

07

**Fresas para
pantógrafos normais e cnc**

Fresas para
fresadoras y centros cnc

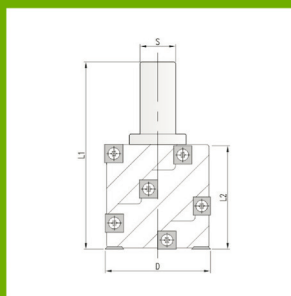
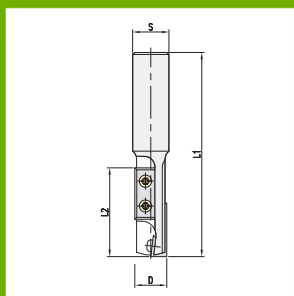
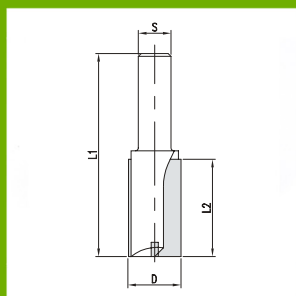


araújo&silva
ferramentas de corte

JÁ MEDIU A SUA PRODUTIVIDADE?



A Araujo&Silva, Lda. desenvolve ferramentas especiais, proporcionando aos seus clientes as soluções mais rentáveis.



araújo&silva
ferramentas de corte

ESPECIALISTAS EM FERRAMENTA DE CORTE

www.araujosilva.pt

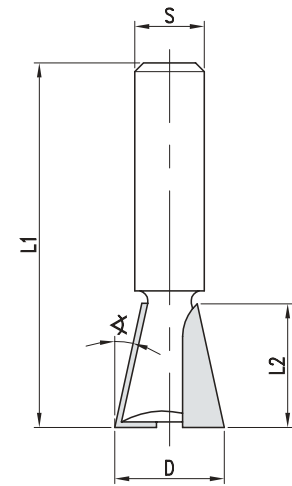


HW · MAN

D	L2	α	S	Z	S	Ref.
10,4	13	8°	8	2	Mida	3023.910.013.08
14,8	19	8°	12	2	Mida	3023.914.019.12
15	15	10°	12	2	Pinheiro	3023.015.015.12
15	10	14°	9	2	Nipuer*	3023.015.010.09
	10	14°	10	2	Tupi	3023.015.010.10
	10	14°	W3/8"	2	Nipuer**	3023.015.010.53
	10	14°	W3/8"	2	Vibemo	3023.015.310.53
	12	12°	9	2	Nipuer*	3023.015.012.09
	12	12°	10	2	Tupi	3023.015.012.10
	12	12°	W3/8"	2	Nipuer**	3023.015.012.53
	12	12°	W3/8"	2	Vibemo	3023.015.312.53
	14	10°	9	2	Nipuer*	3023.015.014.09
	14	10°	10	2	Tupi	3023.015.014.10
	14	10°	W3/8"	2	Nipuer**	3023.015.014.53
	14	10°	W3/8"	2	Vibemo	3023.015.314.53
	15	9,5°	9	2	Nipuer*	3023.015.015.09
	15	9,5°	10	2	Tupi	3023.015.015.10
	15	9,5°	W3/8"	2	Nipuer**	3023.015.015.53
	15	9,5°	W3/8"	2	Vibemo	3023.015.315.53
16	23	8°	12	2	Mida	3023.016.023.12
18,5	26	8°	12	2	Mida	3023.918.026.12
19	18	12°	12	2	Pinheiro	3023.019.018.12
20	30	8°	12	2	Mida	3023.020.030.12

* Nipuer Automática

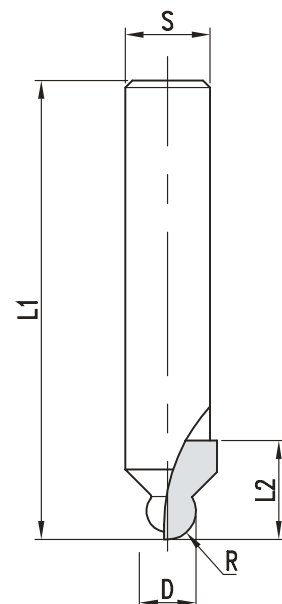
** Nipuer Manual



Fresa de ranhurar para borracha de vácuo 3069
Fresa de ranura goma de vacio

HW · MAN

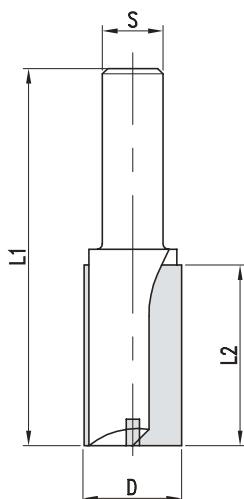
D	L2	R	S	Z	Ref.
6	12	3	12	1	3069.006.012.12
8	14	4	12	1	3069.008.014.12
10	17	5	12	1	3069.010.017.12





3067 Fresa de ranhurar

Fresa para ranurar



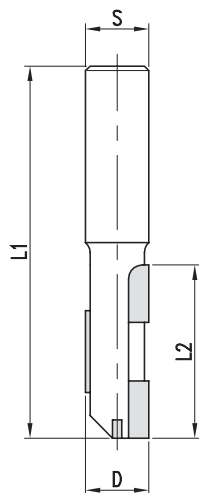
HW · MAN

D	L2	L1	S	Z	Ref.
8	20	60	10x35	2	3067.008.020.10
10	25	70	10x35	2	3067.010.025.10
	40	90	12x45	2	3067.010.040.12
12	25	70	10x35	2	3067.012.025.10
	40	90	12x45	2	3067.012.040.12
14	25	70	10x35	2	3067.014.025.10
	40	90	12x45	2	3067.014.040.12
16	25	70	10x35	2	3067.016.025.10
	40	90	12x45	2	3067.016.040.12
18	25	70	10x35	2	3067.018.025.10
	40	90	12x45	2	3067.018.040.12
20	25	70	10x35	2	3067.020.025.10
	40	90	12x45	2	3067.020.040.12
22	25	70	10x35	2	3067.022.025.10
	40	90	12x45	2	3067.022.040.12
24	40	90	12x45	2	3067.024.040.12
25	25	70	10x35	2	3067.025.025.10
30	25	70	10x35	2	3067.030.025.10

COM CORTANTE CENTRAL PARA FURAR - Corte frontal para penetrar

3106 Fresa para furar e recortar

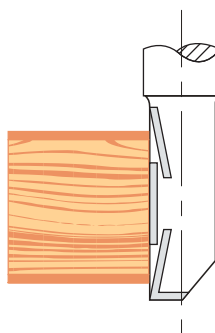
Fresa para calar interior



HC · MAN

D	L2	L1	S	Z	Ref.
14	50	110	12x50	1+1	3106.014.050.12
	50	110	14x50	1+1	3106.014.050.14

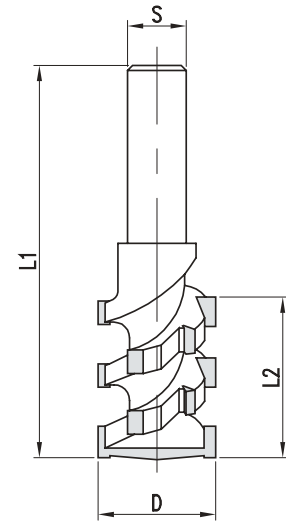
COM CORTANTE CENTRAL PARA FURAR - Corte frontal para penetrar





HW · MAN

D	L2	S	Z	Ref.
20	40	12	3	3104.020.040.12
	40	18	3	3104.020.040.18
	40	20	3	3104.020.040.20
30	40	18	6	3104.030.040.18
	40	20	6	3104.030.040.20
30	60	18	6	3104.030.060.18
	60	20	6	3104.030.060.20
	60	25	6	3104.030.060.25



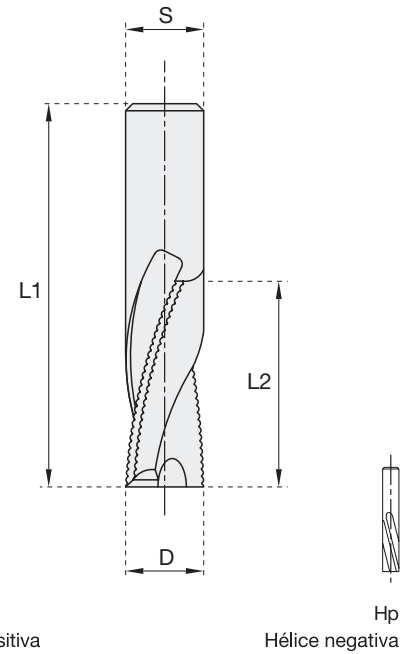
07

Fresas para pantógrafos normais e cnc · Fresas para fresadoras y centros cnc

Fresa para desbastar integral **8000**
Fresa para podar integral

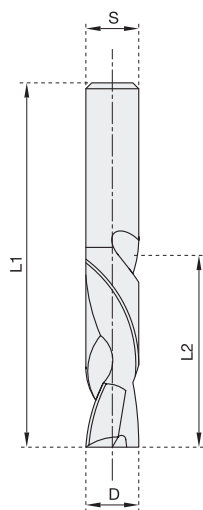
HW · MAN

D	L2	L1	S	Z	Ref. Hp	Ref. Hn
8	32	80	8	2	8000.08.0	8000.08.1
10	32	80	10	3	8000.10.0	8000.10.1
12	40	80	12	3	8000.12.0	8000.12.1
14	50	110	14	3	8000.14.0	8000.14.1
16	55	110	16	3	8000.16.0	8000.16.1
18	55	110	18	3	8000.18.0	8000.18.1
20	50	100	20	3	8000.20.0	8000.20.1
20	60	120	20	3	8000.520.0	8000.520.1





8150 Fresa de acabamento integral com axial pos./neg. Fresa de integral axial pos. / Neg.

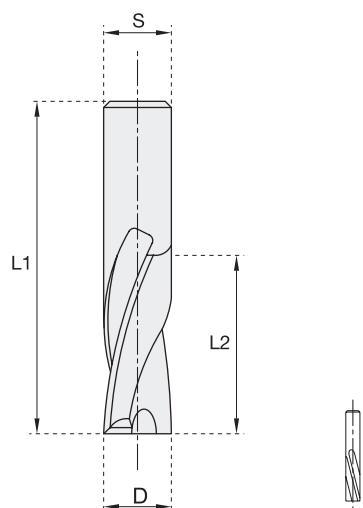


HW · MAN

D	L2	L1	S	Z	Ref.
8	32	80	8	2+2	8150.08.0
10	32	80	10	2+2	8150.10.0
12	42	90	12	2+2	8150.12.0
16	55	110	16	2+2	8150.16.0
18	55	110	18	2+2	8150.18.0

07

8025 Fresa de acabamento integral Fresa de integral

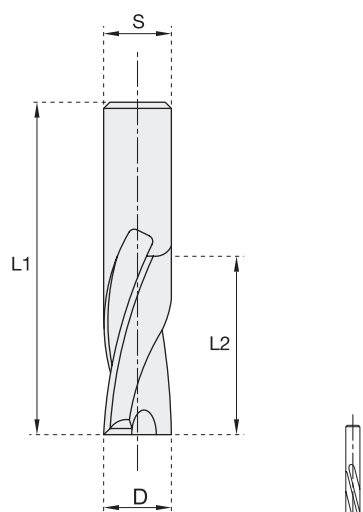


Hp
Hélice positiva

Hp
Hélice negativa

HW · MAN

D	L2	L1	S	Z	Ref. Hn	Ref. Hn
3	12	50	3	2	8025.03.0	8025.03.1
4	15	50	4	2	8025.04.0	8025.04.1
5	17	50	5	2	8025.05.0	8025.05.1
6	20	60	6	2	8025.06.0	8025.06.1
8	32	80	8	2	8025.08.0	8025.08.1
10	32	80	10	3	8025.10.0	8025.10.1
12	42	90	12	3	8025.12.0	8025.12.1
14	50	110	14	3	8025.14.0	8025.14.1
16	55	110	16	3	8025.16.0	8025.16.1
18	55	110	18	3	8025.18.0	8025.18.1
20	50	100	20	3	8025.20.0	8025.20.1
20	60	120	20	3	8025.520.0	8025.520.1



Hp
Hélice positiva

Hp
Hélice negativa

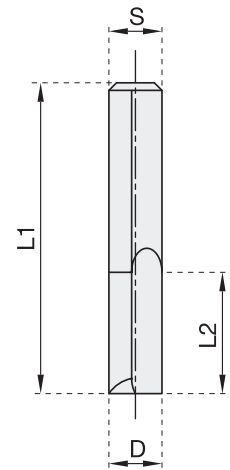
HSS · MAN

D	L2	L1	S	Z	Ref. Hn	Ref. Hn
3	12	50	3	2	8025.03.2	8025.03.3
4	15	50	4	2	8025.04.2	8025.04.3
5	17	50	5	2	8025.05.2	8025.05.3
6	20	60	6	2	8025.06.2	8025.06.3
8	32	80	8	2	8025.08.2	8025.08.3
10	32	80	10	3	8025.10.2	8025.10.3
12	42	90	12	3	8025.12.2	8025.12.3
14	50	110	14	3	8025.14.2	8025.14.3
16	55	110	16	3	8025.16.2	8025.16.3
18	55	110	18	3	8025.18.2	8025.18.3
20	50	100	20	3	8025.20.2	8025.20.3
20	60	120	20	3	8025.520.2	8025.520.3



HW · MAN

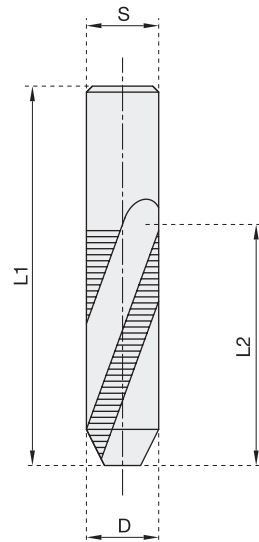
D	L2	L1	S	Z	Ref.
2	7	40	6	2	8050.02.0
3	10	55	8	2	8050.03.0
4	12	55	8	2	8050.04.0
5	12	55	8	2	8050.05.0
6	12	55	8	2	8050.06.0
8	20	55	8	2	8050.08.0
10	20	60	10	2	8050.10.0
12	26	65	12	2	8050.12.0
18	50	100	18	2	8050.18.0



Fresa para furos de fechaduras e espreitador 8075
Fresa para agujeros de las cerraduras y acosador

HW · MAN

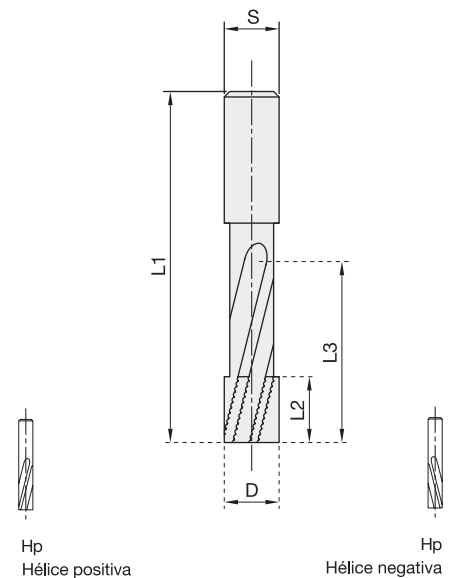
D	L2	L1	S	Z	Ref.
14	50	110	14	3	8075.14.0
16	55	110	16	3	8075.16.0



Fresa de ranhurar para fechaduras 8100
Fresa de ranura para cerraduras

HW · MAN

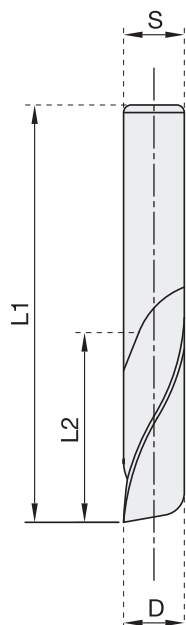
D	L3	L2	L1	S	Z	Ref.
14	105	50	160	14	3	8100.14.0
16	105	50	160	16	3	8100.16.0
	115	30	175	16	3	8100.516.0
18	115	50	160	16	3	8100.18.0





8125 Fresa de acabado integral

Fresa de integral



HW · MAN

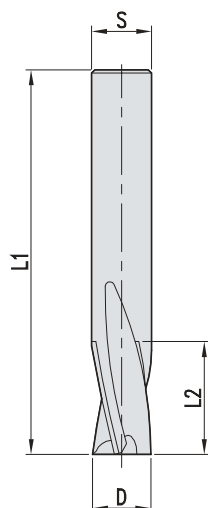
D	L2	L1	S	Z	Ref.
3	12	50	3	1	8125.03.0
4	15	50	4	1	8125.04.0
5	17	50	5	1	8125.05.0
6	22	60	6	1	8125.06.0
8	22	70	8	1	8125.08.0
10	32	70	10	1	8125.10.0
12	32	80	12	1	8125.12.0

07

Fresas para pantógrafos normales e cnc · Fresas para fresadoras y centros cnc

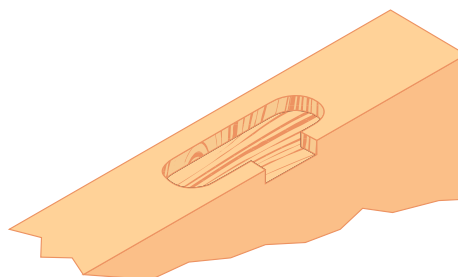
8225 Fresa de furar para dobradiças

Fresa de ranurar para bisagras



HW · MAN

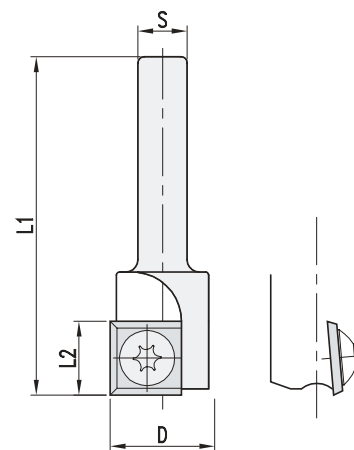
D	L2	L1	S	Z	Ref. esq.	Ref. dt.
10	10	64	10x40	2	8225.10.1	8225.10.0
12	10	64	12x40	2	8225.12.1	8225.12.0
12	10	64	12x40	3	8225.12.3	8225.12.2





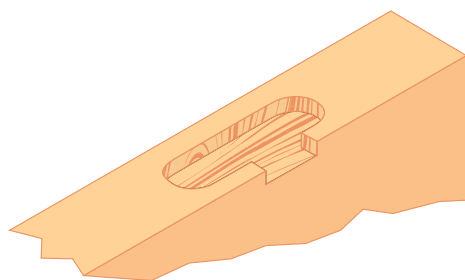
HW · MAN

D	L2	L1	S	Z	Ref. esq.	Ref. dt.
16	12	64	12x40	1	3725.501	3725.001



ACESSÓRIOS - Piezas de recambio

	Dim.	Ref.
lâmina	12x12x1.5	5003.01.1
Parafuso torx	M4x6	5109.006
Chave torx	T15	5302.202

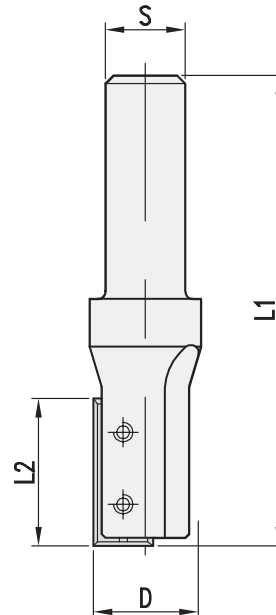


Porta-Lâminas para ranhurar
Porta-cuchillas para ranhurar con cuchillas reversibles

HC · MAN

D	L2	L1	S*	Z	Ref. dt.
8	20	68	10	1	3640.008.020.10
	20	68	12	1	3640.008.020.12
10	20	68	10	1	3640.010.020.10
	20	68	12	1	3640.010.020.12
12	20	68	10	1	3640.012.020.10
	20	68	12	1	3640.012.020.12
14	30	74	10	1	3640.014.030.10
	30	74	12	1	3640.014.030.12
14	50	94	10	1	3640.014.050.10
	50	94	12	1	3640.014.050.12
15	30	74	10	1	3640.015.030.10
	30	74	12	1	3640.015.030.12

*S=8, ver ref.3521



ACESSÓRIOS - Piezas de recambio

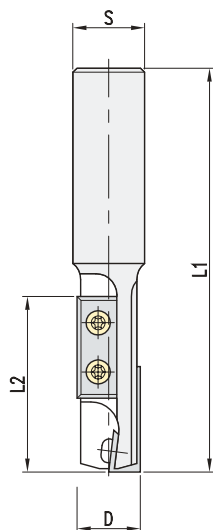
	Dim.	Ref.	
Lâmina*	∅ 8/12	20x5,5x1,1	5009.01
	∅ 14/15	20x10x1,5	5009.02
		30x10x1,5	5009.03
		50x10x1,5	5009.04
	Perno	M2,5x2,5	5106.001
Chave	M4x4	5106.002	
	SW1,3(M2,5)	5302.003	
	SW2(M4)	5302.005	

*Metal Duro Revestido



3641 Porta-Lâminas de ranhurar

Porta-cuchillas para ranurar com cuchillas reversíveis



HW · MAN

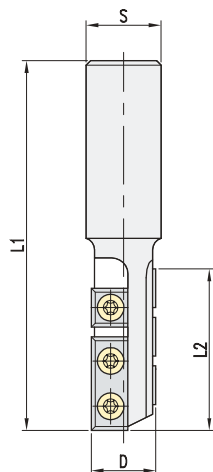
D	L2	L1	S	Z	Ref.
16	30	90	18	1+1	3641.016.030.18
	30	100	20	1+1	3641.016.030.20
	30	100	25	1+1	3641.016.030.25
18	50	110	18	1+1	3641.018.050.18
	50	120	20	1+1	3641.018.050.20
	50	120	25	1+1	3641.018.050.25
20	50	110	18	1+1	3641.020.050.18
	50	120	20	1+1	3641.020.050.20
	50	120	25	1+1	3641.020.050.25

ACESSÓRIOS - Peças de recambio

	Dim.	Ref.
Lâmina*	29,5x12x1,5	5004.01.1
	∅16/18	5000.01.1
	∅20	5000.17.1
Parafuso	M4x4	5109.007
	M3,5x5	5109.005
Chave Torx	T15	5302.202

3642 Porta-lâminas helicoidal para desbastar

Porta-cuchillas para ranurar com cuchillas reversíveis



HW · MAN

D	L2	L1	S	Z	Ref.
16	45	105	18	2	3642.016.045.18
	45	115	20	2	3642.016.045.20
	45	115	25	2	3642.016.045.25
18	50	110	18	2	3642.018.050.18
	50	120	20	2	3642.018.050.20
	50	120	25	2	3642.018.050.25
20	50	110	18	2	3642.020.050.18
	50	120	20	2	3642.020.050.20
	50	120	25	2	3642.020.050.25

ACESSÓRIOS - Peças de recambio

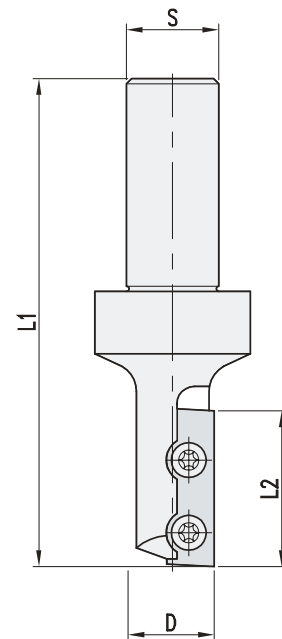
	Dim.	Ref.
Lâmina	29,5x12x1,5	5004.01.1
	12x12x1,5	5003.01.1
Parafuso	M4x6	5109.006
Chave Torx	T15	5302.202

Com cortante central para furar
Corte frontal para penetra



HW · MAN

D	L2	L1	S	Z	Ref.
16	30	91	20	1	3643.016.030.20
	50	111	20	1	3643.016.050.20
18	30	91	20	1	3643.018.030.20
	50	111	20	1	3643.018.050.20



ACESSÓRIOS - Piezas de recambio

	Dim.	Ref.
Lâmina	∅16	29,5x9x1,5
		49,5x9x1,5
	∅18	29,5x12x1,5
		49,5x12x1,5
Parafuso	M3,5x5	5109.005
Chave Torx	T15	5302.202

07

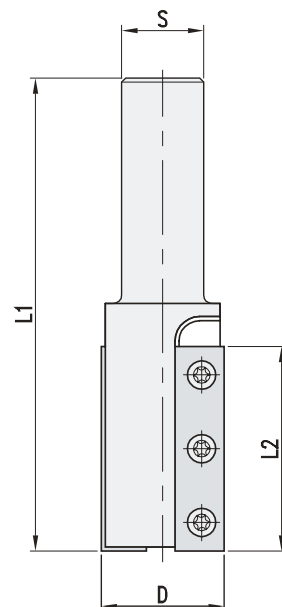
Fresas para pantógrafos normais e cnc · Fresas para fresadoras y centros cnc

Porta-Lâminas para facejar
Porta-cuchillas para conformar con cuchillas reversibles

3562

HW · MAN

D	L2	L1	S	Z	Ref.
30	50	119	25	2	3562.030.050.25
	50	119	20	2	3562.030.050.20



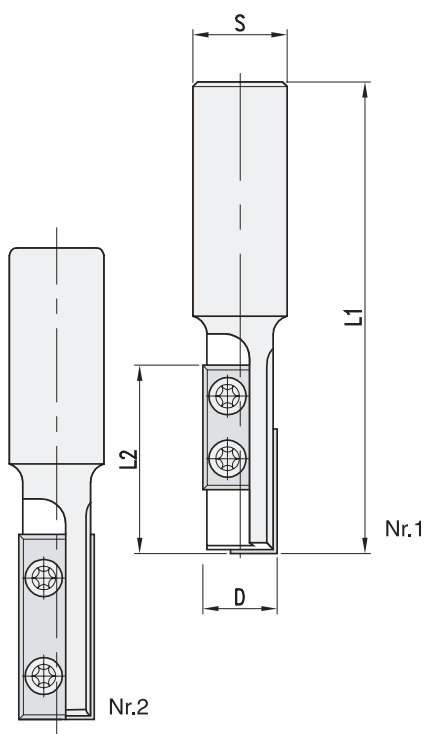
ACESSÓRIOS - Piezas de recambio

	Dim.	Ref.
Lâmina	50x12x1,7	5004.03.1
Parafuso	M4x6	5109.006
Chave Torx	T15	5302.202



3700 Porta-Lâminas recto

Porta-cuchillas recta con cuchillas reversibles



HW · MAN

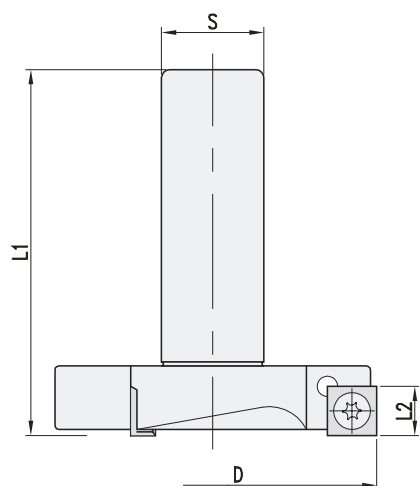
D	L2	L1	S	Z	Ref.
16	35	105	20	1+1	3700.016.035.20
18	45	115	20	1+1	3700.018.045.20
	45	115	25	1+1	3700.018.045.25
20	50	125	20	1+1	3700.020.050.20
	50	125	25	1+1	3700.020.050.25
22	55	135	20	1+1	3700.022.055.20
	55	135	25	1+1	3700.022.055.25
Tipo 2 - Com 2 lâminas 50x12x1,5					
20	50	125	20	2	

ACESSÓRIOS - Peças de recambio

	Dim.	Ref.
Lâmina	30x12x1,5	5004.01.1
	50x12x1,5	5004.02.1
Parafuso	M4x6	5109.006
Chave Torx	T15	5302.202

3563 Porta-Lâminas para facejar

Porta-cuchillas para planear con cuchillas reversibles



HW · MAN

D	L2	L1	S	Z	Ref.
80	12	75	20	3	3563.080.012.20
	12	75	25	3	3563.080.012.25

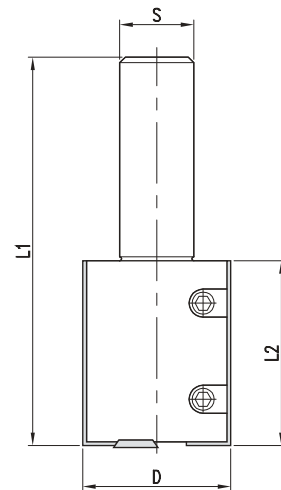
ACESSÓRIOS - Peças de recambio

	Dim.	Ref.
Lâmina	12x12x1,5	5003.01.1
Parafuso	M4x6	5109.006
Chave Torx	T15	5302.202



HW · MAN

D	L2	L1	S	Z	V	Ref.
40	30	75	18	2	2	3660.040.030.18
	30	85	20	2	2	3660.040.030.20
	30	85	25	2	2	3660.040.030.25
	50	95	18	2	2	3660.040.050.18
	50	105	20	2	2	3660.040.050.20
	50	105	25	2	2	3660.040.050.25



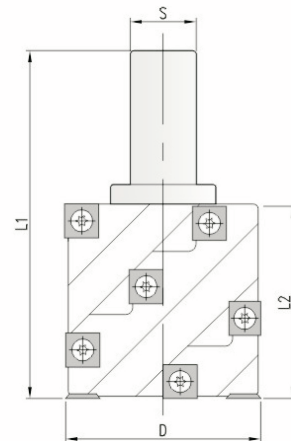
ACESSÓRIOS - Piezas de recambio

	Dim.	Ref.
Lâmina	30x12x1,5	5001.01.1
	50x12x1,5	5001.07.1
Calço		
Perno (DIN915)	M6x10	5109.005
Vincador	14x14x2	5002.01.1
Parafuso	M5x8	5107.003
Chave Torx	SW3	5302.102

Jogo de porta-lâminas para rebaixar (Liga Leve) 3740
Cabezal para conformar (Aleación Ligera)

HW · MAN

D	L2	S	Z	V	Ref.
80	80	20	2	2	3740.080.080.20
	80	25	2	2	3470.080.080.25



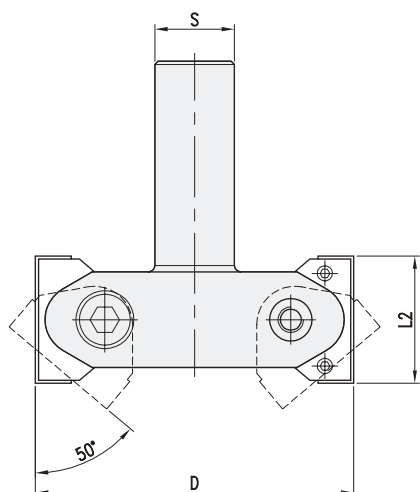
JOGO COMPOSTO POR FRESA E ÁRVORE PORTA FRESA
Juego compuesto por cabezal y eje

ACESSÓRIOS - Piezas de recambio

	Dim.	Ref.
Lâmina	15x15x2,5	5003.06.1
Parafuso	M5x14	5108.002
Vincador	14x14x2	5002.01.1
Parafuso (DIN963)	M5x8	5107.003
Chave Torx	T20	5302.205



3540 Porta-lâminas para chanfrar de inclinação variável Porta-cuchillas orientable con cuchillas reversibles



HW · MAN

D	Dmax	L2	S	Z	Ref.
105	121	40	20	2	3540.105.040.20
	121	40	25	2	3540.105.040.25

ESCALA COM INCREMENTO DE 2,5° - Escala con 2,5° graduacion

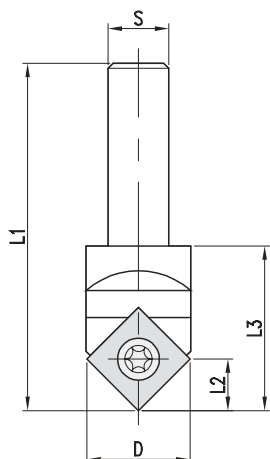
ACESSÓRIOS - Piezas de recambio

	Dim.	Ref.
Lâmina	40x12x1,5	5001.05.1
Calço		
Perno (DIN915)	M6x10	5105.003
Chave em T	SW3	5302.102

07

Fresas para pantógrafos normais e cnc · Fresas para fresadoras y centros cnc

3720 Porta-lâminas para perfilar Porta-cuchillas para perfilar



HW · MAN

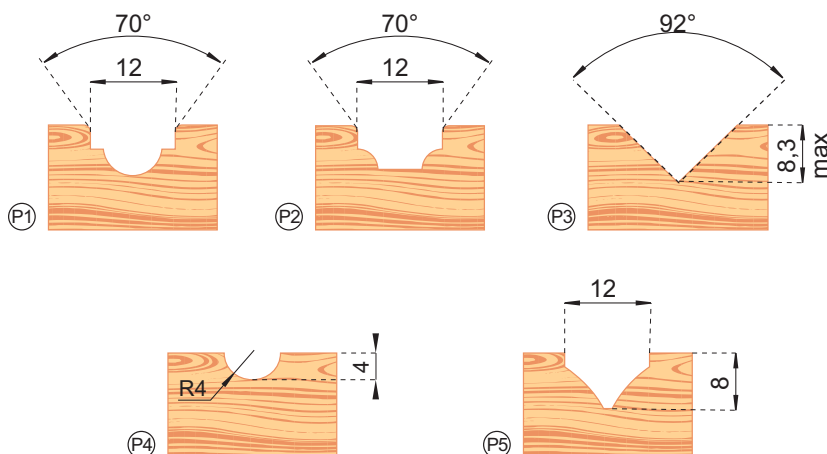
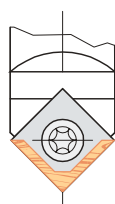
D	L2	L3	S	Z	Ref.
17	8,5	27	8	1	3720.017.908.08
	8,5	27	10	1	3720.017.908.10
	8,5	27	12	1	3720.017.908.12

LÂMINA NÃO INCLUÍDAS - Sin cuchillas

ACESSÓRIOS - Piezas de recambio

	Dim.	Ref.
Lâmina	12x12x1,5*	5003.01.1
	P1 12x12x1,5	3720.001
	P2 12x12x1,5	3720.002
	P3 12x12x1,5	3720.003
	P4 12x12x1,5	3720.004
	P5 12x12x1,5	3720.005
Parafuso	M3,5x6	5109.004
Chave Torx	T15	5302.202

*Lâmina sem perfil





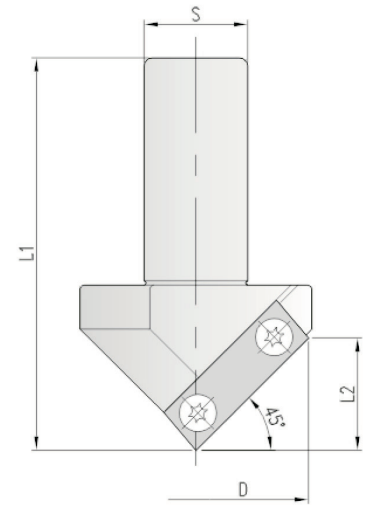
HW · MAN

D	α	L2	S	Z	Ref.
55	45°	24	25	1	3750.001
71	45°	35	25	1	3750.002

Escala com incremento de 2,5

ACESSÓRIOS - Piezas de recambio

	Dim.	Ref.
Lâmina	39.5x12x1,5	3750.101
	49.5x12x1,5	3750.102
Parafuso Torx	M4x6	5109.006
Chave Torx	T15	5302.202



Porta-Lâminas para chanfrar e bolear
Cabezal para biselar y redondear

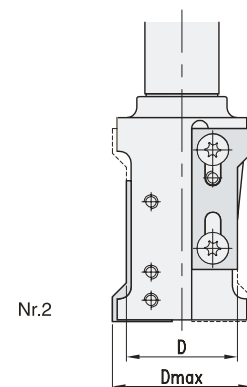
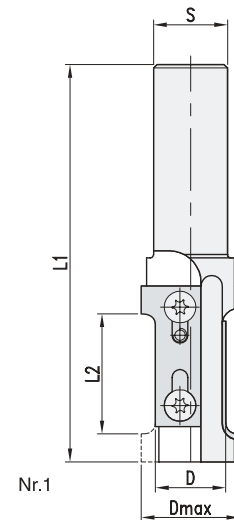
HW · MAN

Nr.	Dmax	D	L1	S	Z	Ref.
55	28-34	20	113	20	1+1	3541.020.034.20
71	28-34	20	113	25	1+1	3541.020.034.25
	49-57	35	150	25	1+1	3541.035.056.25

Lâminas não incluídas - Cuchillas no incluido

ACESSÓRIOS - Piezas de recambio

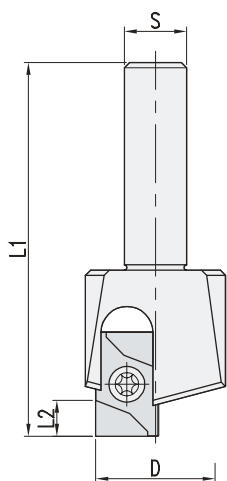
	R	Dim.	Ref.
Lâmina Nr.1	3	40x17,2x2,2	SUP 3541.001
			INF 3541.101
	4	40x18,2x2,2	SUP 3541.002
			INF 3541.102
	5	40x19,2x2,2	SUP 3541.003
			INF 3541.103
	6	40x20,2x2,2	SUP 3541.004
			INF 3541.104
	45°	40x20,2x2,2	SUP 3541.005
			INF 3541.105
Lâmina Nr.2	6	50x20,3x2,2	SUP 3541.006
			INF 3541.106
	8	50x22,3x2,2	SUP 3541.007
			INF 3541.107
	10	50x24,3x2,2	SUP 3541.008
			INF 3541.108
	45°	50x24,3x2,2	SUP 3541.009
			INF 3541.109
	Parafuso		M4x6





3755 Porta-Lâminas Universal para perfilar Cabezal universal para perfilar

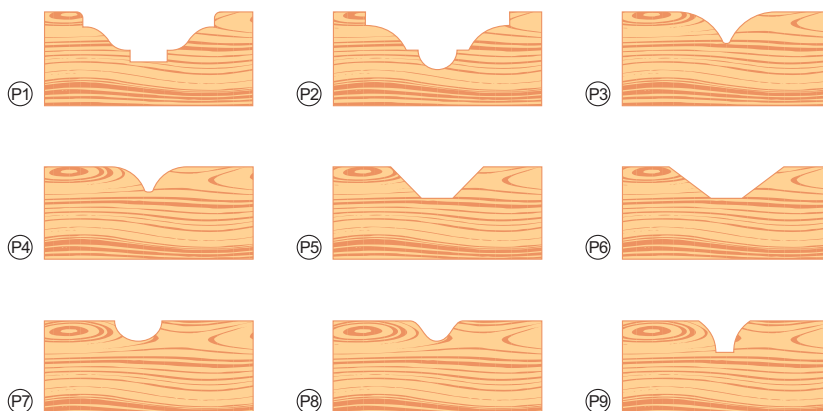
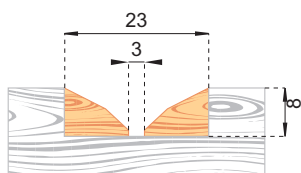
HW · MAN



D	L2	L1	S	Z	Ref.
23	8	69	12	1	3755.001
	8	105	20	1	3755.002

ACESSÓRIOS - Peças de recambio

		Dim.	Ref.
Lâmina	P1	20x12x1.5	3755.001
	P2	20x12x1.5	3755.002
	P3	20x12x1.5	3755.003
	P4	20x12x1.5	3755.004
	P5	20x12x1.5	3755.005
	P6	20x12x1.5	3755.006
	P7	20x12x1.5	3755.007
	P8	20x12x1.5	3755.008
	P9	20x12x1.5	3755.009
Parafuso		M3.5x4	5109.005



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