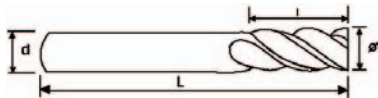
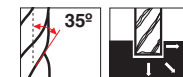



403 003 HSS E8 | DIN 327 D | Z=2

APLICACIONES

ACEROS < 1200 N/mm²
Fresa Frontal. Mango Cilíndrico


Ø	€	L	l	d	Ø	€	L	l	d	Ø	€	L	l	d
2,00	10,44	48	4	6	10,00	14,80	63	13	10	18,00	33,01	79	19	16
2,50	10,44	49	5	6	10,50	20,49	70	13	12	18,50	34,34	79	19	16
3,00	10,44	49	5	6	11,00	20,30	70	13	12	19,00	44,93	79	19	16
3,50	11,00	50	6	6	11,50	21,05	70	13	12	19,50	48,92	88	22	20
4,00	10,44	51	7	6	12,00	17,26	73	16	12	20,00	38,49	88	22	20
4,50	11,77	51	7	6	12,50	24,09	73	16	12	22,00	49,11	88	22	20
5,00	10,44	52	8	6	13,00	23,53	73	16	12	24,00	69,02	102	26	25
5,50	12,34	52	8	6	13,50	25,79	73	16	12	25,00	65,04	102	26	25
6,00	10,44	52	8	6	14,00	22,38	73	16	12	26,00	84,37	102	26	25
6,50	16,31	60	10	10	14,50	34,34	73	16	12	28,00	86,64	102	26	25
7,00	15,74	60	10	10	15,00	26,74	73	16	12	30,00	97,08	102	26	25
7,50	15,74	60	10	10	15,50	34,13	79	19	16	32,00	104,28	112	32	32
8,00	13,47	61	11	10	16,00	27,30	79	19	16	36,00	117,93	112	32	32
8,50	17,45	61	11	10	16,50	29,77	79	19	16	40,00	163,61	130	38	40
9,00	15,57	61	11	10	17,00	36,23	79	19	16					
9,50	15,36	61	11	10	17,50	36,23	79	19	16					


403 011 HSS E8 | DIN 327 D | Z=3

APLICACIONES

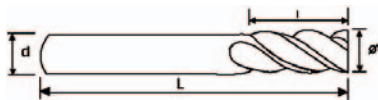
ACEROS < 1200 N/mm²
INOXIDABLES < 640 N/mm²
LATON < 400 N/mm²
Fresa Frontal. Mango Cilíndrico

Ø	€	L	l	d	Ø	€	L	l	d	Ø	€	L	l	d
2	12,21	48	4	6	10	17,82	63	13	10	20	46,64	88	22	20
3	12,21	49	5	6	11	25,43	70	13	10	22	61,03	88	22	20
4	12,21	51	7	6	12	21,63	73	16	12	24	83,46	102	26	25
5	12,21	52	8	6	13	29,83	73	16	12	25	77,85	102	26	25
6	12,21	52	8	6	14	28,04	73	16	12	28	105,87	102	26	25
7	19,02	60	10	10	15	38,64	73	16	12	30	117,06	102	26	25
8	16,21	61	11	10	16	33,04	79	19	16	32	127,08	32	112	32
9	20,82	61	11	10	18	39,84	79	19	16					

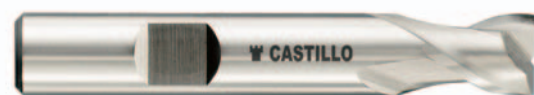



403 003 HSS E8 | DIN 327 D | Z=2

APLICACIONES

ACEROS < 1200 N/mm²
Fresa Frontal. Mango Cilíndrico


Ø	€	L	l	d	Ø	€	L	l	d	Ø	€	L	l	d
2,00	10,44	48	4	6	10,00	14,80	63	13	10	18,00	33,01	79	19	16
2,50	10,44	49	5	6	10,50	20,49	70	13	12	18,50	34,34	79	19	16
3,00	10,44	49	5	6	11,00	20,30	70	13	12	19,00	44,93	79	19	16
3,50	11,00	50	6	6	11,50	21,05	70	13	12	19,50	48,92	88	22	20
4,00	10,44	51	7	6	12,00	17,26	73	16	12	20,00	38,49	88	22	20
4,50	11,77	51	7	6	12,50	24,09	73	16	12	22,00	49,11	88	22	20
5,00	10,44	52	8	6	13,00	23,53	73	16	12	24,00	69,02	102	26	25
5,50	12,34	52	8	6	13,50	25,79	73	16	12	25,00	65,04	102	26	25
6,00	10,44	52	8	6	14,00	22,38	73	16	12	26,00	84,37	102	26	25
6,50	16,31	60	10	10	14,50	34,34	73	16	12	28,00	86,64	102	26	25
7,00	15,74	60	10	10	15,00	26,74	73	16	12	30,00	97,08	102	26	25
7,50	15,74	60	10	10	15,50	34,13	79	19	16	32,00	104,28	112	32	32
8,00	13,47	61	11	10	16,00	27,30	79	19	16	36,00	117,93	112	32	32
8,50	17,45	61	11	10	16,50	29,77	79	19	16	40,00	163,61	130	38	40
9,00	15,57	61	11	10	17,00	36,23	79	19	16					
9,50	15,36	61	11	10	17,50	36,23	79	19	16					


403 011 HSS E8 | DIN 327 D | Z=3

APLICACIONES

ACEROS < 1200 N/mm²
INOXIDABLES < 640 N/mm²
LATON < 400 N/mm²
Fresa Frontal. Mango Cilíndrico

Ø	€	L	l	d	Ø	€	L	l	d	Ø	€	L	l	d
2	12,21	48	4	6	10	17,82	63	13	10	20	46,64	88	22	20
3	12,21	49	5	6	11	25,43	70	13	10	22	61,03	88	22	20
4	12,21	51	7	6	12	21,63	73	16	12	24	83,46	102	26	25
5	12,21	52	8	6	13	29,83	73	16	12	25	77,85	102	26	25
6	12,21	52	8	6	14	28,04	73	16	12	28	105,87	102	26	25
7	19,02	60	10	10	15	38,64	73	16	12	30	117,06	102	26	25
8	16,21	61	11	10	16	33,04	79	19	16	32	127,08	32	112	32
9	20,82	61	11	10	18	39,84	79	19	16					





403 028 HSS E8 | DIN 844 B

Serie Larga

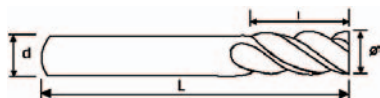


APLICACIONES

V VI

ALUMINIO < 610 N/mm²
LATON < 500 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	z
4	16,88	63	19	6	2
5	16,88	68	24	6	2
6	17,45	68	24	6	2
8	20,49	88	38	10	2
10	26,94	95	45	10	2

Ø	€	L	l	d	z
12	36,78	110	53	12	3
14	47,02	110	53	12	3
16	51,20	123	63	16	3
18	68,64	123	63	16	3
20	72,05	141	75	20	3



403 014 HSS E8 | DIN 844 B | Z=2

Serie Larga

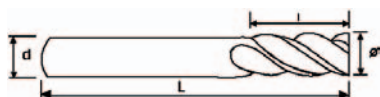


APLICACIONES

I II

ACEROS < 1200 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d
4	16,31	63	19	6
5	16,31	68	24	6
6	16,31	68	24	6
8	21,25	88	38	10
10	23,13	95	45	10

Ø	€	L	l	d
12	26,94	110	53	12
14	35,09	123	63	16
16	42,66	123	63	16
18	51,57	123	63	16
20	60,10	141	75	20



403 019 HSS E8 | DIN 844 B



APLICACIONES



ACEROS < 1200 N/mm²
 INOXIDABLES < 1250 N/mm²
 FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico

Ø	€	L	l	d	z	Ø	€	L	l	d	z	Ø	€	L	l	d	z
2,00	11,57	51	7	6	3	9,00	16,70	69	19	10	4	22,00	57,84	104	38	20	4
2,50	11,77	52	8	6	3	10,00	15,93	72	22	10	4	24,00	69,77	121	45	25	4
3,00	10,44	52	8	6	3	11,00	23,71	79	22	12	4	25,00	75,46	121	45	25	6
3,50	11,00	54	10	6	3	12,00	21,81	83	26	12	4	26,00	98,59	121	45	25	6
4,00	10,06	55	11	6	4	13,00	27,12	83	26	12	4	28,00	94,62	121	45	25	6
4,50	10,44	11	11	6	4	14,00	27,87	83	26	12	4	30,00	107,51	121	45	25	6
5,00	10,06	57	13	6	4	15,00	33,38	83	26	12	4	32,00	111,48	133	53	32	6
6,00	10,44	57	13	6	4	16,00	30,36	92	32	16	4	36,00	149,97	133	53	32	6
7,00	16,31	66	16	10	4	18,00	40,57	92	32	16	4	40,00	182,76	155	63	40	6
8,00	12,15	69	19	10	4	20,00	42,66	104	38	20	4						



403 026 HSS E8 | DIN 844 B

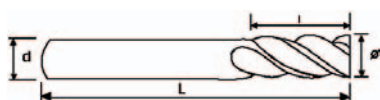


APLICACIONES



ALUMINIO < 610 N/mm²
 LATON < 500 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	z	Ø	€	L	l	d	z
3	13,47	52	8	6	2	12	28,27	83	26	12	3
4	13,09	55	11	6	2	14	36,23	83	26	12	3
5	13,09	57	13	6	2	16	39,44	92	32	16	3
6	13,47	57	13	6	2	18	52,71	92	32	16	3
8	15,74	69	19	10	3	20	55,36	104	38	20	3
10	20,67	72	22	10	3						

Fresas Cutters • End mills



403 277 HSS E8 | DIN 844 B | Z=2

Serie Larga

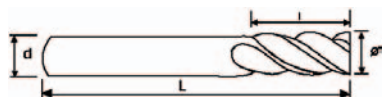


APLICACIONES



ACEROS < 1200 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	Ø	€	L	l	d	Ø	€	L	l	d
2	12,72	54	7	6	6	12,72	68	13	6	12	20,67	110	26	12
2,5	12,72	54	7	6	7	18,96	80	16	10	14	26,94	110	26	12
3	12,72	56	8	6	8	16,31	88	19	10	16	32,80	123	32	16
4	12,72	63	11	6	9	18,60	88	19	10	18	39,63	123	32	16
5	12,72	68	13	6	10	17,82	95	22	10	20	46,08	141	38	20



403 023 HSS E8 | DIN 844 B

Serie Larga

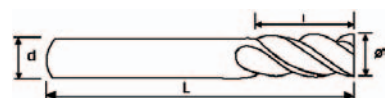


APLICACIONES



ACEROS < 1200 N/mm²
INOXIDABLES < 1150 N/mm²
FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	z	Ø	€	L	l	d	z
4	13,09	63	19	6	4	20	56,95	141	75	20	4
5	13,44	68	24	6	4	22	71,98	141	75	20	4
6	14,35	68	24	6	4	25	104,57	166	90	25	6
8	17,20	88	38	10	4	28	124,26	166	90	25	6
10	19,87	95	45	10	4	30	128,73	166	90	25	6
12	27,04	110	53	12	4	32	134,12	186	106	32	6
14	36,36	110	53	12	4	36	178,68	186	106	32	6
16	40,29	123	63	16	4	40	224,17	217	125	40	6
18	49,25	123	63	16	4						



403 019 HSS E8 | DIN 844 B



APLICACIONES



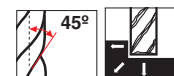
ACEROS < 1200 N/mm²
INOXIDABLES < 1250 N/mm²
FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico

Ø	€	L	l	d	z	Ø	€	L	l	d	z	Ø	€	L	l	d	z
2,00	11,57	51	7	6	3	9,00	16,70	69	19	10	4	22,00	57,84	104	38	20	4
2,50	11,77	52	8	6	3	10,00	15,93	72	22	10	4	24,00	69,77	121	45	25	4
3,00	10,44	52	8	6	3	11,00	23,71	79	22	12	4	25,00	75,46	121	45	25	6
3,50	11,00	54	10	6	3	12,00	21,81	83	26	12	4	26,00	98,59	121	45	25	6
4,00	10,06	55	11	6	4	13,00	27,12	83	26	12	4	28,00	94,62	121	45	25	6
4,50	10,44	11	11	6	4	14,00	27,87	83	26	12	4	30,00	107,51	121	45	25	6
5,00	10,06	57	13	6	4	15,00	33,38	83	26	12	4	32,00	111,48	133	53	32	6
6,00	10,44	57	13	6	4	16,00	30,36	92	32	16	4	36,00	149,97	133	53	32	6
7,00	16,31	66	16	10	4	18,00	40,57	92	32	16	4	40,00	182,76	155	63	40	6
8,00	12,15	69	19	10	4	20,00	42,66	104	38	20	4						



403 026 HSS E8 | DIN 844 B

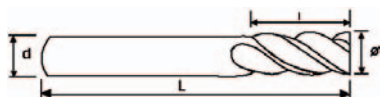


APLICACIONES



ALUMINIO < 610 N/mm²
LATON < 500 N/mm²

Fresa Frontal. Mango Cilíndrico

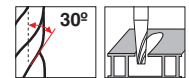


Ø	€	L	l	d	z	Ø	€	L	l	d	z
3	13,47	52	8	6	2	12	28,27	83	26	12	3
4	13,09	55	11	6	2	14	36,23	83	26	12	3
5	13,09	57	13	6	2	16	39,44	92	32	16	3
6	13,47	57	13	6	2	18	52,71	92	32	16	3
8	15,74	69	19	10	3	20	55,36	104	38	20	3
10	20,67	72	22	10	3						

Fresas Cutters • End mills

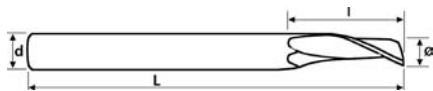


403 088 HSS | NORMA FABRICA | Z=1



APLICACIONES

V ALUMINIO < 610 N/mm²



Ø	L	€	l	d
3	60	15,38	12	8
4	60	15,38	14	8
*4	70	17,69	12	8
4	80	21,76	16	8
5	60	15,38	14	8
5	80	15,38	14	8
6	60	15,38	14	8

Ø	L	€	l	d
6	80	17,69	14	8
6	90	20,34	14	8
7	60	18,66	14	8
8	80	18,66	14	8
8	100	24,15	14	8
10	80	18,66	14	10

* Hasta fin de existencias / While stocks last.



403 225 HSS E8 | DIN 844 B | TIPO NF

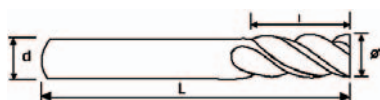


APLICACIONES



ACEROS < 1200 N/mm²
 INOXIDABLES < 1250 N/mm²
 FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	z
8	28,64	69	19	10	4
10	28,07	72	22	10	4
12	36,98	83	26	12	4
14	40,20	83	26	12	4

Ø	€	L	l	d	z
16	49,11	92	32	16	4
18	52,15	92	32	18	4
20	64,09	104	38	20	4



403 721 HSS PM | DIN 844 B | TIPO NR

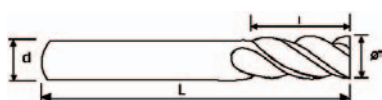


APLICACIONES



ACEROS < 1200 N/mm²
 INOXIDABLES < 1250 N/mm²
 FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	z
7	42,48	66	16	10	3
8	38,32	69	19	10	4
9	46,08	69	19	10	4
10	37,17	72	22	10	4
11	48,92	79	22	12	4
12	49,11	83	26	12	4
13	53,46	83	26	12	4
14	53,46	83	26	12	4
15	61,44	83	26	12	4
16	65,23	92	32	16	4

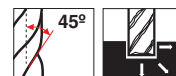
Ø	€	L	l	d	z
18	69,58	92	32	18	4
20	85,51	104	38	20	4
22	99,54	104	38	20	4
25	121,91	121	45	25	4
28	143,33	121	45	25	4
30	167,78	121	45	25	6
32	172,13	133	53	32	6
36	226,74	133	53	32	6
40	275,84	155	63	40	6

Fresas Cutters • End mills



403 281 HSS E8 | Sim. DIN 844 B | Z=3

Serie Larga

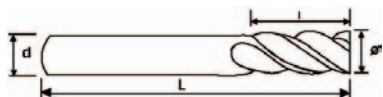


APLICACIONES



ACEROS < 1200 N/mm²
INOXIDABLES < 1150 N/mm²
FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d
4	13,86	63	11	6
5	13,86	68	13	6
6	13,86	68	13	6
7	21,63	80	16	10
8	18,40	88	19	10
9	23,71	88	19	10

Ø	€	L	l	d
10	20,30	95	22	10
12	24,65	110	26	12
14	31,87	123	26	16
16	37,55	123	32	16
18	45,32	123	32	16
20	53,09	141	38	20



403 244 HSS E8 | DIN 844 B | TIPO NF

Serie Larga

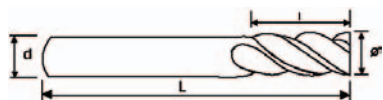


APLICACIONES



ACEROS < 1200 N/mm²
INOXIDABLES < 1150 N/mm²
FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	z
8	34,34	88	38	38	4
10	33,57	95	45	45	4
12	44,17	110	53	53	4
14	48,17	110	53	53	4

Ø	€	L	l	d	z
16	58,78	123	63	63	4
18	62,76	123	63	63	4
20	76,97	141	75	75	4

Fresas Cutters • End mills



403 277 HSS E8 | DIN 844 B | Z=2

Serie Larga

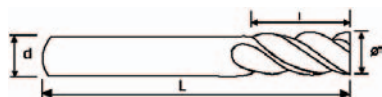


APLICACIONES



ACEROS < 1200 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	Ø	€	L	l	d	Ø	€	L	l	d
2	12,72	54	7	6	6	12,72	68	13	6	12	20,67	110	26	12
2,5	12,72	54	7	6	7	18,96	80	16	10	14	26,94	110	26	12
3	12,72	56	8	6	8	16,31	88	19	10	16	32,80	123	32	16
4	12,72	63	11	6	9	18,60	88	19	10	18	39,63	123	32	16
5	12,72	68	13	6	10	17,82	95	22	10	20	46,08	141	38	20



403 023 HSS E8 | DIN 844 B

Serie Larga

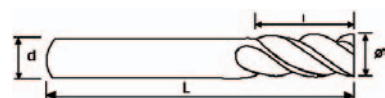


APLICACIONES



ACEROS < 1200 N/mm²
INOXIDABLES < 1150 N/mm²
FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico

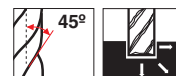


Ø	€	L	l	d	z	Ø	€	L	l	d	z
4	13,09	63	19	6	4	20	56,95	141	75	20	4
5	13,44	68	24	6	4	22	71,98	141	75	20	4
6	14,35	68	24	6	4	25	104,57	166	90	25	6
8	17,20	88	38	10	4	28	124,26	166	90	25	6
10	19,87	95	45	10	4	30	128,73	166	90	25	6
12	27,04	110	53	12	4	32	134,12	186	106	32	6
14	36,36	110	53	12	4	36	178,68	186	106	32	6
16	40,29	123	63	16	4	40	224,17	217	125	40	6
18	49,25	123	63	16	4						



403 281 HSS E8 | Sim. DIN 844 B | Z=3

Serie Larga

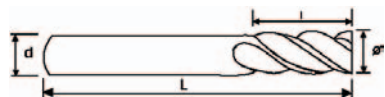


APLICACIONES



ACEROS < 1200 N/mm²
INOXIDABLES < 1150 N/mm²
FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d
4	13,86	63	11	6
5	13,86	68	13	6
6	13,86	68	13	6
7	21,63	80	16	10
8	18,40	88	19	10
9	23,71	88	19	10

Ø	€	L	l	d
10	20,30	95	22	10
12	24,65	110	26	12
14	31,87	123	26	16
16	37,55	123	32	16
18	45,32	123	32	16
20	53,09	141	38	20



403 244 HSS E8 | DIN 844 B | TIPO NF

Serie Larga

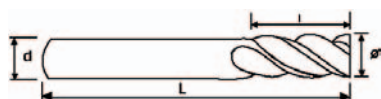


APLICACIONES



ACEROS < 1200 N/mm²
INOXIDABLES < 1150 N/mm²
FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	z
8	34,34	88	38	38	4
10	33,57	95	45	45	4
12	44,17	110	53	53	4
14	48,17	110	53	53	4

Ø	€	L	l	d	z
16	58,78	123	63	63	4
18	62,76	123	63	63	4
20	76,97	141	75	75	4



403 720 HSS PM | DIN 844 B | TIPO NR

Serie Larga

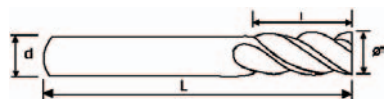


APLICACIONES



ACEROS < 1200 N/mm²
INOXIDABLES < 1150 N/mm²
FUNDICIÓN < 800 N/mm²

Fresa Frontal. Mango Cilíndrico



Ø	€	L	l	d	z
8	46,08	88	38	10	4
10	44,75	95	45	10	4
12	58,96	110	53	12	4
14	64,09	110	53	12	4
16	78,30	123	63	16	4
18	83,43	123	63	16	4
20	102,57	141	75	20	4

Ø	€	L	l	d	z
22	119,25	141	75	20	4
25	146,36	166	90	25	4
28	171,95	166	90	25	6
30	201,54	166	90	25	6
32	206,65	186	106	32	6
36	272,04	186	106	32	6
40	331,00	217	125	40	6



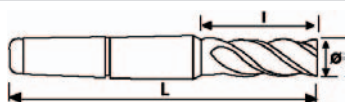
403 039 HSS E8 | DIN 326 D | Z=2



APLICACIONES

ACEROS < 1200 N/mm²

Fresa Frontal. Mango Cónico.



Ø	€	L	l	d
12	45,07	101	16	2
14	46,73	101	16	2
16	50,06	104	19	2
18	55,50	104	19	2
20	61,11	107	22	2
22	71,14	107	22	2
24	86,97	128	26	3
25	88,21	128	26	3

Ø	€	L	l	d
26	92,60	128	26	3
28	101,35	128	26	3
30	111,57	128	26	3
32	122,85	134	32	3
36	159,75	157	32	4
40	194,37	163	38	4
50	290,29	170	45	4