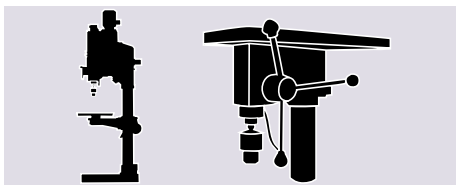


# MANDRINI



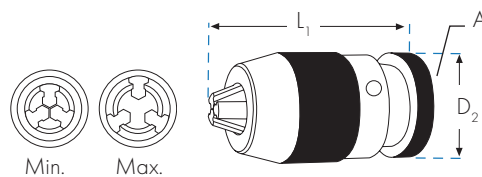
**BLUE-MASTER<sup>®</sup>**  
by *celesa*

CUTTING TECHNOLOGIES

**MANDRINI INDUSTRIALI PER TRAPANI A COLONNA O CNC**

**PREC.  
<0,05**

Ref. DC1

ALTA PRECISIONE

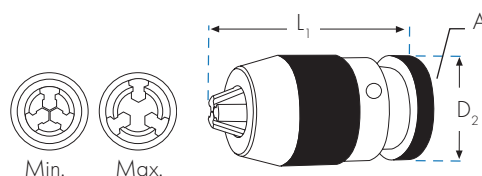


DC1						
	PRECISIONE mm	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	€
DC1-16-B16	<0,05	1-16	B16	53	119	173,92
DC1-20-B22	<0,05	5-20	B22	58	130	200,12

**PREC.  
<0,12**

Ref. DC2

INDUSTRIALE

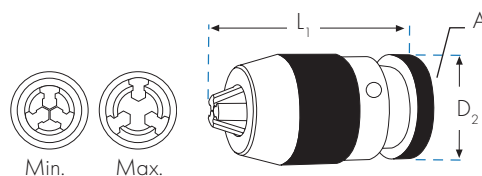


DC2						
	PRECISIONE mm	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	€
DC2-16-B18	<0,12	1-16	B18	53	119	147,56

**PREC.  
<0,20**

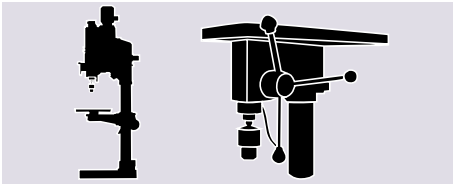
Ref. DC3

INDUSTRIALE LEGGERO

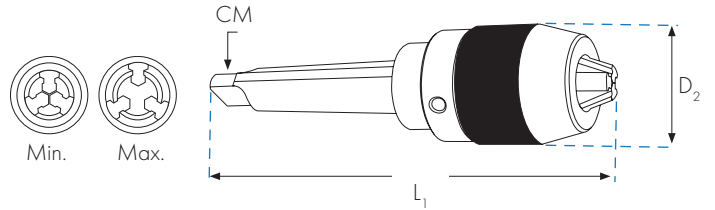


DC3						
	PRECISIONE mm	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	€
DC3-13-B16	<0,20	1-13	B16	43	94	75,36
DC3-13-3/8	<0,20	1-13	3/8-24 UNF	43	94	75,36
DC3-13-1/2	<0,20	1-13	1/2-20 UNF	43	94	75,36
DC3-16-B16	<0,20	1-16	B16	48	119	116,97
DC3-16-B18	<0,20	1-16	B18	48	119	116,97

**MANDRINI INDUSTRIALI CON CODOLO CONICO PER TRAPANI A COLONNA O CNC**

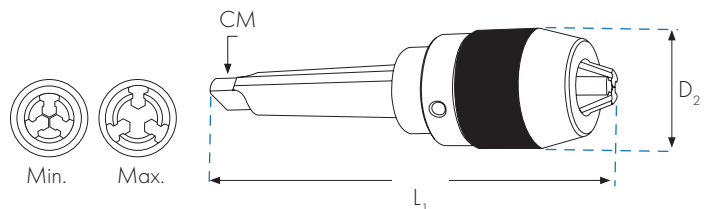


**PREC. <0,05** Ref. DC10 **ALTA PRECISIONE**



DC10						
	PRECISIONE mm	Min.-Max. mm	CM	D2 mm	L1 mm	€
DC10-13-CM3	<0,05	1-13	CM3	51	192	256,53
DC10-13-CM4	<0,05	1-13	CM4	51	218	259,02
DC10-16-CM3	<0,05	1-16	CM3	56	207	262,29
DC10-16-CM4	<0,05	1-16	CM4	56	232	267,04

**PREC. <0,12** Ref. DC11 **INDUSTRIALE**



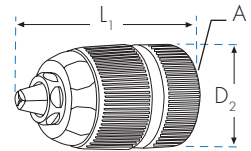
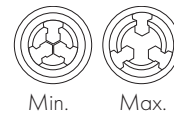
DC11						
	PRECISIONE mm	Min.-Max. mm	CM	D2 mm	L1 mm	€
DC11-13-CM2	<0,12	1-13	CM2	51	174	154,90
DC11-13-CM3	<0,12	1-13	CM3	51	192	154,90
DC11-13-CM4	<0,12	1-13	CM4	51	218	154,90
DC11-16-CM3	<0,12	1-16	CM3	56	207	181,62

**MANDRINI AUTOMATICI PROFESSIONALI**
**<950W**

Ref. DC4



- Bloccaggio automatico.
- Corpo in plastica.
- Per trapano sia in modalità a rotazione sia a percussione.



DC4

	W	Min.-Max. mm	A	D2 mm	L1 mm	€
DC4-13-1/2	<950	1,5-13	1/2-20 UNF	43	75	46,08
DC4-13-1/2-SDS	<950	1,5-13	1/2-20 UNF	43	75	53,16

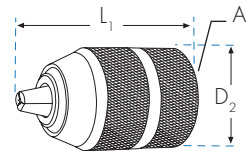
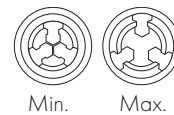
Ref. DC4-13-1/2-SDS

**<1050W**

Ref. DC5



- Bloccaggio automatico.
- Corpo in metallo.
- Alta potenza.
- Ganasce speciali per alto rendimento.
- Per trapano sia in modalità a rotazione sia a percussione.



DC5

	W	Min.-Max. mm	A	D2 mm	L1 mm	€
DC5-13-1/2	<1050	1,5-13	1/2-20 UNF	43	75	53,81
DC5-13-SDS	<1050	1,5-13	1/2-20 UNF	43	75	61,79

Ref. DC5-13-SDS

**<950W**

Ref. DC13



- Si blocca ruotando il trapano ed esercitando una leggera pressione sul mandrino con la mano.
- Pensato per trapani leggeri a batteria.
- Corpo in plastica.

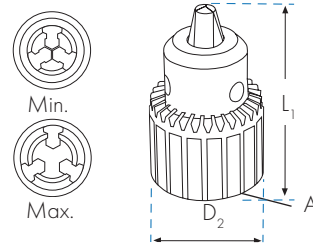


DC13

	W	Min.-Max. mm	A	D2 mm	L1 mm	€
DC13-10-1/2	<950W	0,8-10	1/2-20 UNF	40	65	12,38

Ref. DC13-10-1/2

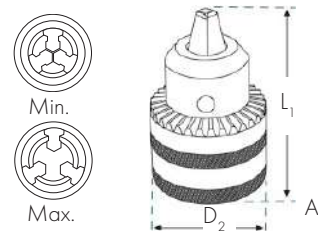
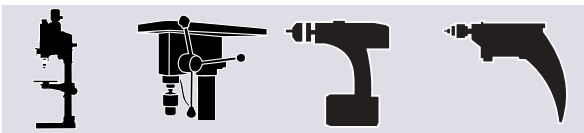
**MANDRINI CON CHIAVE PROFESSIONALI**



- Ref. DC6
- Supporta la percussione, si consiglia l'uso in modalità a rotazione.
  - Chiave inclusa



	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	DC6 €
DC6-06-B10	0,5-6,5	B10	31	50	36,98
DC6-06-3/8	0,5-6,5	3/8-24 UNF	31	50	36,98
DC6-10-1/2	1-10	1/2-20 UNF	37	60	28,96
DC6-13-B12	1-13	B12	46	78	36,98
DC6-13-3/8	1-13	3/8-24 UNF	46	78	53,47
DC6-16-B16	1-16	B16	57	95	44,81
DC6-16-B18	1-16	B18	57	95	44,81
DC6-16-1/2	1-16	1/2-20 UNF	57	95	44,81
DC6-19-B22	5-20	B22	68	115	61,33



- Ref. DC7
- LEGGERO**
- Per trapano sia in modalità a rotazione sia a percussione.
  - Chiave inclusa



	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	DC7 €
DC7-06-B10	0,6-6,5	B10	30	50	15,88
DC7-06-3/8	0,6-6,5	3/8-24 UNF	30	50	15,88
DC7-10-1/2	1,5-10	1/2-20 UNF	33	59	15,54
DC7-13-B12	1,5-13	B12	42	70	18,45
DC7-13-B16	1,5-13	B16	42	70	17,30
DC7-13-3/8	1,5-13	3/8-24 UNF	42	70	16,14
DC7-13-1/2	1,5-13	1/2-20 UNF	42	70	16,14
DC7-13-SDS	1,5-13	1/2-20 UNF	42	70	18,93
DC7-16-1/2	3-16	1/2-20 UNF	51	87	23,30
DC7-16-5/8	3-16	5/8-16 UN	51	87	23,30

Ref. DC7-13-SDS

• Per le chiavi di ricambio per punte consultare la pagina 126

## MANDRINO CON PROLUNGA FLESSIBILE

Ref. DC15-001

- Prolunga flessibile di 1050 mm.
- Mandrino automatico da Ø1 a 6 mm di capacità.
- Velocità massima di lavoro 6000 rpm.



DC15-001

	Min.-Max. mm	D2 mm	L1 mm	€
DC15-001	1-6	30	1050	34,13

## MANDRINO AD ANGOLO

Ref. DC15-002

- Indicato per lavorare in luoghi di difficile accesso.
- Uso esclusivo in modalità a rotazione.
- Mandrino automatico da Ø 1 a 10 mm di capacità.
- Design leggero. Include impugnatura per mancini e destri.



DC15-002

	Min.-Max. mm	D2 mm	α	€
DC15-002	1-10	41	90°	19,98

## SUPPORTO A COLONNA PROFESSIONALE PER TRAPANO

Ref. STE99

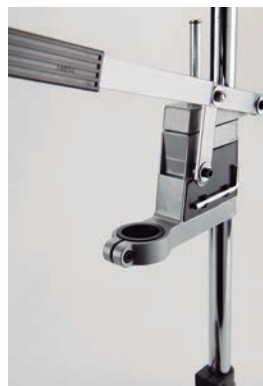
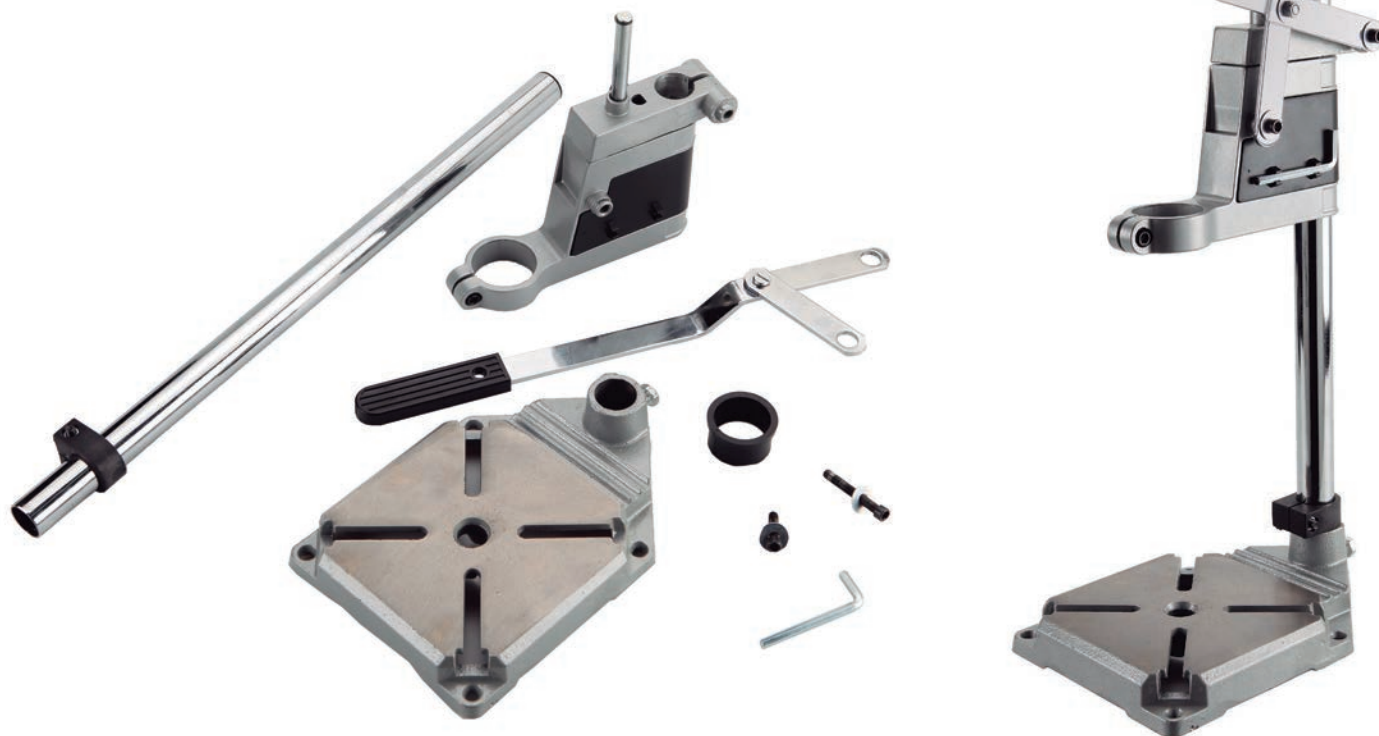
- Maniglia con molla di richiamo integrata (recupera la posizione in modo rapido, semplice e senza alcuno sforzo).
- Regola di controllo di forazione, 60 mm di profondità.
- Supporto a colonna professionale per trapano con  $\varnothing$  43/38 mm.
- Base in ghisa grigia con guide per morsa di stringimento e fori per ancoraggio al banco da lavoro.
- Forazione precisa di superficie, pezzi da lavorare rotondi o listelli.

**43/38  
mm**

**60  
mm**

**510  
mm**

				STE99
	Ø Attacco mm	Profondità forazione mm	Altezza mm	€
STE99	43/38	60	510	64,80



## MINI MANDRINI

### MINI MANDRINO A MACCHINA



P28

Include 3 pinze:

- Da 0 a 1,0 mm

- Da 0,5 a 1,5 mm

- Da 1,0 a 2,0 mm

15,81 €

### MINI MANDRINO CODOLO ESAGONALE



P29

- Codolo 1/4 Esagonale

- Da 0,6 a 6,0 mm

17,94 €

## ACCESSORI PER MANDRINI

### CHIAVI PER MANDRINI



	Min.-Max. mm	Ø mm	DC €
DC-10	1 - 10	6	4,42
DC-13	1 - 13	6	5,25
DC-16	1 - 16	8	6,53
DC-20	5 - 20	9	11,59

### ADATTATORI SDS PLUS



	Filettatura (A)	DC €
DC -3/8	3/8 - 24 UNF	14,57
DC -1/2	1/2 - 20 UNF	14,57

### ADATTATORE 1/4" ESAGONALE



	Codolo	Filettatura	DC-01 €
DC-01	1/4" Esag.	3/8 - 24 UNF	8,43



**ACCESSORI PER PUNTE E MANDRINI**

**CONI RIDUTTORI**

**CONI AUMENTATORI**

**DIN 2185**



**DIN 2187**



CONO MORSE		L <sub>1</sub> mm	CR
EST.	INT.		€
1	0	80	17,20
2	1	92	17,20
3	1	99	23,14
3	2	112	23,60
4	1	124	35,17
4	2	124	33,04
4	3	140	33,04

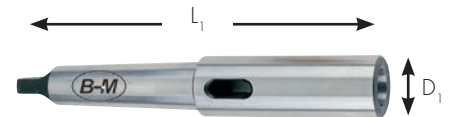
CONO MORSE		L <sub>1</sub> mm	CR
EST.	INT.		€
5	1	156	60,51
5	2	156	55,23
5	3	156	55,23
5	4	171	59,40
6	3	218	119,21
6	4	218	135,26
6	5	218	135,26

CONO MORSE		L <sub>1</sub> mm	D <sub>1</sub> mm	CA
EST.	INT.			€
1	2	160	30	38,08
2	3	196	36	51,78
3	4	240	48	87,33
4	5	300	63	146,57
5	6	415	80	432,49

**CONI RIDUTTORI ESTENSIVI**

**CONI ESTENSIVI**

**DIN 2187**



CONO MORSE		L <sub>1</sub> mm	CA
EST.	INT.		€
2	1	160	26,19
3	1	175	36,42
3	2	194	39,32
4	1	200	55,14
4	2	215	53,89
4	3	240	56,40
5	1	232	136,49

CONO MORSE		L <sub>1</sub> mm	CA
EST.	INT.		€
5	2	247	124,09
5	3	268	107,30
5	4	300	121,29
6	3	330	262,20
6	4	355	262,20
6	5	390	264,12

CONO MORSE		L <sub>1</sub> mm	D <sub>1</sub> mm	CA
EST.	INT.			€
1	1	145	20	26,19
2	2	175	30	38,08
3	3	215	36	57,67
4	4	265	48	93,01
5	5	335	63	200,69
6	6	470	85	460,60

**ELEMENTI DI FISSAGGIO CONICI PER MANDRINI**

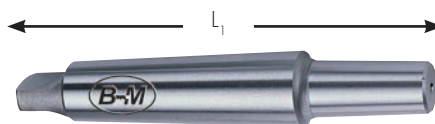
**ESTRATTORE PER ELEMENTI DI FISSAGGIO DI MANDRINI CON CONO STANDARDIZZATO B16 E B18**

**DIN 228**

CONO MORSE

**DIN 238**

MANDRINI



CM	MANDRINI	L <sub>1</sub> mm	CM
			€
1	B10	86	13,06
1	B12	89	9,82
1	B16	99	9,82
1	B18	107	9,82
2	B10	105	15,61
2	B12	106	11,21
2	B16	112	11,21
2	B18	119	11,21
2	B22	130	20,51
3	B12	127	19,20
3	B16	134	14,53
3	B18	140	14,53

CM	MANDRINI	L <sub>1</sub> mm	CM
			€
3	B22	147	24,45
3	B24	157	31,48
4	B16	158	21,84
4	B18	166	22,43
4	B22	176	40,32
4	B24	186	40,79
5	B16	193	82,59
5	B18	200	82,59
5	B22	208	82,52
5	B24	221	89,63
6	B22	240	168,55



CMEXT

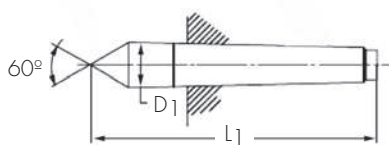
46,76 €

**ACCESSORI PER PUNTE E MANDRINI**
**ESTRATTORE CONO MORSE**
**DIN  
317**

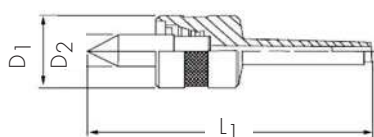

CE			
N°	VALIDI CM	L <sub>1</sub> mm	€
0	0	90	13,90
1	1 / 2	140	16,43
3	3	190	21,70
4	4	225	29,51
5	5 / 6	265	47,92

**ELEMENTI DI FISSAGGIO CONICI PER MANDRINI FILETTATI**
**DIN  
228**


CMR				CMR			
	CM	A	€		CM	A	€
CMR1-3/8	1	3/8-24h	20,52	CMR2-5/8	2	5/8-16h	20,52
CMR1-1/2	1	1/2-20h	20,52	CMR3-3/8	3	3/8-24h	27,77
CMR2-3/8	2	3/8-24h	20,52	CMR3-1/2	3	1/2-20h	27,77
CMR2-1/2	2	1/2-20h	20,52	CMR3-5/8	3	5/8-16h	27,77

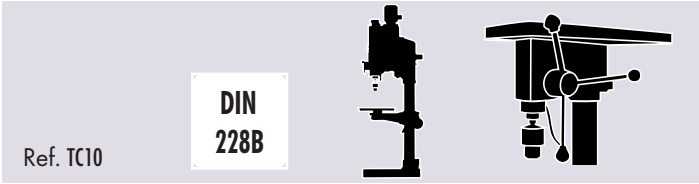
**ACCESSORI PER PUNTE**
**CONTROPUNTE FISSE PER TORNI**


CPC				CPC..MD	
	D <sub>1</sub> mm	L <sub>1</sub> mm	CM INT.	MD	€
CPCM1	12	80	1		
CPCM2	18	100	2	CPCM2-MD	57,57
CPCM3	24	125	3	CPCM3-MD	78,58
CPCM4	31	160	4	CPCM4-MD	95,84
CPCM5	44	200	5	CPCM5-MD	162,93
CPCM6	63	270	6		

**CONTROPUNTE ROTANTI PER TORNI**


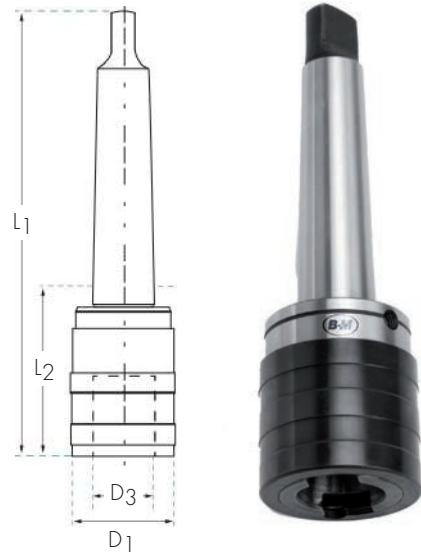
PGC					
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	CM	€
PGCM1	34	18	120	1	144,23
PGCM2	50	21	148	2	160,86
PGCM3	60	24	185	3	216,26
PGCM4	63	30	220	4	256,31
PGCM5	75	44	260	5	370,45

**PORTAMASCHI E TESTINE**

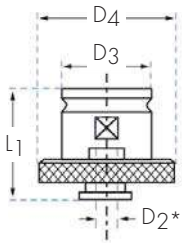


- Con compensazione longitudinale di compressione e trazione.
- Codolo Cono Morse

						TC10
	D1 mm	D3 mm	L1 mm	L2 mm	CM	€
TC10-19-CM2	36	19	122	47	2	307,14
TC10-19-CM3	36	19	141	47	3	392,42
TC10-31-CM3	53	31	165	71	3	504,96
TC10-31-CM4	53	31	189	72	4	562,67
TC10-48-CM4	78	48	222	105	4	851,21
TC10-48-CM5	78	48	255	106	5	908,93

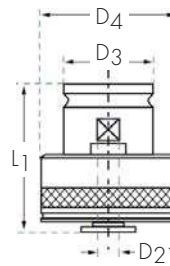


**PORTAMASCHI SENZA FRIZIONE**



					TC15
	D2 mm	D3 mm	L1 mm	D4 mm	€
TC15-19-035	3,5	19	28	30	41,13
TC15-19-040	4,0	19	28	30	41,13
TC15-19-045	4,5	19	28	30	41,13
TC15-19-060	6,0	19	28	30	41,13
TC15-19-070	7,0	19	28	30	41,13
TC15-19-080	8,0	19	28	30	41,13
TC15-19-090	9,0	19	28	30	41,13
TC15-19-100	10,0	19	28	30	41,13
TC15-31-070	7,0	31	46	48	57,75
TC15-31-080	8,0	31	46	48	57,75
TC15-31-090	9,0	31	46	48	57,75
TC15-31-100	10,0	31	46	48	57,75
TC15-31-110	11,0	31	46	48	57,75
TC15-31-120	12,0	31	46	48	57,75
TC15-31-140	14,0	31	46	48	57,75
TC15-31-160	16,0	31	46	48	57,75
TC15-48-110	11,0	48	69	70	152,99
TC15-48-120	12,0	48	69	70	152,99
TC15-48-140	14,0	48	69	70	152,99
TC15-48-160	16,0	48	69	70	152,99
TC15-48-180	18,0	48	69	70	152,99
TC15-48-200	20,0	48	69	70	152,99
TC15-48-220	22,0	48	69	70	152,99
TC15-48-250	25,0	48	69	70	152,99
TC15-48-280	28,0	48	69	70	152,99

**PORTAMASCHI CON FRIZIONE**



					TC16
	D2 mm	D3 mm	L1 mm	D4 mm	€
TC16-19-035	3,5	19	46	32	98,70
TC16-19-040	4,0	19	46	32	98,70
TC16-19-045	4,5	19	46	32	98,70
TC16-19-060	6,0	19	46	32	98,70
TC16-19-070	7,0	19	46	32	98,70
TC16-19-080	8,0	19	46	32	98,70
TC16-19-090	9,0	19	46	32	98,70
TC16-19-100	10,0	19	46	32	98,70
TC16-31-070	7,0	31	69	50	125,02
TC16-31-080	8,0	31	69	50	125,02
TC16-31-090	9,0	31	69	50	125,02
TC16-31-100	10,0	31	69	50	125,02
TC16-31-110	11,0	31	69	50	125,02
TC16-31-120	12,0	31	69	50	125,02
TC16-31-140	14,0	31	69	50	125,02
TC16-31-160	16,0	31	69	50	125,02
TC16-48-110	11,0	48	100	70	276,80
TC16-48-120	12,0	48	100	70	276,80
TC16-48-140	14,0	48	100	70	276,80
TC16-48-160	16,0	48	100	70	276,80
TC16-48-180	18,0	48	100	70	276,80
TC16-48-200	20,0	48	100	70	276,80
TC16-48-220	22,0	48	100	70	276,80
TC16-48-250	25,0	48	100	70	276,80
TC16-48-280	28,0	48	100	70	276,80

\* D2: Ø Codolo del maschio

\* Per informazioni sul Ø codolo del maschio (D2) consultare la pagina 130.

**MASCHI M/MF COMPATIBILI PER PORTAMASCHI CON / SENZA FRIZIONE**

Mandirini e accessori

Rosa

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: Codolo del maschio

\* La tabella si riferisce a codoli a norma DIN:

\* R = Rinforzato = DIN371

\* D = Ridotto = DIN374 / DIN376

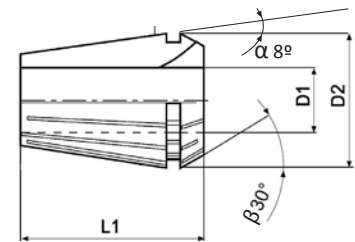
**PINZE DI PRECISIONE**

Ref. ER8

**TIPO**  
**ER**
**DIN**  
**6499-B**

• Pinze adatte ad utensili a codolo cilindrico liscio.

 D2: 8,5  
 L1: 13,5

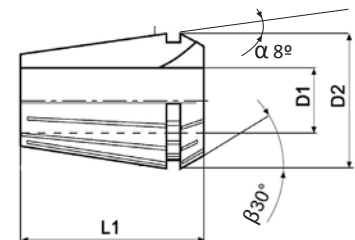
 $\alpha$ : 8°  
 $\beta$ : 30°

**ER8**

	<b>EXC 0,01</b> INDUSTRIALE		<b>EXC 0,005</b> ALTA PRECISIONE		
	Capacità D1	€	Capacità D1	€	
ER8-1	0,5-1,0	50,46	ER8-1MICRO	0,5-1,0	-
ER8-1,5	1,0-1,5	50,46	ER8-1,5MICRO	1,0-1,5	-
ER8-2	1,5-2,0	43,25	ER8-2MICRO	1,5-2,0	-
ER8-2,5	2,0-2,5	43,25	ER8-2,5MICRO	2,0-2,5	-
ER8-3	2,5-3,0	37,97	ER8-3MICRO	2,5-3,0	-
ER8-3,5	3,0-3,5	37,97	ER8-3,5MICRO	3,0-3,5	-
ER8-4	3,5-4,0	37,97	ER8-4MICRO	3,5-4,0	-
ER8-4,5	4,0-4,5	37,97	ER8-4,5MICRO	4,0-4,5	-
ER8-5	4,5-5,0	37,97	ER8-5MICRO	4,5-5,0	-

Ref. ER11

**TIPO**  
**ER**
**DIN**  
**6499-B**

 D2: 11,5  
 L1: 18

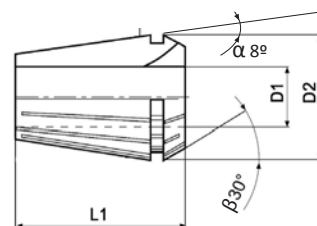
 $\alpha$ : 8°  
 $\beta$ : 30°

**ER11**

	<b>EXC 0,01</b> INDUSTRIALE		<b>EXC 0,005</b> ALTA PRECISIONE		
	Capacità D1	€	Capacità D1	€	
ER11-1	0,5-1,0	48,06	ER11-1MICRO	0,5-1,0	-
ER11-1,5	1,0-1,5	48,06	ER11-1,5MICRO	1,0-1,5	-
ER11-2	1,5-2,0	41,20	ER11-2MICRO	1,5-2,0	-
ER11-2,5	2,0-2,5	41,20	ER11-2,5MICRO	2,0-2,5	-
ER11-3	2,5-3,0	36,17	ER11-3MICRO	2,5-3,0	-
ER11-3,5	3,0-3,5	36,17	ER11-3,5MICRO	3,0-3,5	51,78
ER11-4	3,5-4,0	36,17	ER11-4MICRO	3,5-4,0	51,78
ER11-4,5	4,0-4,5	36,17	ER11-4,5MICRO	4,0-4,5	51,78
ER11-5	4,5-5,0	36,17	ER11-5MICRO	4,5-5,0	51,78
ER11-5,5	5,0-5,5	36,17	ER11-5,5MICRO	5,0-5,5	51,78
ER11-6	5,5-6,0	36,17	ER11-6MICRO	5,5-6,0	51,78
ER11-6,5	6,0-6,6	36,17	ER11-6,5MICRO	6,0-6,6	51,78
ER11-7	6,5-7,0	36,17	ER11-7MICRO	6,5-7,0	51,78

**PINZE DI PRECISIONE**

Ref. ER16

**TIPO**  
**ER**
**DIN**  
**6499-B**

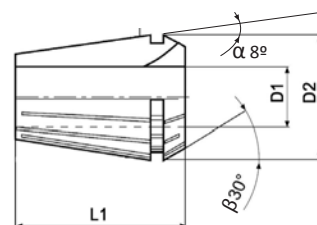
D2: 17      $\alpha$ : 8°  
L1: 27,5      $\beta$ : 30°


ER16

	EXC 0,01 INDUSTRIALE		EXC 0,005 ALTA PRECISIONE		
	Capacità D1	€	Capacità D1	€	
ER16-1	0,5-1,0	43,07	ER16-1 MICRO	0,5-1,0	-
ER16-2	1,0-2,0	38,77	ER16-2 MICRO	1,0-2,0	-
ER16-3	2,0-3,0	34,88	ER16-3 MICRO	2,0-3,0	-
ER16-4	3,0-4,0	34,88	ER16-4 MICRO	3,0-4,0	46,11
ER16-5	4,0-5,0	34,88	ER16-5 MICRO	4,0-5,0	46,11
ER16-6	5,0-6,0	34,88	ER16-6 MICRO	5,0-6,0	46,11
ER16-7	6,0-7,0	34,88	ER16-7 MICRO	6,0-7,0	46,11
ER16-8	7,0-8,0	34,88	ER16-8 MICRO	7,0-8,0	46,11
ER16-9	8,0-9,0	34,88	ER16-9 MICRO	8,0-9,0	46,11
ER16-10	9,0-10,0	34,88	ER16-10 MICRO	9,0-10,0	46,11

Ref. ER25

**TIPO**  
**ER**
**DIN**  
**6499-B**

D2: 26      $\alpha$ : 8°  
L1: 34      $\beta$ : 30°


ER25

	EXC 0,01 INDUSTRIALE		EXC 0,005 ALTA PRECISIONE		
	Capacità D1	€	Capacità D1	€	
ER25-2	1,0-2,0	39,94	ER25-2 MICRO	1,0-2,0	-
ER25-3	2,0-3,0	39,94	ER25-3 MICRO	2,0-3,0	-
ER25-4	3,0-4,0	39,94	ER25-4 MICRO	3,0-4,0	49,65
ER25-5	4,0-5,0	39,94	ER25-5 MICRO	4,0-5,0	49,65
ER25-6	5,0-6,0	39,94	ER25-6 MICRO	5,0-6,0	49,65
ER25-7	6,0-7,0	39,94	ER25-7 MICRO	6,0-7,0	49,65
ER25-8	7,0-8,0	39,94	ER25-8 MICRO	7,0-8,0	49,65
ER25-9	8,0-9,0	39,94	ER25-9 MICRO	8,0-9,0	49,65
ER25-10	9,0-10,0	39,94	ER25-10 MICRO	9,0-10,0	49,65
ER25-11	10,0-11,0	39,94	ER25-11 MICRO	10,0-11,0	49,65
ER25-12	11,0-12,0	39,94	ER25-12 MICRO	11,0-12,0	49,65
ER25-13	12,0-13,0	39,94	ER25-13 MICRO	12,0-13,0	49,65
ER25-14	13,0-14,0	39,94	ER25-14 MICRO	13,0-14,0	49,65
ER25-15	14,0-15,0	39,94	ER25-15 MICRO	14,0-15,0	49,65
ER25-16	15,0-16,0	39,94	ER25-16 MICRO	15,0-16,0	49,65

**PINZE DI PRECISIONE**

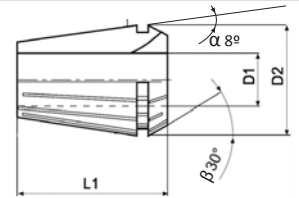
Ref. ER32

**TIPO**  
**ER**

**DIN**  
**6499-B**

D2: 33  
L1: 40

$\alpha$ : 8°  
 $\beta$ : 30°



ER32

	EXC 0,01 INDUSTRIALE		EXC 0,005 ALTA PRECISIONE		
	Capacità D1	€	Capacità D1	€	
ER32-3	2,0-3,0	37,96	ER32-3MICRO	2,0-3,0	-
ER32-4	3,0-4,0	37,96	ER32-4MICRO	3,0-4,0	51,85
ER32-5	4,0-5,0	37,96	ER32-5MICRO	4,0-5,0	51,85
ER32-6	5,0-6,0	37,96	ER32-6MICRO	5,0-6,0	51,85
ER32-7	6,0-7,0	37,96	ER32-7MICRO	6,0-7,0	51,85
ER32-8	7,0-8,0	37,96	ER32-8MICRO	7,0-8,0	51,85
ER32-9	8,0-9,0	37,96	ER32-9MICRO	8,0-9,0	51,85
ER32-10	9,0-10,0	37,96	ER32-10MICRO	9,0-10,0	51,85
ER32-11	10,0-11,0	37,96	ER32-11MICRO	10,0-11,0	51,85
ER32-12	11,0-12,0	37,96	ER32-12MICRO	11,0-12,0	51,85
ER32-13	12,0-13,0	37,96	ER32-13MICRO	12,0-13,0	51,85
ER32-14	13,0-14,0	37,96	ER32-14MICRO	13,0-14,0	51,85
ER32-15	14,0-15,0	37,96	ER32-15MICRO	14,0-15,0	51,85
ER32-16	15,0-16,0	37,96	ER32-16MICRO	15,0-16,0	51,85
ER32-17	16,0-17,0	37,96	ER32-17MICRO	16,0-17,0	51,85
ER32-18	17,0-18,0	37,96	ER32-18MICRO	17,0-18,0	51,85
ER32-19	18,0-19,0	37,96	ER32-19MICRO	18,0-19,0	51,85
ER32-20	19,0-20,0	37,96	ER32-20MICRO	19,0-20,0	51,85

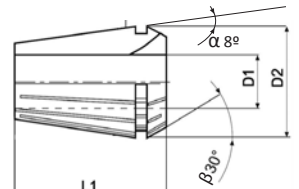
Ref. ER40

**TIPO**  
**ER**

**DIN**  
**6499-B**

D2: 41  
L1: 46

$\alpha$ : 8°  
 $\beta$ : 30°



ER40

	EXC 0,01 INDUSTRIALE		EXC 0,005 ALTA PRECISIONE		
	Capacità D1	€	Capacità D1	€	
ER40-3	2,0-3,0	48,24	ER40-3MICRO	2,0-3,0	-
ER40-4	3,0-4,0	48,24	ER40-4MICRO	3,0-4,0	61,70
ER40-5	4,0-5,0	48,24	ER40-5MICRO	4,0-5,0	61,70
ER40-6	5,0-6,0	48,24	ER40-6MICRO	5,0-6,0	61,70
ER40-7	6,0-7,0	48,24	ER40-7MICRO	6,0-7,0	61,70
ER40-8	7,0-8,0	48,24	ER40-8MICRO	7,0-8,0	61,70
ER40-9	8,0-9,0	48,24	ER40-9MICRO	8,0-9,0	61,70
ER40-10	9,0-10,0	48,24	ER40-10MICRO	9,0-10,0	61,70
ER40-11	10,0-11,0	48,24	ER40-11MICRO	10,0-11,0	61,70
ER40-12	11,0-12,0	48,24	ER40-12MICRO	11,0-12,0	61,70
ER40-13	12,0-13,0	48,24	ER40-13MICRO	12,0-13,0	61,70
ER40-14	13,0-14,0	48,24	ER40-14MICRO	13,0-14,0	61,70
ER40-15	14,0-15,0	48,24	ER40-15MICRO	14,0-15,0	61,70
ER40-16	15,0-16,0	48,24	ER40-16MICRO	15,0-16,0	61,70
ER40-17	16,0-17,0	48,24	ER40-17MICRO	16,0-17,0	61,70
ER40-18	17,0-18,0	48,24	ER40-18MICRO	17,0-18,0	61,70
ER40-19	18,0-19,0	48,24	ER40-19MICRO	18,0-19,0	61,70
ER40-20	19,0-20,0	48,24	ER40-20MICRO	19,0-20,0	61,70
ER40-21	20,0-21,0	48,24	ER40-21MICRO	20,0-21,0	61,70
ER40-22	21,0-22,0	48,24	ER40-22MICRO	21,0-22,0	61,70
ER40-23	22,0-23,0	48,24	ER40-23MICRO	22,0-23,0	61,70
ER40-24	23,0-24,0	48,24	ER40-24MICRO	23,0-24,0	61,70
ER40-25	24,0-25,0	48,24	ER40-25MICRO	24,0-25,0	61,70
ER40-26	25,0-26,0	48,24	ER40-26MICRO	25,0-26,0	61,70

**AFFILATRICE PROFESSIONALE CERTIFICATA BLUE-MASTER**


\*Include valigetta e mola di scorta





Ref. AFB10



"Dimentica i problemi elettrici delle altre affilatrici"  
 Include dispositivo anti-cortocircuiti

AFB10

CAPACITÀ AFFILATURA:	Ø 3-13
ANGOLO DI TAGLIO:	118°
TIPI DI AFFILATURE:	 
RIAFFILA PUNTE:	HSS HSSCo MD <b>TiN</b> PMD

274,80 €

**AFFILA PUNTE IN 4 SEMPLICI PASSI:**


**1**  
 Posiziona e regola  
 la punta nel mandrino



**2**  
 Affila la punta



**3**  
 Controlla l'affilatura convenzionale



**4**  
 Affilatura secondaria a croce (Split Point)

**MANDRINO DI RICAMBIO**


PAFB10  
 32,28 €

**MOLA IN DIAMANTE GRANA STANDARD**


MAFB10  
 33,81 €



**AFFILATRICI PER PUNTE DRILL DOCTOR**

**750X**  
Alta precisione



AFB1				
CAPACITÀ AFFILATURA:	Ø 2,5-19			
ANGOLO DI TAGLIO:	118°	135°		
TIPI DI AFFILATURE:				
RIAFFILA PUNTE:	HSS	HSSCo	MD	<b>TiN</b> PMD
*Include valigetta				505,04 €

**500X**  
Affilatura professionale



AFB2				
CAPACITÀ AFFILATURA:	Ø 2,5-13			
ANGOLO DI TAGLIO:	118°	135°		
TIPI DI AFFILATURE:				
RIAFFILA PUNTE:	HSS	HSSCo	MD	<b>TiN</b> PMD
				424,22 €

**XP**  
Pratico ed economico



AFB3				
CAPACITÀ AFFILATURA:	Ø 2,5-13			
ANGOLO DI TAGLIO:	118°			
TIPI DI AFFILATURE:				
RIAFFILA PUNTE:	HSS	HSSCo	MD	<b>TiN</b> PMD
				204,45 €

**ACCESSORI PER AFFILTRICI**
**MANDRINI PER AFFILTRICI**

*Per 750X*

 AFB1PB  
 76,42 €

*Per punte a sinistra*

 AFB2PBI  
 76,45 €

**MOLA GRANA GROSSA PER AFFILTRICI 750X, 500X**

 AFBT  
 73,14 €

**MOLA GRANA STANDARD PER AFFILTRICI 750X, 500X**

 AFBR  
 73,14 €

**VITI PER AFFILTRICI 750X Y 500X**

 AFBTLL  
 8,39 €

**SUPPORTO PER AFB10**

 SOPAFB10  
 30,25 €