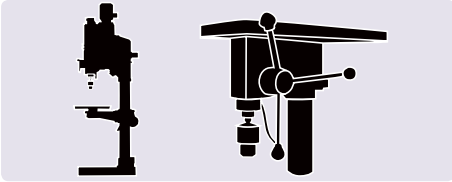
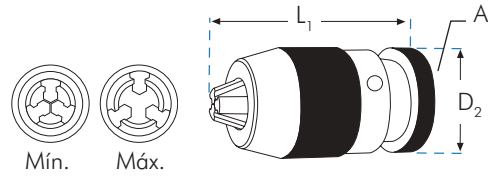


PORTABROCAS



PORTABROCAS INDUSTRIALES PARA TALADROS DE COLUMNA O CNC

<0,05

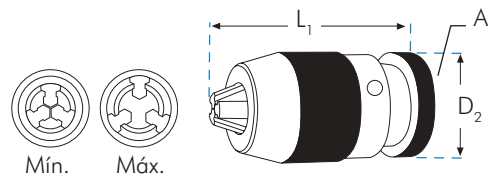
Ref. DC1

ALTA PRECISIÓN


						DC1
	PRECISIÓN mm	Mín.-Máx. mm	A	D2 mm	L1 mm	€
DC1-10-B12	<0,05	1-10	B12	42	90	146,78
DC1-13-B16	<0,05	1-13	B16	48	104	157,04
DC1-16-B16	<0,05	1-16	B16	53	119	167,23
DC1-16-B18	<0,05	1-16	B18	53	119	167,23
DC1-20-B22	<0,05	5-20	B22	58	130	192,42

<0,12

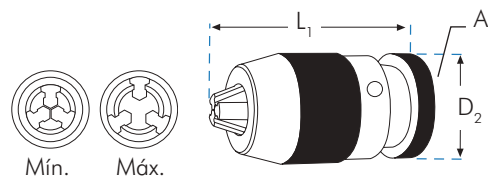
Ref. DC2

INDUSTRIAL


						DC2
	PRECISIÓN mm	Mín.-Máx. mm	A	D2 mm	L1 mm	€
DC2-13-1/2	<0,12	1-13	1/2-20 UNF	48	104	115,92
DC2-13-B16	<0,12	1-13	B16	48	104	115,92
DC2-16-B16	<0,12	1-16	B16	53	119	141,88
DC2-16-B18	<0,12	1-16	B18	53	119	141,88
DC2-20-B22	<0,12	5-20	B22	58	130	153,94

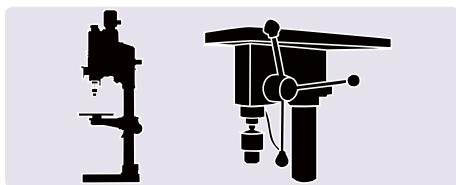
<0,20

Ref. DC3

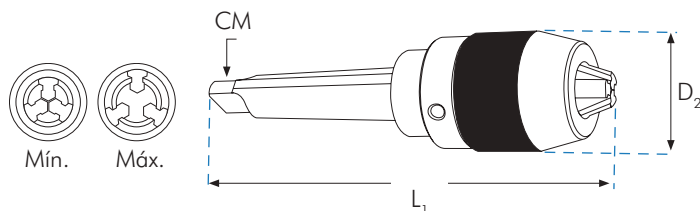
INDUSTRIAL LIGERO


						DC3
	PRECISIÓN mm	Mín.-Máx. mm	A	D2 mm	L1 mm	€
DC3-10-3/8	<0,20	1-10	3/8-24 UNF	34	75	71,04
DC3-10-1/2	<0,20	1-10	1/2-20 UNF	34	75	71,04
DC3-13-B16	<0,20	1-13	B16	43	94	76,45
DC3-13-3/8	<0,20	1-13	3/8-24 UNF	43	94	76,45
DC3-13-1/2	<0,20	1-13	1/2-20 UNF	43	94	76,45
DC3-16-B16	<0,20	1-16	B16	48	119	118,66
DC3-16-B18	<0,20	1-16	B18	48	119	118,66
DC3-16-1/2	<0,20	3-16	1/2-20 UNF	48	105	118,66
DC3-16-5/8	<0,20	3-16	5/8-18 UNF	48	105	118,66

PORTABROCAS INDUSTRIALES CON MANGO CÓNICO PARA TALADROS DE COLUMNA O CNC

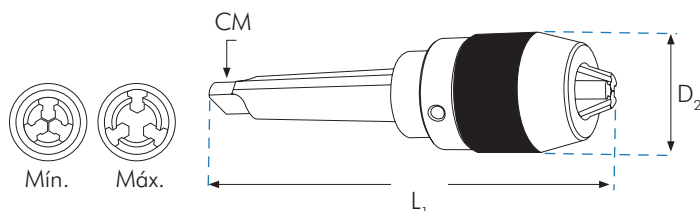


<0,05
Ref. DC10 **ALTA PRECISIÓN**

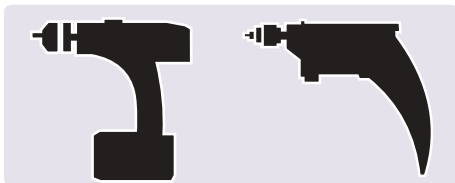


						DC10
	PRECISIÓN mm	Mín.-Máx. mm	CM	D2 mm	L1 mm	€
DC10-13-CM2	<0,05	1-13	CM2	51	174	243,70
DC10-13-CM3	<0,05	1-13	CM3	51	192	246,66
DC10-13-CM4	<0,05	1-13	CM4	51	218	249,06
DC10-16-CM3	<0,05	1-16	CM3	56	207	252,20
DC10-16-CM4	<0,05	1-16	CM4	56	232	256,77

<0,12
Ref. DC11 **INDUSTRIAL**



						DC11
	PRECISIÓN mm	Mín.-Máx. mm	CM	D2 mm	L1 mm	€
DC11-13-CM2	<0,12	1-13	CM2	51	174	148,94
DC11-13-CM3	<0,12	1-13	CM3	51	192	148,94
DC11-13-CM4	<0,12	1-13	CM4	51	218	148,94
DC11-16-CM3	<0,12	1-16	CM3	56	207	174,63
DC11-16-CM4	<0,12	1-16	CM4	56	232	174,63

PORTABROCAS AUTOMÁTICOS PROFESIONALES

<950W

Ref. DC4

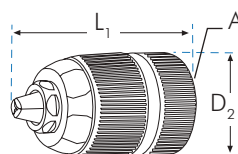


- Bloqueo automático.
- Cuerpo de plástico.
- Taladro tanto en modo rotación como en percusión.



Mín.

Máx.



						DC4
	W	Mín.-Máx. mm	A	D2 mm	L1 mm	€
DC4-10-3/8	<950	1-10	3/8-24 UNF	41	65	42,73
DC4-10-1/2	<950	1-10	1/2-20 UNF	41	65	42,73
DC4-13-3/8	<950	2-13	3/8-24 UNF	43	75	59,08
DC4-13-3/8-SDS	<950	2-13	3/8-24 UNF	43	75	68,16
DC4-13-1/2	<950	2-13	1/2-20 UNF	43	75	59,08
DC4-13-1/2-SDS	<950	2-13	1/2-20 UNF	43	75	68,16

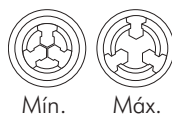
Ref. DC4-13-1/2-SDS

<1050W

Ref. DC5

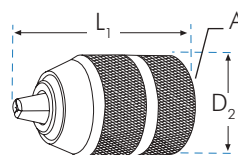


- Bloqueo automático.
- Cuerpo de metal.
- Alta potencia.
- Garras especiales para alto rendimiento.
- Taladro tanto en modo rotación como en percusión.



Mín.

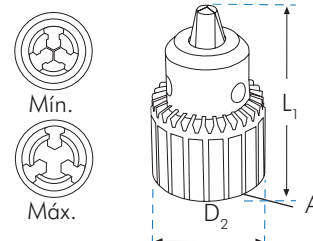
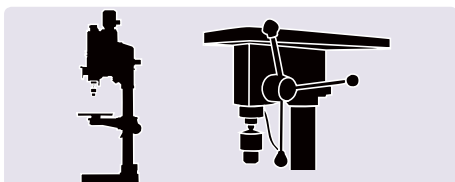
Máx.



						DC5
	W	Mín.-Máx. mm	A	D2 mm	L1 mm	€
DC5-10-3/8	<1050	1-10	3/8-24 UNF	41	64	43,47
DC5-13-3/8	<1050	2-13	3/8-24 UNF	43	75	62,34
DC5-13-1/2	<1050	2-13	1/2-20 UNF	43	75	62,34
DC5-13-SDS	<1050	2-13	1/2-20 UNF	43	75	77,16

Ref. DC5-13-SDS

PORTABROCAS DE LLAVE PROFESIONALES

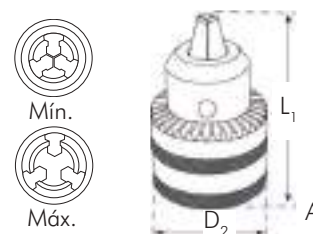


Ref. DC6

- Admite percusión, se recomienda uso en modo rotación.
- Incluye llave



					DC6
	Mín.-Máx. mm	A	D2 mm	L1 mm	€
DC6-06-B10	0,6-6	B10	31	50	41,83
DC6-06-3/8	0,6-6	3/8-24 UNF	31	50	41,83
DC6-10-B12	1-10	B12	37	60	32,76
DC6-10-3/8	1-10	3/8-24 UNF	37	60	32,76
DC6-10-1/2	1-10	1/2-20 UNF	37	60	32,76
DC6-13-B12	1-13	B12	46	78	42,84
DC6-13-B16	1-13	B16	46	78	42,84
DC6-13-3/8	1-13	3/8-24 UNF	46	78	42,84
DC6-13-1/2	1-13	1/2-20 UNF	46	78	42,84
DC6-16-B16	1-16	B16	57	95	47,88
DC6-16-B18	1-16	B18	57	95	47,88
DC6-16-1/2	1-16	1/2-20 UNF	57	95	47,88
DC6-16-5/8	1-16	5/8-18 UNF	57	95	50,39
DC6-19-B22	1-19	B22	68	115	65,52



Ref. DC7

LIGERO

- Taladro tanto en modo percusión como en rotación.
- Incluye llave



					DC7
	Mín.-Máx. mm	A	D2 mm	L1 mm	€
DC7-06-B10	0,6-6	B10	30	50	19,09
DC7-06-3/8	0,6-6	3/8-24 UNF	30	50	19,09
DC7-10-3/8	1,5-10	3/8-24 UNF	33	59	18,67
DC7-10-1/2	1,5-10	1/2-20 UNF	33	59	18,67
DC7-13-B12	1,5-13	B12	42	70	22,17
DC7-13-B16	1,5-13	B16	42	70	22,17
DC7-13-3/8	1,5-13	3/8-24 UNF	42	70	22,17
DC7-13-1/2	1,5-13	1/2-20 UNF	42	70	22,17
DC7-13-SDS	1,5-13	1/2-20 UNF	42	70	23,33
DC7-16-B16	3-16	B16	51	87	28,00
DC7-16-1/2	3-16	1/2-20 UNF	51	87	28,00
DC7-16-5/8	3-16	5/8-18 UNF	51	87	28,00

Ref. DC7-13-SDS

- Llaves de repuesto para portabrocas consultar página siguiente

MINI-PORTABROCAS
MINI-PORTABROCAS MANUAL

P27

 Incluye Pinza reversible:
 - Rango de diámetros de 0 a 3,0 mm

8,98 €
MINI-PORTABROCAS DE MÁQUINA

P28

 Incluye 3 Pinzas:
 - De 0 a 1,0 mm - De 1,0 a 2,0 mm
 - De 0,5 a 1,5 mm

13,45 €
MINI-PORTABROCAS MANGO HEX.

P29

 - Mango 1/4 Hex.
 - De 0,6 a 6,0 mm

15,26 €
ACCESORIOS PARA PORTABROCAS
LLAVES PARA PORTABROCAS


	Mín.-Máx. mm	Ø mm	DC €
DC-10	1 - 10	6	3,42
DC-13	1 - 13	6	4,06
DC-16	1 - 16	8	5,05
DC-20	5 - 20	9	8,96

ADAPTADORES SDS PLUS


	Rosca (A)	DC €
DC -3/8	3/8 - 24 UNF	20,40
DC -1/2	1/2 - 20 UNF	20,40

ADAPTADOR 1/4" Hex.


	Mango	Rosca	DC-01 €
DC-01	1/4" Hex.	3/8 - 24 UNF	11,81

**ADAPTADOR SDS PLUS PARA
TALADROS DE 1/2X20 UNF**


	Rosca	DC-02 €
DC-02	1/2x20UNF	SDS plus 49,51

ACCESORIOS PARA BROCAS Y PORTABROCAS

CONOS REDUCTORES

CONOS AUMENTADORES

DIN 2185



DIN 2187



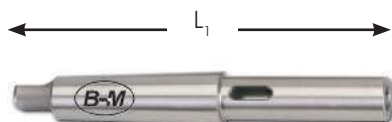
CONO MORSE		L ₁ mm	CR		CONO MORSE		L ₁ mm	CR	
EXT.	INT.		€	EXT.	INT.	€			
1	0	80	19,21	5	1	156	63,53		
2	1	92	19,23	5	2	156	57,98		
3	1	99	25,88	5	3	156	57,98		
3	2	112	26,38	5	4	171	64,89		
4	1	124	36,91	6	3	218	112,63		
4	2	124	34,68	6	4	218	127,80		
4	3	140	34,68	6	5	218	127,80		

CONO MORSE		L ₁ mm	CA	
EXT.	INT.		€	EXT.
1	2	160	37,38	
2	3	196	50,82	
3	4	240	85,71	
4	5	300	143,87	
5	6	415	404,31	

CONOS REDUCTORES ALARGADORES

CONOS ALARGADORES

DIN 2187



CONO MORSE		L ₁ mm	CA		CONO MORSE		L ₁ mm	CA	
EXT.	INT.		€	EXT.	INT.	€			
2	1	160	24,13	5	2	247	112,23		
3	1	175	35,09	5	3	268	98,90		
3	2	194	36,23	5	4	300	111,79		
4	1	200	50,82	6	3	330	246,17		
4	2	215	49,67	6	4	355	246,17		
4	3	240	51,97	6	5	390	247,99		
5	1	232	123,45						

CONO MORSE		L ₁ mm	CA	
EXT.	INT.		€	EXT.
1	1	145	24,13	
2	2	175	35,09	
3	3	215	53,15	
4	4	265	85,71	
5	5	335	184,96	
6	6	470	424,52	

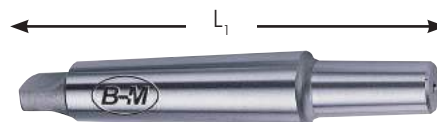
ESPIGAS DE SUJECIÓN CON MANGO CÓNICO PARA PORTABROCAS

DIN 228

CONO MORSE

DIN 238

PORTA BROCAS



CM		L ₁ mm	CM	
CM	PORTA BROCAS		€	EXT.
1	B10	86	10,44	
1	B12	89	7,85	
1	B16	99	7,85	
1	B18	107	7,85	
2	B10	105	12,48	
2	B12	106	9,53	
2	B16	112	9,53	
2	B18	119	9,53	
2	B22	130	16,40	
3	B12	127	15,92	
3	B16	134	11,61	
3	B18	140	11,61	

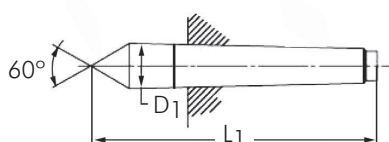
CM		L ₁ mm	CM	
CM	PORTA BROCAS		€	EXT.
3	B22	147	19,55	
3	B24	157	25,17	
4	B16	158	17,46	
4	B18	166	17,93	
4	B22	176	32,24	
4	B24	186	32,61	
5	B16	193	70,83	
5	B18	200	70,83	
5	B22	208	65,97	
5	B24	221	71,66	
6	B22	240	134,75	

ACCESORIOS PARA BROCAS Y PORTABROCAS
CUÑA EXPULSADORA
**DIN
317**

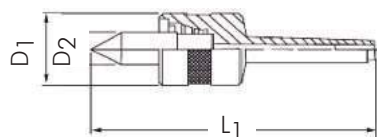

			CE
Nº	VÁLIDOS CM	L ₁ mm	€
0	0	90	10,71
1	1 / 2	140	12,66
3	3	190	16,71
4	4	225	22,73
5	5 / 6	265	36,91

ESPIGA DE SUJECCIÓN MANGO CÓNICO PARA PORTABROCAS ROSCADOS
**DIN
2185**


			CMR			CMR	
	CM	A	€		CM	€	
CMR1-3/8	1	3/8-24h	15,80	CMR2-5/8	2	5/8-18h	15,80
CMR1-1/2	1	1/2-20h	15,80	CMR3-3/8	3	3/8-24h	21,39
CMR2-3/8	2	3/8-24h	15,80	CMR3-1/2	3	1/2-20h	21,39
CMR2-1/2	2	1/2-20h	15,80	CMR3-5/8	3	5/8-18h	21,39

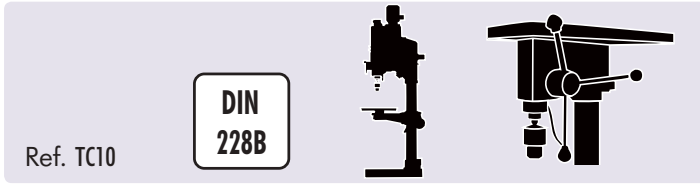
ACCESORIOS PARA BROCAS
CONTRAPUNTOS FIJOS PARA TORNOS


				CPC	CPC..MD	
	D ₁ mm	L ₁ mm	CM INT.	€	MD	€
CPCM1	12	80	1	11,60		
CPCM2	18	100	2	15,43	CPCM2-MD	44,35
CPCM3	24	125	3	23,98	CPCM3-MD	60,53
CPCM4	31	160	4	37,45	CPCM4-MD	73,82
CPCM5	44	200	5	52,92	CPCM5-MD	125,50
CPCM6	63	270	6	204,03		

PUNTO GIRATORIO


					PGC
	D ₁ mm	D ₂ mm	L ₁ mm	CM	€
PGCM1	34	18	120	1	111,10
PGCM2	50	21	148	2	123,91
PGCM3	60	24	185	3	166,58
PGCM4	63	28	220	4	197,43
PGCM5	75	36	260	5	285,35

PORTAMACHOS Y CABECILLAS

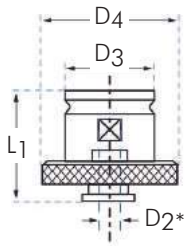


- Con compensación Longitudinal en compresión y tracción.
- Mango Cono Morse

						TC10
	D1 mm	D3 mm	L1 mm	L2 mm	CM	€
TC10-19-CM2	36	19	122	47	2	251,92
TC10-19-CM3	36	19	141	47	3	321,86
TC10-31-CM3	53	31	165	71	3	414,17
TC10-31-CM4	53	31	189	72	4	461,50
TC10-48-CM4	78	48	222	105	4	698,17
TC10-48-CM5	78	48	255	106	5	745,50

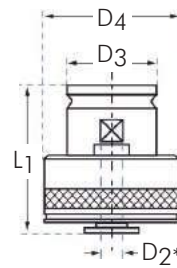


PORTAMACHOS SIN EMBRAGUE



					TC15
	D2 mm	D3 mm	L1 mm	D4 mm	€
TC15-19-035	3,5	19	28	30	33,73
TC15-19-040	4,0	19	28	30	33,73
TC15-19-045	4,5	19	28	30	33,73
TC15-19-060	6,0	19	28	30	33,73
TC15-19-070	7,0	19	28	30	33,73
TC15-19-080	8,0	19	28	30	33,73
TC15-19-090	9,0	19	28	30	33,73
TC15-19-100	10,0	19	28	30	33,73
TC15-31-070	7,0	31	46	48	47,36
TC15-31-080	8,0	31	46	48	47,36
TC15-31-090	9,0	31	46	48	47,36
TC15-31-100	10,0	31	46	48	47,36
TC15-31-110	11,0	31	46	48	47,36
TC15-31-120	12,0	31	46	48	47,36
TC15-31-140	14,0	31	46	48	47,36
TC15-31-160	16,0	31	46	48	47,36
TC15-48-110	11,0	48	69	70	125,48
TC15-48-120	12,0	48	69	70	125,48
TC15-48-140	14,0	48	69	70	125,48
TC15-48-160	16,0	48	69	70	125,48
TC15-48-180	18,0	48	69	70	125,48
TC15-48-200	20,0	48	69	70	125,48
TC15-48-220	22,0	48	69	70	125,48
TC15-48-250	25,0	48	69	70	125,48
TC15-48-280	28,0	48	69	70	125,48

PORTAMACHOS CON EMBRAGUE



					TC16
	D2 mm	D3 mm	L1 mm	D4 mm	€
TC16-19-035	3,5	19	46	32	80,96
TC16-19-040	4,0	19	46	32	80,96
TC16-19-045	4,5	19	46	32	80,96
TC16-19-060	6,0	19	46	32	80,96
TC16-19-070	7,0	19	46	32	80,96
TC16-19-080	8,0	19	46	32	80,96
TC16-19-090	9,0	19	46	32	80,96
TC16-19-100	10,0	19	46	32	80,96
TC16-31-070	7,0	31	69	50	102,54
TC16-31-080	8,0	31	69	50	102,54
TC16-31-090	9,0	31	69	50	102,54
TC16-31-100	10,0	31	69	50	102,54
TC16-31-110	11,0	31	69	50	102,54
TC16-31-120	12,0	31	69	50	102,54
TC16-31-140	14,0	31	69	50	102,54
TC16-31-160	16,0	31	69	50	102,54
TC16-48-110	11,0	48	100	70	227,03
TC16-48-120	12,0	48	100	70	227,03
TC16-48-140	14,0	48	100	70	227,03
TC16-48-160	16,0	48	100	70	227,03
TC16-48-180	18,0	48	100	70	227,03
TC16-48-200	20,0	48	100	70	227,03
TC16-48-220	22,0	48	100	70	227,03
TC16-48-250	25,0	48	100	70	227,03
TC16-48-280	28,0	48	100	70	227,03

* D2: Ø Mango del macho

* Para informarse sobre el Ø Mango del macho (D2) consultar página 116.

MACHOS M/MF COMPATIBLES PARA PORTAMACHOS CON / SIN EMBRAGUE

D2 mm.								
3,5	4	4,5	6	7	8	9	10	11
M3x0,50R	M3,5x0,60R	M4x0,50R	M4,5x0,50R	M9x1,00D	M8x1,25R	M9x1,25R	M10x1,50R	M13x0,75D
M3x0,60R	M3,5x0,75R	M4x0,70R	M4,5x0,75R	M9x1,25D	M11x0,75D	M12x0,75D		M13x1,00D
M5x0,50D		M4x0,75R	M5x0,50R	M10x0,50D	M11x1,00D	M12x1,00D		M13x1,25D
M5x0,75D		M4x0,80R	M5x0,75R	M10x0,75D	M11x1,25D	M12x1,25D		M13x1,50D
M5x0,80D		M6x0,50D	M5x0,80R	M10x1,00D	M11x1,50D	M12x1,50D		M13x1,75D
M5x0,90D		M6x0,75D	M5x0,90R	M10x1,25D		M12x1,75D		M14x0,75D
		M6x1,00D	M5x1,00R	M10x1,50D				M14x1,00D
			M5,5x0,90R					M14x1,25D
			M6x0,50R					M14x1,50D
			M6x0,75R					M14x2,00D
			M6x1,00R					
			M6x1,25R					
			M8x0,50D					
			M8x0,75D					
			M8x1,00D					
			M8x1,25D					
			M8x1,50D					

D2 mm.							
12	14	16	18	20	22	25	28
M15x1,00D	M18x1,00D	M20x1,00D	M22x1,00D	M27x1,00D	M30x1,00D	M33x1,00D	M34x1,50D
M15x1,25D	M18x1,25D	M20x1,25D	M22x1,25D	M27x1,50D	M30x1,50D	M33x1,50D	M34x2,00D
M15x1,50D	M18x1,50D	M20x1,50D	M22x1,50D	M27x2,00D	M30x2,00D	M33x2,00D	M35x1,50D
M15x2,00D	M18x2,00D	M20x2,00D	M22x2,00D	M27x3,00D	M30x3,00D	M33x3,50D	M35x2,00D
M16x1,00D	M18x2,50D	M20x2,50D	M22x2,50D	M28x1,00D	M30x3,50D		M36x1,50D
M16x1,25D	M19x1,00D	M21x1,00D	M23x1,00D	M28x1,50D	M32x1,00D		M36x2,00D
M16x1,50D	M19x1,25D	M21x1,25D	M23x1,50D	M28x2,00D	M32x1,50D		M36x3,00D
M16x2,00D	M19x1,50D	M21x1,50D	M24x1,00D		M32x2,00D		M36x4,00D
M17x1,00D	M19x2,00D		M24x1,25D				M38x1,50D
M17x1,25D			M24x1,50D				M38x2,00D
M17x1,50D			M24x2,00D				
			M24x3,00D				
			M25x1,00D				
			M25x1,25D				
			M25x1,50D				
			M25x2,00D				
			M26x1,00D				
			M26x1,50D				
			M26x2,00D				

* D2: Mango del macho

* La tabla se refiere a mangos según norma DIN:

* R = Reforzado = DIN371

* D = Delgado = DIN374 / DIN376

PINZAS DE PRECISIÓN

Ref. ER8

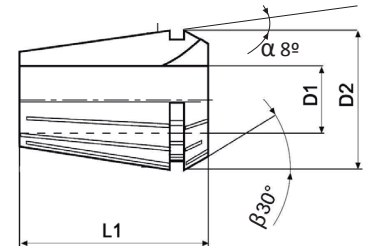
**TIPO
ER**

**DIN
6499-B**

• Pinzas aptas para herramientas con mangos cilíndricos lisos.

D2: 8,5
L1: 13,5

α : 8°
 β : 30°



ER8					
	EXC 0,01 INDUSTRIAL		EXC 0,005 ALTA PRECISIÓN		
	Capacidad D1	€		Capacidad D1	€
ER8-1	0,5-1,0	42,80	ER8-1MICRO	0,5-1,0	-
ER8-1,5	1,0-1,5	42,80	ER8-1,5MICRO	1,0-1,5	-
ER8-2	1,5-2,0	36,68	ER8-2MICRO	1,5-2,0	-
ER8-2,5	2,0-2,5	36,68	ER8-2,5MICRO	2,0-2,5	-
ER8-3	2,5-3,0	32,20	ER8-3MICRO	2,5-3,0	-
ER8-3,5	3,0-3,5	32,20	ER8-3,5MICRO	3,0-3,5	-
ER8-4	3,5-4,0	32,20	ER8-4MICRO	3,5-4,0	-
ER8-4,5	4,0-4,5	32,20	ER8-4,5MICRO	4,0-4,5	-
ER8-5	4,5-5,0	32,20	ER8-5MICRO	4,5-5,0	-

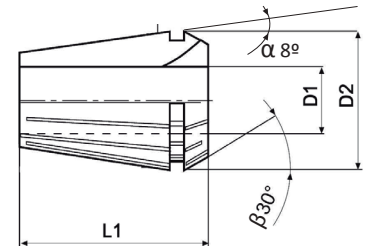
Ref. ER11

**TIPO
ER**

**DIN
6499-B**

D2: 11,5
L1: 18

α : 8°
 β : 30°

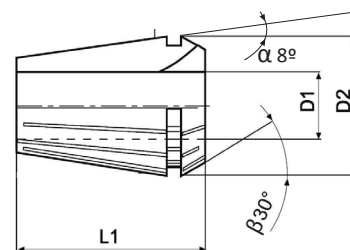


ER11					
	EXC 0,01 INDUSTRIAL		EXC 0,005 ALTA PRECISIÓN		
	Capacidad D1	€		Capacidad D1	€
ER11-1	0,5-1,0	40,76	ER11-1MICRO	0,5-1,0	-
ER11-1,5	1,0-1,5	40,76	ER11-1,5MICRO	1,0-1,5	-
ER11-2	1,5-2,0	34,94	ER11-2MICRO	1,5-2,0	-
ER11-2,5	2,0-2,5	34,94	ER11-2,5MICRO	2,0-2,5	-
ER11-3	2,5-3,0	30,67	ER11-3MICRO	2,5-3,0	-
ER11-3,5	3,0-3,5	30,67	ER11-3,5MICRO	3,0-3,5	43,91
ER11-4	3,5-4,0	30,67	ER11-4MICRO	3,5-4,0	43,91
ER11-4,5	4,0-4,5	30,67	ER11-4,5MICRO	4,0-4,5	43,91
ER11-5	4,5-5,0	30,67	ER11-5MICRO	4,5-5,0	43,91
ER11-5,5	5,0-5,5	30,67	ER11-5,5MICRO	5,0-5,5	43,91
ER11-6	5,5-6,0	30,67	ER11-6MICRO	5,5-6,0	43,91
ER11-6,5	6,0-6,6	30,67	ER11-6,5MICRO	6,0-6,6	43,91
ER11-7	6,5-7,0	30,67	ER11-7MICRO	6,5-7,0	43,91

PINZAS DE PRECISIÓN

Ref. ER16

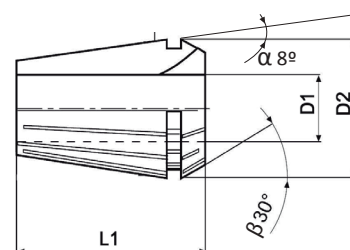
TIPO
ER
DIN
6499-B

 D2: 17 $\alpha: 8^\circ$
 L1: 27,5 $\beta: 30^\circ$

ER16

	EXC 0,01 INDUSTRIAL		EXC 0,005 ALTA PRECISIÓN		
	Capacidad D1	€	Capacidad D1	€	
ER16-1	0,5-1,0	36,52	ER16-1MICRO	0,5-1,0	-
ER16-2	1,0-2,0	32,88	ER16-2MICRO	1,0-2,0	-
ER16-3	2,0-3,0	29,58	ER16-3MICRO	2,0-3,0	-
ER16-4	3,0-4,0	29,58	ER16-4MICRO	3,0-4,0	39,10
ER16-5	4,0-5,0	29,58	ER16-5MICRO	4,0-5,0	39,10
ER16-6	5,0-6,0	29,58	ER16-6MICRO	5,0-6,0	39,10
ER16-7	6,0-7,0	29,58	ER16-7MICRO	6,0-7,0	39,10
ER16-8	7,0-8,0	29,58	ER16-8MICRO	7,0-8,0	39,10
ER16-9	8,0-9,0	29,58	ER16-9MICRO	8,0-9,0	39,10
ER16-10	9,0-10,0	29,58	ER16-10MICRO	9,0-10,0	39,10

Ref. ER25

TIPO
ER
DIN
6499-B

 D2: 26 $\alpha: 8^\circ$
 L1: 34 $\beta: 30^\circ$

ER25

	EXC 0,01 INDUSTRIAL		EXC 0,005 ALTA PRECISIÓN		
	Capacidad D1	€	Capacidad D1	€	
ER25-2	1,0-2,0	33,87	ER25-2MICRO	1,0-2,0	-
ER25-3	2,0-3,0	33,87	ER25-3MICRO	2,0-3,0	-
ER25-4	3,0-4,0	33,87	ER25-4MICRO	3,0-4,0	42,11
ER25-5	4,0-5,0	33,87	ER25-5MICRO	4,0-5,0	42,11
ER25-6	5,0-6,0	33,87	ER25-6MICRO	5,0-6,0	42,11
ER25-7	6,0-7,0	33,87	ER25-7MICRO	6,0-7,0	42,11
ER25-8	7,0-8,0	33,87	ER25-8MICRO	7,0-8,0	42,11
ER25-9	8,0-9,0	33,87	ER25-9MICRO	8,0-9,0	42,11
ER25-10	9,0-10,0	33,87	ER25-10MICRO	9,0-10,0	42,11
ER25-11	10,0-11,0	33,87	ER25-11MICRO	10,0-11,0	42,11
ER25-12	11,0-12,0	33,87	ER25-12MICRO	11,0-12,0	42,11
ER25-13	12,0-13,0	33,87	ER25-13MICRO	12,0-13,0	42,11
ER25-14	13,0-14,0	33,87	ER25-14MICRO	13,0-14,0	42,11
ER25-15	14,0-15,0	33,87	ER25-15MICRO	14,0-15,0	42,11
ER25-16	15,0-16,0	33,87	ER25-16MICRO	15,0-16,0	42,11

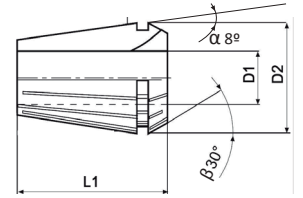
PINZAS DE PRECISIÓN

Ref. ER32

TIPO
ER

DIN
6499-B

D2: 33 α: 8°
L1: 40 β: 30°



ER32

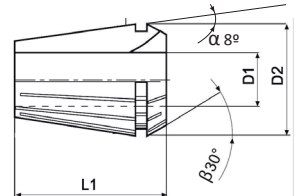
EXC 0,01 INDUSTRIAL			EXC 0,005 ALTA PRECISIÓN		
	Capacidad D1	€		Capacidad D1	€
ER32-3	2,0-3,0	32,19	ER32-3MICRO	2,0-3,0	-
ER32-4	3,0-4,0	32,19	ER32-4MICRO	3,0-4,0	43,97
ER32-5	4,0-5,0	32,19	ER32-5MICRO	4,0-5,0	43,97
ER32-6	5,0-6,0	32,19	ER32-6MICRO	5,0-6,0	43,97
ER32-7	6,0-7,0	32,19	ER32-7MICRO	6,0-7,0	43,97
ER32-8	7,0-8,0	32,19	ER32-8MICRO	7,0-8,0	43,97
ER32-9	8,0-9,0	32,19	ER32-9MICRO	8,0-9,0	43,97
ER32-10	9,0-10,0	32,19	ER32-10MICRO	9,0-10,0	43,97
ER32-11	10,0-11,0	32,19	ER32-11MICRO	10,0-11,0	43,97
ER32-12	11,0-12,0	32,19	ER32-12MICRO	11,0-12,0	43,97
ER32-13	12,0-13,0	32,19	ER32-13MICRO	12,0-13,0	43,97
ER32-14	13,0-14,0	32,19	ER32-14MICRO	13,0-14,0	43,97
ER32-15	14,0-15,0	32,19	ER32-15MICRO	14,0-15,0	43,97
ER32-16	15,0-16,0	32,19	ER32-16MICRO	15,0-16,0	43,97
ER32-17	16,0-17,0	32,19	ER32-17MICRO	16,0-17,0	43,97
ER32-18	17,0-18,0	32,19	ER32-18MICRO	17,0-18,0	43,97
ER32-19	18,0-19,0	32,19	ER32-19MICRO	18,0-19,0	43,97
ER32-20	19,0-20,0	32,19	ER32-20MICRO	19,0-20,0	43,97

Ref. ER40

TIPO
ER

DIN
6499-B

D2: 41 α: 8°
L1: 46 β: 30°



ER40

EXC 0,01 INDUSTRIAL			EXC 0,005 ALTA PRECISIÓN		
	Capacidad D1	€		Capacidad D1	€
ER40-3	2,0-3,0	40,91	ER40-3MICRO	2,0-3,0	-
ER40-4	3,0-4,0	40,91	ER40-4MICRO	3,0-4,0	52,33
ER40-5	4,0-5,0	40,91	ER40-5MICRO	4,0-5,0	52,33
ER40-6	5,0-6,0	40,91	ER40-6MICRO	5,0-6,0	52,33
ER40-7	6,0-7,0	40,91	ER40-7MICRO	6,0-7,0	52,33
ER40-8	7,0-8,0	40,91	ER40-8MICRO	7,0-8,0	52,33
ER40-9	8,0-9,0	40,91	ER40-9MICRO	8,0-9,0	52,33
ER40-10	9,0-10,0	40,91	ER40-10MICRO	9,0-10,0	52,33
ER40-11	10,0-11,0	40,91	ER40-11MICRO	10,0-11,0	52,33
ER40-12	11,0-12,0	40,91	ER40-12MICRO	11,0-12,0	52,33
ER40-13	12,0-13,0	40,91	ER40-13MICRO	12,0-13,0	52,33
ER40-14	13,0-14,0	40,91	ER40-14MICRO	13,0-14,0	52,33
ER40-15	14,0-15,0	40,91	ER40-15MICRO	14,0-15,0	52,33
ER40-16	15,0-16,0	40,91	ER40-16MICRO	15,0-16,0	52,33
ER40-17	16,0-17,0	40,91	ER40-17MICRO	16,0-17,0	52,33
ER40-18	17,0-18,0	40,91	ER40-18MICRO	17,0-18,0	52,33
ER40-19	18,0-19,0	40,91	ER40-19MICRO	18,0-19,0	52,33
ER40-20	19,0-20,0	40,91	ER40-20MICRO	19,0-20,0	52,33
ER40-21	20,0-21,0	40,91	ER40-21MICRO	20,0-21,0	52,33
ER40-22	21,0-22,0	40,91	ER40-22MICRO	21,0-22,0	52,33
ER40-23	22,0-23,0	40,91	ER40-23MICRO	22,0-23,0	52,33
ER40-24	23,0-24,0	40,91	ER40-24MICRO	23,0-24,0	52,33
ER40-25	24,0-25,0	40,91	ER40-25MICRO	24,0-25,0	52,33
ER40-26	25,0-26,0	40,91	ER40-26MICRO	25,0-26,0	52,33

AFILADORA PROFESIONAL PATENTADA BLUE-MASTER


Ref. AFB10

*Incluye maletín y muela de repuesto


 "Olvide los problemas eléctricos de otras afiladoras"
 Incluye dispositivo anti-cortocircuitos

AFB10

CAPACIDAD AFILADO:

 \emptyset
3-13

ÁNGULOS DE PUNTA

118°

TIPOS DE AFILADOS:



REAFILA BROCAS:

HSS	HSSCo	MD	TiN	PMD
-----	-------	----	------------	-----

216,18 €

AFILE BROCAS EN 4 SENCILLOS PASOS:

1
 Posicione y ajuste la broca en el portabrocas

2
 Afíle la broca

3
 Compruebe el afilado convencional

4
 Afilado secundario en cruz (Split Point)

PORTABROCAS DE REPUESTO

PAFB10

26,38 €

MUELA DE DIAMANTE GRANO ESTANDAR

MAFB10

27,63 €

AFILADORAS PARA BROCAS DRILL DOCTOR

750X
Alta precisión



AFB1				
CAPACIDAD AFILADO:	Ø 2,5-19			
ÁNGULOS DE PUNTA	118°	135°		
TIPOS DE AFILADOS:				
REAFILA BROCAS:	HSS	HSSCo	MD	TiN
				PMD
				386,47 €

*Incluye maletín

500X
Afilado profesional



AFB2				
CAPACIDAD AFILADO:	Ø 2,5-13			
ÁNGULOS DE PUNTA	118°	135°		
TIPOS DE AFILADOS:				
REAFILA BROCAS:	HSS	HSSCo	MD	TiN
				PMD
				324,63 €

360X
Práctico y económico



AFB3				
CAPACIDAD AFILADO:	Ø 2,5-13			
ÁNGULOS DE PUNTA	118°			
TIPOS DE AFILADOS:				
REAFILA BROCAS:	HSS	HSSCo	MD	TiN
				PMD
				156,45 €

ACCESORIOS PARA AFILADORAS
PORTABROCAS PARA AFILADORAS


Para 750X

AFB1PB

62,46 €



Para 500X

AFB2PB

62,48 €



Para 360X

AFB3PB

62,48 €


 Para Brocas a
 izquierdas

AFB2PBI

62,48 €

**MUELA DE GRANO BASTO PARA AFILADORAS
 750X, 500X**
**MUELA GRANO STANDARD PARA AFILADORAS
 750X, 500X**

AFBT

59,77 €


AFBR

59,77 €

**TORNILLOS PARA AFILADORAS
 750X Y 500X**
**MALETÍN VACÍO PARA AFILADORAS
 750X, 500X Y 360X**

AFBTLL

6,85 €


AFBV

28,27 €