240	TA.12.9/10x240
					260	TA.12.9/10x260
10	11	12	18	M12	16	TA.12.9/12x016
	15				20	TA.12.9/12x020
	20				25	TA.12.9/12x025
	25				30	TA.12.9/12x030
	30				35	TA.12.9/12x035

s	l2	k	d2	d1	l1	REF.
10	35	12	18	M12	40	TA.12.9/12x040
	40				45	TA.12.9/12x045
	45				50	TA.12.9/12x050
	36				55	TA.12.9/12x055
					60	TA.12.9/12x060
					65	TA.12.9/12x065
					70	TA.12.9/12x070
					75	TA.12.9/12x075
					80	TA.12.9/12x080
					90	TA.12.9/12x090
					100	TA.12.9/12x100
					110	TA.12.9/12x110
					120	TA.12.9/12x120
					130	TA.12.9/12x130
					140	TA.12.9/12x140
					150	TA.12.9/12x150
					160	TA.12.9/12x160
					170	TA.12.9/12x170
					180	TA.12.9/12x180
					190	TA.12.9/12x190
					200	TA.12.9/12x200
					220	TA.12.9/12x220
					240	TA.12.9/12x240
					260	TA.12.9/12x260
					280	TA.12.9/12x280
					300	TA.12.9/12x300
					320	TA.12.9/12x320
					340	TA.12.9/12x340
					360	TA.12.9/12x360
12	19	14	21	M14	25	TA.12.9/14x025
	24				30	TA.12.9/14x030
	29				35	TA.12.9/14x035

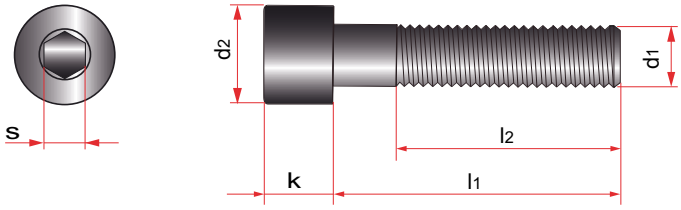


s	l2	k	d2	d1	l1	REF.
12	34	14	21	M14	40	TA.12.9/14x040
	39				45	TA.12.9/14x045
	44				50	TA.12.9/14x050
	49				55	TA.12.9/14x055
	40				60	TA.12.9/14x060
					65	TA.12.9/14x065
	44				70	TA.12.9/14x070
					75	TA.12.9/14x075
					80	TA.12.9/14x080
					90	TA.12.9/14x090
					100	TA.12.9/14x100
					110	TA.12.9/14x110
					120	TA.12.9/14x120
					130	TA.12.9/14x130
					140	TA.12.9/14x140
					150	TA.12.9/14x150
					160	TA.12.9/14x160
					170	TA.12.9/14x170
					180	TA.12.9/14x180
					190	TA.12.9/14x190
					200	TA.12.9/14x200
					220	TA.12.9/14x220
					240	TA.12.9/14x240
					260	TA.12.9/14x260
					280	TA.12.9/14x280
					300	TA.12.9/14x300
14	19	16	24	M16	25	TA.12.9/16x025
	24				30	TA.12.9/16x030
	29				35	TA.12.9/16x035
	34				40	TA.12.9/16x040
	39				45	TA.12.9/16x045
	44				50	TA.12.9/16x050

s	l2	k	d2	d1	l1	REF.
14	49	16	24	M16	55	TA.12.9/16x055
	54				60	TA.12.9/16x060
	44				65	TA.12.9/16x065
					70	TA.12.9/16x070
					75	TA.12.9/16x075
					80	TA.12.9/16x080
					90	TA.12.9/16x090
					100	TA.12.9/16x100
					110	TA.12.9/16x110
					120	TA.12.9/16x120
					130	TA.12.9/16x130
					140	TA.12.9/16x140
					150	TA.12.9/16x150
					160	TA.12.9/16x160
					170	TA.12.9/16x170
					180	TA.12.9/16x180
					190	TA.12.9/16x190
					200	TA.12.9/16x200
					220	TA.12.9/16x220
					240	TA.12.9/16x240
					260	TA.12.9/16x260
					280	TA.12.9/16x280
					300	TA.12.9/16x300
					320	TA.12.9/16x320
					340	TA.12.9/16x340
					360	TA.12.9/16x360
					400	TA.12.9/16x400
	24	18	27	M18	30	TA.12.9/18x030
	33				40	TA.12.9/18x040
	38				45	TA.12.9/18x045
	43				50	TA.12.9/18x050
	48				55	TA.12.9/18x055

TA12.9

E1200. Z31

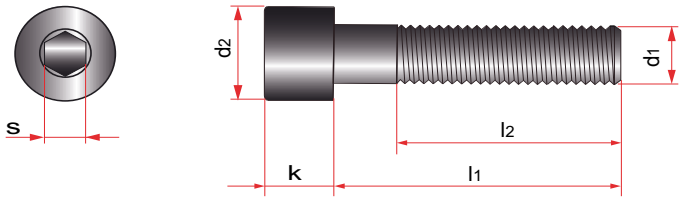


s	l2	k	d2	d1	l1	REF.
14	53	18	27	**M18**	**60**	**TA.12.9/18x060**
	58				**65**	**TA.12.9/18x065**
	63				**70**	**TA.12.9/18x070**
	68				**75**	**TA.12.9/18x075**
	52				**80**	**TA.12.9/18x080**
					90	**TA.12.9/18x090**
					100	**TA.12.9/18x100**
					110	**TA.12.9/18x110**
					120	**TA.12.9/18x120**
					130	**TA.12.9/18x130**
					140	**TA.12.9/18x140**
					150	**TA.12.9/18x150**
					160	**TA.12.9/18x160**
					170	**TA.12.9/18x170**
					180	**TA.12.9/18x180**
					190	**TA.12.9/18x190**
					200	**TA.12.9/18x200**
17	23	20	30	**M20**	**30**	**TA.12.9/20x030**
	28				**35**	**TA.12.9/20x035**
	33				**40**	**TA.12.9/20x040**
	38				**45**	**TA.12.9/20x045**
	43				**50**	**TA.12.9/20x050**
	48				**55**	**TA.12.9/20x055**
	53				**60**	**TA.12.9/20x060**
	58				**65**	**TA.12.9/20x065**
	63				**70**	**TA.12.9/20x070**
	68				**75**	**TA.12.9/20x075**
	52				**80**	**TA.12.9/20x080**
					90	**TA.12.9/20x090**
					100	**TA.12.9/20x100**
					110	**TA.12.9/20x110**
					120	**TA.12.9/20x120**

s	l2	k	d2	d1	l1	REF.
17	52	20	30	**M20**	**130**	**TA.12.9/20x130**
					140	**TA.12.9/20x140**
					150	**TA.12.9/20x150**
					160	**TA.12.9/20x160**
					170	**TA.12.9/20x170**
					180	**TA.12.9/20x180**
					190	**TA.12.9/20x190**
					200	**TA.12.9/20x200**
					220	**TA.12.9/20x220**
					240	**TA.12.9/20x240**
					260	**TA.12.9/20x260**
					280	**TA.12.9/20x280**
					300	**TA.12.9/20x300**
					320	**TA.12.9/20x320**
					340	**TA.12.9/20x340**
					360	**TA.12.9/20x360**
					380	**TA.12.9/20x380**
					400	**TA.12.9/20x400**
	23	22	33	**M22**	**30**	**TA.12.9/22x030**
	28				**35**	**TA.12.9/22x035**
	31				**40**	**TA.12.9/22x040**
	36				**45**	**TA.12.9/22x045**
	41				**50**	**TA.12.9/22x050**
	46				**55**	**TA.12.9/22x055**
	51				**60**	**TA.12.9/22x060**
	56				**65**	**TA.12.9/22x065**
	61				**70**	**TA.12.9/22x070**
	71				**75**	**TA.12.9/22x075**
	60				**80**	**TA.12.9/22x080**
					90	**TA.12.9/22x090**
					100	**TA.12.9/22x100**
					110	**TA.12.9/22x110**

TA12.9

E1200. Z31



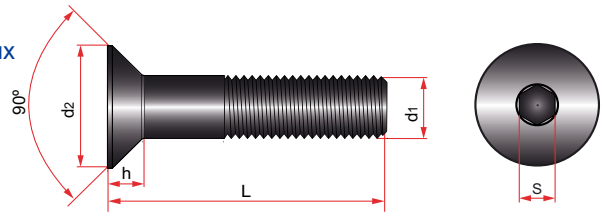
s	l2	k	d2	d1	l1	REF.
17	60	22	33	**M22**	**120**	**TA.12.9/22x120**
					130	**TA.12.9/22x130**
					140	**TA.12.9/22x140**
					150	**TA.12.9/22x150**
19	31	24	36	**M24**	**40**	**TA.12.9/24x040**
	36				**45**	**TA.12.9/24x045**
	41				**50**	**TA.12.9/24x050**
	46				**55**	**TA.12.9/24x055**
	51				**60**	**TA.12.9/24x060**
	56				**65**	**TA.12.9/24x065**
	61				**70**	**TA.12.9/24x070**
	71				**75**	**TA.12.9/24x075**
	60				**80**	**TA.12.9/24x080**
					90	**TA.12.9/24x090**
					100	**TA.12.9/24x100**
					110	**TA.12.9/24x110**
					120	**TA.12.9/24x120**
					130	**TA.12.9/24x130**

s	l2	k	d2	d1	l1	REF.
19	60	24	36	**M24**	**140**	**TA.12.9/24x140**
					150	**TA.12.9/24x150**
					160	**TA.12.9/24x160**
					170	**TA.12.9/24x170**
					180	**TA.12.9/24x180**
					190	**TA.12.9/24x190**
					200	**TA.12.9/24x200**
					220	**TA.12.9/24x220**
					240	**TA.12.9/24x240**
					260	**TA.12.9/24x260**
					280	**TA.12.9/24x280**
					300	**TA.12.9/24x300**
					320	**TA.12.9/24x320**
					340	**TA.12.9/24x340**
					360	**TA.12.9/24x360**
					380	**TA.12.9/24x380**
					400	**TA.12.9/24x400**

TAE

E1220. Z33

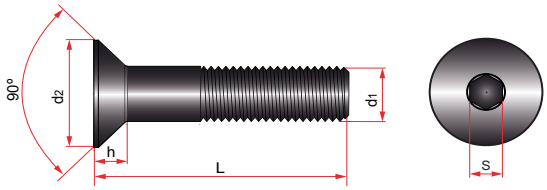
Socket countersunk head cap screw
Tornillo allen de cabeza cónica
Śruba z łbem stożkowym
Parafuso cabeça conica
Vis tete fraise a 6 pans creux



DIN 7991. 110-120 Kg/mm².

S	h	d2	d1	L	REF.
1,25	1,2	4	M2	16	TAE/02x016
2	1,7	6	M3	8	TAE/03x008
				10	TAE/03x010
				12	TAE/03x012
				16	TAE/03x016
				18	TAE/03x018
				20	TAE/03x020
				25	TAE/03x025
				30	TAE/03x030
2,5	2,3	8	M4	8	TAE/04x008
				10	TAE/04x010
				12	TAE/04x012
				16	TAE/04x016
				18	TAE/04x018
				20	TAE/04x020
				25	TAE/04x025
				30	TAE/04x030
				35	TAE/04x035
				40	TAE/04x040
				45	TAE/04x045
				50	TAE/04x050
				60	TAE/04x060
3	2,8	10	M5	8	TAE/05x008
				10	TAE/05x010
				12	TAE/05x012
				16	TAE/05x016
				18	TAE/05x018
				20	TAE/05x020
				25	TAE/05x025
				30	TAE/05x030
				35	TAE/05x035
				40	TAE/05x040

S	h	d2	d1	L	REF.
3	2,8	10	M5	45	TAE/05x045
				50	TAE/05x050
				55	TAE/05x055
				60	TAE/05x060
				70	TAE/05x070
4	3,3	12	M6	10	TAE/06x010
				12	TAE/06x012
				16	TAE/06x016
				18	TAE/06x018
				20	TAE/06x020
				25	TAE/06x025
				30	TAE/06x030
				35	TAE/06x035
				40	TAE/06x040
				45	TAE/06x045
				50	TAE/06x050
				55	TAE/06x055
				60	TAE/06x060
				70	TAE/06x070
				80	TAE/06x080
				90	TAE/06x090
				100	TAE/06x100
5	4,4	16	M8	10	TAE/08x010
				16	TAE/08x016
				18	TAE/08x018
				20	TAE/08x020
				25	TAE/08x025
				30	TAE/08x030
				35	TAE/08x035
				40	TAE/08x040
				45	TAE/08x045
				50	TAE/08x050



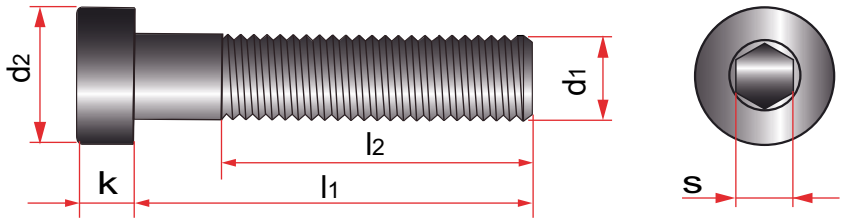
S	h	d2	d1	L	REF.
5	4,4	16	M8	55	TAE/08x055
				60	TAE/08x060
				70	TAE/08x070
				80	TAE/08x080
				90	TAE/08x090
				100	TAE/08x100
6	5,5	20	M10	16	TAE/10x016
				18	TAE/10x018
				20	TAE/10x020
				25	TAE/10x025
				30	TAE/10x030
				35	TAE/10x035
				40	TAE/10x040
				45	TAE/10x045
				50	TAE/10x050
				55	TAE/10x055
				60	TAE/10x060
				70	TAE/10x070
				80	TAE/10x080
				90	TAE/10x090
				100	TAE/10x100
8	6,5	24	M12	20	TAE/12x020
				25	TAE/12x025
				30	TAE/12x30
				35	TAE/12x035
				40	TAE/12x040
				45	TAE/12x045
				50	TAE/12x050
				55	TAE/12x055
				60	TAE/12x060
				70	TAE/12x070
				80	TAE/12x080

S	h	d2	d1	L	REF.
8	6,5	24	M12	90	TAE/12x090
				100	TAE/12x100
10	7	27	M14	25	TAE/14x025
				30	TAE/14x030
				35	TAE/14x035
				40	TAE/14x040
				45	TAE/14x045
				50	TAE/14x050
				55	TAE/14x055
				60	TAE/14x060
				70	TAE/14x070
				80	TAE/14x080
	7,5	30	M16	25	TAE/16x025
				30	TAE/16x030
				35	TAE/16x035
				40	TAE/16x040
				45	TAE/16x045
				50	TAE/16x050
				55	TAE/16x055
				60	TAE/16x060
				70	TAE/16x070
				80	TAE/16x080
				90	TAE/16x090
				100	TAE/16x100
12	8,5	36	M20	40	TAE/20x040
				45	TAE/20x045
				50	TAE/20x050
				55	TAE/20x055
				60	TAE/20x060
				70	TAE/20x070
				80	TAE/20x080

UFK

E1226 Z32

Cylinder head screw, flat head
Tornillo allen cabeza baja
Śruba z łbem walcowym , z niskim łbem
Parafuso cabeça cilindrica rebaixada
Vis tete cylindrique basse, a 6 pans creux

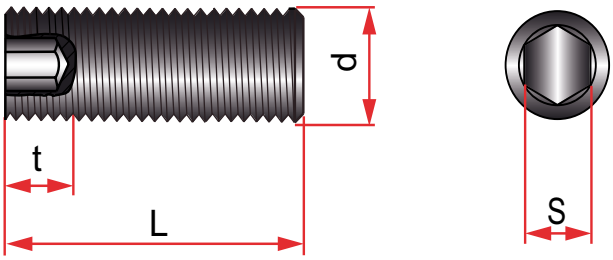


DIN 7984. 800 N/mm².

s	l2	k	d2	d1	l1	REF.
3	-	2,8	7	M4	8	UFK-10.9-M-04X008
					10	UFK-10.9-M-04X010
					12	UFK-10.9-M-04X012
					16	UFK-10.9-M-04X016
					20	UFK-10.9-M-04X020
	20				25	UFK-10.9-M-04X025
4	-	3,5	8,5	M5	8	UFK-10.9-M-05X008
					10	UFK-10.9-M-05X010
					12	UFK-10.9-M-05X012
					16	UFK-10.9-M-05X016
					20	UFK-10.9-M-05X020
	22				25	UFK-10.9-M-05X025
					30	UFK-10.9-M-05X030
5	-	4	10	M6	8	UFK-10.9-M-06X008
					10	UFK-10.9-M-06X010
					12	UFK-10.9-M-06X012
					16	UFK-10.9-M-06X016
					20	UFK-10.9-M-06X020
	24				25	UFK-10.9-M-06X025
					30	UFK-10.9-M-06X030
					35	UFK-10.9-M-06X035

s	l2	k	d2	d1	l1	REF.
5	24	4	10	M6	40	UFK-10.9-M-06X040
6	-	5	13	M8	12	UFK-10.9-M-08X012
					16	UFK-10.9-M-08X016
					20	UFK-10.9-M-08X020
					25	UFK-10.9-M-08X025
	28				30	UFK-10.9-M-08X030
					35	UFK-10.9-M-08X035
					40	UFK-10.9-M-08X040
					45	UFK-10.9-M-08X045
					50	UFK-10.9-M-08X050
					60	UFK-10.9-M-08X060
8	-	6,5	16	M10	16	UFK-10.9-M-10X016
					20	UFK-10.9-M-10X020
					25	UFK-10.9-M-10X025
					30	UFK-10.9-M-10X030
	32				35	UFK-10.9-M-10X035
					40	UFK-10.9-M-10X040
					45	UFK-10.9-M-10X045
					50	UFK-10.9-M-10X050
					70	UFK-10.9-M-10X070

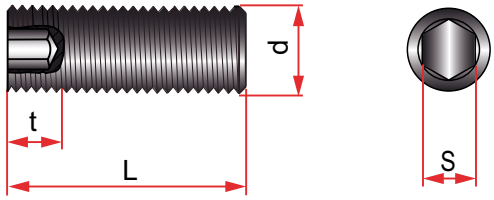
Hexagon socket set screw with flat point
Espárrago allen
Wkręt dociskowy
Perno roscado
Vis sans tete a 6 pans creux bout plat



DIN 913-45H. 120 Kg/mm².

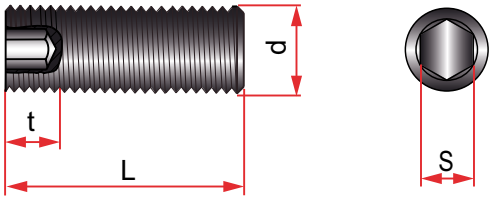
t	S	d	L	REF.
2,5	1,5	M3	3	VRA/03x003
			4	VRA/03x004
			5	VRA/03x005
			6	VRA/03x006
			8	VRA/03x008
			10	VRA/03x010
			12	VRA/03x012
			16	VRA/03x016
			20	VRA/03x020
			25	VRA/03x025
			30	VRA/03x030
3	2	M4	3	VRA/04x003
			4	VRA/04x004
			5	VRA/04x005
			6	VRA/04x006
			8	VRA/04x008
			10	VRA/04x010
			12	VRA/04x012
			16	VRA/04x016
			20	VRA/04x020
			25	VRA/04x025
			30	VRA/04x030
			35	VRA/04x035
			40	VRA/04x040
3,5	2,5	M5	4	VRA/05x004

t	S	d	L	REF.
3,5	2,5	M5	5	VRA/05x005
			6	VRA/05x006
			8	VRA/05x008
			10	VRA/05x010
			12	VRA/05x012
			16	VRA/05x016
			20	VRA/05x020
			25	VRA/05x025
			30	VRA/05x030
			35	VRA/05x035
			40	VRA/05x040
			45	VRA/05x045
4	3	M6	5	VRA/06x005
			6	VRA/06x006
			8	VRA/06x008
			10	VRA/06x010
			12	VRA/06x012
			16	VRA/06x016
			20	VRA/06x020
			25	VRA/06x025
			30	VRA/06x030
			35	VRA/06x035
			40	VRA/06x040
			45	VRA/06x045
			50	VRA/06x050



t	S	d	L	REF.
4	3	M6	55	VRA/06x055
			60	VRA/06x060
5	4	M8	6	VRA/08x006
			8	VRA/08x008
			10	VRA/08x010
			12	VRA/08x012
			16	VRA/08x016
			20	VRA/08x020
			25	VRA/08x025
			30	VRA/08x030
			35	VRA/08x035
			40	VRA/08x040
			45	VRA/08x045
			50	VRA/08x050
			55	VRA/08x055
			60	VRA/08x060
			70	VRA/08x070
			80	VRA/08x080
			90	VRA/08x090
			100	VRA/08x100
6	5	M10	8	VRA/10x008
			10	VRA/10x010
			12	VRA/10x012
			16	VRA/10x016
			20	VRA/10x020
			25	VRA/10x025
			30	VRA/10x030
			35	VRA/10x035
			40	VRA/10x040
			45	VRA/10x045
			50	VRA/10x050
			55	VRA/10x055

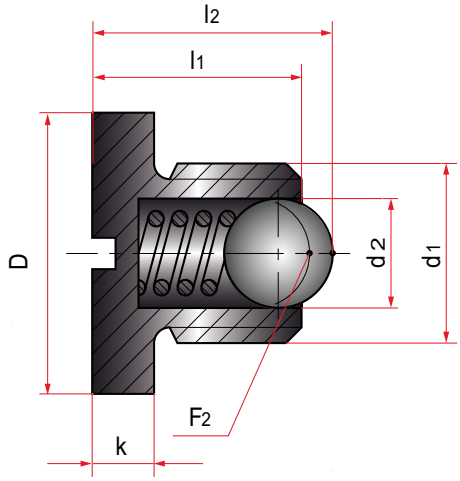
t	S	d	L	REF.
6	5	M10	60	VRA/10x060
			70	VRA/10x070
			80	VRA/10x080
			90	VRA/10x090
			100	VRA/10x100
8	6	M12	10	VRA/12x010
			12	VRA/12x012
			16	VRA/12x016
			20	VRA/12x020
			25	VRA/12x025
			30	VRA/12x030
			35	VRA/12x035
			40	VRA/12x040
			45	VRA/12x045
			50	VRA/12x050
			55	VRA/12x055
			60	VRA/12x060
			70	VRA/12x070
			80	VRA/12x080
			90	VRA/12x090
			100	VRA/12x100
		M14	12	VRA/14x012
			16	VRA/14x016
			20	VRA/14x020
			25	VRA/14x025
			30	VRA/14x030
			35	VRA/14x035
			40	VRA/14x040
			45	VRA/14x045
			50	VRA/14x050
			55	VRA/14x055
			60	VRA/14x060



t	S	d	L	REF.
8	6	M14	70	VRA/14x070
			80	VRA/14x080
			90	VRA/14x090
			100	VRA/14x100
10	8	M16	12	VRA/16x012
			16	VRA/16x016
			20	VRA/16x020
			25	VRA/16x025
			30	VRA/16x030
			35	VRA/16x035
			40	VRA/16x040
			45	VRA/16x045
			50	VRA/16x050
			55	VRA/16x055
			60	VRA/16x060
			70	VRA/16x070
			80	VRA/16x080
			90	VRA/16x090
			100	VRA/16x100
12	10	M18	20	VRA/18x020
			25	VRA/18x025
			30	VRA/18x030
			35	VRA/18x035

t	S	d	L	REF.
12	10	M18	40	VRA/18x040
			45	VRA/18x045
			50	VRA/18x050
			55	VRA/18x055
			60	VRA/18x060
			70	VRA/18x070
			80	VRA/18x080
			90	VRA/18x090
			100	VRA/18x100
		M20	20	VRA/20x020
			25	VRA/20x025
			30	VRA/20x030
			35	VRA/20x035
			40	VRA/20x040
			45	VRA/20x045
			50	VRA/20x050
			55	VRA/20x055
			60	VRA/20x060
			70	VRA/20x070
			80	VRA/20x080
			90	VRA/20x090
			100	VRA/20x100

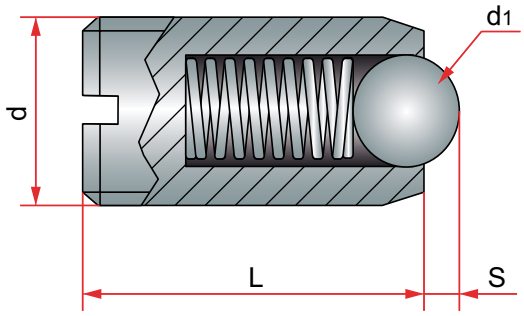
Spring stop
Posicionador de bola
Zatrzask kulkowy
Perno roscado com esfera
Vis a bille a tête fendue



Mat. : 1.0718. Maximum temperature at work: 250º C.

d2	D	K	F2	l1	l2	d1	REF.
2,5	6	2,5	11,6	9	9,8	**M4**	**BR36/ M04**
3	8	3,5	13,3	12	12,9	**M5**	**BR36/ M05**
3,5	10	5	15,1	14	15	**M6**	**BR36/ M06**
5	13		29,5	16	17,5	**M8**	**BR36/ M08**
6	16	6	43	20	22	**M10**	**BR36/ M10**
8	18	7	59,8	22	24,5	**M12**	**BR36/ M12**

Spring stop
Posicionador de bola
Zatrzask kulkowy
Perno roscado com esfera
Vis a bille a tête fendue



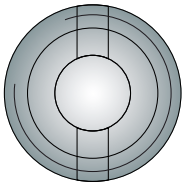
Mat. : Alloy steel. Hardness: HRC 38-42

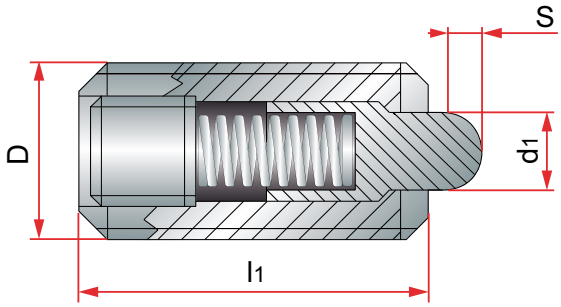
S	d1	L	d	REF.
0,8	2,5	9	**M4**	**POS/M04**
0,9	3	12	**M5**	**POS/M05**
1	3,5	14	**M6**	**POS/M06**
2	5	16	**M8**	**POS/M08**
	6	19	**M10**	**POS/M10**
3	8	22	**M12**	**POS/M12**
3,5	10	24	**M16**	**POS/M16**

BR372

E 1254, Z 372

Spring stop
Posicionador de bola
Zatrzask trzpieniowy
Perno roscado com esfera
Vis a bille a tête fendue



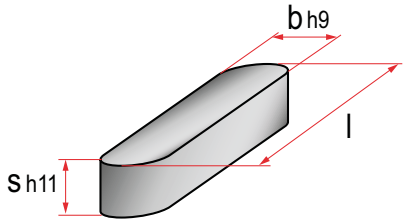


Mat. : Alloy steel. Hardness: HRC 38-42

Strength (Kg. f.)						
Initial	**Final**	**S**	**d1**	**l1**	**D**	**REF.**
0,2	0,3	0,8	1	12	**M3**	**BR372/03**
0,5	1,2	1,2	1,5	15	**M4**	**BR372/04**
0,7	1,6	1,8	2,4	18	**M5**	**BR372/05**
		2	2,7	20	**M6**	**BR372/06**
0,9	2,9	2,4	3,5	22	**M8**	**BR372/08**
			4		**M10**	**BR372/10**
1,5	4,5	3,2	6	28	**M12**	**BR372/12**
4,6	8,2	4	7,5	32	**M16**	**BR372/16**
7,1	11,4	5,6	10	40	**M20**	**BR372/20**
8,2	14,7	8	12	52	**M24**	**BR372/24**

BR1340

E 1340

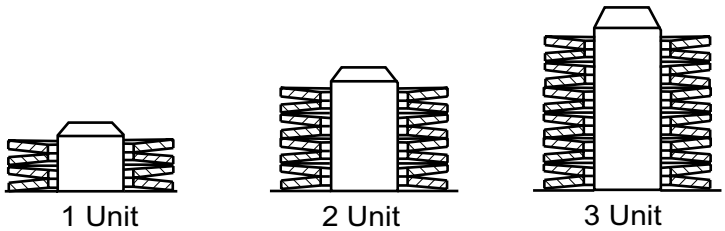


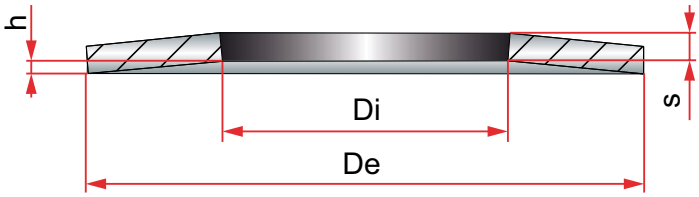
DIN 6885 - Form A

b	s	l	REF.
5	5	14	BR1340-05-05-014
		20	BR1340-05-05-020
		25	BR1340-05-05-025
		32	BR1340-05-05-032
		40	BR1340-05-05-040
		50	BR1340-05-05-050
6	6	20	BR1340-06-06-020
		28	BR1340-06-06-028
		40	BR1340-06-06-040
		50	BR1340-06-06-050
8	7	20	BR1340-08-07-020
		28	BR1340-08-07-028
		40	BR1340-08-07-040
		50	BR1340-08-07-050
		63	BR1340-08-07-063
10	8	28	BR1340-10-08-028
		40	BR1340-10-08-040
		50	BR1340-10-08-050
		63	BR1340-10-08-063
		70	BR1340-10-08-070
12		28	BR1340-12-08-028
		40	BR1340-12-08-040
		50	BR1340-12-08-050
		63	BR1340-12-08-063
		70	BR1340-12-08-070
16	10	40	BR1340-16-10-040
		50	BR1340-16-10-050
		63	BR1340-16-10-063
		70	BR1340-16-10-070
		80	BR1340-16-10-080
20	12	50	BR1340-20-12-050
		63	BR1340-20-12-063
		70	BR1340-20-12-070
		80	BR1340-20-12-080
		100	BR1340-20-12-100

MUP

Disc spring mup
Muelle mup
Sprężyna talerzowa
Mola de disco mup
Rondelle ressort mup





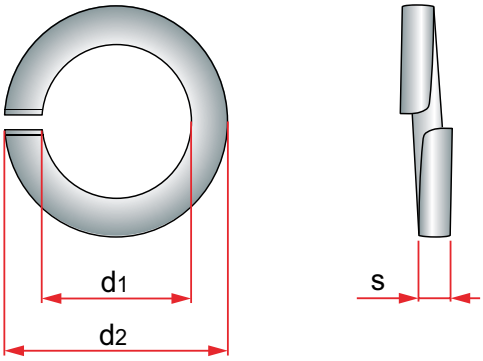
Mat. 51CrV4 - DIN EN 16983 - T.max. 150ºC

s	h	De	Di	REF.
0,60	0,45	**16,00**	8,20	**MUP/ 16,00**
0,80	0,55	**20,00**	10,20	**MUP/ 20,00**
0,90	0,70	**25,00**	12,20	**MUP/ 25,00**
1,00	0,80	**28,00**	14,20	**MUP/ 28,00**
1,25	0,90	**31,50**	16,30	**MUP/ 31,50**
	1,00	**35,50**	18,30	**MUP/ 35,50**
1,50	1,15	**40,00**	20,40	**MUP/ 40,00**

BR1585

E 1585, Z 69

Spring washer
Arandela de seguridad
Podkładka sprężysta
Anilha pressão fixação
Rondelle de sécurité



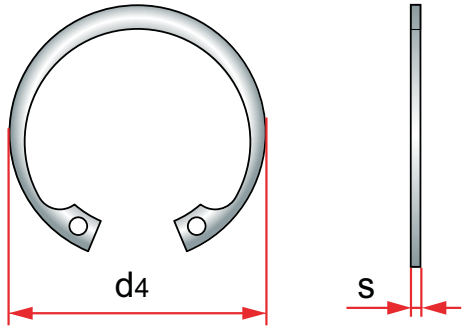
DIN 7980

s1	d2	d1	REF.
1	5.6	**3,1**	**BR1585/03,10**
1,2	7	**4,1**	**BR1585/04,10**
1,6	8,8	**5,1**	**BR1585/05,10**
1,6	9,9	**6,1**	**BR1585/06,10**
2	12,7	**8,1**	**BR1585/08,10**
2,5	16	**10,2**	**BR1585/10,20**
2,5	18	**12,2**	**BR1585/12,20**
3,5	24,4	**16,2**	**BR1585/16,20**
4,5	30,6	**20,2**	**BR1585/20,20**
5	35,9	**24,5**	**BR1585/24,50**

BR1570

E 1570, Z 68

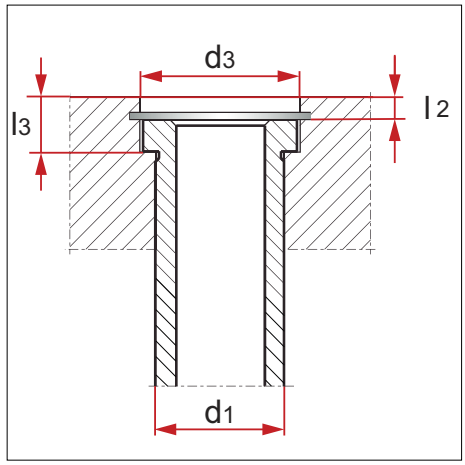
Seeger circlip ring
Anillo Seeger interior
Pierścień Seegera wewnętrzny
Freio para interiores
Circlips intérieur

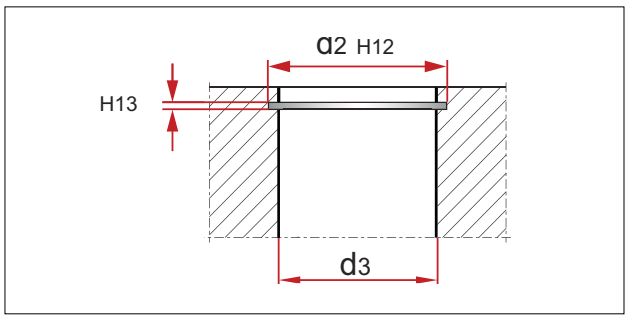


DIN 472

l1	s	d2	d4	d3	REF.
1,1	1	10,4	10,8	**10**	**BR1570/10**
		12,5	13	**12**	**BR1570/12**
		14,6	15,1	**14**	**BR1570/14**
		16,8	17,3	**16**	**BR1570/16**
		17,8	18,3	**17**	**BR1570/17**
		19	19,5	**18**	**BR1570/18**
		21	21,5	**20**	**BR1570/20**
		23	23,5	**22**	**BR1570/22**
1,3	1,2	25,2	25,9	**24**	**BR1570/24**
		27,2	27,9	**26**	**BR1570/26**
		31,4	32,1	**30**	**BR1570/30**
		33,7	34,4	**32**	**BR1570/32**
1,6	1,5	38	38,8	**36**	**BR1570/36**
1,85	1,75	42,5	43,5	**40**	**BR1570/40**
		44,5	45,5	**42**	**BR1570/42**
		50,5	51,5	**48**	**BR1570/48**
2,15	2	58	59,2	**55**	**BR1570/55**
		63	64,2	**60**	**BR1570/60**
2,65	2,5	75	76,5	**72**	**BR1570/72**
3,15	3	88,5	90,5	**85**	**BR1570/85**

d3	d1	l2	l3
24	18	3	9,3
26	20	3	9,3
32	26	4	10,3
36	30	5	11,3
48	42	6	12,3
60	54	7	17,3
72	66	8	18,3

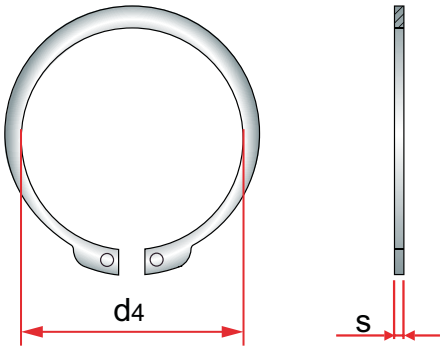




BR1575

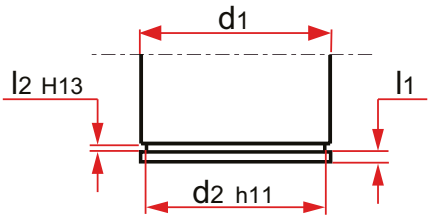
E 1575, Z 67

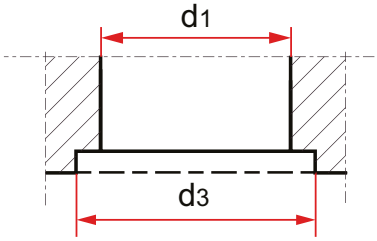
Circlip for axles
Anillo Seeger exterior
Pierścień Seegera zewnętrzny
Freio para exteriores
Circlips pour arbre



DIN 471

l1 min.	l2	s	d2	d3	d4	d1	REF.
0,6	1,1	1	8,6	16	8,4	**9**	**BR1575/09**
			9,6	17,6	9,3	**10**	**BR1575/10**
0,8			11,5	19,6	11	**12**	**BR1575/12**
0,9			13,4	22	12,9	**14**	**BR1575/14**
1,1			14,3	22,6	13,8	**15**	**BR1575/15**
1,2			15,2	23,8	14,7	**16**	**BR1575/16**
1,5	1,3	1,2	17	26,8	16,5	**18**	**BR1575/18**
			19	29	18,5	**20**	**BR1575/20**
			21	30,8	20,5	**22**	**BR1575/22**
1,7			22,9	33,2	22,2	**24**	**BR1575/24**
			23,9	34,2	23,2	**25**	**BR1575/25**
			24,9	35,5	24,2	**26**	**BR1575/26**
2,1	1,6	1,5	28,6	40,5	27,9	**30**	**BR1575/30**
2,6			30,3	43	29,6	**32**	**BR1575/32**
3,8	1,85	1,75	36	50,2	35,2	**38**	**BR1575/38**
			37,5	52,6	36,5	**40**	**BR1575/40**
			39,5	55,7	38,5	**42**	**BR1575/42**
			45,5	62,6	44,5	**48**	**BR1575/48**
4,5	2,15	2	47	64,5	45,8	**50**	**BR1575/50**
			49	66	47,8	**52**	**BR1575/52**
			52	70,2	50,8	**55**	**BR1575/55**
			55	73,6	53,8	**58**	**BR1575/58**
	2,65	2,5	62	81,4	60,8	**65**	**BR1575/65**
			67	87	65,5	**70**	**BR1575/70**

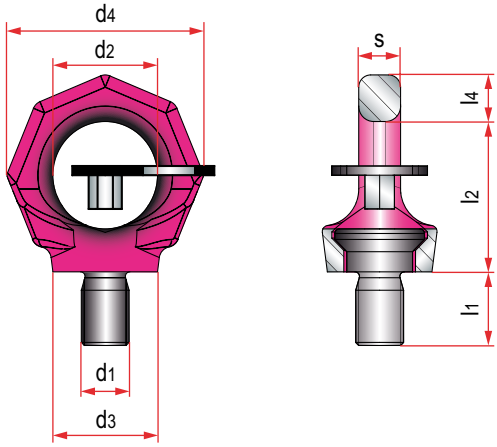




BR1272

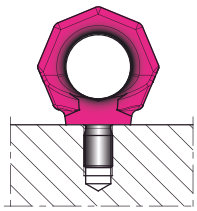
E 1272

Revolvable eye bolt
Cáncamo giratorio
Zawiesie śrubowe obrotowe
Olhal rotativo
Anneau de levage pivotant



l1	l2	l4	d2	d3	d4	s4	d1	REF.
15	34	11	25	25	47	9	**M10**	**BR1272/10**
18	42	13	30	30	56	10	**M12**	**BR1272/12**
24	49	15	35	35	65	14	**M16**	**BR1272/16**
30	57	17	40	40	75	16	**M20**	**BR1272/20**
36	69	21	48	48	90	19	**M24**	**BR1272/24**
45	86	26	60	60	112	24	**M30**	**BR1272/30**
54	103	32	72	75	135	29	**M36**	**BR1272/36**

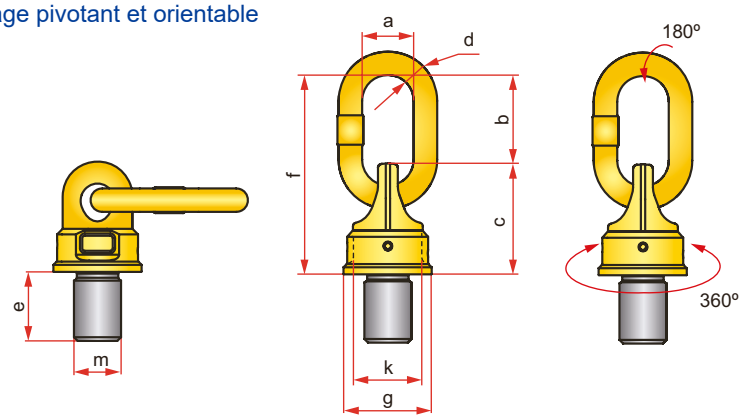
d1	Max. kg	Max. kg	Max. kg	Max. kg
M10	1000	400	800	560
M12	2000	750	1500	1000
M16	4000	1500	3000	2100
M20	6000	2300	4600	3200
M24	8000	3200	6400	4500
M30	12000	4500	9000	6300
M36	16000	7000	14000	9800



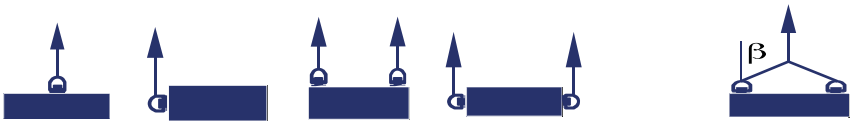
BR1274

E 1274, Z 721

Revolvable and tirtable eye bolt
Cáncamo giratorio y orientable
Zawiesie śrubowe obrotowe, wahliwe
Olhal articulado
Anneau de levage pivotant et orientable

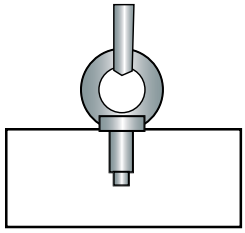


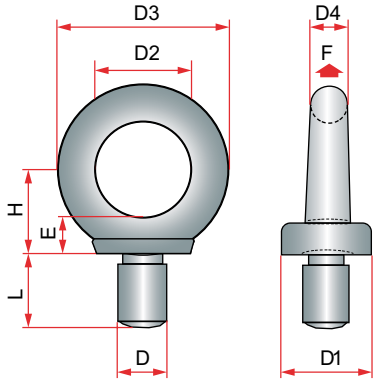
	a	b	c	d	e	f	g	k	REF.
M10	29	32	40	8	15	75	35	30	**BR1274/10**
M12	35	50	45	10	18	95	40	36	**BR1274/12**
M16	38		54	13	24	104	46	41	**BR1274/16**
M20		54	68		30	122	62	55	**BR1274/20**
M24	40	66	88	19	36	154	78	70	**BR1274/24**
M30	50	86	120	22	46	206	90	80	**BR1274/30**
M36					55				**BR1274/36**
M42	65	110	122	25	64	235	98	84	**BR1274/42**



d1	Max. kg	Max. kg	Max. kg	Max. kg	Max.Kg (<45º)	Max.Kg (45-60º)
M10	900	450	1800	900	600	400
M12	1200	600	2400	1200	800	600
M16	2600	1300	5200	2600	1800	1300
M20	4000	2000	8000	4000	2800	2000
M24	7000	3500	14000	7000	4900	3500
M30	10000	5000	20000	10000	7000	5000
M36	15000	8000	30000	16000	11200	8000
M42	17000	12000	34000	24000	16800	12000

Liffing bolt
Cáncamos
Śruba z uchem
Olhal de elevação
Anneu de levege



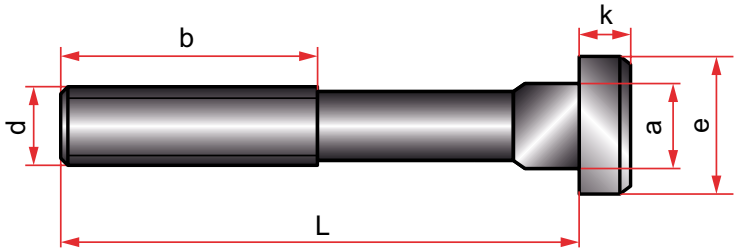


DIN 580

F (Kp)	E	H	L	D4	D3	D2	D1	D	REF.
85	8,50	18	15	8	36	20	20	**8**	**CAN/ 08**
150	10	22	18	10	45	25	25	**10**	**CAN/ 10**
220	11	28	22	12	54	30	30	**12**	**CAN/ 12**
								14	**CAN/ 14**
380	13	30	28	14	63	35	35	**16**	**CAN/ 16**
570	16	35	30	16	72	40	40	**20**	**CAN/ 20**
1050	18	45	38	20	90	50	50	**24**	**CAN/ 24**
1700	22	55	45	24	108	60	65	**30**	**CAN/ 30**
2500	26	65	56	28	126	70	75	**36**	**CAN/ 36**
3400	30	75	65	32	144	80	85	**42**	**CAN/ 42**

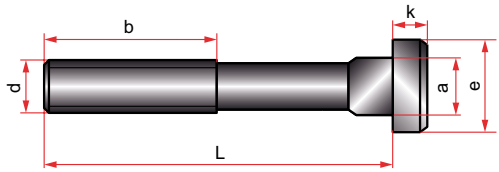
BR787

T slot bolts forged
Tensor forjado
Śruba do rowków teowych
Parafuso em T
Boulons forgés en T



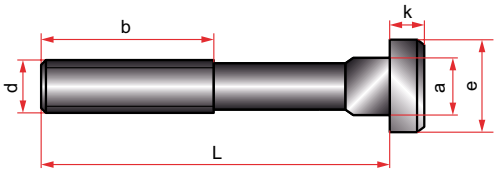
d	L	b	a	k	e	REF.
M10	**40**	30	9,7	6	15	**BR787/10M10x 40**
	63	45				**BR787/10M10x 63**
	100	60				**BR787/10M10x100**
M12	**50**	35	11,5	7	18	**BR787/12M12x 50**
	63	40				**BR787/12M12x 63**
	80	55				**BR787/12M12x 80**
	100	63				**BR787/12M12x100**
	125	75				**BR787/12M12x125**
	160	100				**BR787/12M12x160**
	200	120				**BR787/12M12x200**
M12	**50**	35	13,5	8	22	**BR787/14M12x 50**
	63	40				**BR787/14M12x 63**
	80	55				**BR787/14M12x 80**
	100	63				**BR787/14M12x100**
	125	75				**BR787/14M12x125**
	160	100				**BR787/14M12x160**
	200	120				**BR787/14M12x200**
M14	**63**	45	15,5	9	25	**BR787/16M14x 63**
	80	55				**BR787/16M14x 80**
	100	63				**BR787/16M14x100**
	160	100				**BR787/16M14x160**
	200	120				**BR787/16M14x200**
	250	160				**BR787/16M14x250**
M16	**63**	45				**BR787/16M16x 63**

BR787

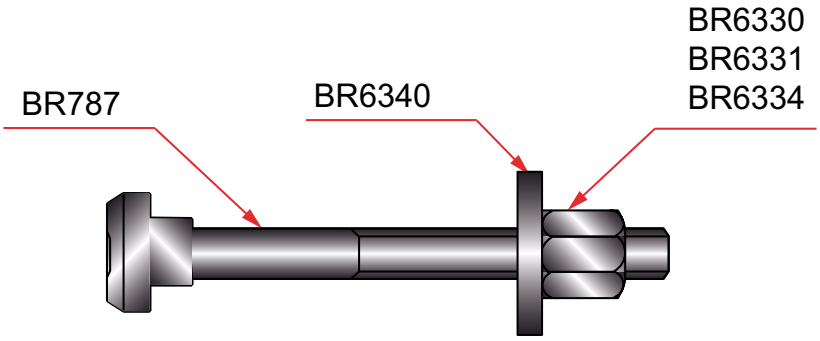


d	L	b	a	k	e	REF.
M16	**80**	55	15,5	9	25	**BR787/16M16x 80**
	100	63				**BR787/16M16x100**
	125	75				**BR787/16M16x125**
	160	100				**BR787/16M16x160**
	200	125				**BR787/16M16x200**
	250	160				**BR787/16M16x250**
	63	45	17,5	10	28	**BR787/18M16x 63**
	80	55				**BR787/18M16x 80**
	100	63				**BR787/18M16x100**
	125	75				**BR787/18M16x125**
	160	100				**BR787/18M16x160**
	200	125				**BR787/18M16x200**
	250	160				**BR787/18M16x250**
M20	**80**	55	19,5	12	32	**BR787/20M20x 80**
	100	63				**BR787/20M20x100**
	125	85				**BR787/20M20x125**
	160	110				**BR787/20M20x160**
	200	125				**BR787/20M20x200**
	250	160				**BR787/20M20x250**
	315	180				**BR787/20M20x315**
	80	55	21,5	14	35	**BR787/22M20x 80**
	100	63				**BR787/22M20x100**
	125	85				**BR787/22M20x125**
	160	100				**BR787/22M20x160**
	200	125				**BR787/22M20x200**
	250	160				**BR787/22M20x250**
	315	180				**BR787/22M20x315**
M24	**100**	70	23,5	16	40	**BR787/24M24x100**
	125	85				**BR787/24M24x125**

BR787

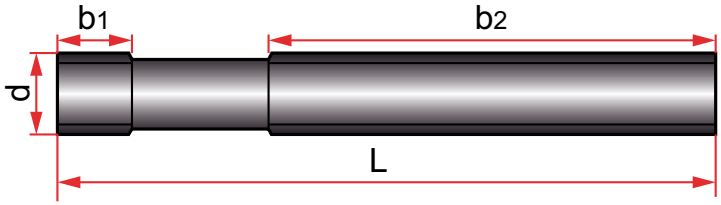


d	L	b	a	k	e	REF.
M24	**160**	110	23,5	16	40	**BR787/24M24x160**
	200	125				**BR787/24M24x200**
	250	160				**BR787/24M24x250**
	315	180				**BR787/24M24x315**
	400	250				**BR787/24M24x400**
	100	70	27,5	18	44	**BR787/28M24x100**
	125	85				**BR787/28M24x125**
	160	110				**BR787/28M24x160**
	200	125				**BR787/28M24x200**
	250	160				**BR787/28M24x250**
	315	180				**BR787/28M24x315**
	400	250				**BR787/28M24x400**



BR6379

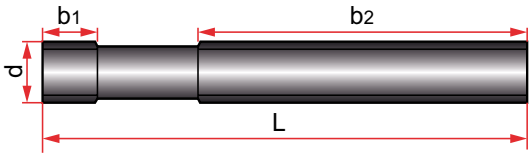
Bolt
Tensor
Śruba dwustronna
Extensor roscado
Goujons



d	L	b1	b2	REF.
M6	40	9	20	BR6379/ 6 x 40
	60		37	BR6379/ 6 x 60
	70		50	BR6379/ 6 x 70
	80		60	BR6379/ 6 x 80
M8	40	11	20	BR6379/ 8 x 40
	63		40	BR6379/ 8 x 63
	85		55	BR6379/ 8 x 85
	100		63	BR6379/ 8 x 100
	125		75	BR6379/ 8 x 125
	160		100	BR6379/ 8 x 160
M10	50	13	25	BR6379/ 10 x 50
	63		32	BR6379/ 10 x 63
	80		50	BR6379/ 10 x 80
	100		63	BR6379/ 10 x 100
	125		75	BR6379/ 10 x 125
	140		80	BR6379/ 10 x 140
	160		100	BR6379/ 10 x 160
	200		125	BR6379/ 10 x 200
M12	50	15	25	BR6379/ 12 x 50
	63		32	BR6379/ 12 x 63
	80		50	BR6379/ 12 x 80
	100		63	BR6379/ 12 x 100
	125		75	BR6379/ 12 x 125
	160		100	BR6379/ 12 x 160

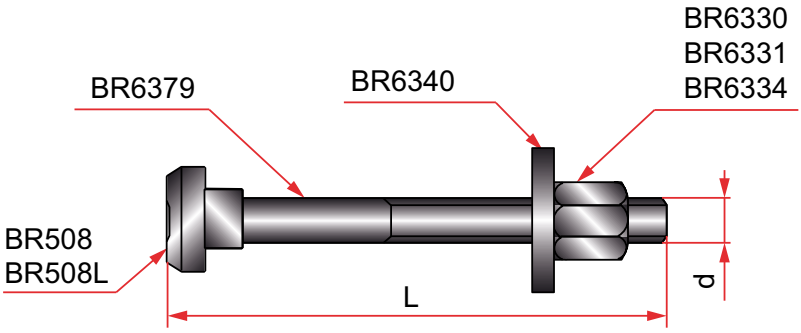
d	L	b1	b2	REF.
M12	200	15	125	BR6379/ 12 x 200
M14	63	17	32	BR6379/ 14 x 63
	80		50	BR6379/ 14 x 80
	100		63	BR6379/ 14 x 100
	125		75	BR6379/ 14 x 125
	160		100	BR6379/ 14 x 160
	200		125	BR6379/ 14 x 200
	250		160	BR6379/ 14 x 250
M16	63	19	32	BR6379/ 16 x 63
	80		50	BR6379/ 16 x 80
	100		63	BR6379/ 16 x 100
	125		75	BR6379/ 16 x 125
	160		100	BR6379/ 16 x 160
	200		125	BR6379/ 16 x 200
	250		160	BR6379/ 16 x 250
	315		180	BR6379/ 16 x 315
M18	80	23	50	BR6379/ 18 x 80
	100		63	BR6379/ 18 x 100
	125		75	BR6379/ 18 x 125
	160		100	BR6379/ 18 x 160
	200		125	BR6379/ 18 x 200
	250		160	BR6379/ 18 x 250
	315		180	BR6379/ 18 x 315
M20	80	27	32	BR6379/ 20 x 80

BR6379



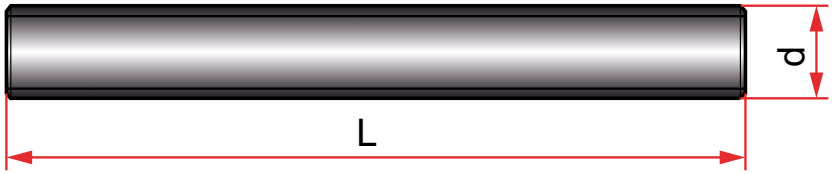
d	L	b1	b2	REF.
M20	**100**	27	63	**BR6379/ 20 x 100**
	125		75	**BR6379/ 20 x 125**
	160		100	**BR6379/ 20 x 160**
	200		125	**BR6379/ 20 x 200**
	250		160	**BR6379/ 20 x 250**
	315		180	**BR6379/ 20 x 315**
M22	**100**	31	45	**BR6379/ 22 x 100**
	125		75	**BR6379/ 22 x 125**
	160		100	**BR6379/ 22 x 160**
	200		125	**BR6379/ 22 x 200**
	250		160	**BR6379/ 22 x 250**

d	L	b1	b2	REF.
M22	**315**	31	180	**BR6379/ 22 x 315**
	400		250	**BR6379/ 22 x 400**
M24	**100**	35	45	**BR6379/ 24 x 100**
	125		75	**BR6379/ 24 x 125**
	160		100	**BR6379/ 24 x 160**
	200		125	**BR6379/ 24 x 200**
	250		160	**BR6379/ 24 x 250**
	315		180	**BR6379/ 24 x 315**
	350		210	**BR6379/ 24 x 350**
	400		250	**BR6379/ 24 x 400**



BR975

Stud-rolled thead
Varilla roscada
Pręt gwintowany
Varão roscado
Tige filetage

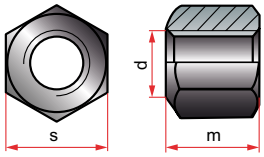


d	L	Quality	REF.
M03	1000	5.6	BR975/5.6-M03
M04			BR975/5.6-M04
M05			BR975/5.6-M05
M06			BR975/5.6-M06
M08			BR975/5.6-M08
M10			BR975/5.6-M10
M12			BR975/5.6-M12
M14			BR975/5.6-M14
M16			BR975/5.6-M16
M18			BR975/5.6-M18
M20			BR975/5.6-M20
M22			BR975/5.6-M22
M24			BR975/5.6-M24
M27			BR975/5.6-M27
M30			BR975/5.6-M30
M33			BR975/5.6-M33
M36			BR975/5.6-M36
M06		8.8	BR975/8.8-M06
M08			BR975/8.8-M08
M10			BR975/8.8-M10
M12			BR975/8.8-M12
M14			BR975/8.8-M14
M16			BR975/8.8-M16
M18			BR975/8.8-M18

d	L	Quality	REF.
M20	1000	8.8	BR975/8.8-M20
M22			BR975/8.8-M22
M24			BR975/8.8-M24
M27			BR975/8.8-M27
M30			BR975/8.8-M30
M33			BR975/8.8-M33
M36			BR975/8.8-M36
M42			BR975/8.8-M42
M03		A2	BR975/A2-M03
M04			BR975/A2-M04
M05			BR975/A2-M05
M06			BR975/A2-M06
M08			BR975/A2-M08
M10			BR975/A2-M10
M12			BR975/A2-M12
M14			BR975/A2-M14
M16			BR975/A2-M16
M18			BR975/A2-M18
M20			BR975/A2-M20
M22			BR975/A2-M22
M24			BR975/A2-M24
M27			BR975/A2-M27
M30			BR975/A2-M30

BR6330

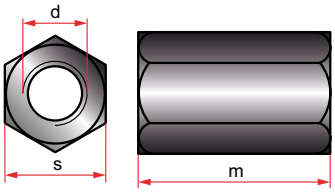
High nuts
Tuerca alta
Nakrętka
Porca alta
Ecrou hexagonal



	m	s	REF.
M6	8	9	**BR6330B/M-06**
M8	12	13	**BR6330B/M-08**
M10	15	17	**BR6330B/M-10**
M12	18	19	**BR6330B/M-12**
M14	21	22	**BR6330B/M-14**
M16	24	24	**BR6330B/M-16**
M18	27	27	**BR6330B/M-18**
M20	30	30	**BR6330B/M-20**
M22	33	32	**BR6330B/M-22**
M24	36	36	**BR6330B/M-24**

BR6334

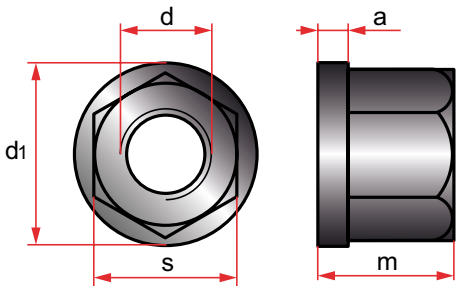
Extension nuts
Tuerca de prolongación
Nakrętka wysoka
Porca de prolongamento para extensores
Ecrou allongée



d	m	s	REF.
M6	18	10	**BR6334/ M-6**
M8	24	13	**BR6334/ M-8**
M10	30	17	**BR6334/M-10**
M12	36	19	**BR6334/M-12**
M14	42	22	**BR6334/M-14**
M16	48	24	**BR6334/M-16**
M18	54	27	**BR6334/M-18**
M20	60	30	**BR6334/M-20**
M22	66	32	**BR6334/M-22**
M24	72	36	**BR6334/M-24**

BR6331

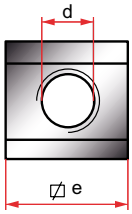
Flaged nuts
Tuerca con collarín
Nakrętka kołnierzowa
Porca com gola
Ecrou hexagonal à embase

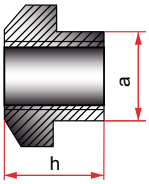


d	s	m	d1	a	REF.
M6	10	9	14	3	**BR6331/M-06**
M8	13	12	18	3,5	**BR6331/M-08**
M10	17	15	22	4	**BR6331/M-10**
M12	19	18	25		**BR6331/M-12**
M14	22	21	28	4,5	**BR6331/M-14**
M16	24	24	31	5	**BR6331/M-16**
M18	27	27	34		**BR6331/M-18**
M20	30	30	37	6	**BR6331/M-20**
M22	32	33	40		**BR6331/M-22**
M24	36	36	45		**BR6331/M-24**

BR508

T slot nuts
Tuerca en T
Nakrętka teowa
Porca em T
Tasseaux pour rainures en T

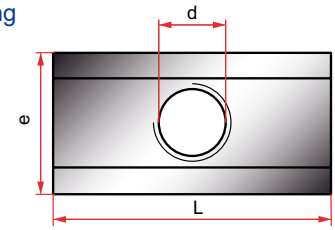


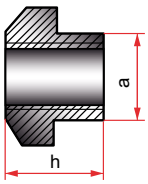


d	e	h	a	REF.
M5	10	8	5,7	**BR508/M-05**
M6	13	10	7,7	**BR508/M-06**
M8	15	12	9,7	**BR508/M-08**
M10	18	14	11,7	**BR508/M-10**
M12	22	16	13,7	**BR508/M-12**
M14	25	18	15,7	**BR508/M-14**
M16	28	20	17,7	**BR508/M-16**
M18	32	24	19,7	**BR508/M-18**
M20	35	28	21,7	**BR508/M-20**
M22	40	32	23,7	**BR508/M-22**
M24	44	36	27,7	**BR508/M-24**

BR508L

T slot nuts long
Tuercas en T largas
Nakrętka teowa wydłużona
Porca longa em T
Tasseaux pour rainures en T long

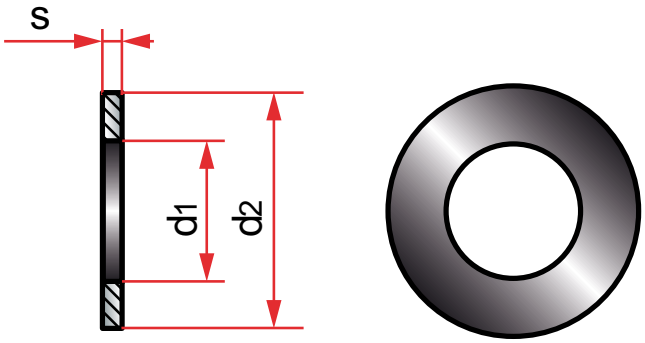




d	a	e	L	h	REF.
M8	9,7	15	30	12	**BR508L/M-08**
M10	11,7	18	36	14	**BR508L/M-10**
M12	13,7	22	44	16	**BR508L/M-12**
M14	15,7	25	50	18	**BR508L/M-14**
M16	17,7	28	56	20	**BR508L/M-16**
M18	19,7	32	64	24	**BR508L/M-18**
M20	21,7	35	70	28	**BR508L/M-20**
M22	23,7	40	80	32	**BR508L/M-22**
M24	27,7	44	88	36	**BR508L/M-24**

BR6340

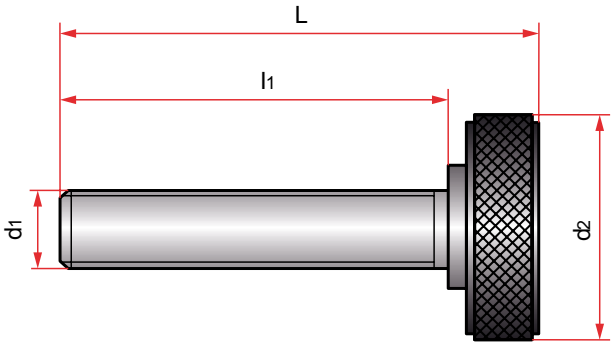
Washers
Arandelas
Podkładka
Anilhas
Rondelle plate



d1	d2	s	REF.
6,4	17	3	**BR6340/M06**
8,5	23	4	**BR6340/M08**
10,5	28		**BR6340/M10**
13	35	5	**BR6340/M12**
15	40		**BR6340/M14**
17	45	6	**BR6340/M16**
19			**BR6340/M18**
21	50		**BR6340/M20**
23		8	**BR6340/M22**
25	60		**BR6340/M24**

BR63141

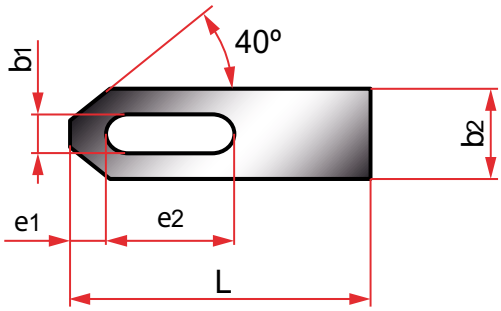
Adjuster screw
Tornillo de regulación
Podpora śrubowa
Parafuso de regulação em altura
Vis de réglage



d1	d2	l1	L	REF.
M10	30	40	50	**63141/M10**
M12	35			**63141/M12**
M16	40	57	70	**63141/M16**
M20	50	65	80	**63141/M20**
M24	60	72	90	**63141/M24**

BR6314

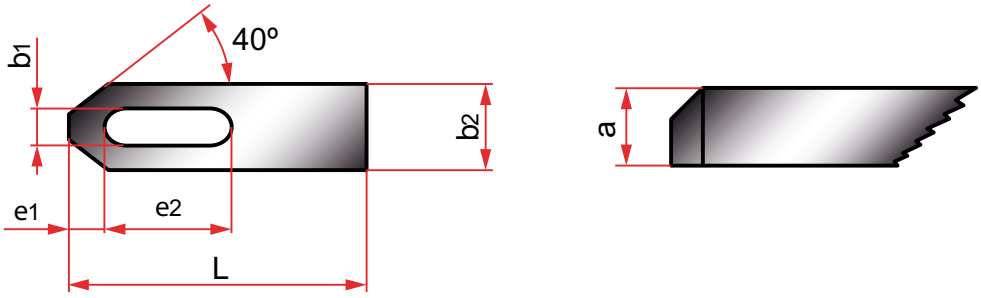
Plain clamps
Brida plana
Łapa dociskowa prosta
Barra de aperto plana
Bride droite



b1	L	a	b2	b3	e1	e2	REF.
7	**50**	10	20	…	10	20	**BR6314/07X050**
9	**60**	12	25	10	13	22	**BR6314/09X060**
11	**80**	15	30	12	15	30	**BR6314/11X080**
14	**80**	20	40	14	21		**BR6314/14X080**
	100					40	**BR6314/14X100**
	125					50	**BR6314/14X125**
18	**100**	25	50	18	26	40	**BR6314/18X100**
	125					45	**BR6314/18X125**
	160					65	**BR6314/18X160**
22	**160**	30	60	22	30	60	**BR6314/22X160**
	200					80	**BR6314/22X200**
	250					100	**BR6314/22X250**
26	**160**		70	26	35	60	**BR6314/26X160**
	200					80	**BR6314/26X200**
	250	35				100	**BR6314/26X250**

BR6314Z

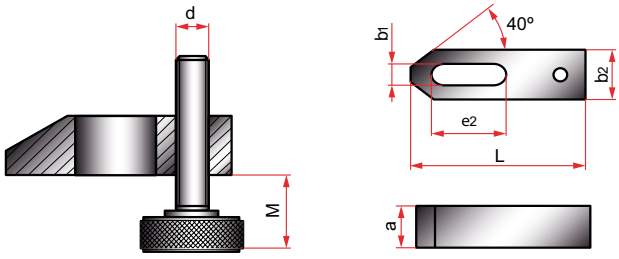
Step clamps
Brida dentada
Łapa dociskowa ząbkowana
Barra de aperto dentada
Bride crénelée



b1	L	a	b2	b3	e1	e2	REF.
7	**50**	10	20	8	10	20	**BR6314Z/07X050**
9	**60**	12	25	10	13	22	**BR6314Z/09X060**
11	**80**	20	30	12	15	30	**BR6314Z/11X080**
14	**100**		40	14	21	40	**BR6314Z/14X100**
18	**125**	25	50	18	26	45	**BR6314Z/18X125**
22	**160**	30	60	22	30	60	**BR6314Z/22X160**
26	**200**		70	26	35	80	**BR6314Z/26X200**

BR6314T

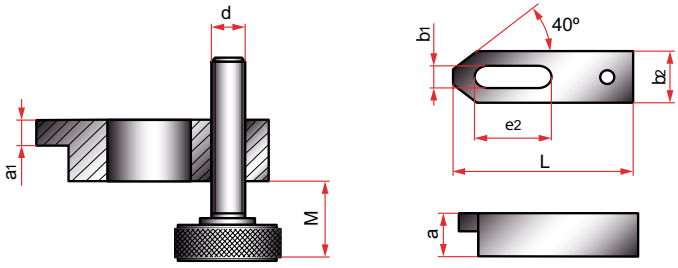
Ajustable clamps
Brida ajustable
Łapa dociskowa regulowana
Barra de aperto ajustável
Bride droite avec vis de réglage ajustable



b1	L	a	d	b2	M (min.)	M (max.)	e2	REF.
11	**80**	15	M10	30	8	27	30	**BR6314T/11X080**
14	**100**	20	M12	40	10	33	40	**BR6314T/14X100**
18	**125**	25	M16	50	13	41	45	**BR6314T/18X125**
	160						65	**BR6314T/18X160**
22		30	M20	60	16	55	60	**BR6314T/22X160**
26	**200**		M24	70	20	60	80	**BR6314T/26X200**

BR6314AT

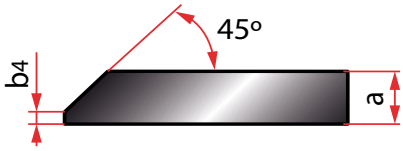
Ajustable clamps
Brida ajustable
Łapa dociskowa regulowana
Barra de aperto ajustável
Bride droite avec vis de réglage ajustable

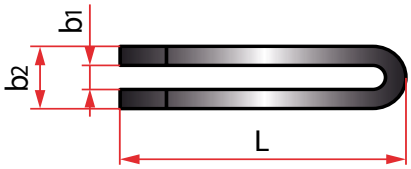


a1	b1	L	a	d	b2	M (min.)	M (max.)	e2	REF.
12	**11**	**80**	15	M10	30	8	27	30	**BR6314AT/11X080**
14	**14**	**100**	20	M12	40	10	33	40	**BR6314AT/14X100**
16	**18**	**125**	25	M16	50	13	41	45	**BR6314AT/18X125**
20	**22**	**160**	30	M20	60	16	55	60	**BR6314AT/22X160**

BR6315B

U clamps
Brida horquilla
Łapa dociskowa regulowana
Barra de aperto ajustável
Bride a fourche simple

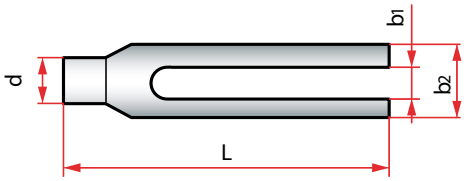




b1	L	a	b2	b4	REF.
7	60	12	12	3	BR6315B/07x060
9	80	15	25	4	BR6315B/09x080
11	100	20	31	15	BR6315B/11x100
14	125	25	38	6	BR6315B/14x125
	160				BR6315B/14x160
	200				BR6315B/14x200
18	160	30	48	8	BR6315B/18x160
	200	40			BR6315B/18x200
	250				BR6315B/18x250
22	200		52	10	BR6315B/22x200
	250		62		BR6315B/22x250
	315				BR6315B/22x315
26	200		66		BR6315B/26x200
	250				BR6315B/26x250
	315				BR6315B/26x315

BR6315C

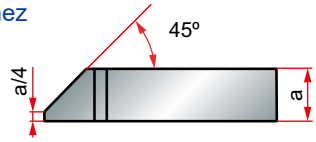
U finger clamps
Brida con espiga redonda
Łapa dociskowa widlasta z czopem
Barra de aperto em U com respiga redonda
Bride à fourche avec tourillon

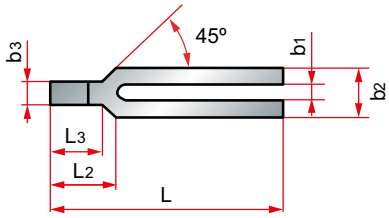


b1	L	a	b2	d	REF.
14	160	25	40	20	BR6315C/14x160
	200				BR6315C/14x200
18	200	30	50	24	BR6315C/18x200
	250				BR6315C/18x250
22	250	40	60	30	BR6315C/22x250

BR6315GN

Nose clamps
Brida con nariz
Łapa dociskowa widlasta z noskiem
Barra de aperto em U com respiga facejada
Bride avec nez

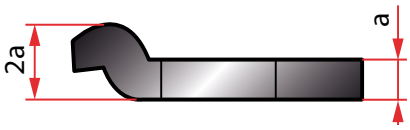


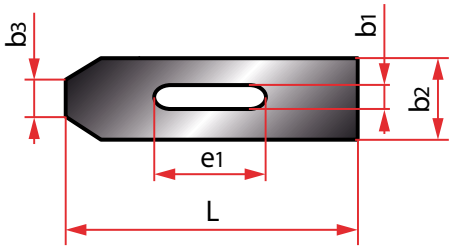


b1	L	a	b2	b3	L2	L3	REF.
9	100	15	30	16	32	18	BR6315GN/09X100
11	125	20		20	38	24	BR6315GN/11X125
14	160	25	40	24	47	30	BR6315GN/14X160
	200						BR6315GN/14X200
18	160	30	50	28	57	36	BR6315GN/18X160
	200						BR6315GN/18X200
	250						BR6315GN/18X250
22	200	40	60	35	68	45	BR6315GN/22X200
	250						BR6315GN/22X250
	315						BR6315GN/22X315
26	250		70	43	83	56	BR6315GN/26X250
	315						BR6315GN/26X315

BR6316

Neek clamps
Brida acodada
Łapa dociskowa odsadzona
Barra de aperto de dois corpos
Bride contre-coudée

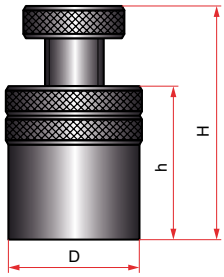


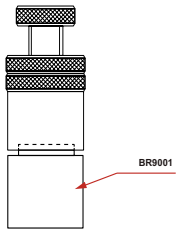


b1	L	b3	b2	a	e1	REF.
9	**80**	12	25	12	25	**BR6316/09x080**
11	**100**	15	30	15	32	**BR6316/11x100**
14	**125**	20	40	20	40	**BR6316/14x125**
18		25	50	25	50	**BR6316/18x125**
	160					**BR6316/18x160**
22		30	60	30	70	**BR6316/22x160**
	200					**BR6316/22x200**
26		35	70	35	80	**BR6316/26x200**
	250					**BR6316/26x250**

BR6400

Adjustable vertical jacks
Calzos de roscas (rosca métrica)
Podpora śrubowa
Calços ajustáveis
Verin de calage et d´alignement

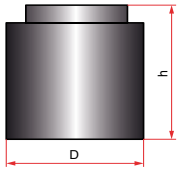


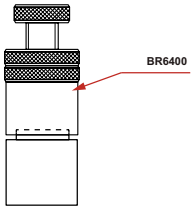


h	H	D	M	REF.
22	30	**16**	10	**BR6400-16**
30	45	**28**	16	**BR6400-28**
45	65	**40**	20	**BR6400-40**
65	95	**45**	24	**BR6400-45**
90	140	**60**	30	**BR6400-60**
125	190	**80**	45	**BR6400-80**

BR9001

Suplements
Casquillo
Tuleja
Casquilho
Bague support

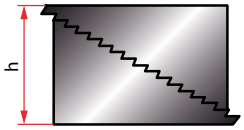


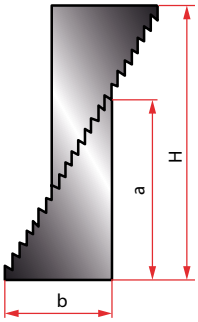


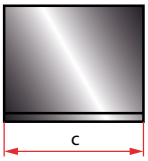
h	D	REF.
15	28	**BR9001-1**
30		**BR9001-2**
60		**BR9001-3**
20	40	**BR9002-1**
40		**BR9002-2**
80		**BR9002-3**
30	45	**BR9003-1**
60		**BR9003-2**
100		**BR9003-3**
50	60	**BR9004-1**
100		**BR9004-2**
65	80	**BR9005-1**
130		**BR9005-2**

BR6500

Step blocks
Calzos de escalera
Podpora ząbkowana
Calços dentados
Cales réglables crénelées



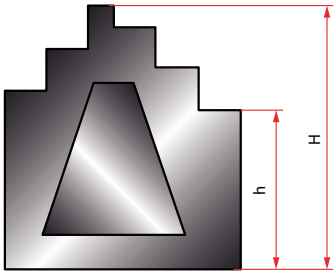




h	H	a	b	c	REF.
22	51	**33**	20	30	**1x BR6500/033**
39	107	**66**	36		**1x BR6500/066**
71	208	**130**	69		**1x BR6500/130**

BR6318

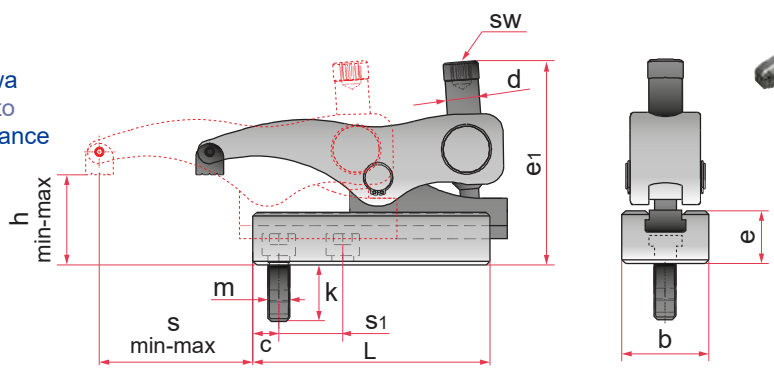
Step blocks
Calzos de escalera
Podpora ząbkowana
Calços dentados
Cales réglables crénelées



h	H	REF.
57,5	**95**	**1x BR6318/095**
102,5	**140**	**1x BR6318/140**
140	**177,5**	**1x BR6318/177,5**

BR43114

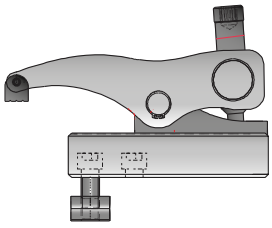
Quick clamps
Bridas rápidas
Łapa dociskowa
Garra de aperto
Bride de puissance



m	h min.	h max.	s	s1	e1	d	sw	L	e	b	c	k	Force	max. Tightening torque[Nm]	REF.
M-10	0	50	12-66	25	100	M-14	8	104	35,5	38	13	20	1600	50	**BR43114-16-M10**
M-12	0	50	12-66	25	100	M-14	8	104	35,5	38	13	20	1600	50	**BR43114-16-M12**
M-12	0	60	15-83	30	113	M-18	10	130	39	48	17,5	22	2000	100	**BR43114-20-M12**
M-16	0	60	15-83	30	113	M-18	10	130	39	48	17,5	26	2000	100	**BR43114-20-M16**
M-16	0	65	18-96	35	125	M-20	12	140	43	55	19,5	26	2500	150	**BR43114-25-M16**
M-18	0	65	18-96	35	125	M-20	12	140	43	55	19,5	30	2500	150	**BR43114-25-M18**
M-20	0	65	18-96	35	125	M-20	12	140	43	55	19,5	30	2500	150	**BR43114-25-M20**
M-20	20	80	17-92	41,5	175	M-24	12	178	55	74	24	34	5500	200	**BR43114-34-M20**
M-22	20	80	17-92	41,5	175	M-24	12	178	55	74	24	38	5500	200	**BR43114-34-M22**
M-24	20	80	17-92	41,5	175	M-24	12	178	55	74	24	44	5500	200	**BR43114-34-M24**

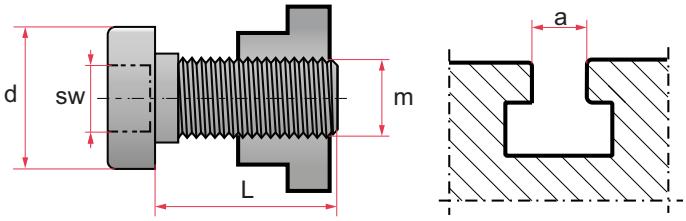
*To add the T-base assembly see table with REF. BR43117

* Para añadir el conjunto de base en “T”, ver tabla con REF. BR43117



BR43117

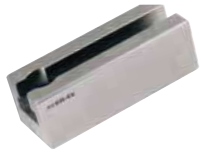
Mounting kit T
Conjunto fijación T
Uchwyt montażowy T
Conjunto de fixação T
Unité de fixation T

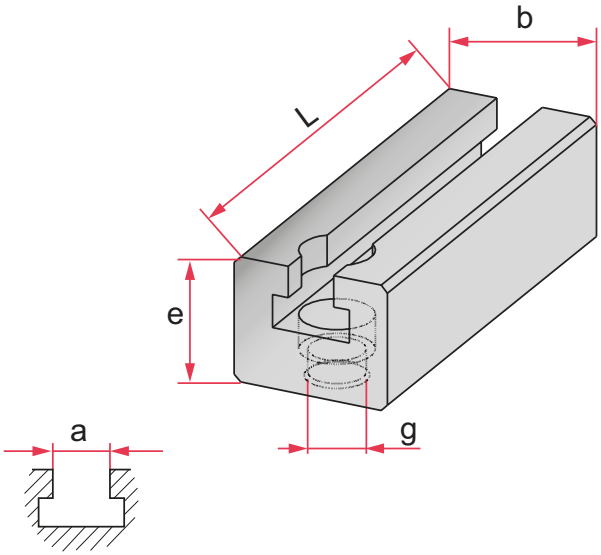


a	m	L	d	sw	REF.
12	M-10	29	16,5	8	**BR43117-12-M10**
14	M-12	29	16,5	8	**BR43117-14-M12**
16	M-12	30	20,5	10	**BR43117-16-M12**
18	M-12	30	20,5	10	**BR43117-18-M12**
20	M-12	36	20,5	10	**BR43117-20-M12**
22	M-12	36	20,5	10	**BR43117-20-M12**
18	M-16	34	24,5	12	**BR43117-18-M16**
20	M-16	34	24,5	12	**BR43117-20-M16**
22	M-16	42	24,5	12	**BR43117-22-M16**
24	M-16	42	24,5	12	**BR43117-24-M16**
28	M-16	42	24,5	12	**BR43117-28-M16**
22	M-20	45	34	12	**BR43117-22-M20**
24	M-20	45	34	12	**BR43117-24-M20**
28	M-24	55	34	12	**BR43117-28-M24**
32	M-24	61	34	12	**BR43117-32-M24**
36	M-24	66	38,5	12	**BR43117-36-M24**

BR43115

Spacer block for power clamp
Distanciador para brida rápida
Blok podwyższający do łapy dociskowej
Elemento intermédio para garra de aperto
Cale pour bride de puissance

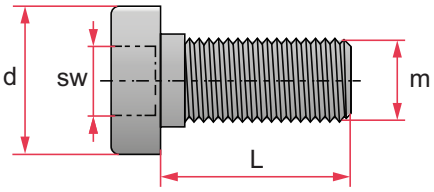




g	a	L	b	e	REF.
M-10 / M-12	14	104	38	38	**BR43115-16**
M-12 / M-16	14	130	48	45	**BR43115-20**
M16/M18/M20	18	140	55	48	**BR43115-25**
M20/M22/M24	28	178	74	55	**BR43115-34**

BR43116

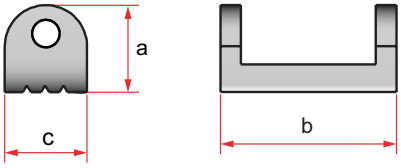
Hexagon socket screw for power clamp
Tornillo para brida rápida
Śruba imbusowa do łapy dociskowej
Parafuso para garra de aperto
Vis cylindrique pour bride de puissance



m	L	d	sw	REF.
M-10	29	16,5	8	**BR43116-16-M10**
M-12	29	16,5	8	**BR43116-16-M12**
M-12	30	20,5	10	**BR43116-20-M12**
M-16	34	20,5	10	**BR43116-20-M16**
M-16	34	24,5	12	**BR43116-25-M16**
M-18	38	24,5	12	**BR43116-25-M18**
M-20	38	24,5	12	**BR43116-25-M20**
M-20	45	34	12	**BR43116-34-M20**
M-22	49	34	12	**BR43116-34-M22**
M-24	45	34	12	**BR43116-34-M24**

BR43118

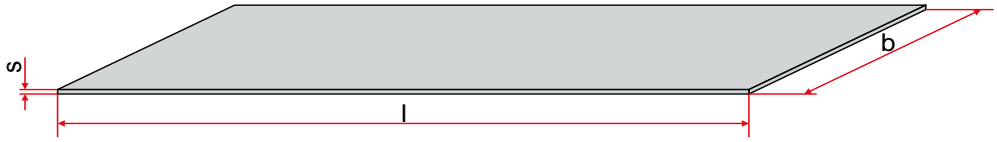
Thrust piece
Pieza de presión
Zatrzask
Sapatas de pressão
Membre de pression



a	b	c	REF.
13,5	26,5	12	**BR43118-20DP**
17	32	15	**BR43118-30DP**
19	38	18	**BR43118-50DP**
22	44	22	**BR43118-60DP**

BR1161

Calibrated steel sheet
Lámina calibrada
Stal kalibrowana precyzyjna
Chapa de aço calibrado
Plaque clinquant acier



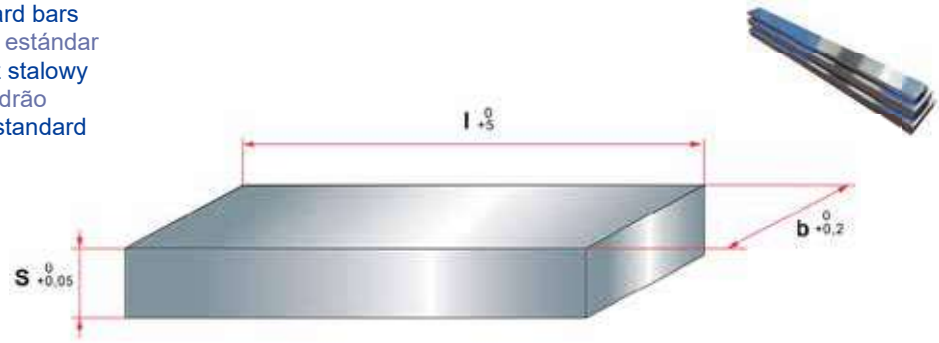
Mat. : 1.4310 ≈ 48 HRC.

s	b	l	REF.
0,01	25	300	BR1161/300/25/0'01
0,02			BR1161/300/25/0'02
0,03			BR1161/300/25/0'03
0,04			BR1161/300/25/0'04
0,05			BR1161/300/25/0'05
0,06			BR1161/300/25/0'06
0,07			BR1161/300/25/0'07
0,08			BR1161/300/25/0'08
0,09			BR1161/300/25/0'09
0,1			BR1161/300/25/0'10
0,15			BR1161/300/25/0'15
0,2			BR1161/300/25/0'20
0,25			BR1161/300/25/0'25
0,3			BR1161/300/25/0'30
0,4			BR1161/300/25/0'40
0,5			BR1161/300/25/0'50
0,6			BR1161/300/25/0'60
0,7			BR1161/300/25/0'70
0,8			BR1161/300/25/0'80
0,9			BR1161/300/25/0'90
1			BR1161/300/25/1'00

s	b	l	REF.
0,01	50	300	BR1161/300/50/0'01
0,02			BR1161/300/50/0'02
0,03			BR1161/300/50/0'03
0,04			BR1161/300/50/0'04
0,05			BR1161/300/50/0'05
0,06			BR1161/300/50/0'06
0,07			BR1161/300/50/0'07
0,08			BR1161/300/50/0'08
0,09			BR1161/300/50/0'09
0,1			BR1161/300/50/0'10
0,15			BR1161/300/50/0'15
0,2			BR1161/300/50/0'20
0,25			BR1161/300/50/0'25
0,3			BR1161/300/50/0'30
0,4			BR1161/300/50/0'40
0,5			BR1161/300/50/0'50
0,6			BR1161/300/50/0'60
0,7			BR1161/300/50/0'70
0,8			BR1161/300/50/0'80
0,9			BR1161/300/50/0'90
1			BR1161/300/50/1'00

BR1162

Standard bars
Barras estándar
Arkusz stalowy
Bar padrão
Barre standard

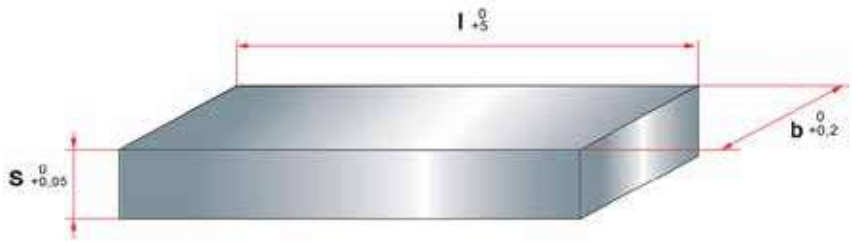


DIN 59350. Mat. : 1.2510 max. 229 Hb. Mat. : 1.2379 max. 255 Hb.

MAT.		s	b	l	REF.
1,2510	1,2379	3,2	20	500	BR1162/03,2x020/MAT
			30		BR1162/03,2x030/MAT
			40		BR1162/03,2x040/MAT
			50		BR1162/03,2x050/MAT
			60		BR1162/03,2x060/MAT
			80		BR1162/03,2x080/MAT
			100		BR1162/03,2x100/MAT
		4,2	20		BR1162/04,2x020/MAT
			30		BR1162/04,2x030/MAT
			40		BR1162/04,2x040/MAT
			50		BR1162/04,2x050/MAT
			60		BR1162/04,2x060/MAT
			80		BR1162/04,2x080/MAT
			100		BR1162/04,2x100/MAT
		5,2	20		BR1162/05,2x020/MAT
			30		BR1162/05,2x030/MAT
			40		BR1162/05,2x040/MAT
			50		BR1162/05,2x050/MAT
			60		BR1162/05,2x060/MAT
			80		BR1162/05,2x080/MAT
			100		BR1162/05,2x100/MAT
		6,2	20		BR1162/06,2x020/MAT
			30		BR1162/06,2x030/MAT
			40		BR1162/06,2x040/MAT
			50		BR1162/06,2x050/MAT

MAT.		s	b	l	REF.
1,2510	1,2379	6,2	60	500	BR1162/06,2x060/MAT
			80		BR1162/06,2x080/MAT
			100		BR1162/06,2x100/MAT
		8,2	20		BR1162/08,2x020/MAT
			30		BR1162/08,2x030/MAT
			40		BR1162/08,2x040/MAT
			50		BR1162/08,2x050/MAT
			60		BR1162/08,2x060/MAT
			80		BR1162/08,2x080/MAT
			100		BR1162/08,2x100/MAT
		10,4	20		BR1162/10,4x020/MAT
			30		BR1162/10,4x030/MAT
			40		BR1162/10,4x040/MAT
			50		BR1162/10,4x050/MAT
			60		BR1162/10,4x060/MAT
			80		BR1162/10,4x080/MAT
			100		BR1162/10,4x100/MAT
			120		BR1162/10,4x120/MAT
			150		BR1162/10,4x150/MAT
		12,4	20		BR1162/12,4x020/MAT
			30		BR1162/12,4x030/MAT
			40		BR1162/12,4x040/MAT
			50		BR1162/12,4x050/MAT
			60		BR1162/12,4x060/MAT
			80		BR1162/12,4x080/MAT

BR1162



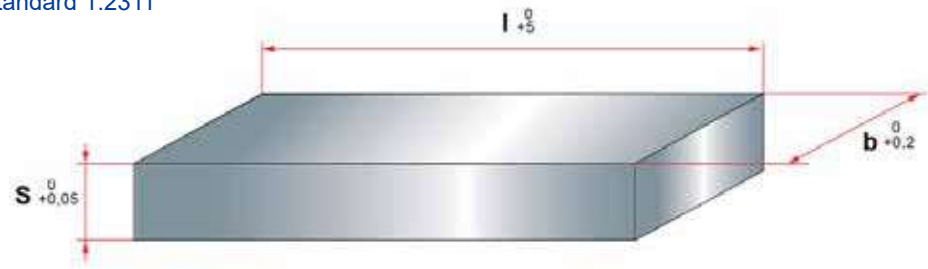
DIN 59350. Mat. : 1.2510 max. 229 Hb. Mat. : 1.2379 max. 255 Hb.

MAT.		s	b	l	REF.
1,2510	1,2379	12,4	100	500	BR1162/12,4x100/MAT
			120		BR1162/12,4x120/MAT
			150		BR1162/12,4x150/MAT
		16,4	20		BR1162/16,4x020/MAT
			30		BR1162/16,4x030/MAT
			40		BR1162/16,4x040/MAT
			50		BR1162/16,4x050/MAT
			60		BR1162/16,4x060/MAT
			80		BR1162/16,4x080/MAT
			100		BR1162/16,4x100/MAT
			120		BR1162/16,4x120/MAT
			150		BR1162/16,4x150/MAT
		20,4	20		BR1162/20,4x020/MAT
			30		BR1162/20,4x030/MAT
			40		BR1162/20,4x040/MAT
			50		BR1162/20,4x050/MAT
			60		BR1162/20,4x060/MAT
			80		BR1162/20,4x080/MAT
			100		BR1162/20,4x100/MAT
			120		BR1162/20,4x120/MAT
			150		BR1162/20,4x150/MAT
		25,4	20		BR1162/25,4x020/MAT
			30		BR1162/25,4x030/MAT
			40		BR1162/25,4x040/MAT
			50		BR1162/25,4x050/MAT
			60		BR1162/25,4x060/MAT

MAT.		s	b	l	REF.
1,2510	1,2379	25,4	80	500	BR1162/25,4x080/MAT
			100		BR1162/25,4x100/MAT
			120		BR1162/25,4x120/MAT
			150		BR1162/25,4x150/MAT
		30,4	30		BR1162/30,4x030/MAT
			40		BR1162/30,4x040/MAT
			50		BR1162/30,4x050/MAT
			60		BR1162/30,4x060/MAT
			80		BR1162/30,4x080/MAT
			100		BR1162/30,4x100/MAT
			120		BR1162/30,4x120/MAT
			150		BR1162/30,4x150/MAT
		40,4	40		BR1162/40,4x040/MAT
			50		BR1162/40,4x050/MAT
			60		BR1162/40,4x060/MAT
			80		BR1162/40,4x080/MAT
			100		BR1162/40,4x100/MAT
			120		BR1162/40,4x120/MAT
			150		BR1162/40,4x150/MAT
		50,4	50		BR1162/50,4x050/MAT
			60		BR1162/50,4x060/MAT
			80		BR1162/50,4x080/MAT
			100		BR1162/50,4x100/MAT
			120		BR1162/50,4x120/MAT
			150		BR1162/50,4x150/MAT

BR1164

Standard bars 1.2311
Barras estándar 1.2311
Arkusz stalowy 1.2311
Bar padrão 1.2311
Barre standard 1.2311



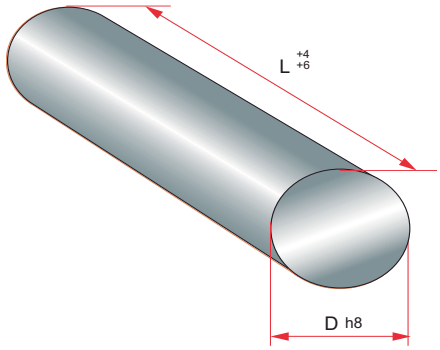
Mat : 1.2311 max.330Hb.

s	b	l	REF.
16,4	20,4	1000	BR1164/16,4x020,4 /1,2311
	30,4		BR1164/16,4x030,4 /1,2311
	40,4		BR1164/16,4x040,4 /1,2311
	50,4		BR1164/16,4x050,4 /1,2311
	60,4		BR1164/16,4x060,4 /1,2311
	80,4		BR1164/16,4x080,4 /1,2311
	100,4		BR1164/16,4x100,4/1,2311
	120,4		BR1164/16,4x120,4/1,2311
	150,4		BR1164/16,4x150,4/1,2311
20,4	20,4		BR1164/20,4x020,4 /1,2311
	30,4		BR1164/20,4x030,4 /1,2311
	40,4		BR1164/20,4x040,4 /1,2311
	50,4		BR1164/20,4x050,4 /1,2311
	60,4		BR1164/20,4x060,4 /1,2311
	80,4		BR1164/20,4x080,4 /1,2311
	100,4		BR1164/20,4x100,4/1,2311
	120,4		BR1164/20,4x120,4/1,2311
	150,4		BR1164/20,4x150,4/1,2311
25,4	20,4		BR1164/25,4x020,4 /1,2311
	30,4		BR1164/25,4x030,4 /1,2311
	40,4		BR1164/25,4x040,4 /1,2311
	50,4		BR1164/25,4x050,4 /1,2311
	60,4		BR1164/25,4x060,4 /1,2311
	80,4		BR1164/25,4x080,4 /1,2311

s	b	l	REF.
25,4	100,4	1000	BR1164/25,4x100,4/1,2311
	120,4		BR1164/25,4x120,4/1,2311
	150,4		BR1164/25,4x150,4/1,2311
30,4	30,4		BR1164/30,4x030,4 /1,2311
	40,4		BR1164/30,4x040,4 /1,2311
	50,4		BR1164/30,4x050,4 /1,2311
	60,4		BR1164/30,4x060,4 /1,2311
	80,4		BR1164/30,4x080,4 /1,2311
	100,4		BR1164/30,4x100,4/1,2311
	120,4		BR1164/30,4x120,4/1,2311
	150,4		BR1164/30,4x150,4/1,2311
40,4	40,4		BR1164/40,4x040,4 /1,2311
	50,4		BR1164/40,4x050,4 /1,2311
	60,4		BR1164/40,4x060,4 /1,2311
	80,4		BR1164/40,4x080,4 /1,2311
	100,4		BR1164/40,4x100,4/1,2311
	120,4		BR1164/40,4x120,4/1,2311
	150,4		BR1164/40,4x150,4/1,2311
50,4	50,4		BR1164/50,4x050,4 /1,2311
	60,4		BR1164/50,4x060,4 /1,2311
	80,4		BR1164/50,4x080,4 /1,2311
	100,4		BR1164/50,4x100,4/1,2311
	120,4		BR1164/50,4x120,4/1,2311
	150,4		BR1164/50,4x150,4/1,2311

BR1163

Silver steel
Acero plata
Stal srebrna
Aço de plata
Acier argent



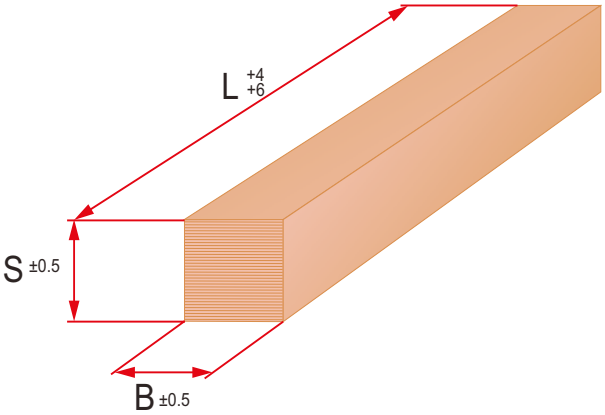
Mat: 1.2210

D	L	REF.
2,00	1000	BR1163/02,00
2,50		BR1163/02,50
3,00		BR11630/3,00
3,50		BR1163/03,50
4,00		BR1163/04,00
4,50		BR1163/04,50
5,00		BR1163/05,00
5,50		BR1163/05,50
6,00		BR1163/06,00
6,50		BR1163/06,50
7,00		BR1163/07,00
7,50		BR1163/07,50
8,00		BR1163/08,00
8,50		BR11630/8,50
9,00		BR1163/09,00
9,50		BR1163/09,50
10,00		BR1163/10,00
10,50		BR1163/10,50
11,00		BR1163/11,00
11,50		BR1163/11,50
12,00		BR1163/12,00
12,50		BR1163/12,50
13,00		BR1163/13,00
13,50		BR1163/13,50

D	L	REF.
14,00	1000	BR1163/14,00
14,50		BR1163/14,50
15,00		BR1163/15,00
15,50		BR1163/15,50
16,00		BR1163/16,00
16,50		BR1163/16,50
17,00		BR1163/17,00
17,50		BR1163/17,50
18,00		BR1163/18,00
18,50		BR1163/18,50
19,00		BR1163/19,00
19,50		BR1163/19,50
20,00		BR1163/20,00
21,00		BR1163/21,00
22,00		BR1163/22,00
23,00		BR1163/23,00
24,00		BR1163/24,00
25,00		BR1163/25,00
26,00		BR1163/26,00
27,00		BR1163/27,00
28,00		BR1163/28,00
29,00		BR1163/29,00
30,00		BR1163/30,00
35,00		BR1163/35,00

BR2111

Copper
Cobre
Miedź
Cobre
Cuivre



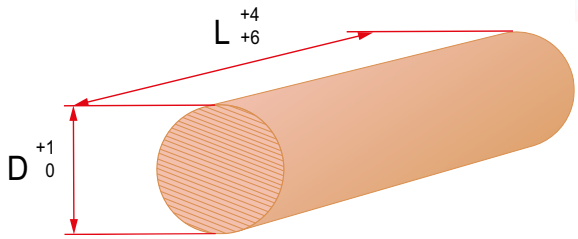
Minimum electrical conductivity of 57 M/Ohms x mm², in an annealed condition. No requierent for weldability.
Conductividad eléctrica mínima de 57 M/Ohms x mm², en estado recocido. Ningún requisito de soldabilidad.

Mat. : Cu 99,9 Min. DIN E-Cu 57 2,0060. ISO CU-ETP.

		L				
B	**S**	**100**	**300**	**500**	**1000**	**REF.**
10	**10**	*	*	*	*	**BR2111/010x010x...**
20	**20**	*	*	*	*	**BR2111/020x020x...**
25	**25**	*	*	*	*	**BR2111/025x025x...**
30	**30**	*	*	*	*	**BR2111/030x030x...**
40	**40**	*	*	*	*	**BR2111/040x040x...**
50	**50**	*	*	*	*	**BR2111/050x050x...**
60	**60**	*	*	*	*	**BR2111/060x060x...**
70	**70**	*	*	*	*	**BR2111/070x070x...**
80	**80**	*	*	*	*	**BR2111/080x080x...**
100	**100**	*	*	*		**BR2111/100x100x...**

BR2112

Copper
Cobre
Miedź
Cobre
Cuivre



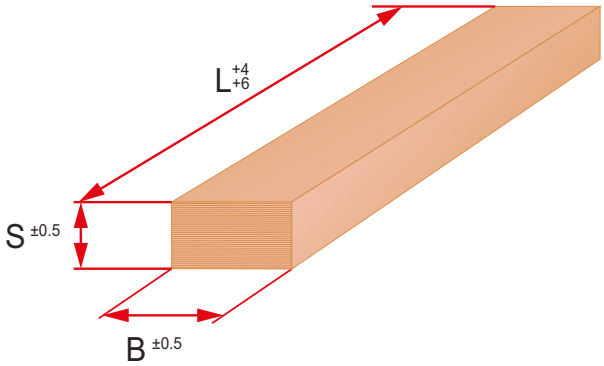
Minimum electrical conductivity of 57 M/Ohms x mm², in an annealed condition. No requierent for weldability.
Conductividad eléctrica mínima de 57 M/Ohms x mm², en estado recocido. Ningún requisito de soldabilidad.

Mat. : Cu 99,9 Min. DIN E-Cu 57 2,0060. ISO CU-ETP.

	L				
D	**100**	**300**	**500**	**1000**	**REF.**
4			*	*	**BR2112/04 x ...**
5			*	*	**BR2112/05 x ...**
6			*	*	**BR2112/06 x ...**
8			*	*	**BR2112/08 x ...**
10			*	*	**BR2112/010 x ...**
12			*	*	**BR2112/012 x ...**
14			*	*	**BR2112/014 x ...**
16			*	*	**BR2112/016 x ...**
18			*	*	**BR2112/018 x ...**
20	*	*	*	*	**BR2112/020 x ...**
25	*	*	*	*	**BR2112/025 x ...**
30	*	*	*	*	**BR2112/030 x ...**
35	*	*	*	*	**BR2112/035 x ...**
40	*	*	*	*	**BR2112/040 x ...**
45	*	*	*	*	**BR2112/045 x ...**
50	*	*	*	*	**BR2112/050 x ...**
60	*	*	*	*	**BR2112/060 x ...**
70	*	*	*	*	**BR2112/070 x ...**
80	*	*	*	*	**BR2112/080 x ...**
90	*	*	*	*	**BR2112/090 x ...**
100	*	*	*	*	**BR2112/100 x ...**
110	*	*	*	*	**BR2112/110 x ...**
120	*	*	*	*	**BR2112/120 x ...**
130	*	*	*	*	**BR2112/130 x ...**
150	*	*	*	*	**BR2112/150 x ...**
250	*	*	*	*	**BR2112/180 x ...**

BR2113

Copper
Cobre
Miedź
Cobre
Cuivre



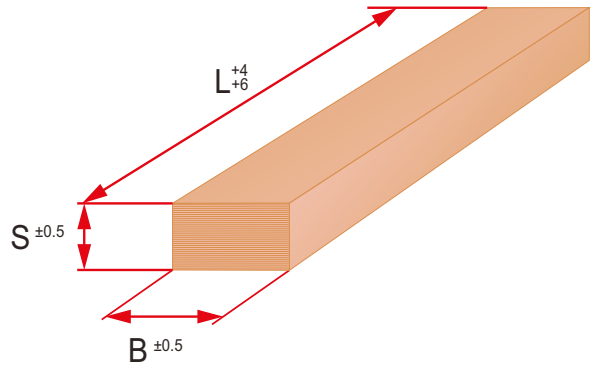
Minimum electrical conductivity of 57 M/Ohms x mm², in an annealed condition. No requierent for weldability.
Conductividad eléctrica mínima de 57 M/Ohms x mm², en estado recocido. Ningún requisito de soldabilidad.

Mat. : Cu 99,9 Min. DIN E-Cu 57 2,0060. ISO CU-ETP.

		L				
S	B	100	300	500	1000	REF.
0,5	100	*	*	*	*	BR2113/00,5x100x...
1		*	*	*	*	BR2113/01,0x100x...
	200	*	*	*	*	BR2113/01,0x200x...
1,5	100	*	*	*	*	BR2113/01,5x100x...
2		*	*	*	*	BR2113/02,0x100x...
	200	*	*	*	*	BR2113/02,0x200x...
2,5	100	*	*	*	*	BR2113/02,5x100x...
3	20	*	*	*	*	BR2113/03,0x020x...
	50	*	*	*	*	BR2113/03,0x050x...
	100	*	*	*	*	BR2113/03,0x100x...
	200	*	*	*	*	BR2113/03,0x200x...
4	80	*	*	*	*	BR2113/04,0x080x...
	100	*	*	*	*	BR2113/04,0x100x...
	200	*	*	*	*	BR2113/04,0x200x...
5	15	*	*	*	*	BR2113/05,0x015x...
	20	*	*	*	*	BR2113/05,0x020x...
	25	*	*	*	*	BR2113/05,0x025x...
	30	*	*	*	*	BR2113/05,0x030x...
	40	*	*	*	*	BR2113/05,0x040x...
	50	*	*	*	*	BR2113/05,0x050x...
	60	*	*	*	*	BR2113/05,0x060x...
	70	*	*	*	*	BR2113/05,0x070x...
	80	*	*	*	*	BR2113/05,0x080x...

		L				
S	B	100	300	500	1000	REF.
5	100	*	*	*	*	BR2113/05,0x100x...
	200	*	*	*	*	BR2113/05,0x200x...
6	30	*	*	*	*	BR2113/06,0x030x...
	40	*	*	*	*	BR2113/06,0x040x...
	60	*	*	*	*	BR2113/06,0x060x...
	100	*	*	*	*	BR2113/06,0x100x...
8	25	*	*	*	*	BR2113/08,0x025x...
	30	*	*	*	*	BR2113/08,0x030x...
	40	*	*	*	*	BR2113/08,0x040x...
	50	*	*	*	*	BR2113/08,0x050x...
	60	*	*	*	*	BR2113/08,0x060x...
	100	*	*	*	*	BR2113/08,0x100x...
10	20	*	*	*	*	BR2113/10,0x020x...
	25	*	*	*	*	BR2113/10,0x025x...
	30	*	*	*	*	BR2113/10,0x030x...
	40	*	*	*	*	BR2113/10,0x040x...
	50	*	*	*	*	BR2113/10,0x050x...
	60	*	*	*	*	BR2113/10,0x060x...
	70	*	*	*	*	BR2113/10,0x070x...
	80	*	*	*	*	BR2113/10,0x080x...
	100	*	*	*	*	BR2113/10,0x100x...
	150	*	*	*	*	BR2113/10,0x150x...
	200	*	*	*	*	BR2113/10,0x200x...

BR2113



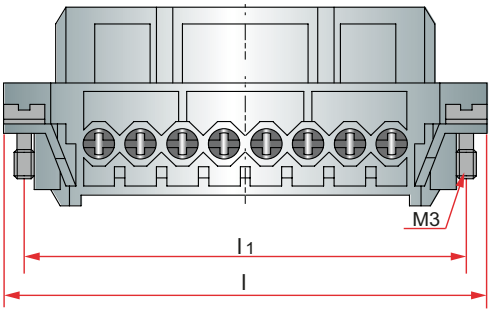
		L				
S	B	100	300	500	1000	REF.
15	20	*	*	*	*	BR2113/15,0x020x…
	30	*	*	*	*	BR2113/15,0x030x…
	40	*	*	*	*	BR2113/15,0x040x…
	50	*	*	*	*	BR2113/15,0x050x…
	60	*	*	*	*	BR2113/15,0x060x…
	80	*	*	*	*	BR2113/15,0x080x…
	100	*	*	*	*	BR2113/15,0x100x…
	150	*	*	*	*	BR2113/15,0x150x…
	200	*	*	*	*	BR2113/15,0x200x…
20	40	*	*	*	*	BR2113/20,0x040x…
	50	*	*	*	*	BR2113/20,0x050x…
	60	*	*	*	*	BR2113/20,0x060x…
	80	*	*	*	*	BR2113/20,0x080x…
	100	*	*	*	*	BR2113/20,0x100x…
	150	*	*	*	*	BR2113/20,0x150x…
	200	*	*	*	*	BR2113/20,0x200x…

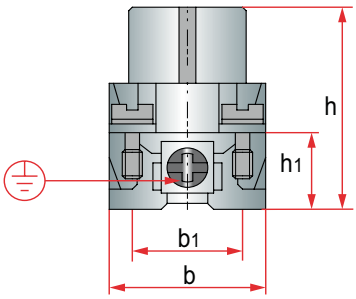
		L				
S	B	100	300	500	1000	REF.
25	50	*	*	*	*	BR2113/25,0x050x…
	100	*	*	*	*	BR2113/25,0x100x…
	150	*	*	*	*	BR2113/25,0x150x…
	200	*	*	*	*	BR2113/25,0x200x…
30	60	*	*	*	*	BR2113/30,0x060x…
	100	*	*	*	*	BR2113/30,0x100x…
	150	*	*	*	*	BR2113/30,0x150x…
	200	*	*	*	*	BR2113/30,0x200x…
40	100	*	*	*	*	BR2113/40,0x100x…
	150	*	*	*	*	BR2113/40,0x150x…
	200	*	*	*	*	BR2113/40,0x200x…
50	100	*	*	*	*	BR2113/50,0x100x…
	150	*	*	*	*	BR2113/50,0x150x…
	200	*	*	*	*	BR2113/50,0x200x…
60	100	*	*	*	*	BR2113/60,0x100x…
	200	*	*	*	*	BR2113/60,0x200x…

BR2711

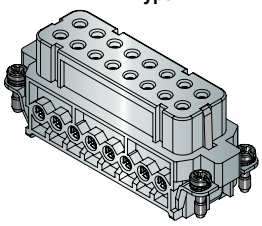
E 2700

Female insert whit threaded connection
Conector hembra
Gniazdo wtykowe żeńskie
Ficha fémea de ligação roscada
Connecteur femelle avec fixation vissée

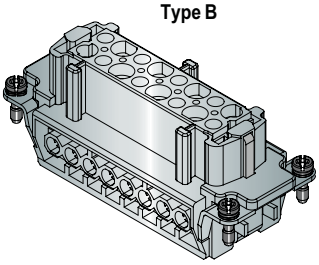




Type A



Type B



Mat. Polycarbonate. Maximum temperature at work: 125º C.

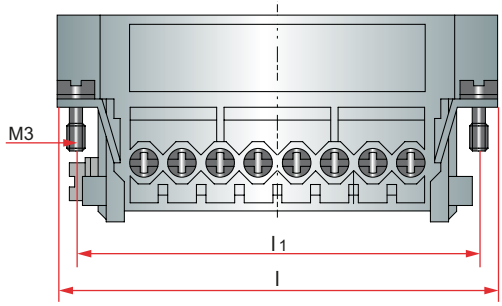
l	b	h	l1	b1	h1	polos	tipo	DESCRIPCION
21	21	26	-	-	-	**3**	**A**	**BR2711/03A**
		27	-	-	-	**4**		**BR2711/04A**
56	23	30	49,5	16	11,5	**10**		**BR2711/10A**
72,4			66			**16**		**BR2711/16A**
64	34	35	57	27	18	**10**	**B**	**BR2711/10B**
84,5			77,5			**16**		**BR2711/16B**
111			104			**24**		**BR2711/24B**

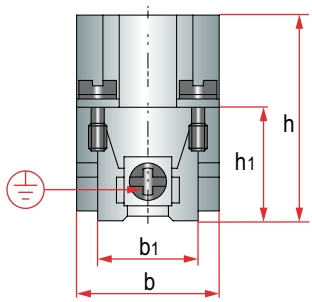
Poles	Type	Rated voltage	Rated current
3 - 4	A	230V	10A
10 - 16		250V	16A
10 - 24	B	500V	

BR2712

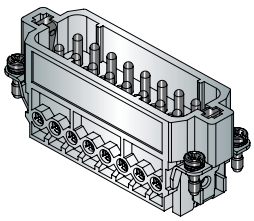
E 2702

Male insert whit threaded connection
Conector macho
Gniazdo wtykowe męskie
Ficha macho de ligação roscada
Insert mâle avec raccordement fileté

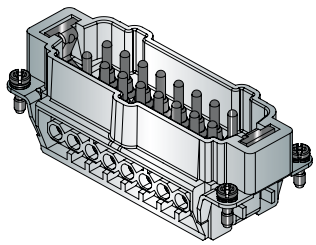




Type A



Type B



Mat. Polycarbonate. Maximum temperature at work: 125º C.

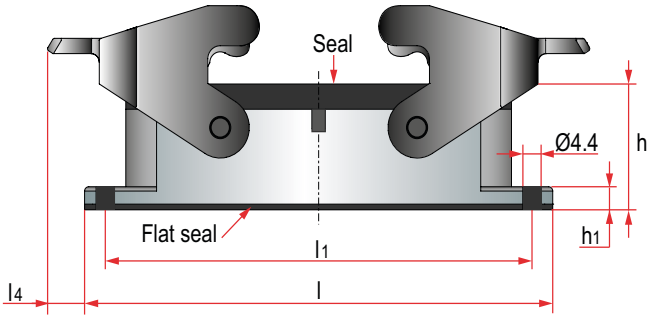
l	b	h	l1	b1	h1	polos	tipo	DESCRIPCION
21	21	27	-	-	-	**3**	**A**	**BR2712/03A**
		28	-	-	-	**4**		**BR2712/04A**
56	23	33	49,5	16	18,4	**10**		**BR2712/10A**
72,4			66			**16**		**BR2712/16A**
64	34		57	27	18	**10**	**B**	**BR2712/10B**
84,5			77,5			**16**		**BR2712/16B**
111			104			**24**		**BR2712/24B**

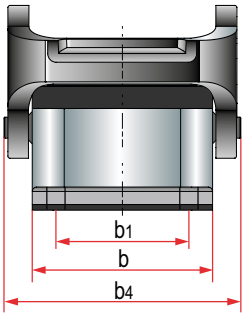
Poles	Type	Rated voltage	Rated current
3 - 4	A	230V	10A
10 - 16		250V	16A
10 - 24	B	500V	

BR2721

E 2710

Connector housing with double locking lacht
Caja de enchufe con doble sujección
Gniazdko z 2 poprzecznymi uchwytam
Caixa elétrica de duplo fecho
Boitier de raccordement avec deux griffes de fermeture

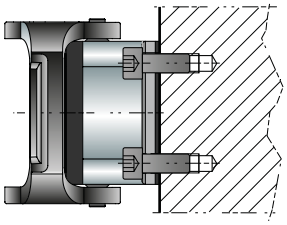


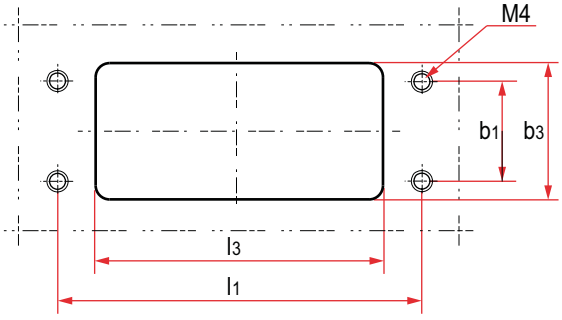


Mat. Powder coated die-cast aluminium. Maximum temperature at work: 125º C.

l	b	h	l1	b1	h1	l3	b3	l4	b4	polos	tipo	DESCRIPCION
93	43	29	83	32	5	60	35	13	57	**10**	**B**	**BR2721/10B**
116			103			82				**16**		**BR2721/16B**
140			130			108				**24**		**BR2721/24B**

Connector BR2711, 2712-Type B

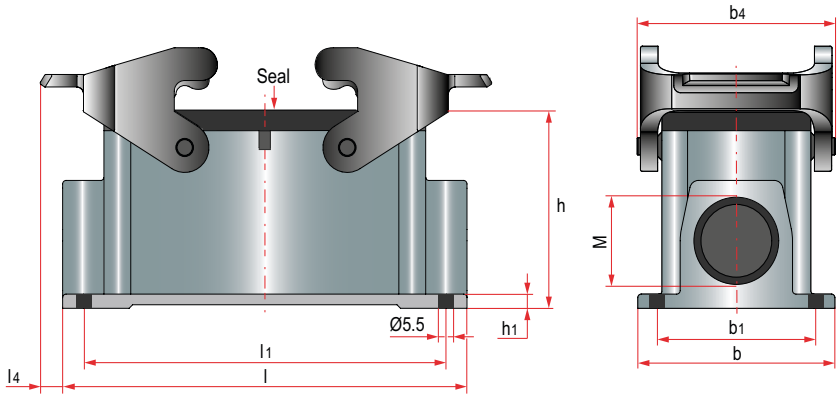




BR2722

E 2711

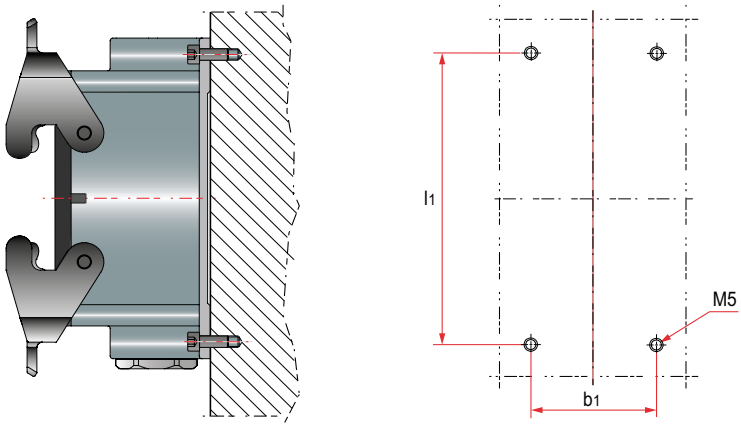
Socket housing with double locking lacht
Caja de enchufe con doble conexión
Obudowa gniazda z 2 uchwytami poprzecznymi
Caixa elétrica de duplo fecho com entradas laterais
Embase de boitier avec deux griffes de fermeture transversales



Mat. Powder coated die-cast aluminium. Maximum temperature at work: 125º C.

l	b	l1	b1	h1	l4	b4	M	h	polos	tipo	DESCRIPCION
94	52	82	40	4	12	56	1x M20x1.5	**54**	**10**	**B**	**BR2722/10B**
117	57	105	45				1x M25x1.5	**56**	**16**		**BR2722/16B**
144		132							**24**		**BR2722/24B**

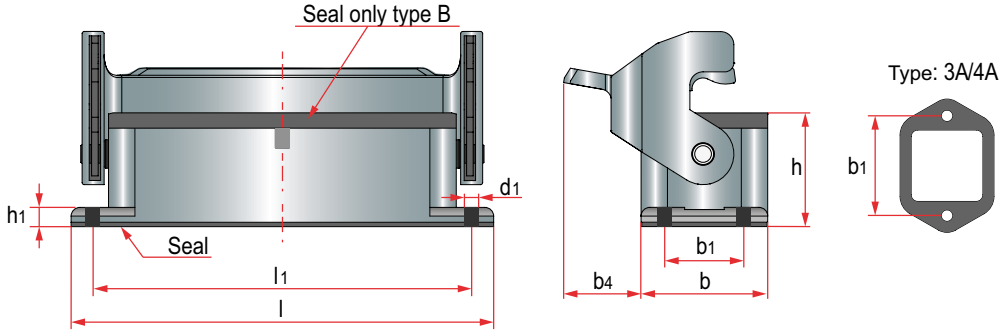
Connector BR2711, 2712-Type B



BR2723

E 2712

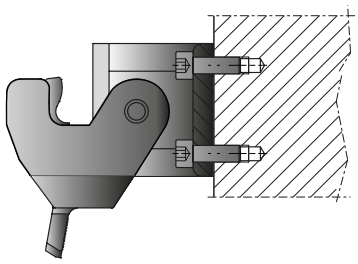
Connector housing with single locking lacht
Caja de enchufe con sujección simple
Gniazdko z uchwytem wzdłużnym
Caixa elétrica de fecho simples
Boitier de raccordement avec une griffe longitudinale de fermeture

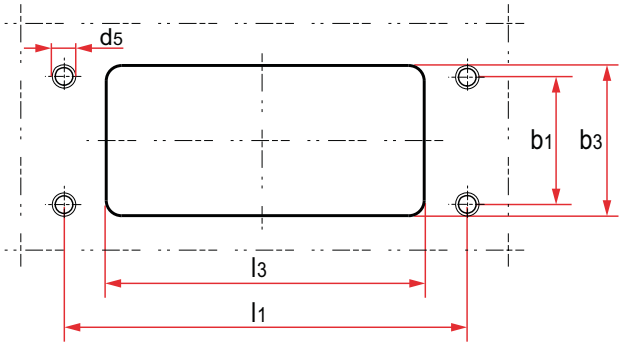


Mat. Powder coated die-cast aluminium. Maximum temperature at work: 125º C.

l	b	h	l1	b1	h1	d1	l3	b3	b4	d5	polos	tipo	DESCRIPCION
28	40	23	-	30	3	3,2	22	22	17	M3	**3**	**A**	**BR2723/03A**
			-								**4**		**BR2723/04A**
81	29	26	70	17,5	4,5	3,4	57	24	22		**10**		**BR2723/10A**
96			86				73				**16**		**BR2723/16A**
	43	29	83	32	5	4,4	60	35	23	M4	**10**	**B**	**BR2723/10B**
113			103				82				**16**		**BR2723/16B**
140			130				108				**24**		**BR2723/24B**

Connector BR2711, 2712-Type A+A, B+B



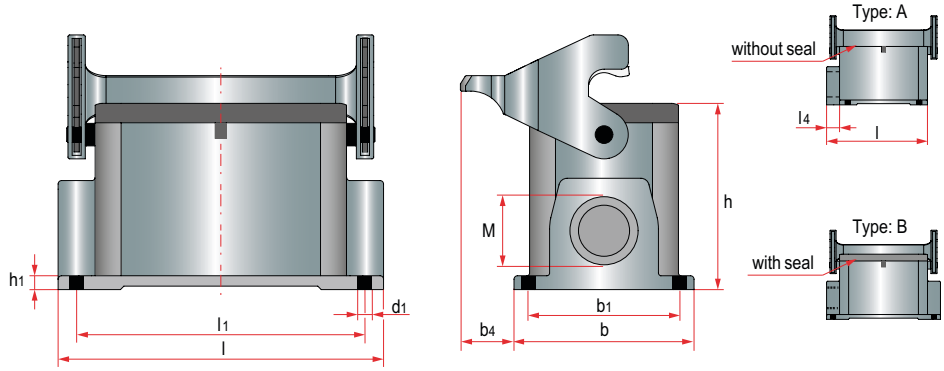


12

BR2724

E 2713

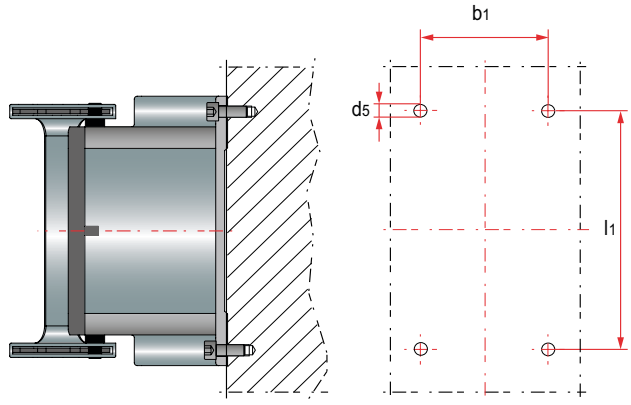
Connector housing with single locking lacht
Caja de enchufe con sujección simple
Obudowa gniazda z uchwytem wzdłużnym
Caixa elétrica de fecho simples com entradas laterais
Embase de boitier avec griffe de fermeture longitudinale



Mat. Powder coated die-cast aluminium. Maximum temperature at work: 125º C.

l	b	l1	b1	h1	d1	l4	b4	d5	M	h	polos	tipo	DESC.
74,5	50	48	40	4	4,5	11	12	M4	1xM25x1,5	52	**10**	**A**	**BR2724/10A**
95		64				15				57	**16**		**BR2724/16A**
94	52	82	40		5,5	-	16	M5		54	**10**	**B**	**BR2724/10B**
117	57	105	45			-				56	**16**		**BR2724/16B**
144		132				-					**24**		**BR2724/24B**

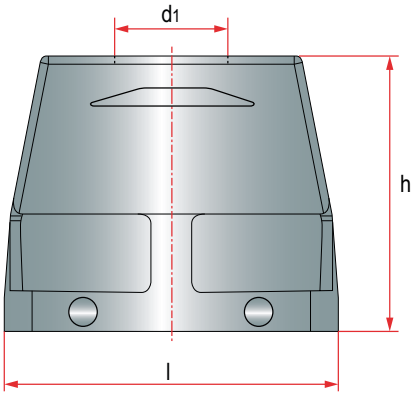
Connector BR2711, 2712-Type A+A, B+B

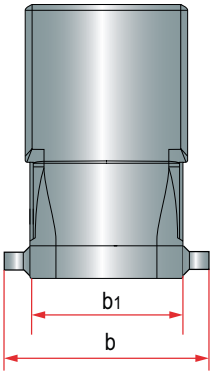


BR2731

E 2720

Sleeve housing for double locking lacht
Capota de enchufe con sujección doble
Obudowa wtyczki z zapięciem poprzecznym
Caixa para ficha elétrica de duplo fecho
Boitier à douilles pour griffes de fermeture





Mat. Die-cast aluminium. Maximum temperature at work: 125º C.

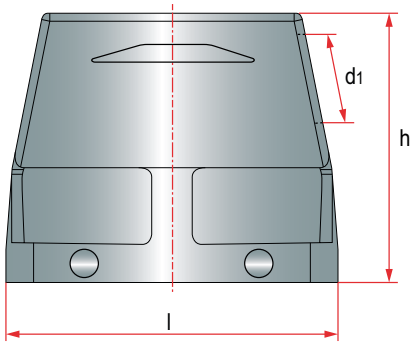
b	l	h	b1	d1	poles	type	DESC.
57	73	72	43	M25x1,5	**10**	**B**	**BR2731/10B**
	93,5	76		PG21	**16**		**BR2731/16B**
	120			PG29	**24**		**BR2731/24B**

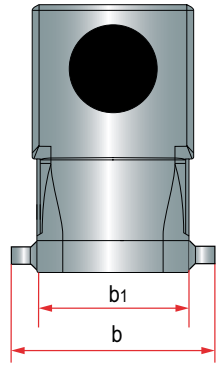
Connector BR2711, 2712-Type B

BR2732

E 2720

Sleeve housing for double locking lacht
Capota de enchufe con sujección doble
Obudowa wtyczki z zapięciem poprzecznym
Caixa para ficha elétrica de duplo fecho
Boitier à douilles pour griffes de fermeture





Mat. Powder coated die-cast aluminium. Maximum temperature at work: 125º C.

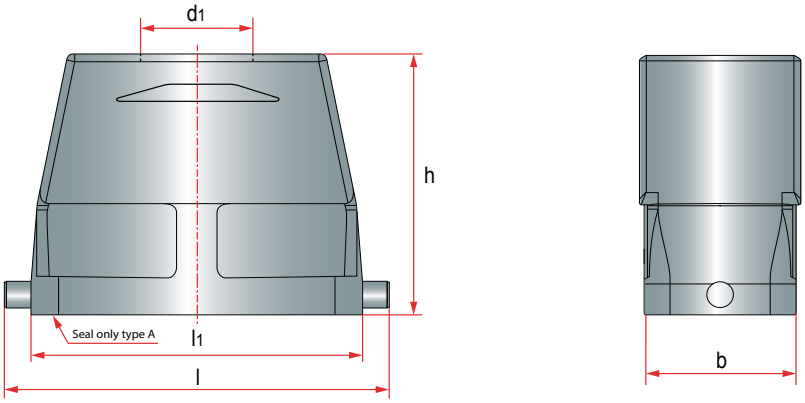
b	l	h	b1	d1	poles	type	DESC.
57	73	72	43	M25x1,5	**10**	**B**	**BR2732/10B**
	93,5	76		PG21	**16**		**BR2732/16B**
	120			PG29	**24**		**BR2732/24B**

Connector BR2711, 2712-Type B

BR2733

E 2722

Sleeve housing for single locking lacht
Capota de enchufe con sujección simple
Obudowa wtyczki z zapięciem wzdłużnym
Caixa para ficha elétrica de fecho simples
Boitier à douilles pour griffe de fermeture longitudinale



Mat. Die-cast aluminium. Maximum temperature at work: 125º C.

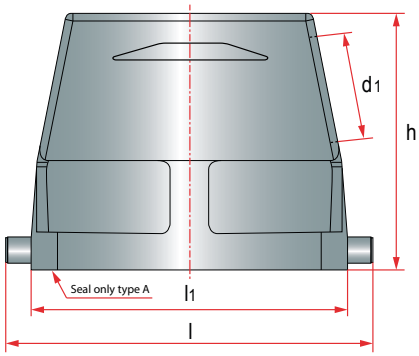
b	l	h	l1	d1	polos	tipo	DESCRIPCION
27	35	60	27	PG11	**3**	**A**	**BR2733/03A**
			27	PG11	**4**	**A**	**BR2733/04A**
29,5	72	67	63	M25X1,5	**10**	**A**	**BR2733/10A**
	88,5	70	79,5	PG21	**16**	**A**	**BR2733/16A**
43	90,5	72	73	M25X1,5	**10**	**B**	**BR2733/10B**
	111,5	76	93,5	PG21	**16**	**B**	**BR2733/16B**
	138	76	120	PG29	**24**	**B**	**BR2733/24B**

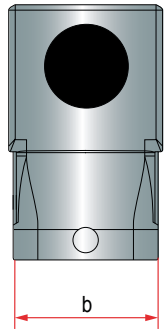
Connector BR2711, 2712-Type A+A, B+B

BR2734

E 2722

Sleeve housing for single locking lacht
Capota de enchufe con sujección simple
Obudowa wtyczki z zapięciem wzdłużnym
Caixa para ficha elétrica de fecho simples
Boitier à douilles pour griffe de fermeture longitudinale





Mat. Die-cast aluminium. Maximum temperature at work: 125º C.

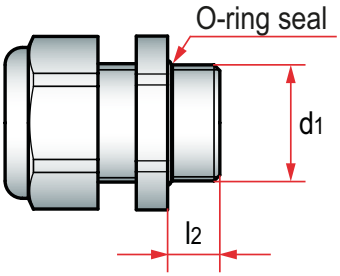
b	l	h	l1	d1	polos	tipo	DESC.
29,5	76	67,2	63	M25X1,5	**10**	**A**	**BR2734/10A**
	92,5	70	79,5		**16**		**BR2734/16A**
43	88	72	73		**10**	**B**	**BR2734/10B**
	108,5	76	93,5	PG21	**16**		**BR2734/16B**
	135		120	PG29	**24**		**BR2734/24B**

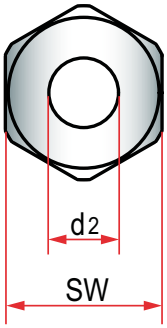
Connector BR2711, 2712-Type A+A, B+B

BR2751

E 27421

Cable gland
Pasa-cables
Dławik kablowy
Glândula de cabo
Presse-étoupe





Mat. PA. Maximum temperature at work: 100º C. Protection class IP68

SW	Nm	l2	d1	d2	DESCRIPCION
22	4	8	**PG11**	5- 9	**BR2751/11**
27	4,5	10	**PG16**	8- 14	**BR2751/16**
32	5	11	**PG21**	13-18	**BR2751/21**
42	6,5	11	**PG29**	18-25	**BR2751/29**
24	4,5	9	**M20x1,5**	6-12	**BR2751/20**
32	5	11	**M25x1,5**	13-18	**BR2751/25**
42	6,5	11	**M32x1,5**	18-25	**BR2751/32**

BR2241

Oily blue paste
Pasta azul
Pasta do tuszowania
Pasta azul
Pot bleu Prusia

Oily blue paste gives a clear perfect mark on any metal. The paste shows an easily visible bright mark on all metal parts when scribed through. It transfers easily from one surface to another and is perfect for making mating surfaces to show imperfections.

· Can be wiped off metal parts.
· Soluble in water.
· Shake before using.
· Protect from cold.

Pasta fluida azul indicada para verificar el ajuste de moldes, matrices, válvulas y construcción de maquinaria en general. No daña las superficies. Marca de forma visible y con un alto contraste las irregularidades de las superficies con una fina capa micrométrica.

· No se seca.
· Se limpia fácilmente.
· Soluble en agua.
· Agitar antes de usar.
· Proteger del frío.

Niebieska pasta zalecana do sprawdzania szczelności form, matryc, zaworów oraz konstrukcji maszyn. Nie uszkadza powierzchni. Znakuje w widoczny i kontrastowy sposób wszelkie nieprawidłowości na badanych powierzchniach.

· Nie wysycha.
· Łatwa w czyszczeniu.
· Rozpuszczalna w wodzie.
· Wstrząsnąć przed użyciem.
· Chonić przed zimnem.

A pasta fluida azul é indicada para verificar o ajuste de moldes, matrizes, válvulas e toda a mecânica em geral. Não danifica as superficies. Marca de forma visível e com alto contraste todas as irregularidades das superficies.

· Não seca.
· Fácil de limpar.
· Solúvel em água.
· Agitar antes de usar.
· Proteger do frio.

ORDER: BR2241

BRLube

Lubricants for moulds
Lubricantes para moldes
Smary do form
Lubrificantes para moldes
Spray Lubrifiant

Ptfe lubricant — Lubricante teflón
Smar teflonowy — Lubrificante de teflon

ORDER: BRLube-T

High PTFE (teflon) content. Synthetic base and superionized PQL-Flon microparticles, smaller tan 0,02 micron. BRLube-T has been developed to be used in places with high lubrication needs. It creates a thin teflon film which prevents any adherence. It also allows for a smoother run instead of a stick-slip run. It has a very low friction coeficient too, because of that film, which has a depth of 100-400 Angström.

Fórmula concentrada de PTFE (Politetrafluoretileno), el producto con el menor coeficiente de fricción de descubierto. En base sintética y micropartículas superionizadas de PQL-FLON, inferiores a 0,02-2 micras. La formación de una fina película adherente evita los temidos arranques en seco. Reduce los problemas del avance a saltos (stick-slip). El bajo coeficiente de fricción se explica por la formación de una película fina y orientada a un grosor de 100 a 400 Angström

Wysoka zawartość PTFE (Teflon). Syntetyczna baza, superzjonizowanemikrocząsteczki PQL-FLON, mniejsze niż 0,02 mikrony. BRLube-T jest przewidziany do stosowania w miejscach wymagających odpornego smarowania. Tworzy cienki film teflonowy, zapobiegający przywieraniu. Umożliwia płynny ruch, bez efektu stick-slip. Posiada również bardzo niski współczynnik tarcia, uzyskany dzięki filmowi olejowemu o grubości 100-400 Angstremów.

Formula concentrada de PFTE (Politetraluoretileno). Numa camada sintética e com micropartículas superionizadas de PQL-FLON, inferior a 0,02 microns. BrLube-T está especialmente desenvolvido para aplicar em qualquer ponto que exija um alto nível de lubrificação. A formação de uma fina película aderente evita os temidos arranques em seco. Reduz os problemas dos avanços em saltos (stick-slip).

Protector spray for moulds — Spray protector para moldes
Spray do ochrony formy — Molde spray protetor

ORDER: BRLube-P

Liquid anti-corrosive water repellent particularly suitable for the protection of molds and machined parts during storage. Protects against corrosion ‘fingerprints’ in all kinds of pieces, polished or rectified. It provides an ultra-thin film, which protects against moisture displacing water from the surface treated. Applied on dry surfaces, prevents these are attacked by humidity. Create a soft waxy film that does not attract dust and dirt. It can be easily removed.

Líquido anti-corrosivo desplazante del agua especialmente indicado para la protección de moldes y piezas mecanizadas durante su almacenaje. Protege contra la corrosión de ‘huellas dactilares’ en todo tipo de piezas, pulidas o rectificadas. Proporciona una película ultrafina, que protege contra la humedad desplazando el agua de la superficie tratada. Aplicado sobre superficies secas, evita que estas sean atacadas por la humedad ambiental. Crea una película blanda de tipo ceroso que no atrae el polvo ni la suciedad. Puede eliminarse fácilmente.

Antykorozyjny środek w sprayu do wypierania cieczy. Tłusty, o kolorze brązowym. W szczególny sposób nadaje się do ochrony form wtryskowych oraz części obrabianych, w trakcie ich magazynowania. Zapobiega korozji wszystkich powierzchni, zarówno polerowanych, jak i szlifowanych. Zapewnia ultracienką powłokę, która chroni przed wilgocią. Środek zaaplikowany na suchych powierzchniach osłania je przed wilgotnością atmosferyczną. Tworzy miękką, woskową powłokę, która nie przyjmuje kurzu , ani zanieczyszczeń. Środek łatwy w usunięciu.

Liquido anticorrosivo, repelente de agua em aerossol. Apresentação gordurosa concentrada. Especialmente indicado para a protecção de molde e peças maquinadas. Protege contra a corrosão em todo o tipo de peças, polidas ou rectificadas. Proporciona uma pelicula ulta-fina que protege contra a humidade, repelindo a aguada superfície tratada. Aplicando sobre superfícies secas, evita que as mesmas sejam atacadas pela humidade ambiental. Cria uma pelicula fina do tipo ceroso que não atrai poeiras ou sujidades. Elimina-se facilmente.

BRLube

Lubricants for moulds
Lubricantes para moldes
Smary do form
Lubrificantes para moldes
Spray Lubrifiant

Demolding spray silicone base
Smar rozdzielający silikonowy

Silicona desmoldeante
Demoldeante con silicona

ORDER: BRLube-S

Spray specially indicated as antiadhesive in the plastic and rubber material forming. Lubricant and antistatic agent. Sliding agent for plastic, protective for rubber, water proofing agent.

Spray especialmente indicado como desmoldeante para la impresión de plástico y goma. Óptimo lubricante, deslizante y antiestático. Deslizante para plástico, protector para goma, hidrorepelente.

Szczególnie zalecany jako środek rozdzielający do wyprasek z tworzyw sztucznych i gumy. Środek smarny i antytatyczny. Środek smarny dla tworzyw, ochronny i wodoodporny dla gumy.

Spray especialmente indicado com desmoldante para a impressão de plásticos e borrachas. Ótimo lubrificante, deslizante e anti-estático. Deslizante para o plástico, protetor para a borracha e hidro-repelente.

Demolding spray silicone lubricant
Smar rozdzielający bez silikonu

Desmolceante sin silicona
Desmoldeante sem silicona

ORDER: BRLube-D

Excellent silicone-free remover suitable for plastic moulding. It permits painting, printing, chromium plating and gluing of printed pieces. It doesn't indent the surfaces that are sprayed with it. It lasts for many printings.

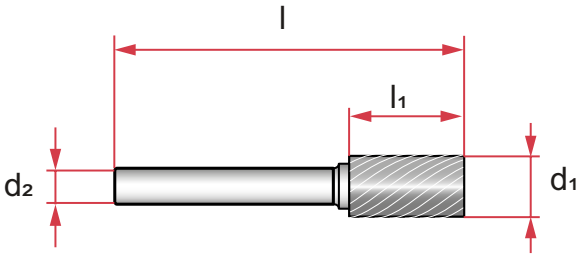
Óptimo antiadhesivo sin silicona para la impresión de materias plásticas. Permite el barnizado, la impresión, el cromado y pegado de piezas impresas. No raja las superficies sobre las que se pulverice. Perdura durante muchas impresiones.

Doskonały bezsilikonowy środek rodzielający do wyprasek z tworzyw sztucznych. Umożliwia malowanie, drukowanie, chromowanie i klejenie wyprasek. Nie plami powierzchni po zaaplikowaniu. Wystarcza na wiele cykli.

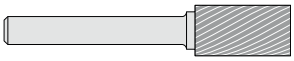
Ótimo anti-adesivo sem silicone para a impressão de materiais plásticos. Permite envernizar, imprimir, cromar e colar as peças impressas. Não provoca trincas nas superfícies que foram pulverizadas. Resiste durante muitas impressões.

BR37515

Solid carbide rotary burrs
Fresas rotativas metal duro
VHM frez rotacyjny dokladny
Fresas rotativas de metal duro
Fraise rotative en carbure monobloc



Mat. Solid carbide grade K30

TYPE	d1	l1	d2	l	REF.
	**1,5**	8	**3**	40	**BR37515-4015**
	2	10			**BR37515-4020**
	2,5	12			**BR37515-4025**
	3	13			**BR37515-4033**
	4	10		45	**BR37515-4043**
	5	12		47	**BR37515-4053**
	6	13		48	**BR37515-4063**
	1,5	8		40	**BR37515-4115**
	2	10			**BR37515-4120**
	2,5	12			**BR37515-4125**
	3	13			**BR37515-4133**
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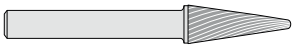
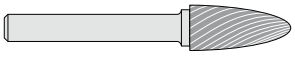
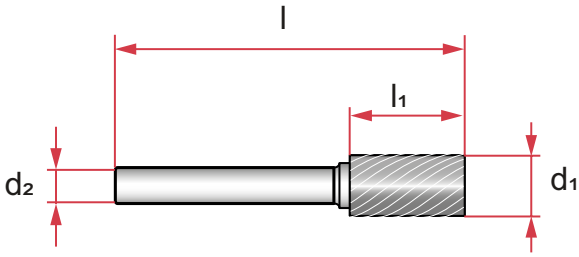
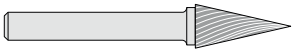
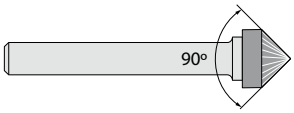
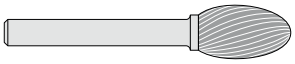
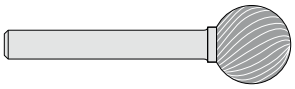
	5	12		47	**BR37515-4153**
	6	13		48	**BR37515-4163**
	**3**	14		40	**BR37515-4233**
	4			49	**BR37515-4243**
	5	16		51	**BR37515-4253**
	6	20		55	**BR37515-4263**
	**3**	13		40	**BR37515-4333**
	4	10		45	**BR37515-4343**
	5	12		47	**BR37515-4353**
	6	13		48	**BR37515-4363**
	3	13		40	**BR37515-4433**
	4	10		45	**BR37515-4443**
	5	12		47	**BR37515-4453**
	6	13		48	**BR37515-4463**

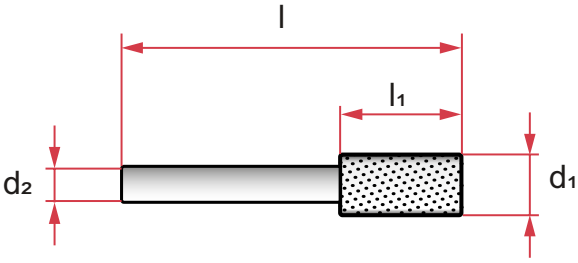
BR37515

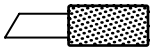
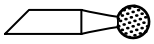
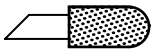


TYPE	d1	l1	d2	l	REF.
	**3**	11	**3**	40	**BR37515-4533**
	4	10		45	**BR37515-4543**
	5	12		47	**BR37515-4553**
	6	13		48	**BR37515-4563**
	**3**	-		40	**BR37515-4633**
	4			38	**BR37515-4643**
	5			39	**BR37515-4653**
	6			40	**BR37515-4663**
	**3**	7		40	**BR37515-4733**
	4			42	**BR37515-4743**
	5	8		43	**BR37515-4753**
	6	10		45	**BR37515-4763**
	**1,5**	1,35		40	**BR37515-4815**
	2	1,8			**BR37515-4820**
	2,5	2,2			**BR37515-4825**
	3	2,7			**BR37515-4833**
	4	3,6		38,5	**BR37515-4843**
	5	4,5		39,5	**BR37515-4853**
	6	5,4		40,4	**BR37515-4863**
	3	7		40	**BR37515-4933**
	4			42	**BR37515-4943**
	5				**BR37515-4953**
	6				**BR37515-4963**

BR17680

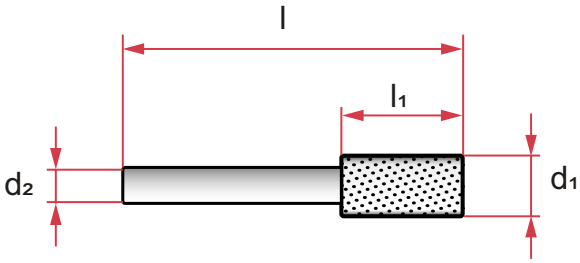
Diamond burrs
Fresas de diamante
Frezy diamentowe
Fresas de diamante
Meules diamant

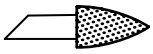
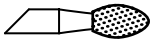


FORMA		d1	l1	d2	l	REF.
A		1	6	3	45	BR17680-A-1,0x6
		1,5				BR17680-A-1,5x6
		2	7			BR17680-A-2,0x7
		2,5				BR17680-A-2,5x7
		3				BR17680-A-3,0x7
		3,5				BR17680-A-3,5x7
		4	10			BR17680-A-4,0x10
		5				BR17680-A-5,0x10
		6				BR17680-A-6,0x10
B		1,5	-			BR17680-B-1,5
		2				BR17680-B-2,0
		3				BR17680-B-3,0
		4				BR17680-B-4,0
		5				BR17680-B-5,0
		6				BR17680-B-6,0
C		1	6			BR17680-C-1,0x6
		1,5				BR17680-C-1,5x6
		2	7			BR17680-C-2,0x7
		2,5				BR17680-C-2,5x7
		3				BR17680-C-3,0x7
		3,5				BR17680-C-3,5x7
		4	10			BR17680-C-4,0x10
		5				BR17680-C-5,0x10
		6				BR17680-C-6,0x10

BR17680

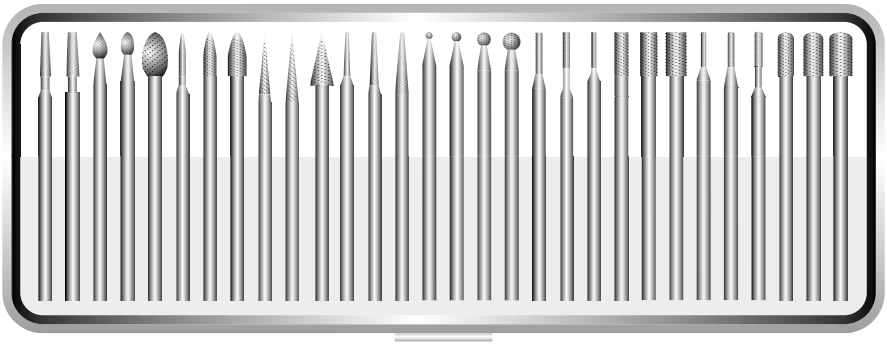
Diamond burrs
Fresas de diamante
Frezy diamentowe
Fresas de diamante
Meules diamant



FORMA		d1	l1	d2	l	REF.
F		2	7	3	45	BR17680-F-2,0x7
		3				BR17680-F-3,0x7
		4	10			BR17680-F-4,0x10
		5				BR17680-F-5,0x10
		6				BR17680-F-6,0x10
J		3	14			BR17680-J-3,0x14
		6	13			BR17680-J-6,0x13
P		2	12			BR17680-P-2,0x12
		3	15			BR17680-P-3,0x15
		6	13			BR17680-P-6,0x13
Q		3	5			BR17680-Q-3,0x5
		6	10			BR17680-Q-6,0x10
R		1,5	12			BR17680-R-1,5x12
		2				BR17680-R-2,0x12
		3	14			BR17680-R-3,0x14
S		3	6			BR17680-S-3,0x6
T		2	7			BR17680-T-2,0x7
		3				BR17680-T-3,0x7
V		3				BR17680-V-3,0x7

BR17681-30

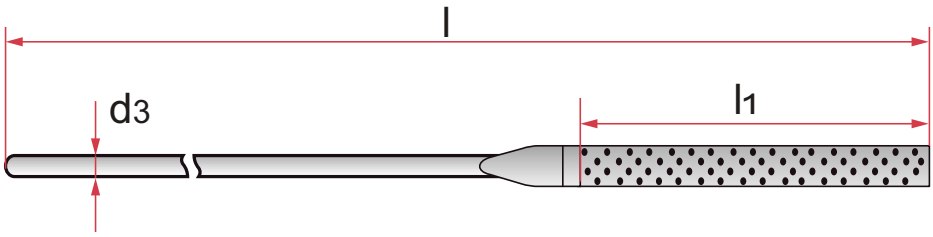
Diamond burr set 30 pcs.
Juego de fresas de diamante de 30 pzas.
Zestaw frezów diamentowych
Jogo de fresas diamantadas 30 pças.
Jeu meules diamant-30 pcs



SET	REF.
30 Units.	BR17681-30

BR17610

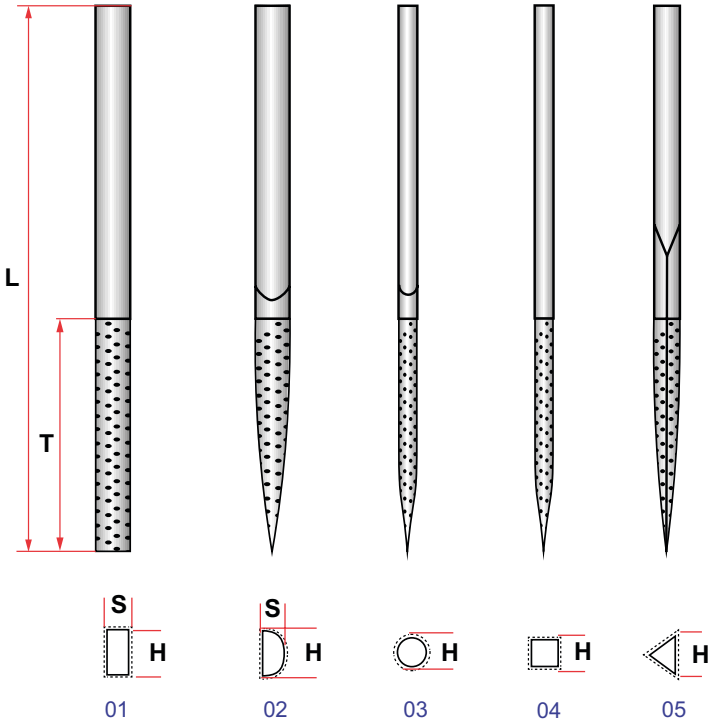
Diamond files
Lima de diamante
Pilniki diamentowe
Limas de diamante
Limes diamant



Type PF	Form	d3	l1	l	# GR	REF.
01	1.5 / 5.5	3	50	140	**120**	**BR17610-01-120**
02	2 / 5					**BR17610-02-120**
03	3					**BR17610-03-120**
04	2.5					**BR17610-04-120**
05	3.5					**BR17610-05-120**
06	5.4 / 1.5					**BR17610-06-120**
07	6 / 1.7					**BR17610-07-120**
08	6 / 2					**BR17610-08-120**
09	5 / 2					**BR17610-09-120**
10	6 / 1.5					**BR17610-10-120**

BR17620

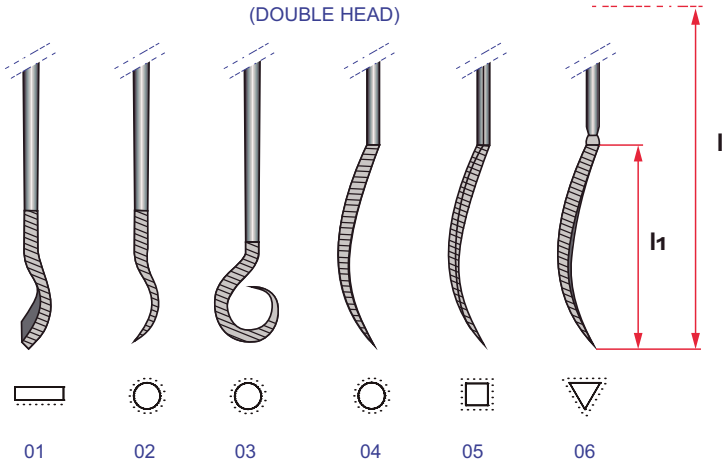
Diamond files
Lima de diamante
Pilniki diamentowe
Limas de diamante
Limes diamant



Type IF	Form	S	H	T	L	# Gr	REF.
01		3,5	11	80	215	100	BR17620-01-100
02		4,4	10,5				BR17620-02-100
03		–	5				BR17620-03-100
04			6,3				BR17620-04-100
05			7,7				BR17620-05-100

BR17630

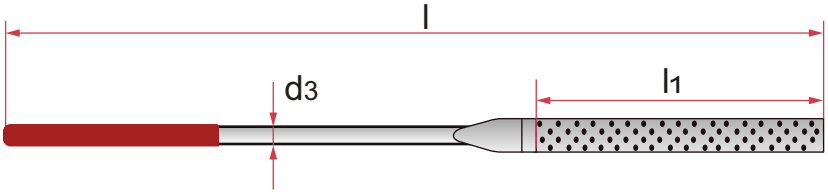
Shaped diamond files
Codillo de diamante
Pilniki diamentowe ryflowe
Limas agulha de diamante
Rifloirs diamant.



Type BF	Form	l1	l	# Gr	REF.
01		20 mm	155	200	BR17630-01-200
02					BR17630-02-200
03					BR17630-03-200
04		30 mm			BR17630-04-200
05					BR17630-05-200
06					BR17630-06-200

BR17640 Set-10

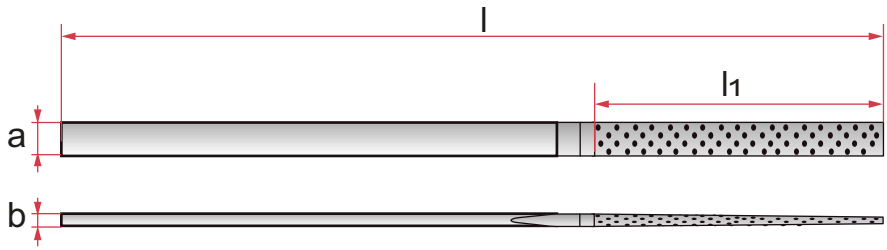
Diamond files
Lima de diamante
Pilniki diamentowe
Limas de diamante
Limes diamant



Type PTF	Form	d3	l1	l	# GR	REF.
100	2 / 1.4 / 0.3	3	30	130	200	BR17640-SET-10
					400	
					600	
	4 / 1.4 / 0.3				200	
					400	
					600	
	6 / 1.1 / 0.3				200	
					400	
					600	
	Ø 3		50	140		

BR17641 Set-12

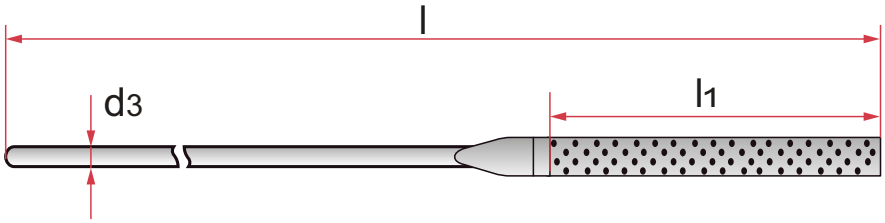
Diamond files
Lima de diamante
Pilniki diamentowe
Limas de diamante
Limes diamant



Type CF	Form	a	b	l1	l	# GR	REF.
400	2 / 2.0 / 0.3	2	2	40	180	150	BR17641-SET-12
						200	
						400	
	4 / 2.0 / 0.3	4		50		150	
						200	
						400	
	6 / 2.0 / 0.3	6				150	
						200	
						400	
	8 / 2.0 / 0.3	8				150	
						200	
						400	

BR17642 Set-10

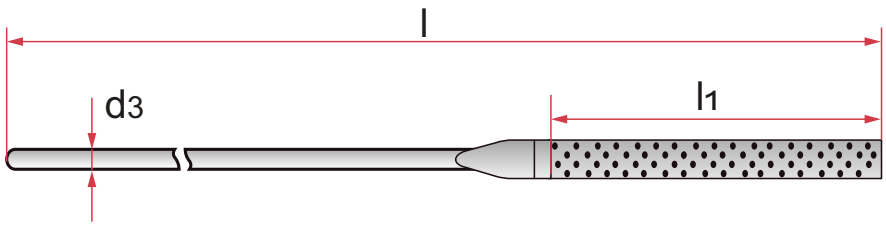
Diamond files
Lima de diamante
Pilniki diamentowe
Limas de diamante
Limes diamant



Type PF10L	Form	d3	l1	l	# GR	REF.
01	1.5 / 5.5	3	70	140	**120**	BR17642-SET-10
02	2 / 5					
03	3					
04	2.5					
05	3.5					
06	5.4 / 1.5					
07	6 / 1.7					
08	6 / 2					
09	5 / 2					
10	6 / 1.5					

BR17643 Set-5

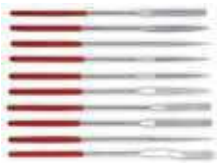
Diamond files
Lima de diamante
Pilniki diamentowe
Limas de diamante
Limes diamant

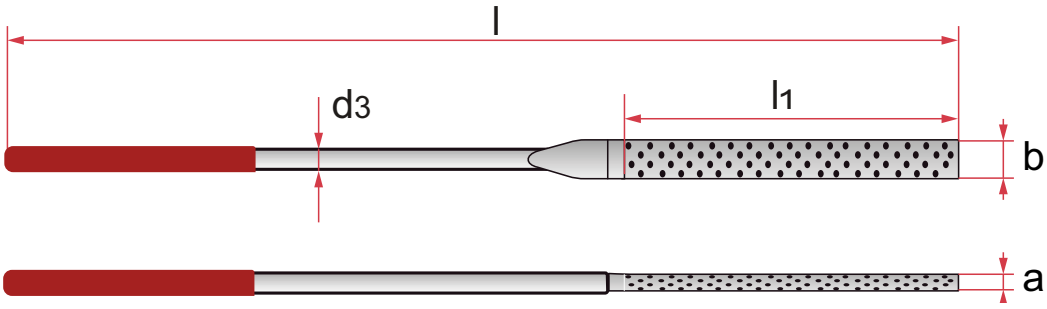


Type PF10L	Form	d3	l1	l	# GR	REF.
01	1.5 / 5.5	3	70	140	**120**	BR17643-SET-5
02	2 / 5					
03	3					
04	2.5					
05	3.5					

BR17650

Diamond files
Lima de diamante
Pilniki diamentowe
Limas de diamante
Limes diamant

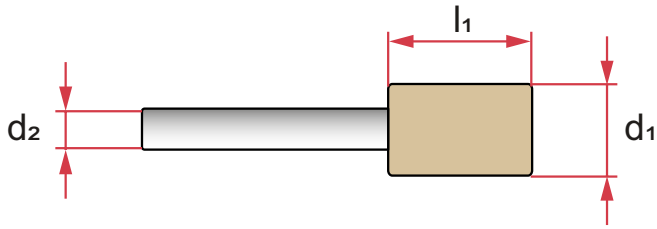


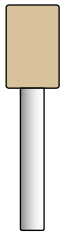
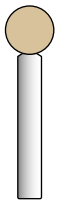


Type PFL	Form	a	b	d3	l1	l	# GR	REF.
01		0,5	5,5	3	50	180	200	BR17650-01-0,5x5,5
01		0,8						BR17650-01-0,8x5,5
01		1,5						BR17650-01-1,5x5,5
01								BR17650-101-1,5x5,5
02		2,0	5					BR17650-02-2,0x5,0
03			-					BR17650 - 03 - 2,0
03		3,0						BR17650 - 03 - 3,0
04		2,5						BR17650 - 04 - 2,5
05		3,5						BR17650 - 05 - 3,5
06		1,0	1,5					BR17650-06-1,0x1,5

BR17110

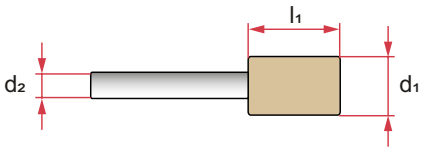
Felt bobs
Muela de fieltro
Wrzeciona filcowe
Fieltros de pulir
Feutre sur tige

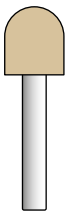
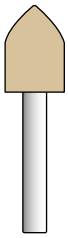
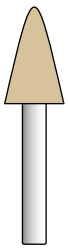


FORMA		d1	l1	d2	REF.
A		4	8	3	BR17110-A-4,0x8-3
		5	9		BR17110-A-5,0x9-3
		6	10		BR17110-A-6,0x10-3
		8			BR17110-A-8,0x10-3
		10	12		BR17110-A-10x12-3
		12	15		BR17110-A-12x15-3
		13	19		BR17110-A-13x19-3
		19	25		BR17110-A-19x25-3
		10	15	6	BR17110-A-10x15-6
		12	20		BR17110-A-12x20-6
		16			BR17110-A-16x20-6
		20	25		BR17110-A-20x25-6
		25	30		BR17110-A-25x30-6
		30	40		BR17110-A-30x40-6
B		6	-	3	BR17110-B-6,0-3
		8			BR17110-B-8,0-3
		10			BR17110-B-10-3
		12			BR17110-B-12-3
		15			BR17110-B-15-3
		10		6	BR17110-B-10-6
		12			BR17110-B-12-6
		20			BR17110-B-20-6

BR17110

Felt bobs
Muela de fieltro
Wrzeciona filcowe
Fieltros de pulir
Feutre sur tige



FORMA		d1	l1	d2	REF.
C		4	8	3	BR17110-C-4,0x8-3
		6	10		BR17110-C-6,0x10-3
		8			BR17110-C-8,0x10-3
		10	13		BR17110-C-10x13-3
		12	14		BR17110-C-12x14-3
			18		BR17110-C-12x18-3
			18		BR17110-C-12x18-3
		15	20	6	BR17110-C-15x20-6
		20	25		BR17110-C-20x25-6
		25	30		BR17110-C-25x30-6
F		6	10	3	BR17110-F-6,0x10-3
		8			BR17110-F-8,0x10-3
		10	12		BR17110-F-10x12-3
			20		BR17110-F-10x20-3
		12	25		BR17110-F-12x25-3
		19	38		BR17110-F-19x38-3
		10	15	6	BR17110-F-10x15-6
		12	20		BR17110-F-12x20-6
		15	25		BR17110-F-15x25-6
		20			BR17110-F-20x25-6
		25	30		BR17110-F-25x30-6
			50		BR17110-F-25x50-6
		30	40		BR17110-F-30x40-6
J		10	12	3	BR17110-J-10x12-3
		12	18		BR17110-J-12x18-3
			25		BR17110-J-12x25-3
		10	15	6	BR17110-J-10x15-6
		16	20		BR17110-J-16x20-6
		20	25		BR17110-J-20x25-6
		25	30		BR17110-J-25x30-6
			50		BR17110-J-25x50-6
		30	40		BR17110-J-30x40-6

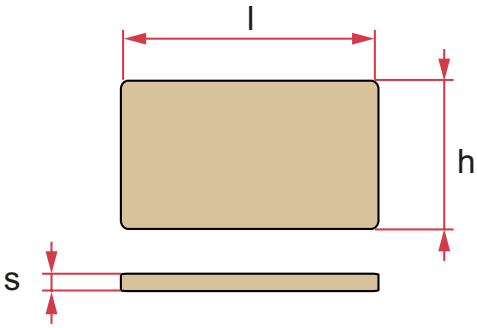
Diamond compound

Diamond compound 5 gr.
Pasta de diamante 5 gr.
Pasta diamentowa 5 gr.
Pasta de diamante 5 gr.
Pate de diamant 5 gr.

	µ	Concentration	REF.
PDR-280	0,25	28000	**Nº1/4**
PDR-140	1	14000	**Nº 01**
PDR-080	3	8000	**Nº 03**
PDR-050	4,5	5000	**Nº4.5**
PDR-030	6	3000	**Nº 06**
PDR-018	9	1800	**Nº 09**
PDR-012	14	1200	**Nº 14**
PDR-006	25	600	**Nº 25**
PDR-003	15	300	**Nº 45**

BR83019

Flat Felts Pack
Paq. de fieltros planos
Filce płaskie
Pacote de feltros planos
Pack de feutre plat



l	h	s	Qty.	REF.
50	25	2,5	10	**BR83019**

BR OS Fluid

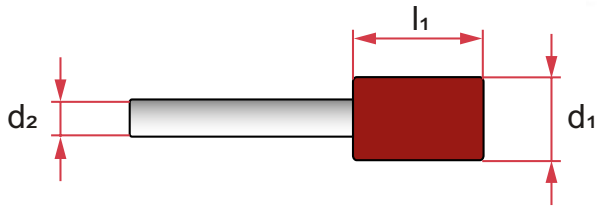
Lubricating fluid 450ml.
Diluyente pasta diamante 450ml.
Rozcieńczalnik do pasty diamentowej 450ml.
Diluente em pasta de diamante 450ml.
Diluant pour pâte diamant 450ml.

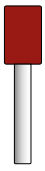
- Assists diamond paste products to cut and polish more effectively by absorbing frictional heat and diluting the lapping residue.
- Lubricant performance remains stable even when under high pressure.
- Manufactured from high purity chemicals.
- Recommended when polishing tooling, moulds and similar components.

- Ayuda a las pastas de diamante a cortar y pulir de manera mas efectiva, al absorber el calor de la fricción y diluir los residuos del pulido.
- El rendimiento del fluido permanece estable incluso cuando se encuentra bajo alta presión.
- Fabricado con productos quimicos de alta pureza.
- Recomendado para pulir moldes, utillajes y componentes similares.

BR17310

Mounted polishing stones
Muela sobre vástago
Trzpienie polerskie
Mós montada
Meules sur tige

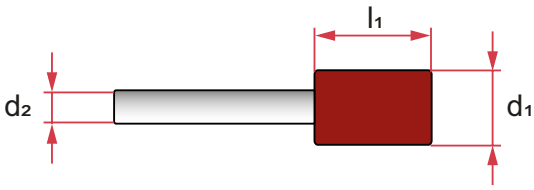


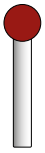
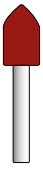
FORM		d2	d1	l1	REF.
A		3	2	5	BR17310-A-2,0x5-3
			3	6	BR17310-A-3,0x6-3
			4	2	BR17310-A-4,0x2-3
				8	BR17310-A-4,0x8-3
			5	10	BR17310-A-5,0x10-3
			6	13	BR17310-A-6,0x13-3
			8	2	BR17310-A-8,0x2-3
				10	BR17310-A-8,0x10-3
				16	BR17310-A-8,0x16-3
			10	2	BR17310-A-10x2-3
				13	BR17310-A-10x13-3
			13	3	BR17310-A-13x3-3
				13	BR17310-A-13x13-3
			16	4	BR17310-A-16x4-3
			20	6	BR17310-A-20x6-3
		6	5	10	BR17310-A-5,0x10-6
			6	13	BR17310-A-6,0x13-6
			10	20	BR17310-A-10x20-6
				25	BR17310-A-10x25-6
				32	BR17310-A-10x32-6
			13	3	BR17310-A-13x3-6
				6	BR17310-A-13x6-6
				13	BR17310-A-13x13-6
				25	BR17310-A-13x25-6
				40	BR17310-A-13x40-6
			16	4	BR17310-A-16x4-6
				10	BR17310-A-16x10-6
				20	BR17310-A-16x20-6
				32	BR17310-A-16x32-6

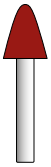
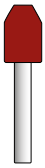
FORM		d2	d1	l1	REF.
A		6	16	40	BR17310-A-16x40-6
				50	BR17310-A-16x50-6
			20	6	BR17310-A-20x6-6
				10	BR17310-A-20x10-6
				13	BR17310-A-20x13-6
				20	BR17310-A-20x20-6
				25	BR17310-A-20x25-6
				32	BR17310-A-20x32-6
				40	BR17310-A-20x40-6
				50	BR17310-A-20x50-6
			25	6	BR17310-A-25x6-6
				13	BR17310-A-25x13-6
				16	BR17310-A-25x16-6
				25	BR17310-A-25x25-6
				32	BR17310-A-25x32-6
				40	BR17310-A-25x40-6
			32	8	BR17310-A-32x8-6
				16	BR17310-A-32x16-6
				20	BR17310-A-32x20-6
				32	BR17310-A-32x32-6
				40	BR17310-A-32x40-6
			40	6	BR17310-A-40x6-6
				10	BR17310-A-40x10-6
				15	BR17310-A-40x15-6
				20	BR17310-A-40x20-6
				40	BR17310-A-40x40-6
			50	8	BR17310-A-50x8-6
				13	BR17310-A-50x13-6
				25	BR17310-A-50x25-6

BR17310

Mounted polishing stones
Muela sobre vástago
Trzpienie polerskie
Mós montada
Meules sur tige

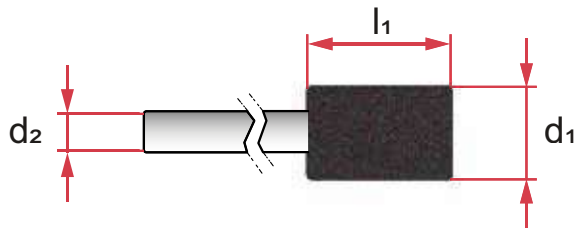


FORM		d2	d1	l1	REF.
B		3	3	-	BR17310-B-3,0-3
			5		BR17310-B-5,0-3
			8		BR17310-B-8,0-3
			10		BR17310-B-10-3
			13		BR17310-B-13-3
		6	3		BR17310-B-3,0-6
			5		BR17310-B-5,0-6
			8		BR17310-B-8,0-6
			10		BR17310-B-10-6
			13		BR17310-B-13-6
			16		BR17310-B-16-6
			20		BR17310-B-20-6
			25		BR17310-B-25-6
			32		BR17310-B-32-6
C		3	3	6	BR17310-C-3,0x6-3
			5	10	BR17310-C-5,0x10-3
		6	3	6	BR17310-C-3,0x6-6
			5	10	BR17310-C-5,0x10-6
			8	16	BR17310-C-8,0x16-6
			13	20	BR17310-C-13x20-6
			20	25	BR17310-C-20x25-6
F		3	3	6	BR17310-F-3,0x6-3
			5	10	BR17310-F-5,0x10-3
			9	16	BR17310-F-9,0x16-3
		6	9	16	BR17310-F-9,0x16-6
			13	20	BR17310-F-13x20-6
			20	32	BR17310-F-20x32-6
				50	BR17310-F-20x50-6
			25	40	BR17310-F-25x40-6

FORM		d2	d1	l1	REF.
J		3	10	10	BR17310-J-10x10-3
		6		25	BR17310-J-10x25-6
			13	13	BR17310-J-13x13-6
			16	16	BR17310-J-16x16-6
				45	BR17310-J-16x45-6
			20	20	BR17310-J-20x20-6
				32	BR17310-J-20x32-6
				40	BR17310-J-20x40-6
			25	25	BR17310-J-25x25-6
				45	BR17310-J-25x45-6
			32	32	BR17310-J-32x32-6
T			13	20	BR17310-T-13x20-6
				32	BR17310-T-13x32-6
			20	25	BR17310-T-20x25-6
			25	32	BR17310-T-25x32-6
			32	40	BR17310-T-32x40-6
V			20	16	BR17310-V-20x16-6
			25	20	BR17310-V-25x20-6
			32	25	BR17310-V-32x25-6
			40	32	BR17310-V-40x32-6

BR17520

Abrasive shapes
Dediles abrasivos
Frezy trzpieniowe
Formas abrasivas
Capuchon abrasifs



FORM		GR.	RPM max.	d2	d1	l1	REF.
A		150	95000	3	5	10	BR17520-A-5,0x10-150-(05-A)
			65000		7	12	BR17520-A-7,0x12-150-(07-A)
			45000		10	15	BR17520-A-10x15-150-(10-A)
			35000	6	13	17	BR17520-A-13x17-150-(13-A)
			30000		16	26	BR17520-A-16x26-150-(16-A)
		280	95000	3	5	10	BR17520-A-5,0x10-280-(05-A)
			65000		7	12	BR17520-A-7,0x12-280-(07-A)
			45000		10	15	BR17520-A-10x15-280-(10-A)
			35000	6	13	17	BR17520-A-13x17-280-(13-A)
			30000		16	26	BR17520-A-16x26-280-(16-A)
C		150	95000	3	5	11	BR17520-C-5,0x11-150-(05-C)
			65000		7	13	BR17520-C-7,0x13-150-(07-C)
			45000		10	15	BR17520-C-10x15-150-(10-C)
			35000	6	13	17	BR17520-C-13x17-150-(13-C)
			30000		16	26	BR17520-C-16x26-150-(16-C)
		280	95000	3	5	11	BR17520-C-5,0x11-280-(05-C)
			65000		7	13	BR17520-C-7,0x13-280-(07-C)
			45000		10	15	BR17520-C-10x15-280-(10-C)
			35000	6	13	17	BR17520-C-13x17-280-(13-C)
			30000		16	26	BR17520-C-16x26-280-(16-C)
G		150	95000	3	5	11	BR17520-G-5,0x11-150-(05-G)
			65000		7	13	BR17520-G-7,0x13-150-(07-G)
			45000		10	15	BR17520-G-10x15-150-(10-G)
			35000	6	13	17	BR17520-G-13x17-150-(13-G)
			30000		16	26	BR17520-G-16x26-150-(16-G)
		280	95000	3	5	11	BR17520-G-5,0x11-280-(05-G)
			65000		7	13	BR17520-G-7,0x13-280-(07-G)
			45000		10	15	BR17520-G-10x15-280-(10-G)
			35000	6	13	17	BR17520-G-13x17-280-(13-G)
			30000		16	26	BR17520-G-16x26-280-(16-G)

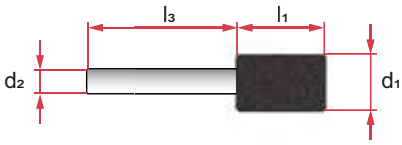
BR17520

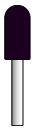
Abrasive shapes
Dediles abrasivos
Frezy trzpieniowe
Formas abrasivas
Capuchon abrasifs

FORM		GR.	RPM max.	d2	d1	l1	REF.
L		150	95000	3	5	11	BR17520-L-5,0x11-150-(05-L)
			40000		11	25	BR17520-L-11x25-150-(11-L)
			30000		16	32	BR17520-L-16x32-150-(16-L)
			20000	6	21	40	BR17520-L-21x40-150-(21-L)
		280	95000	3	5	11	BR17520-L-5,0x11-280-(05-L)
			40000		11	25	BR17520-L-11x25-280-(11-L)
			30000		16	32	BR17520-L-16x32-280-(16-L)
			20000	6	21	40	BR17520-L-21x40-280-(21-L)

BR17521

Support abrasive shape
Portadedil
Frezy trzpieniowe
Suporte capuze abrasivo
Support capuchon abrasif

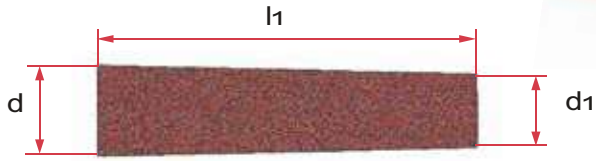


	FORMA	d2	l3	d1	l1	REF.
A		3	25	5	10	BR17521-A-5,0x10-3
				7	12	BR17521-A-7,0x12-3
				10	15	BR17521-A-10x15-3
		6		13	17	BR17521-A-13x17-6
				16	26	BR17521-A-16x26-6
C				5	11	BR17521-C-5,0x11-3
		3		7	13	BR17521-C-7,0x13-3
				10	15	BR17521-C-10x15-3
		6		13	17	BR17521-C-13x17-6
				16	26	BR17521-C-16x26-6
G		3		5	11	BR17521-G-5,0x11-3
				7	13	BR17521-G-7,0x13-3
				10	15	BR17521-G-10x15-3
		6		13	17	BR17521-G-13x17-6
				16	26	BR17521-G-16x26-6
L		3		5	11	BR17521-L-5,0x11-3
				11	25	BR17521-L-11x25-3
				16	32	BR17521-L-16x32-3
		6		21	40	BR17521-L-21x40-6

639

BR17522

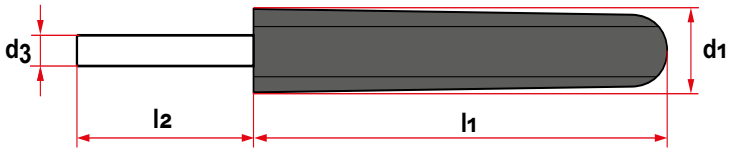
Abrasive shapes
Dediles abrasivos
Frezy trzpieniowe
Formas abrasivas
Capuchon abrasifs



GR	l1	d1	d	REF.
80	85	4,5	8	BR17522-D- 8x85-080
80	85	9,5	13	BR17522-D-13x85-080
80	85	14,5	18	BR17522-D-18x85-080
80	85	19,5	23	BR17522-D-23x85-080
150	85	4,5	8	BR17522-D- 8x85-150
150	85	9,5	13	BR17522-D-13x85-150
150	85	14,5	18	BR17522-D-18x85-150
150	85	19,5	23	BR17522-D-23x85-150

BR17523

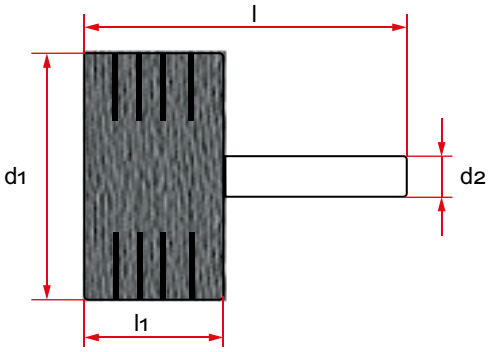
Support abrasive shape
Portadedil
Frezy trzpieniowe
Suporte capuze abrasivo
Support capuchon abrasif



d3	l2	l1	d1	REF.
6	40	85	8	BR17523-D- 8- 6
6	40	85	13	BR17523-D-13- 6
6	40	85	18	BR17523-D-18- 6
6	40	85	23	BR17523-D-23- 6

BR17510

Mounted flap wheels
Abanicos de tela abrasiva
Filce ścierne lamelkowe
Leques de lixa
Meules a lamelles sur tige

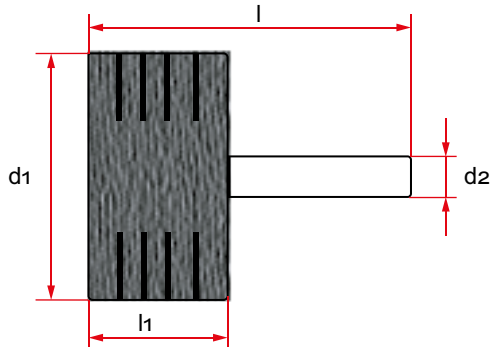


RPM Rec.	RPM Max.	d2	l	d1	l1	GR	REF.
16000	18000	3	55	15	15	60	**BR17510- 15-15-3- 60**
16000	18000	3	55	15	15	80	**BR17510- 15-15-3- 80**
16000	18000	3	45	30	5	60	**BR17510- 30- 5-3- 60**
16000	18000	3	45	30	5	80	**BR17510- 30- 5-3- 80**
16000	18000	3	45	30	5	120	**BR17510- 30- 5-3- 120**
16000	18000	3	45	30	5	150	**BR17510- 30- 5-3- 150**
16000	18000	3	45	30	5	180	**BR17510- 30- 5-3- 180**
16000	18000	3	45	30	5	240	**BR17510- 30- 5-3- 240**
16000	18000	3	45	30	5	320	**BR17510- 30- 5-3- 320**
16000	18000	6	45	30	5	60	**BR17510- 30- 5-6- 60**
16000	18000	6	45	30	5	120	**BR17510- 30- 5-6- 120**
16000	18000	6	45	30	5	320	**BR17510- 30- 5-6- 320**
16000	18000	3	50	30	10	60	**BR17510- 30- 10-3- 60**
16000	18000	3	50	30	10	80	**BR17510- 30- 10-3- 80**
16000	18000	3	50	30	10	120	**BR17510- 30-10-3-120**
16000	18000	3	50	30	10	150	**BR17510- 30-10-3-150**
16000	18000	3	50	30	10	180	**BR17510- 30-10-3-180**
16000	18000	3	50	30	10	240	**BR17510- 30-10-3-240**
16000	18000	3	50	30	10	320	**BR17510- 30-10-3-320**

RPM Rec.	RPM Max.	d2	l	d1	l1	GR	REF.
16000	18000	6	50	30	10	60	**BR17510- 30- 10-6- 60**
16000	18000	6	50	30	10	80	**BR17510- 30- 10-6- 80**
16000	18000	6	50	30	10	120	**BR17510- 30-10-6-120**
16000	18000	6	50	30	10	150	**BR17510- 30-10-6-150**
16000	18000	6	50	30	10	180	**BR17510- 30-10-6-180**
16000	18000	6	50	30	10	240	**BR17510- 30-10-6-240**
16000	18000	6	50	30	10	320	**BR17510- 30-10-6-320**
16000	18000	6	55	30	15	80	**BR17510- 30- 15-6- 80**
16000	18000	6	55	30	15	120	**BR17510- 30-15-6-120**
16000	18000	6	70	30	30	40	**BR17510- 30- 30-6- 40**
16000	18000	6	45	40	5	60	**BR17510- 40- 5-6- 60**
16000	18000	6	45	40	5	80	**BR17510- 40- 5-6- 80**
16000	18000	6	45	40	5	120	**BR17510- 40- 5-6- 120**
16000	18000	6	55	40	15	60	**BR17510- 40- 15-6- 60**
16000	18000	6	55	40	15	120	**BR17510- 40-15-6-120**
16000	18000	6	55	40	15	320	**BR17510- 40-15-6-320**
12000	18000	6	60	40	20	60	**BR17510- 40- 20-6- 60**
12000	18000	6	60	40	20	80	**BR17510- 40- 20-6- 80**
12000	18000	6	60	40	20	120	**BR17510- 40-20-6-120**

BR17510

Mounted flap wheels
Abanicos de tela abrasiva
Filce ścierne lamelkowe
Leques de lixa
Meules a lamelles sur tige

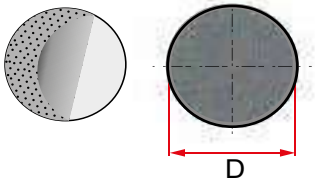


RPM Rec.	RPM Max.	d2	l	d1	l1	GR	REF.
12000	18000	6	60	40	20	150	**BR17510- 40-20-6-150**
12000	18000	6	60	40	20	180	**BR17510- 40-20-6-180**
12000	18000	6	60	40	20	240	**BR17510- 40-20-6-240**
12000	18000	6	60	40	20	320	**BR17510- 40-20-6-320**
12000	18000	6	70	40	30	120	**BR17510- 40-30-6-120**
9000	12000	6	50	50	10	240	**BR17510- 50-10-6-240**
9000	12000	6	55	50	15	60	**BR17510- 50- 15-6- 60**
9000	12000	6	55	50	15	80	**BR17510- 50- 15-6- 80**
9000	12000	6	55	50	15	120	**BR17510- 50-15-6-120**
9000	12000	6	55	50	15	150	**BR17510- 50-15-6-150**
9000	12000	6	55	50	15	180	**BR17510- 50-15-6-180**
9000	12000	6	55	50	15	240	**BR17510- 50-15-6-240**
9000	12000	6	55	50	15	320	**BR17510- 50-15-6-320**
9000	12000	6	60	50	20	60	**BR17510- 50- 20-6- 60**
8000	12000	6	45	60	5	80	**BR17510- 60- 5-6- 80**
8000	12000	6	45	60	5	120	**BR17510- 60- 5-6- 120**
8000	12000	6	50	60	10	80	**BR17510- 60- 10-6- 80**
8000	12000	6	50	60	10	120	**BR17510- 60-10-6-120**
8000	12000	6	50	60	10	320	**BR17510- 60-10-6-320**

RPM Rec.	RPM Max.	d2	l	d1	l1	GR	REF.
8000	12000	6	60	60	20	60	**BR17510- 60- 20-6- 60**
8000	12000	6	60	60	20	80	**BR17510- 60- 20-6- 80**
8000	12000	6	60	60	20	120	**BR17510- 60-20-6-120**
8000	12000	6	60	60	20	150	**BR17510- 60-20-6-150**
8000	12000	6	60	60	20	180	**BR17510- 60-20-6-180**
8000	12000	6	60	60	20	240	**BR17510- 60-20-6-240**
8000	12000	6	60	60	20	320	**BR17510- 60-20-6-320**
8000	12000	6	70	60	30	40	**BR17510- 60- 30-6- 40**
8000	12000	6	70	60	30	60	**BR17510- 60- 30-6- 60**
8000	12000	6	70	60	30	80	**BR17510- 60- 30-6- 80**
8000	12000	6	70	60	30	120	**BR17510- 60-30-6-120**
8000	12000	6	70	60	30	150	**BR17510- 60-30-6-150**
8000	12000	6	70	60	30	240	**BR17510- 60-30-6-240**
8000	12000	6	70	60	30	320	**BR17510- 60-30-6-320**
8000	12000	6	80	60	40	80	**BR17510- 60- 40-6- 80**
8000	12000	6	80	60	40	120	**BR17510- 60-40-6-120**
8000	12000	6	70	80	30	240	**BR17510- 80-30-6-240**
8000	12000	6	90	80	50	120	**BR17510- 80-50-6-120**
8000	12000	6	90	80	50	80	**BR17510- 80- 50-6- 80**

BR17512

Auto-adhesive abrasive discs
Discos de lija autoadhesivos
Samoprzylepne krążki ścierne
Discos de lixa autocolantes
Disques de meulage autocollants

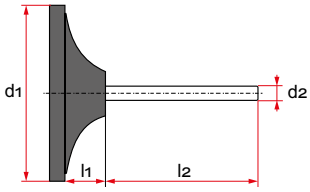


D	GR.	REF.
18	60	**BR17512-18- 60**
18	80	**BR17512-18- 80**
18	120	**BR17512-18-120**
18	150	**BR17512-18-150**
18	180	**BR17512-18-180**
18	240	**BR17512-18-240**
30	60	**BR17512-30- 60**
30	80	**BR17512-30- 80**
30	120	**BR17512-30-120**
30	150	**BR17512-30-150**
30	180	**BR17512-30-180**

D	GR.	REF.
30	240	**BR17512-30-240**
45	60	**BR17512-45- 60**
45	80	**BR17512-45- 80**
45	120	**BR17512-45-120**
45	150	**BR17512-45-150**
45	180	**BR17512-45-180**
45	240	**BR17512-45-240**
60	60	**BR17512-60- 60**
60	80	**BR17512-60- 80**
60	120	**BR17512-60-120**

BR17513

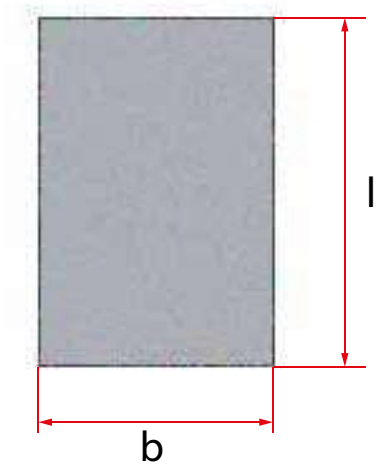
Support for auto-adhesive disc
Soportes para discos de lija autoadhesivos
Nośniki samoprzylepnych krążków ściernych
Suporte para discos de lixa autocolantes
Supports pour disc autocollantes



RPM max.	d2	l	d2	l2	l1	d1	REF.
20.000	**3**	30	3	30	11	**18**	**BR17513-18**
12.500	**3**	30	3	30	12	**30**	**BR17513-30**
12.500	**6**	40	6	40	12	**30**	**BR17513-30**
10.000	**6**	40	6	40	11	**45**	**BR17513-45**
8.000	**6**	40	6	40	13	**60**	**BR17513-60**

BR17511

Abrasive paper sheets
Hojas de esmeril
Papier ścierny
Folhas de lixa
Feuilles pour polissage

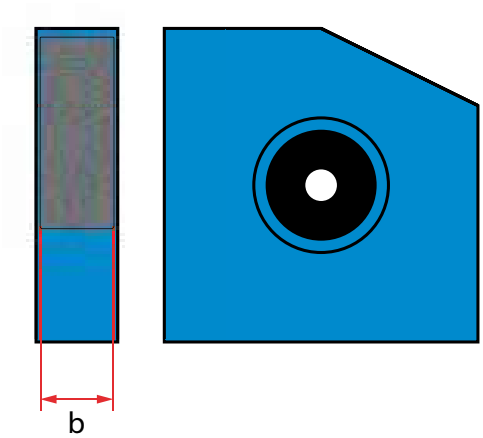


b	l	GR.	REF.
230	280	**40**	**BR17511- 40**
230	280	**50**	**BR17511- 50**
230	280	**60**	**BR17511- 60**
230	280	**80**	**BR17511- 80**
230	280	**100**	**BR17511- 100**
230	280	**120**	**BR17511- 120**
230	280	**150**	**BR17511- 150**
230	280	**180**	**BR17511- 180**
230	280	**220**	**BR17511- 220**
230	280	**120**	**BR17511- 120**
230	280	**150**	**BR17511- 150**
230	280	**220**	**BR17511- 220**
230	280	**240**	**BR17511- 240**
230	280	**280**	**BR17511- 280**
230	280	**320**	**BR17511- 320**
230	280	**360**	**BR17511- 360**
230	280	**400**	**BR17511- 400**
230	280	**500**	**BR17511- 500**
230	280	**600**	**BR17511- 600**
230	280	**800**	**BR17511- 800**
230	280	**1000**	**BR17511-1000**
230	280	**1200**	**BR17511-1200**

644

BR17590

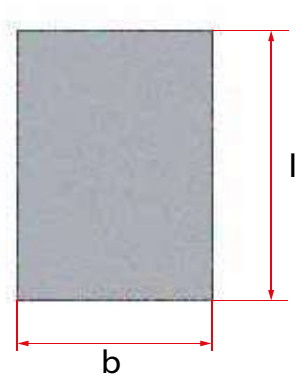
Abrasive cloth rolls
Rollo de esmeril
Taśma ścierna
Rolos de lixa
Rouleaux toile metalite



l	b	GR	REF.
25m	38	60	BR17590- 38-60
		80	BR17590- 38-80
		100	BR17590-38-100
		120	BR17590-38-120
		150	BR17590-38-150
		180	BR17590-38-180
		220	BR17590-38-220
		240	BR17590-38-240
		280	BR17590-38-280
		320	BR17590-38-320
		400	BR17590-38-400
		600	BR17590-38-600
	50	60	BR17590- 50-60
		80	BR17590- 50-80
		100	BR17590-50-100
		120	BR17590-50-120
		150	BR17590-50-150
		180	BR17590-50-180
		220	BR17590-50-220
		240	BR17590-50-240
		280	BR17590-50-280
		320	BR17590-50-320
		400	BR17590-50-400
		600	BR17590-50-600

BR17514

Sandpaper sponge
Esponja de lija
Gąbka ścierna
Esponja de lixa
Éponge de ponçage



b	l	GR		REF
115	140	100-180	MEDIO	**BR17514/100**
115	140	320-400	FINO	**BR17514/320**
115	140	500-600	SUPERFINO	**BR17514/500**

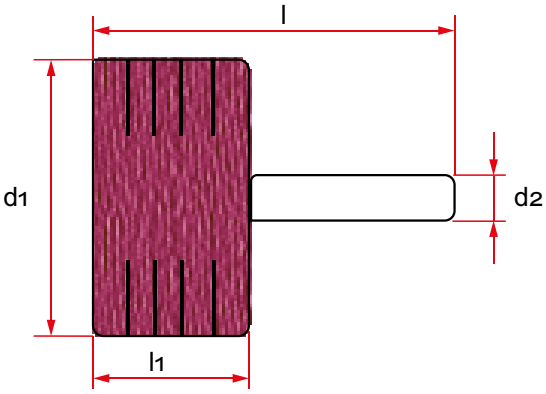
BR17910

Sheets 7447
Lamina 7447
Arkusz ręczny 7447
Lamina 7447
Feuille 7447

b	l	GR		REF.
150	230	320	Muy fino	**BR17910/ VF**

BR17930

Synthetic fiber wheel
Abanicos fibra sintetica
Tarcza polerska
Roda de fibra sintética
Roueen fibre synthétique

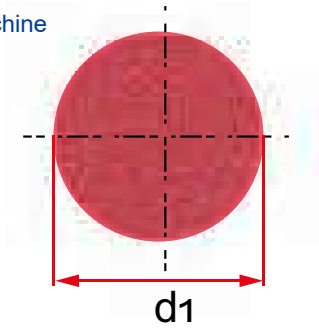


Oxido de aluminio/Aluminium oxide

RPM max.	d2	l	d1	l1	GR	REF.
12200	6	70	**50**	**30**	**Rough**	**BR17930-050x30-Rough**
					Medium	**BR17930-050x30-Medium**
					Fine	**BR17930-050x30-Fine**
10200			**60**		**Rough**	**BR17930-060x30-Rough**
					Medium	**BR17930-060x30-Medium**
					Fine	**BR17930-060x30-Fine**
		90		**50**	**Rough**	**BR17930-060x50-Rough**
					Medium	**BR17930-060x50-Medium**
					Fine	**BR17930-060x50-Fine**
7600			**80**		**Rough**	**BR17930-080x50-Rough**
					Medium	**BR17930-080x50-Medium**
					Fine	**BR17930-080x50-Fine**
6000			**100**		**Rough**	**BR17930-100x50-Rough**
					Medium	**BR17930-100x50-Medium**
					Fine	**BR17930-100x50-Fine**

BR17931

Synthetic fiber disc for machine
Disco fibra sintetica para maquina
Tarcza polerska dla maszyny
Disco fibra sintética para maquina
Disque fibres synthétiques pour machine



Oxido de aluminio/Aluminium oxide+nylon . Reverso Velcro/Velcro back

d1	GR	REF.
150	**Superfine/Super fino**	**BR17931-320**

BR17920

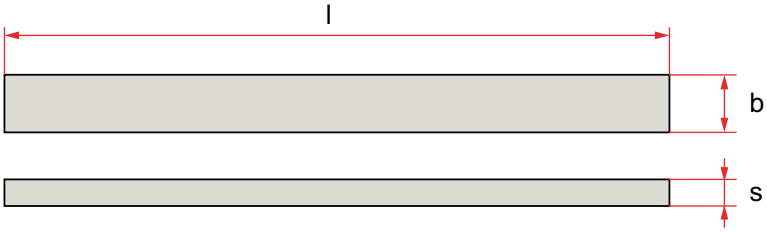
Synthetic fiber roll
Rollo de fibra sintetica
Tarcza polerska
Rolo de fibra sintética
Rouleau fibres synthétiques

Oxido de aluminio/Aluminium oxide

Long/Largo	Width/Ancho	GR	REF.
10m	115	Fine/Fino	**BR17920- F**
10m	115	Superfine/Super fino	**BR17920-VF**

BR17710

Manual polishing stones Gesswein® DF
Piedras para pulido manual Gesswein® DF
Kamienie do polerowania ręcznego Gesswein® DF
Pedra abrasiva Gesswein® DF
Pierres a polir Gesswein®. DF



l	s	b	GR	REF.
150	3	6	150	BR17710- 3x 6-2101
			220	BR17710- 3x 6-2201
			320	BR17710- 3x 6-2301
			400	BR17710- 3x 6-2401
			600	BR17710- 3x 6-2601
			900	BR17710- 3x 6-2901
		13	150	BR17710- 3x13-2103
			220	BR17710- 3x13-2203
			320	BR17710- 3x13-2303
			400	BR17710- 3x13-2403
			600	BR17710- 3x13-2603
			900	BR17710- 3x13-2903
	6	6	150	BR17710- 6x 6-2102
			220	BR17710- 6x 6-2202
			320	BR17710- 6x 6-2302
			400	BR17710- 6x 6-2402
			600	BR17710- 6x 6-2602
			900	BR17710- 6x 6-2902
		13	150	BR17710- 6x13-2104
			220	BR17710- 6x13-2204
			320	BR17710- 6x13-2304
			400	BR17710- 6x13-2404
			600	BR17710- 6x132604

l	s	b	GR	REF.
150	6	13	900	BR17710- 6x13-2904
		19	150	BR17710- 6x19-2109
			220	BR17710- 6x19-2209
			320	BR17710- 6x19-2309
			400	BR17710- 6x19-2409
			600	BR17710- 6x19-2609
			900	BR17710- 6x19-2909
		25	320	BR17710- 6x25-2312
			400	BR17710- 6x25-2412
			600	BR17710- 6x25-2612
	9,5	9,5	150	BR17710-9,5x9,5-2108
			220	BR17710-9,5x9,5-2208
			320	BR17710-9,5x9,5-2308
			400	BR17710-9,5x9,5-2408
			600	BR17710-9,5x9,5-2608
			900	BR17710-9,5x9,5-2908
	13	13	150	BR17710-13x13-2105
			220	BR17710-13x13-2205
			320	BR17710-13x13-2305
			400	BR17710-13x13-2405
			600	BR17710-13x13-2605
			900	BR17710-13x13-2905

DF

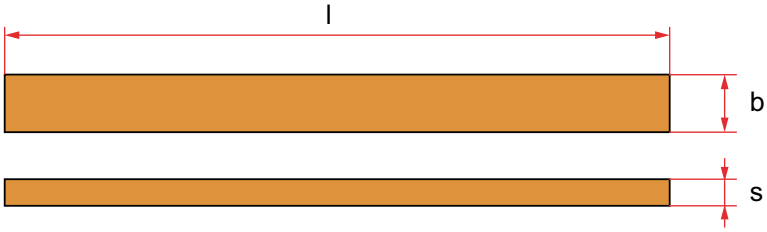
By far our most popular finishing stones, Diemaker Stones combine the characteristics of fast cutting and moderate breakdown. For general purpose stoning on hard and soft grades of mold steel and for prefinishing of aluminium, beryllium copper and kirksite. The precise grit size of medium-hard aluminum oxide is distributed throughout each stone. Can be used in a profiler or ultrasonic polisher.

DF

Color caqui. Estructura semi-dura.
Aplicación: la más popular de las piedras de pulir. Corte rápido. De media duración. Utilizada durante todo el proceso de pulido. No se sobrecarga y es apropiado para el pulido de precisión de aceros duros.

BR17740

Manual polishing stones Gesswein® EDM
Piedras para pulido manual Gesswein® EDM
Kamienie do polerowania ręcznego Gesswein® EDM
Pedra abrasiva Gesswein® EDM
Pierres a polir Gesswein®. EDM



l	s	b	GR	REF.
150	3	6	120	BR17740-3,0x6,0-6121
			180	BR17740-3,0x6,0-6181
			320	BR17740-3,0x6,0-6301
		13	120	BR17740-3,0x13-6123
			180	BR17740-3,0x13-6183
			320	BR17740-3,0x13-6303
	4	4	120	BR17740-4,0x4,0- 61
			180	BR17740-4,0x4,0- 62
			320	BR17740-4,0x4,0- 63
	6	6	120	BR17740-6,0x6,0-6122
			180	BR17740-6,0x6,0-6182
			320	BR17740-6,0x6,0-6302
		13	120	BR17740-6,0x13-6124
			180	BR17740-6,0x13-6184
			320	BR17740-6,0x13-6304
	9,5	9,5	120	BR17740-9,5x9,5-6128
			180	BR17740-9,5x9,5-6188
			320	BR17740-9,5x9,5-6308
	25	25	180	BR17740- 25x 25-6186
			320	BR17740- 25x 25-6306

EDM

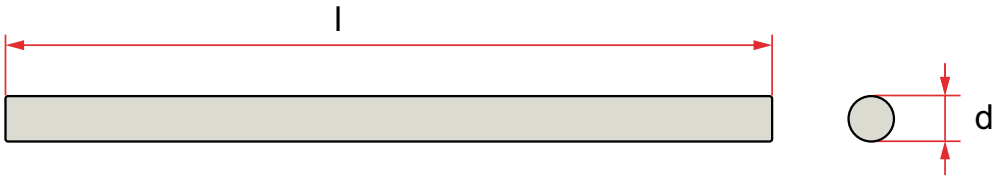
Our EDM stones remove the tough, hard scale left by the Electrical Discharge Machining process much faster than any of our other finishing stones. They contain an extra-sharp premium-grade aluminum oxide for fast cutting action. A special clay bond enables the EDM stones to hold their shape well for working small details and sharp corners. EDM stones break down slowly, cut fast and re - sist loading. They yield excellent results by hand but work even better in a profiler or ultrasonic polisher.

EDM

Color teja. Estructura dura.
Aplicación: abrasivo muy duro y de aristas muy agudas. El aglomerante, extremadamente duro, impide que el abrasivo se desmorone con rapidez. Conserva muy bien la forma y corta rápido. Especializada para el pulido de superficies o perfiles de electroerosión o de materiales muy duros.

BR17711

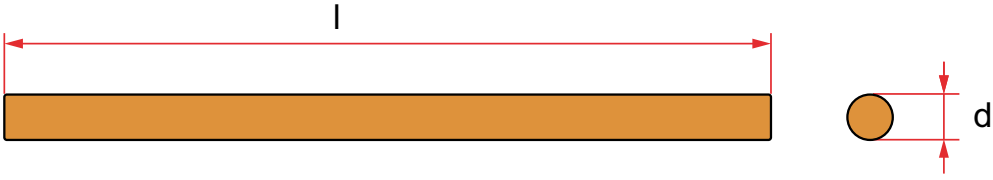
Manual polishing stones Gesswein® DF
Piedras para pulido manual Gesswein® DF
Kamienie do polerowania ręcznego Gesswein® DF
Pedra abrasiva Gesswein® DF
Pierres a polir Gesswein®. DF



l	d	GR	REF.
150	**6**	150	**BR17711-6-3102**
		220	**BR17711-6-3202**
		320	**BR17711-6-3302**
		400	**BR17711-6-3402**
		600	**BR17711-6-3602**
		800	**BR17711-6-3902**

BR17741

Manual polishing stones Gesswein® EDM
Piedras para pulido manual Gesswein® EDM
Kamienie do polerowania ręcznego Gesswein® EDM
Pedra abrasiva Gesswein® EDM
Pierres a polir Gesswein®. EDM

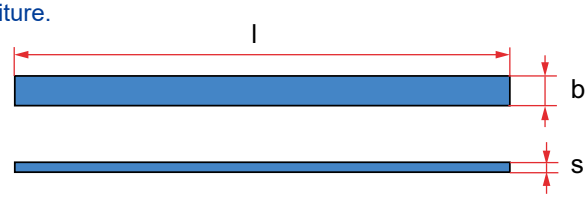


l	d	GR	REF.
150	**6**	120	**BR17741-6-E122**
		180	**BR17741-6-E182**
		320	**BR17741-6-E302**

BR17810

XEBEC Meister Finish ©

Finishing fiber rods
Barritas cerámicas para pulido
Pilniki ceramiczne do polerowania
Barras de polimento de cerâmica
Pierres ceramiques pour finiture.



Colour/Color	s	b	l	GR	REF.
brown/marrón	0'5	6	100	220	BR17810-0'5x6- 220
brick red/teja				300	BR17810-0'5x6- 300
orange/naranja				400	BR17810-0'5x6- 400
black/negro				600	BR17810-0'5x6- 600
blue/azul				800	BR17810-0'5x6- 800
white/blanco				1000	BR17810-0'5x6-1000
red/rojo				1200	BR17810-0'5x6-1200
brown/marrón	0'8			220	BR17810-0'8x6- 220
brick red/teja				300	BR17810-0'8x6- 300
orange/naranja				400	BR17810-0'8x6- 400
black/negro				600	BR17810-0'8x6- 600
blue/azul				800	BR17810-0'8x6- 800
white/blanco				1000	BR17810-0'8x6-1000
red/rojo				1200	BR17810-0'8x6-1200
brown/marrón	1	4		220	BR17810-1'0x4- 220
brick red/teja				400	BR17810-1'0x4- 400
orange/naranja				600	BR17810-1'0x4- 600
brown/marrón		6		220	BR17810-1'0x6- 220
brick red/teja				300	BR17810-1'0x6- 300
orange/naranja				400	BR17810-1'0x6- 400
black/negro				600	BR17810-1'0x6- 600
blue/azul				800	BR17810-1'0x6- 800
white/blanco				1000	BR17810-1'0x6-1000

Colour/Color	s	b	l	GR	REF.
red/rojo	1	6	100	1200	BR17810-1'0x6 -1200
brown/marrón		10		220	BR17810-1'0x10- 220
dark red/teja				300	BR17810-1'0x10- 300
orange/naranja				400	BR17810-1'0x10- 400
black/negro				600	BR17810-1'0x10- 600
blue/azul				800	BR17810-1'0x10- 800
white/blanco				1000	BR17810-1'0x10-1000
red/rojo				1200	BR17810-1'0x10-1200
brown/marrón	1'5	6		220	BR17810-1'5x 6 - 220
brick red/teja				300	BR17810-1'5x 6 - 300
orange/naranja				400	BR17810-1'5x 6 - 400
black/negro				600	BR17810-1'5x 6 - 600
blue/azul				800	BR17810-1'5x 6 - 800
white/blanco				1000	BR17810-1'5x 6-1000
red/rojo				1200	BR17810-1'5x 6-1200
brown/marrón	2'0			220	BR17810-2'0x 6 - 220
brick red/teja				300	BR17810-2'0x 6 - 300
orange/naranja				400	BR17810-2'0x 6 - 400
black/negro				600	BR17810-2'0x 6 - 600
blue/azul				800	BR17810-2'0x 6 - 800
white/blanco				1000	BR17810-2'0x 6-1000
red/rojo				1200	BR17810-2'0x 6-1200

The Meister Finish ®

- Trough the utilization of aerospace materials (alumina fiber filaments), breakage, crackingand chipping have been eliminated. High polishing efficiency can be ensured.
- No clogging. Uniformly fine finishes can be achieved.
- Thanks to the braided structure of the rod type, high polishing efficiency is possible even with the side of the tool and there is no splitting of the tip.
- Suitable for fine deburring.
- Higher polishing efficiency can be achieved by using The Meister Finish® with tools (electric, air ultrasonic).
- Coarse grit type made of thick alumina fiber filaments is ideal for-re moving EDM scales.

Meister Finish ®

- Fabricadas de largas fibras cerámicas aglomeradas en resina termoendurecida.
- Poseen una resistencia superior a las piedras abrasivas normales; no se embotan, inclusive sometidas a las condiciones más rigurosas.
- Una piedra muy dura a la que se puede dar forma hasta lograr una punta sumamente fina.
- Tienen una capacidad de pulido incomparable en todo tipo de metales en las zonas de detalle, ranuras estrechas y nervios.
- Pueden ser suministradas con perfil plano y redondo y es posible su empleo en máquinas de pulido ultrasónico, alternativas mecánicas, rotativas de alta velocidad o manuales.

BR17830

XEBEC Meister Finish ©

Finishing fiber rods
Barritas cerámicas para pulido
Pilniki ceramiczne do polerowania
Barras de polimento de cerâmica
Pierres ceramiques pour finiture.

Colour/Color	d	l	GR	REF
brown/marrón	3	50	220	BR17830-3x50- 220
brick red/teja			300	BR17830-3x50- 300
orange/naranja			400	BR17830-3x50- 400
black/negro			600	BR17830-3x50- 600
blue/azul			800	BR17830-3x50- 800
white/blanco			1000	BR17830-3x50-1000
red/rojo			1200	BR17830-3x50-1200

The Meister Finish ®

- Trough the utilization of aerospace materials (alumina fiber filaments), breakage, crackingand chipping have been eliminated. High polishing efficiency can be ensured.
- No clogging. Uniformly fine finishes can be achieved.
- Thanks to the braided structure of the rod type, high polishing efficiency is possible even with the side of the tool and there is no splitting of the tip.
- Suitable for fine deburring.
- Higher polishing efficiency can be achieved by using The Meister Finish® with tools (electric, air ultrasonic).
- Coarse grit type made of thick alumina fiber filaments is ideal for-re moving EDM scales.

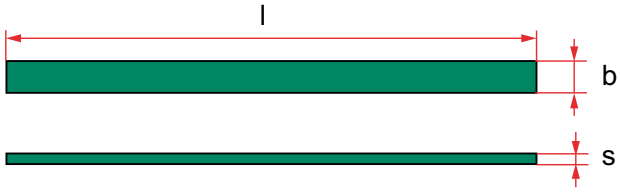
Meister Finish ®

- Fabricadas de largas fibras cerámicas aglomeradas en resina termoendurecida.
- Poseen una resistencia superior a las piedras abrasivas normales; no se embotan, inclusive sometidas a las condiciones más rigurosas.
- Una piedra muy dura a la que se puede dar forma hasta lograr una punta sumamente fina.
- Tienen una capacidad de pulido incomparable en todo tipo de metales en las zonas de detalle, ranuras estrechas y nervios.
- Pueden ser suministradas con perfil plano y redondo y es posible su empleo en máquinas de pulido ultrasónico, alternativas mecánicas, rotativas de alta velocidad o manuales.

BR17820

XEBEC Diamond ©

Finishing fiber rods
Barritas cerámicas para pulido
Pilniki ceramiczne do polerowania
Barras de polimento de cerâmica
Pierres ceramiques pour finiture.



Colour/Color	s	b	l	GR	REF.
green/verde	1	4	100	400	BR17820-1x 4 -400
grey/gris				800	BR17820-1x 4 -800
black/negro		6		200	BR17820-1x 6 -200
green/verde				400	BR17820-1x 6 -400
grey/gris				800	BR17820-1x 6 -800
black/negro		10		200	BR17820-1x10-200
green/verde				400	BR17820-1x10-400
grey/gris				800	BR17820-1x10-800

The XEBEC Diamond ®

- Effeciently and cleanly polishes materials harder than HRC57 such as cemented carbide and hardened steel (SKD, DC, STAVAX, HPM, ASP, etc.).
- Both the stick and the rod types can be used to polish by the tip or the side.
- Can be formed into desired shape, such as thinner tip diamond pastes and diamond powders.
- Far more efficient than electroplated diamond file, hand lappers, diamond pastes and diamond powders.
  - While an electroplated diamond file has diamonds only on its surface, the XEBEC Diamond ®has diamond embedded in layers, enabling it to used to the end without losing its sharpness.
  - Also lasts longer than an electroplated diamond file.
- Can polish efficiently wet or dry.
- Can be used even more efficiently wehn attached to tools (electric, air or ultrasonic).
- Rod type can be attached to rotary tools (max. 30000 R. P. M.).

XEBEC Diamond ®

- Pule eficiente y limpiamente materiales más duros de 57 HRC, tales como metal duro y acero templado (SKD, CC, STAVAX, HPM, ASP, etcétera).
- Tanto el stick como las barritas redondas se pueden usar para pulir lateralmente o en punta.
- Se pueden conformar en la forma deseada.
- Apropiado para eliminar la escala de EDM, puliendo nervios y trabajando bordes y rincones.
  - Mucho más eficiente que los limatones de diamante por electrodepositado, lapeadores manuales, pasta de diamante y polvos de diamante.
  - Mientras un limatón de diamante tiene diamante solo en su superficie, el XEBEC Diamond® está compuesto de varias capas de diamante, permitiendo así su uso hasta el desgaste final sin perder su forma y dureza, por lo que su vida útil es más larga que un limatón de diamante.
- Puede ser usado en seco o en mojado.
- Puede pulir más eficazmente usándolo con máquinas (eléctricas, neumáticas o ultrasonidos).
- La barrita redonda puede ser utilizada con máquinas rotativas (máximo 30000 R. P. M.).

BR17840

XEBEC Diamond ©

Finishing fiber rods
Barritas cerámicas para pulido
Pilniki ceramiczne do polerowania
Barras de polimento de cerâmica
Pierres ceramiques pour finiture.

Colour/Color	d	l	GR	REF.
green/verde	3	50	400	BR17840-3x50 - 400
		100		BR17840-3x100-400

The XEBEC Diamond ®

● Effeciently and cleanly polishes materials harder than HRC57 such as cemented carbide and hardened steel (SKD, DC, STAVAX, HPM, ASP, etc.).

● Both the stick and the rod types can be used to polish by the tip or the side.

● Can be formed into desired shape, such as thinner tip diamond pastes and diamond powders.

● Far more efficient than electroplated diamond file, hand lappers, dia - mond pastes and diamond powders.
- While an electroplated diamond file has diamonds only on its surface, the XEBEC Diamond ®has diamond embedded in layers, enabling it to used to the end without losing its sharpness.
- Also lasts longer than an electroplated diamond file.

● Can polish efficiently wet or dry.

● Can be used even more efficiently wehn attached to tools (electric, air or ultrasonic).

● Rod type can be attached to rotary tools (max. 30000 R. P. M.).

XEBEC Diamond ®

● Pule eficiente y limpiamente materiales más duros de 57 HRC, tales como metal duro y acero templado (SKD, CC, STAVAX, HPM, ASP, etcétera).

● Tanto el stick como las barritas redondas se pueden usar para pulir lateralmente o en punta.

● Se pueden conformar en la forma deseada.

● Apropiado para eliminar la escala de EDM, puliendo nervios y traba- jando bordes y rincones.
- Mucho más eficiente que los limatones de diamante por electrodep- ositado, lapeadores manuales, pasta de diamante y polvos de diamante.
- Mientras un limatón de diamante tiene diamante solo en su superficie, el XEBEC Diamond® está compuesto de varias capas de diamante, per- mitiendo así su uso hasta el desgaste final sin perder su forma y dureza, por lo que su vida útil es más larga que un limatón de diamante.

● Puede ser usado en seco o en mojado.

● Puede pulir más eficazmente usándolo con máquinas (eléctricas, neu- máticas o ultrasonidos).

Electronic polishing machines

Electronic polishing machines
Maquinaria eléctrica de pulido
Elektroniczne automaty polerskie
Maquinas electricas de pulir
Machines electriques a polissage

Electronic polishing machines

Electronic polishing machines
Maquinaria eléctrica de pulido
Elektroniczne automaty polerskie
Maquinas electricas de pulir
Machines electriques a polissage

UC503C

TYPE	UC503C
INPUT	AC230V 50/60Hz 30VA
OUTPUT	DC3-30V 0.3A x 2

- Automatic feedback circuit that ensures constant revolutions under a variety of working conditions.
- The following safety features are provided.
- A fuse to safeguard against an AC short circuit or an abnormal electric current in the primary circuit.
- A thermal fuse is located in the transformer to protect against overheating.
- A thermal sensor that temporarily switches off the current in the event of overheating.
- An electronic circuit breaker that will temporarily stop the current in the event of an excessive load being applied to the handpiece.
- Dust proof system for all controls.
- Variable foot controller *Vc10 and on/off foot switch FS18 are optional.
- Quick stop circuit enables the handpiece to stop as soon as the operator removes his/her foot from the foot control or turns off the power switch.

- Circuito de retroalimentación automática asegura revoluciones constantes bajo toda la variedad de condiciones de trabajo.
- Incluye las siguientes características de seguridad:
  (1) Fusible para salvaguardar contra cortocircuitos AC o corrientes anormales en el circuito primario.
  (2) Fusible térmico en el trasformador para proteger de sobrecalentamientos.
  (3) Sensor térmico que apaga la corriente en el posible evento de un sobrecalentamiento.
  (4) Sensor en el circuito eléctrico que apagará temporalmente la máquina en el caso de aparición de presión excesiva.
- Sistema a prueba de polvo en todos los controles.
- Posibilidad de incorporar sistema de control de pie variable (VC10) o sistema de pie On/Off (FS18).
- El sistema de paro rápido permite un paro inmediato de la herramienta tan pronto el operador retire su pie del pedal.

RE35

- Reciprocating stroke.
- Tool holder accepts tool shaks from 2 mm to 6,35 mm.
- The locking mechanism allows for fixed or free floating operation.
- Motor unit incorporates a self cooling fan.

- Porta herramientas válido par ejes desde 2 mm hasta 6,35 mm.
- El mecanismo de bloqueo permite trabajar en modo fijo o flotante.
- La unidad de motor incorpora ventilador.

	RE35 stroke type
Reciprocating Stroke	0 - 6 mm
Frequency	420-4.200 strokes/mi n

UA14A

- The head and the motor are not interchangeable in UA series but the rotating centering accuracy increases to the maximum.
- Well designed pencil to use easily with a good balance which ensures comfortable working.
- Motor unit incorporates a self cooling fan.

- Cabezal motor Monoblock; con lo que la precisión se incrementa al máximo.
- Diseño ergonómico.
- La unidad de motor incluye ventilador.

	UA14A
Speed	4.500 - 45.000 RPM
Max torque	420 g * cm (41N * cm)
Mounted collet	Ø 2.34 mm (KP-036B)
Enclosed colle t	Ø 3.0mm (KP-032B)

Electronic polishing machines

Electronic polishing machines
Maquinaria eléctrica de pulido
Elektroniczne automaty polerskie
Maquinas electricas de pulir
Machines electriques a polissage

Cabezales UM

- Various heads are interchangeable with Motor "UM" series for wider applications.
- Stable rotation from low to high speed enables to apply to all sorts of working.
- You are not tired with working because noise and vibration are controlled as low as possible.
- Two typical models are provided for your choice according to speed and torque.

- Sistema de cabezales intercambiables con motor de la serie "UM".
- Rotación estable desde velocidades bajas a altas, permite ser un sistema idóneo para todo tipo de trabajos.
- Sonido y vibración controlados al máximo permiten facilidad en el manejo.
- Dos modelos de motor disponibles para su elección de acuerdo a la velocidad y par de fuerza requeridos.

UM21

- The most suitable for general polishing because of powerful motor.
- Más adecuado para pulido general dado su potente motor.

Speed: 1.500 - 15.000 R. P. M.
Max. Torque: 900 g x m (8,8 N x m)

UM23

- The most suitable for grinding because of speed type motor.
- Más adecuado para rectificado dada su velocidad de motor.

Speed: 3.000 - 30.000 R. P. M.
Max. Torque: 650 g x m (6,5 N x m)

UT01

- Standard type head for the major applications.
- Cabezal estándar para las principales aplicaciones.

UT02

- The top part is tapering slender to be gripped.
- Extremo fino.

UT03

- Suitable not only for heavy duty but for all sorts of working.
- Apropiado no solo para trabajos pesados, sino de todo tipo.

UT11

- Head with end tapered as narrow as possible. Most suitable for working in slot and groove.
- Extremo fino, ideal para trabajar en ranuras.

TYPE	COLLET (mm)	
	MOUNTED	INCLUDED
UT01,UT02	Ø 2.34 (Item No. KP-036B)	Ø 3.0 (Item No. KP-032B)
UT03	Ø 6.0 (Item No. KP-060)	Ø 3.0 (Item No. KP-062)
UT11	Ø 3.0 (Item No. KP-032B)	Ø 2.34 (Item No. KP-036B)

UT07

- Heavy duty angle head with 120 deg.
- Cabeza angular para trabajo pesado a 120º.

TYPE	COLLET (mm)	
	MOUNTED	INCLUDED
UT07	Ø3 (Item No. KP-022)	Ø2.34 (Item No. KP-021)

Ultrasonic handpiece and hybrid controller

Ultrasonic handpiece and hybrid controller
Limadora ultrasonido y controlador híbrido
Głowica ultradźwiękowa i sterownik hybrydowy
Maquina de ultrasom para polimento
Poignee a ultrasons et controlleur hibride

UC550C

- Allows simultaneous use of ultrasonic handpiece and grinding motors.
- Automatic feed system is incorporated to adjust the frequency depending on the tool being used.
- Four stages safety circuit are built in to preclude the probability of over-heating or over-loading in both controller and handpiece.
- Motor rotation can be reversed at a touch.
- Quick stop circuit system enables the handpiece to stop as soon as the operator removes his/her fot from the pedal or turns off the power switch.

- Permite el uso no simultáneo de ultrasonidos amoladora eléctrica.
- Incorpora sistema de alimentación automático para ajustar la frecuencia a la herramienta utilizada.
- Circuito de seguridad de cuatro etapas para prevenir la posibilidad de sobrecalentamiento o sobretensión en el controlador y la herramienta.
- El giro del motor se puede cambiar de sentido desde un botón.
- El sistema de paro rápido permite a la herramienta parar tan pronto como el operador retire su pie del pedal o apague el controlador.

UC550C	
INPUT	AC 230 V 50/60 Hz 30 VA
OUTPUT	Controller: AC 6-60V 22.3 KHz 0.3 A Handpiece: DC 3 - 30 V 0.3 A

US55

- A compact sized and light weighted handpiece ergonomically designed to enhance the operational efficiency, not causing fatigue even after working long time.
- Applications include the finishing of plastic moulds, diecasts, presstools, ceramic, non ferrous and precious metals. Ideal for deburring, polishing and removing EDM scales.
- The tip tool vibrates back and forth within an amplitude of maximum 45 micron, to lap groves a, ribs and hard to reach by hand spots.
- An unique tracing sensor for ultrasonics is incorporated to catch up at instance the resonant point with all sorts of the tools.
- Available with hybrid controller UC550C only.

- Diseño ergonómico, compacto y ligero, pensado para aumentar la eficiencia operacional y evitar la fatiga incluso después de trabajo prolongado.
- Las aplicaciones incluyen el acabado de moldes de plástico, fundición, punzones, cerámica, meales no férricos, metales preciosos. Ideal para desbaste, pulidos o eliminación del grano de electroerosión.
- La punta de la herramienta vibra atrás y adelante con una amplitud máxima de 45 micras.
- Incopora un exclusivo sensor para ultrasonidos para percibir instantáneamente el punto de resonancia con cualquier tipo de herramienta.
- Disponible solamente con el control UC550C.

US55	
TRANSDUCER	Langevin Type
AMPLITUDE	45µ

Spare elements for electronic machines

Spare elements for electronic machines
Accesorios para máquinas electrónicas
Akcesoria do mikronapędów
Acessorios para maquinas electronicas
Pieces detachees pour machines electroniques

VC10

Variable foot controller
Controlador variable de pie
Pedał z regulacją obrotów
Controlador dez pé variável

FS18

ON/OFF foot switch
Interruptor ON/OFF de pie
Pedał ON/OFF
Botão ON/OFF de pé

KE50-113

Extension curl cord (1,5 meters)
Cable de conexión (1,5 metros)
Kabel spiralny (1,5 metra)
Cabo de conexão (1,5 metros)

Not available for US55

KE50-114/115

Extension straight cord
Cable de conexión
Kabel przedłużający
Cabo de conexão

*KE50-114: 3 metros
**KE50-115: 5 metros

KP90-101

Handpiece stand
Soporte de motor
Podstawka
Suporte de motor

PA31-748

Handpiece holder (0º, -45º, -90º)
Soporte de motor (0º, -45º, -90º)
Uchwyt (0º, -45º, -90º)
Suporte de motor (0º, -45º, -90º)

Pneumatic tools

Pneumatic tools
Amoladoras neumáticas
Szlifierki pneumatyczne
Retificadora manual
Meuleuses pneumatiques

Weight	R. P. M.	Lt/min.	Conection	Lenght tool	Diam. Tool	Collet	REF.
190	**75.000**	0.16	Rc 1/4	170	18.5	3	**GT-MG75S**
180	**55.000**			163	17.5		**GT-MG55S**
220				180	20.0		**GT-M55SR**
260		0.245		178	24.5		**GT-MG55SAR**
435	**35.000**	0.285		182	29.5	6	**GT-MG35SAR**
305		0.25		183	24.5	3	**GT-MG35-12CC**

GT-MG75S

GT-MG55S

GT-MG55SAR

GT-MG35SAR

GT-MG35-12CC

Set ByR 25000/6

Set ByR 56000/3

	Collet	R. P. M.	Length tool	Weight	Lt./min.
Set ByR 25000/6	**3 / 6**	**25000**	**147**	**0,36**	**0,40**
Set ByR 56000/3	**3**	**56000**	**150**	**0,21**	**0,16**

BRVEC

Cutting and grinding device
Máquina de cortar y rectificar expulsores
Urządzenie do cięcia i szlifowania wypychaczy
Maquina de cortar extractores
Machine pour couper et rectifier ejecteurs

Cut off precision (mm)	Right angle precision (mm)	Cut off sander lamina (mm)	Grinding sander	R. P. M.	Motor (HP)	Capacity (mm)	REF.
Ø25 x 300 ± 0.01	Ø25 x 90° ± 0.01	Ø180 x 1 (Int.31.8)	100 x 50 x 20	3600	3/4	**500**	**BRVEC-500**

- Cutting and grinding device for ejectors pins, columns, guides, etc.
- Long. max. 500 mm.
- Long. min. 50 (measures below to 50 mm, optional).
- Quick chuck from 1 mm to 25 mm.
- 380 V.

- Corte y rectificado de expulsores, columnas, guías, etc.
- Largo máx. 500 mm.
- Largo mín. 50 (acc. opcional para corte inferior a 50 mm).
-Amarre de pieza de 1 mm a 25 mm.
- 380 V.

Tolerancias ISO para Ejes
ISO Tolerances for Shafts (ISO 286-2)

Diámetro nominal ejes (mm) Ø Nominal Shafts Sizes (mm)										
Sup. Over	3	6	10	18	30	40	50	65	80	100
inc.	6	10	18	30	40	50	65	80	100	120
micrometres µ										
a12	-270	-280	-290	-300	-310	-320	-340	-360	-380	-410
	-390	-430	-470	-510	-560	-570	-640	-660	-730	-760
d6	-30	-40	-50	-65	-80		-100		-120	
	-38	-49	-61	-78	-96		-119		-142	
e6	-20	-25	-32	-40	-50		-60		-72	
	-28	-34	-43	-53	-66		-79		-94	
e13	-20	-25	-32	-40	-50		-60		-72	
	-200	-245	-302	-370	-440		-520		-612	
f5	-10	-13	-16	-20	-25		-30		-36	
	-15	-19	-24	-29	-36		-43		-51	
f6	-10	-13	-16	-20	-25		-30		-36	
	-18	-22	-27	-33	-41		-49		-58	
f7	-10	-13	-16	-20	-25		-30		-36	
	-22	-28	-34	-41	-50		-60		-71	
g5	-4	-5	-6	-7	-9		-10		12	
	-9	-11	-14	-16	-20		-23		-27	
g6	-4	-5	-6	-7	-9		-10		-12	
	-12	-14	-17	-20	-25		-29		-34	
g7	-4	-5	-6	-7	-9		-10		-12	
	-16	-20	-24	-28	-34		-40		-47	
h4	-0	-0	-0	-0	-0		-0		-0	
	-4	-4	-5	-6	-7		-8		-10	
h5	-0	-0	-0	-0	-0		-0		-0	
	-5	-6	-8	-9	-11		-13		-15	
h6	-0	-0	-0	-0	-0		-0		-0	
	-8	-9	-11	-13	-16		-19		-22	
h7	-0	-0	-0	-0	-0		-0		-0	
	-12	-15	-18	-21	-25		-30		-35	
h8	-0	-0	-0	-0	-0		-0		-0	
	-18	-22	-27	-33	-39		-46		-54	
h9	-0	-0	-0	-0	-0		-0		-0	
	-30	-36	-43	-52	-62		-74		-87	
h10	-0	-0	-0	-0	-0		-0		-0	
	-48	-58	-70	-84	-100		-120		-140	
h11	-0	-0	-0	-0	-0		-0		-0	
	-75	-90	-110	-130	-160		-190		-220	
h12	-0	-0	-0	-0	-0		-0		-0	
	-120	-150	-180	-210	-250		-300		-350	
j5	+3	+4	+5	+5	+6		+6		+6	
	-2	-2	-3	-4	-5		-7		-9	
j6	+6	+7	+8	+9	+11		+12		+13	
	-2	-2	-3	-4	-5		-7		-9	
j7	+8	+10	+12	+13	+15		+18		+20	
	-4	-5	-6	-8	-10		-12		-15	
js5	+2,5	+3	+4	+4,5	+5,5		+6,5		+7,5	
	-2,5	-3	-4	-4,5	-5,5		-6,5		-7,5	
js6	+4	+4,5	+5,5	+6,5	+8		+9,5		+11	
	-4	-4,5	-5,5	-6,5	8		-9,5		-11	
js7	+6	+7,5	+9	+10,5	+12,5		+15		+17,5	
	-6	-7,5	-9	-10,5	-12,5		-15		-17,5	
k5	+6	+7	+9	+11	+13		+15		+18	
	+1	+1	+1	+2	+2		+2		+3	
k6	+9	+10	+12	+15	+18		+21		+25	
	+1	+1	+1	+2	+2		+2		+3	
k7	+13	+16	+19	+23	+27		+32		+38	
	+1	+1	+1	+2	+2		+2		+3	
m5	+9	+12	+15	+17	+20		+24		+28	
	+4	+6	+7	+8	+9		+11		+13	
m6	+12	+15	+18	+21	+25		+30		+35	
	+4	+6	+7	+8	+9		+11		+13	
m7	+16	+21	+25	29	+34		+41		+48	
	+4	+6	+7	+8	+9		+11		+13	
n5	+13	+16	20	+24	+28		+33		+38	
	+8	+10	+12	+15	+17		+20		+23	
n6	+16	+19	+23	+28	+33		+39		+45	
	+8	+10	+12	+15	+17		+20		+23	
n7	+20	+25	+30	+36	+42		+50		+58	
	+8	+10	+12	+15	+17		+20		+23	

Tolerancias ISO para Agujeros
ISO Tolerances for Holes (ISO 286-2)

Diámetro int. nominal (mm) Ø Nominal holes Sizes (mm)							
Sup. Over	3	6	10	18	30 40	50 65	80 100
inc.	6	10	18	30	40 50	65 80	100 120
micrometres µ							
E6	+28	+34	+43	+53	+66	+79	+94
	+20	+25	+32	+40	+50	+60	+72
E7	+32	+40	+50	+61	+75	+90	+107
	+20	+25	+32	+40	+50	+60	+72
E11	+95	+115	+142	+170	+210	+250	+292
	+20	+25	+32	+40	+50	+60	+72
E12	+140	+175	+212	+250	+300	+360	+422
	+20	+25	+32	+40	+50	+60	+72
E13	+200	+245	+302	+370	+440	+520	+612
	+20	+25	+32	+40	+50	+60	+72
F6	+18	+22	+27	+33	+41	+49	+58
	+10	+13	+16	+20	+2	+30	+36
F7	+22	+28	+34	+41	+50	+60	+71
	+10	+13	+16	+20	+25	+30	+36
F8	+28	+35	+43	+53	+64	+76	+90
	+10	+13	+16	+20	+25	+30	+36
G6	+12	+14	+17	+20	+25	+29	+34
	+4	+5	+6	+7	+9	+10	+12
G7	+16	+20	+24	+28	+34	+40	+47
	+4	+5	+6	+7	+9	+10	+12
G8	+22	+27	+33	+40	+48	+56	+66
	+4	+5	+6	+7	+9	+10	+12
H6	+8	+9	+11	+13	+16	+19	+22
	0	0	0	0	0	0	0
H7	+12	+15	+18	+21	+25	+30	+35
	0	0	0	0	0	0	0
H8	+18	+22	+27	+33	+39	+46	+54
	0	0	0	0	0	0	0
H9	+30	+36	+43	+52	+62	+74	+87
	0	0	0	0	0	0	0
H10	+48	+58	+70	+84	+100	+120	+140
	0	0	0	0	0	0	0
H11	+75	+90	+110	+130	+160	+190	+220
	0	0	0	0	0	0	0
J6	+5	+5	+6	+8	+10	+13	+16
	-3	-4	-5	-5	-6	-6	-6
J7	+6	+8	+10	+12	+14	+18	+22
	-6	-7	-8	-9	-11	-12	-13
J8	+10	+12	+15	+20	+24	+28	+34
	-8	-10	-12	-13	-15	-18	-20
JS6	+4	+4,5	+5,5	+6,5	+8	+9,5	+11
	-4	-4,5	-5,5	-6,5	-8	-9,5	-11
JS7	+6	+7,5	+9	+10,5	+12,5	+15	+17,5
	-6	-7,5	-9	-10,5	-12,5	-15	-17,5
JS8	+9	+11	+13,5	+16,5	+19,5	+23	+27
	-9	-11	-13,5	-16,5	-19,5	-23	-27
K6	+2	+2	+2	+2	+3	+4	+4
	-6	-7	-9	-11	-13	-15	-18
K7	+3	+5	+6	+6	+7	+9	+10
	-9	-10	-12	-15	-18	-21	-25
K8	+5	+6	+8	+10	+12	+14	+16
	-13	-16	-19	-23	-27	-32	-38
M6	-1	-3	-4	-4	-4	-5	-6
	-9	-12	-15	-17	-20	-24	-28
M7	0	0	0	0	0	0	0
	-12	-15	-18	-21	-25	-30	-35
M8	+2	+1	+2	+4	+5	+5	+6
	-16	-21	-25	-29	-34	-41	-48
N6	-5	-7	-9	-11	-12	-14	-16
	-13	-16	-20	-24	-28	-33	-38

Bru y Rubio

Bru y Rubio solutions

Bru y Rubio offers for sale a wide range of high quality components and services por injection moulds such as mould bases, Standard Elements, Plain Plates, Hot Runners and all the necessary accessories for injection moulds.

Established in 1962 this company specialises in customised service with the aim to assist our customers in improving their competitiveness in a global market.

We are currently present in Europe, South-Africa and South America. Our more than 50 years experienca and more than 10.000 customers vouch for our quality service.

Soluciones Bru y Rubio

Bru y Rubio comercializa una completa gama de componentes para moldes de inyección como Portamoldes, Elementos Normalizados, Placas Ciegas, Cámara Caliente y todos los accesorios necesarios para moldes de inyección, con unos altos estándares de calidad y servicio.

Fundada en 1962, esta empresa se centra en el servicio personalizado con el objetivo de atender y mejorar la competitividad de nuestros clientes, en un entorno globalizado.

Presente actualmente en Europa, Sudáfrica y Sudamérica, nuestros más de 50 años de experiencia y empresa nuestros más de 10.000 clientes avalan la calidad de nuestro servicio.

With over 50,000 products available in stock our customer's service has achieved excellence and we have a 24 hours delivery service throughout Europe.

Bru y Rubio is not just about us; our customers are an essential part of our organization and their feedback is taken into account in the day-to-day running and decision-making process at Bru y Rubio.

Our aim is to offer the best value for money currently on offer troughout the world.

Con más de 50.000 productos en stock, nuestro nivel de servicio ha adquirido rango de excelencia, pudiendo llegar a entregar en 24 horas en toda Europa.

Bru y Rubio no solo consiste en su equipo humano, nuestros clientes forman una parte muy importante de nuestra organización y son parte fundamental de cada una de las decisiones que día a día se toman en la empresa.

Nuestro objetivo es ofrecer la mejor relación calidad-precio del mercado a nivel mundial.

Machining services

Bru y Rubio now offers special machining according to the customers specifications

With a capacity for plates of up to 1600x1000 mm and 3000 kg, we can offer pockets and machining of high precision with a quality finish. We also offer a gun drilling service for waterways. All of these services are very competitively priced with quick delivery times. We also offer a laser marking service for plates and ancillaries to cover the customer needs.

Isolation plate machining service now available.

To see our plant list and the type of machining services we offer, please visit us at **"Mechanized under Drawing"** on the homepage of our website: **www.en.bruyrubio.com.** For more information, contact us at **sales@bruyrubio.co.uk.**

Servicios y mecanizado

Bru y Rubio mecaniza portamoldes y portamatrices acorde al diseño del cliente

Con una capacidad para placas de hasta 1600x1000 mm y 3000 Kg, podemos realizar cajeras y taladros de alta precisión y excelentes acabados. Los taladros profundos para refrigeración también son parte de nuestra gama de mecanizados. Además disponemos de una máquina para realizar marcados a láser de placas y piezas especiales.

Ahora también ponemos a su disposición el mecanizado de placa aislante.

En base a su diseño 3D, nuestro equipo técnico de mecanizado realizará un mecanizado de excelencia en lo que se refiere a tolerancias y acabados.

Si desea realizar una consulta acerca de las máquinas de las que disponemos y de las operaciones que realizamos, puede dirigirse al apartado **"Mecanizado bajo Plano" e**n nuestra web: **www.bruyrubio.com**.
Para más información, contacte con nosotros en **info@bruyrubio.com.**

Bru y Rubio

Bru y Rubio focuses on:

1 • Optimising our customer's satisfaction levels.
2 • Improving our products, on a regular basis, both in terms of quality and range on offer.
3 • Reliable and short delivery deadlines.
4 • Comprehensive technical support.
5 • To continuously expand our range of products.

Bru y Rubio está totalmente dirigido a:

1 • Optimizar la satisfacción de nuestros clientes.
2 • Mejorar continuamente nuestros productos tanto en calidad como en rango disponible.
3 • Plazos de entrega fiables y cada vez mas reducidos.
4 • Soporte técnico completo.
5 • Incrementar continuamente nuestra gama de productos.

Digital channel. Webshop

With the aim of facilitating the configuration processes of mold bases and standard accessories, we have developed and continue to work on the continuous improvement of our digital sales channel and virtual store. Our goal is to provide our customers with a tool that streamlines mold configuration and product purchasing, quickly, intuitively, and efficiently, thus ensuring a great customer experience.
With Bru y Rubio, the future of molds is in your hands.

Canal digital. Webshop

Con el propósito de simplificar los procesos de configuración de portamoldes y accesorios estándar, hemos desarrollado y continuamos trabajando en la mejora constante de nuestro canal de venta digital y tienda virtual. Nuestro objetivo es proporcionar a nuestros clientes una herramienta que facilite la configuración de moldes y la compra de productos relacionados, de manera rápida, intuitiva y eficiente, brindando así una excelente experiencia al cliente.
Con Bru y Rubio, el futuro de los moldes está en tus manos.

WWW.BRUYRUBIO.COM

RUNNERTECH
hot runner system

Discover the innovative range of **RUNNERTECH** hot runner systems, distributed by Bru y Rubio. Immerse yourself in a world of possibilities where each solution is designed to meet the unique demands of various markets, from caps to medical parts, thin-wall packaging, automotive, electronics, and much more.

Our extensive nozzle lineup offers a wide variety of options, from injecting ultralight parts of 0.5 g. to multiple-cavity systems with up to 64 points. With sequential valve-gated systems and the innovative pre-assembled RPS System, as well as the comprehensive MB System (Half Hot), we are poised to offer customized solutions that exceed your expectations.

Discover how we can take your projects to the next level with cutting-edge technology and an unwavering commitment to excellence.
With Bru y Rubio, the future of plastic injection is in your hands.

Descubre la innovadora gama **RUNNERTECH** de cámaras calientes distribuida por Bru y Rubio. Sumérgete en un mundo de posibilidades donde cada solución está diseñada para satisfacer las demandas únicas de diversos mercados, desde tapones hasta piezas médicas, envases de pared delgada, automoción, electrónica y mucho más.

Nuestra extensa línea de boquillas ofrece una amplia variedad de opciones, desde la inyección de piezas ultraligeras de 0,5 g hasta sistemas de múltiples cavidades con hasta 64 puntos. Con sistemas valvulados secuenciales y el innovador RPS System preensamblado, así como el completo sistema MB System (Half Hot), estamos preparados para ofrecerle soluciones personalizadas que superen sus expectativas.

Descubre cómo podemos llevar tus proyectos al siguiente nivel con tecnología de vanguardia y un compromiso inquebrantable con la excelencia. Con Bru y Rubio, el futuro de la inyección de plástico está en tus manos.

RUNNERTECH · Conveyor 22 · POWERTEC · CRG Componentes · BRODD Automation AB · INTERCOM · BR stamp

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