



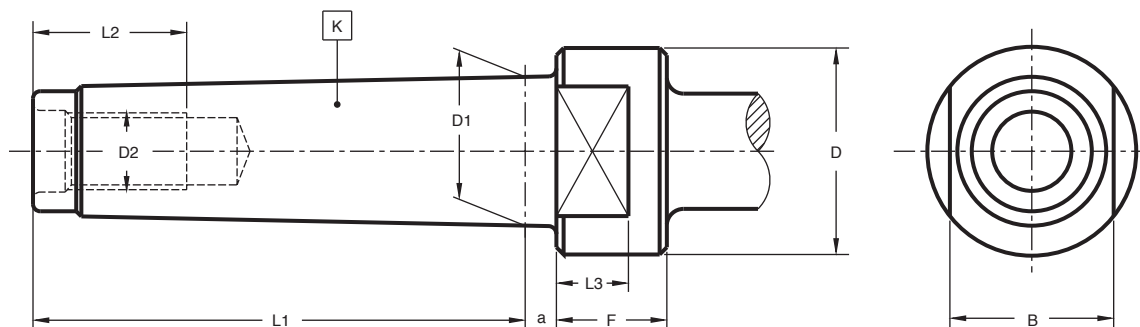
DIN 228 (MORSE)

000 02 00 00 00



MORSE TAPER

DIN 228 form A - DIN 2207

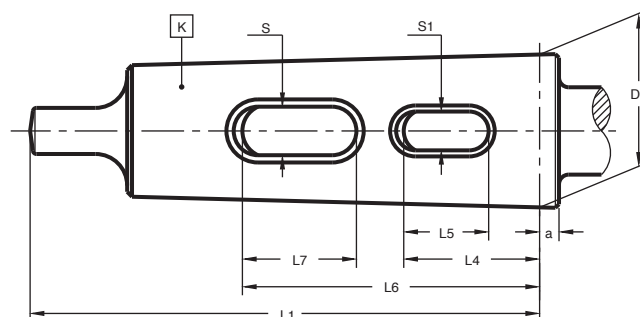


	K	L ₁	L ₂	L ₃	D	D ₁	D ₂	F mī n.	B d9	a
MORSE	1	53,5	16	—	—	12,065	M-6	—	—	3,5
MORSE	2	64	24	—	—	17,780	M-10	—	—	5
MORSE	3	81	24	12	36	23,825	M-12	18	24	5
MORSE	4	102,5	32	15	43	31,267	M-16	23	32	6,5
MORSE	5	129,5	40	18	60	44,399	M-20	28	45	6,5
MORSE	6	182	47	25	84	63,348	M-24	39	65	8



MORSE TAPER

DIN 228 form B - DIN 1806



	K	L ₁	L ₄	L ₅	L ₆	L ₇	D ₁	S	S ₁	a
MORSE	1	62	—	—	—	—	12,065	—	—	3,5
MORSE	2	75	—	—	—	—	17,780	—	—	5
MORSE	3	94	55,5	32	—	—	23,825	—	8,3	5
MORSE	4	117,5	59,5	37	—	—	31,267	—	8,3	6,5
MORSE	5	149,5	64	42	—	—	44,399	—	12,4	6,5
MORSE	6	210	56	35	122	47	63,348	19,5	16,4	8
METRICO	80	220	64	43	136	54	80	26,5	19,5	8

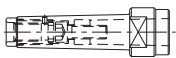
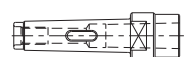
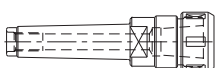
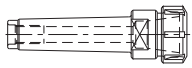
Material: Case-hardening alloy steel. Case-hardened and tempered. Minimum strength in core 880 N/mm².
Surface hardness Rc 57 ÷ 60.
Taper tolerance: Grade AT4.



MORSE TAPER

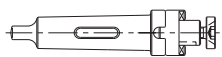
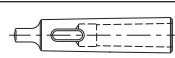
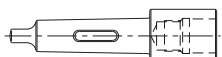
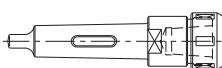
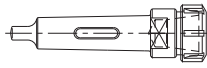
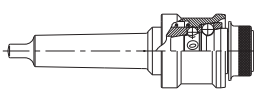
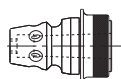
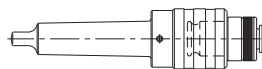


MORSE TAPER WITH THREAD

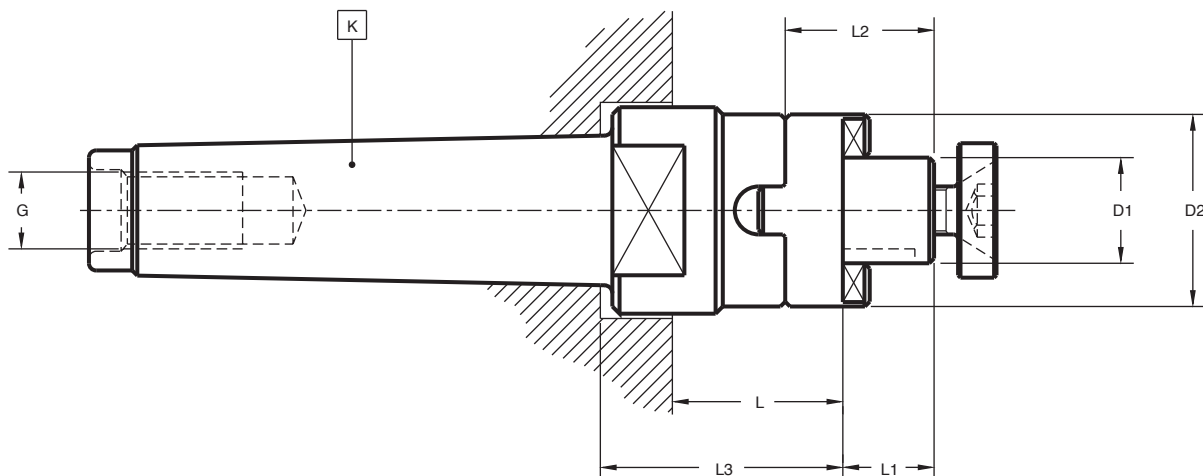
DESCRIPTION		Page
UNIVERSAL ARBORS		6
REDUCING ADAPTERS For tanged Morse taper tools DIN 228-B or Morse taper tools with thread DIN 228-A		7
REDUCING ADAPTERS With double effect pull stud For Morse taper tools with thread DIN 228-A		8
EXTENSIONS AND REDUCING ADAPTERS For tanged Morse taper tools DIN 228-B		9
COLLET CHUCKS FOR DIN 6388 COLLETS		10
COLLET CHUCKS ER TYPE (DIN 6499)		11



MORSE TAPER WITH TANG

DESCRIPTION		Page
UNIVERSAL ARBORS		12
SHELL REAMER ARBORS		13
EXTENSIONS AND REDUCING ADAPTERS For tanged Morse taper tools DIN 228-B	 	14 15
BASIC ADAPTERS FOR MODULAR TOOLING		16
COLLET CHUCKS FOR DIN 6388 COLLETS		17
COLLET CHUCKS ER TYPE (DIN 6499)		18
QUICK-CHANGE HOLDER		20
QUICK-CHANGE ADAPTERS		21 27
QUICK-CHANGE TAPPING CHUCKS Doble axial compensation		28

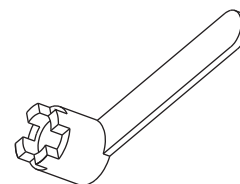
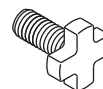
DIN 6362

Maximum circular deviation between K and D₁ ≤ 0,008

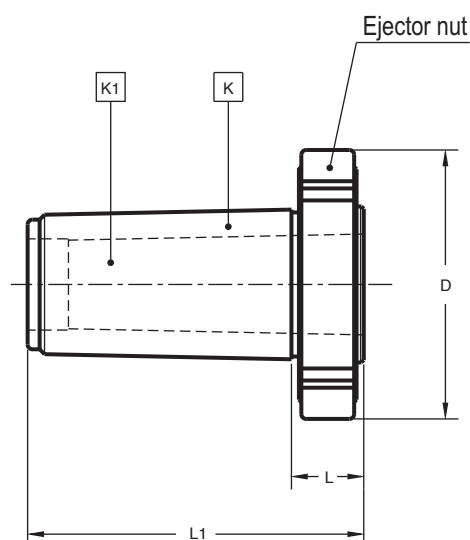
K	D ₁	L	L ₁	L ₂	L ₃	D ₂	G	COD.
M2	13	–	12	22	43	28	M-10	001 01 02 03 20 ⚠
M2	16	–	17	27	43	32	M-10	001 01 02 03 30 ⚠
M2	22	–	19	31	43	40	M-10	001 01 02 03 40 ⚠
M3	22	36	19	31	48	40	M-12	001 01 02 04 40 ⚠
M3	27	36	21	33	48	48	M-12	001 01 02 04 50 ⚠
M3	32	36	24	38	48	58	M-12	001 01 02 04 60 ⚠
M4	16	40	17	27	55	32	M-16	001 01 02 05 30 ⚠
M4	27	40	21	33	55	48	M-16	001 01 02 05 50 ⚠
M4	32	55	24	38	70	58	M-16	001 01 02 05 60 ⚠
M4	40	55	27	41	70	70	M-16	001 01 02 05 70 ⚠
M5	16	55	17	27	73	32	M-20	001 01 02 06 30 ⚠
M5	22	55	19	31	73	40	M-20	001 01 02 06 40 ⚠
M5	32	55	24	38	73	58	M-20	001 01 02 06 60 ⚠
M5	40	55	27	41	73	70	M-20	001 01 02 06 70 ⚠
M5	50	55	30	46	73	90	M-20	001 01 02 06 80 ⚠

⚠ Product outside of our present production program. Price subject to availability.

Accessories, see pages 267-293



D ₁	OPCIONALES					
13	001 99 02 01 20	001 99 01 22 20	001 99 01 12 20	001 99 03 02 20	001 99 01 01 20	001 99 04 01 20
16	001 99 02 01 30	001 99 01 22 30	001 99 01 12 30	001 99 03 02 30	001 99 01 01 30	001 99 04 01 30
22	001 99 02 01 40	001 99 01 22 40	001 99 01 12 40	001 99 03 02 40	001 99 01 01 40	001 99 04 01 40
27	001 99 02 01 50	001 99 01 22 50	001 99 01 12 50	001 99 03 02 50	001 99 01 01 50	001 99 04 01 50
32	001 99 02 01 60	001 99 01 22 60	001 99 01 12 60	001 99 03 02 60	001 99 01 01 60	001 99 04 01 60
40	001 99 02 01 70	001 99 01 22 70	001 99 01 12 70	001 99 03 02 70	001 99 01 01 70	001 99 04 01 70
50	001 99 02 01 80	001 99 01 22 80	001 99 01 12 80	001 99 03 02 80	001 99 01 01 80	001 99 04 01 80



Maximum circular deviation between K and $K_1 \leq 0,008$

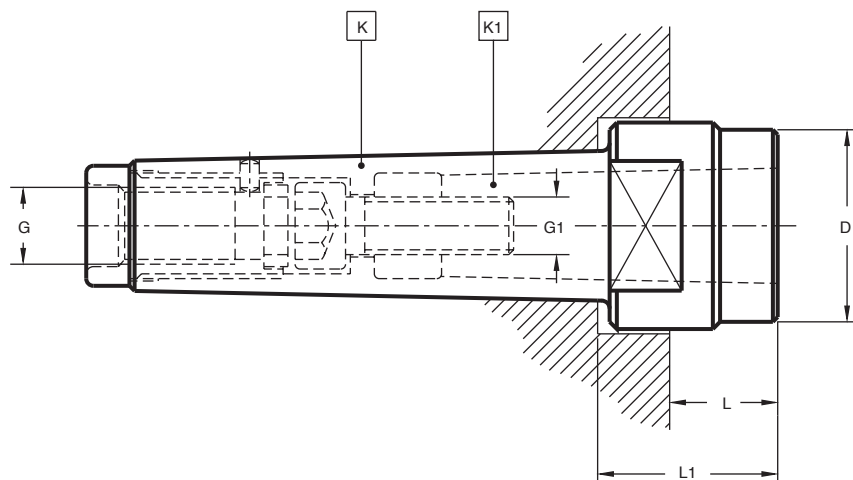
K	K ₁	L	D	L ₁	COD.	Ejector nut 
M3	M1	17	46	60	003 01 01 04 20 	001 99 13 01 50
M3	M2	17	46	60	003 01 01 04 30	001 99 13 01 50
M4	M1	18,5	56	70	003 01 01 05 20 	001 99 13 01 60
M4	M3	18,5	56	70	003 01 01 05 40	001 99 13 01 60
M5	M1	22,5	68	106	003 01 01 06 20 	001 99 13 01 75
M5	M2	22,5	68	106	003 01 01 06 30 	001 99 13 01 75
M5	M4	22,5	68	106	003 01 01 06 50	001 99 13 01 75

 Product outside of our present production program. Price subject to availability.

003 01 02

REDUCING ADAPTERS

With double effect pull stud
For Morse taper tools with thread DIN 228-A



Maximum circular deviation between K and K₁ ≤ 0,008

K	K ₁	L	L ₁	D	G	G ₁	COD.
M3	M1	25	37	25	M-12	M-6	003 01 02 04 20
M4	M1	26,5	41,5	25	M-16	M-6	003 01 02 05 20
M4	M2	26,5	41,5	32	M-16	M-10	003 01 02 05 30
M5	M2	24,5	42,5	32	M-20	M-10	003 01 02 06 30
M5	M3	24,5	42,5	40	M-20	M-12	003 01 02 06 40

Product outside of our present production program. Price subject to availability.

COD.							
003 01 02 04 20	003 99 08 01 20	304 01 00 03 00	301 01 07 04 02	—	—	—	—
003 01 02 04 30	003 99 08 01 30	304 01 00 03 00	301 01 07 04 02	—	—	—	—
003 01 02 05 20	—	—	—	301 01 01 06 50	351 03 05 02 04	351 03 05 01 05	301 04 04 00 50
003 01 02 05 30	—	—	—	301 01 01 10 50	351 03 05 02 05	351 03 05 01 05	301 04 04 00 50
003 01 02 05 40	—	—	—	301 01 01 12 35	351 03 05 02 06	351 03 05 01 05	301 04 04 00 50
003 01 02 06 30	—	—	—	301 01 01 12 70	351 03 05 01 01	351 03 05 01 06	301 04 04 01 00
003 01 02 06 40	—	—	—	301 01 01 12 55	351 03 05 01 02	351 03 05 01 06	301 04 04 01 00

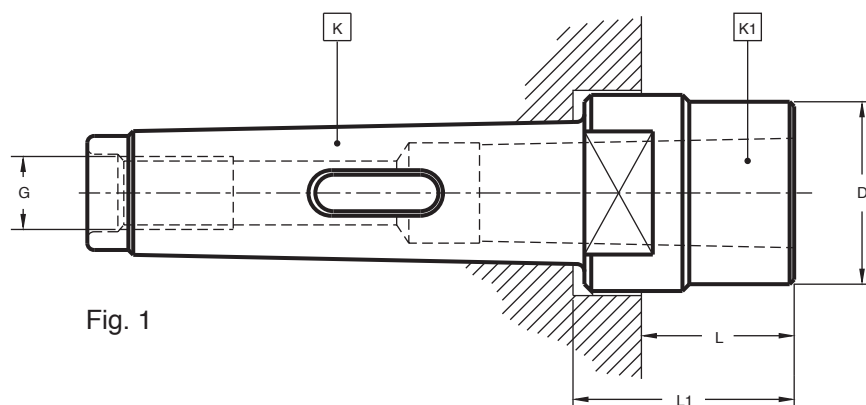


Fig. 1

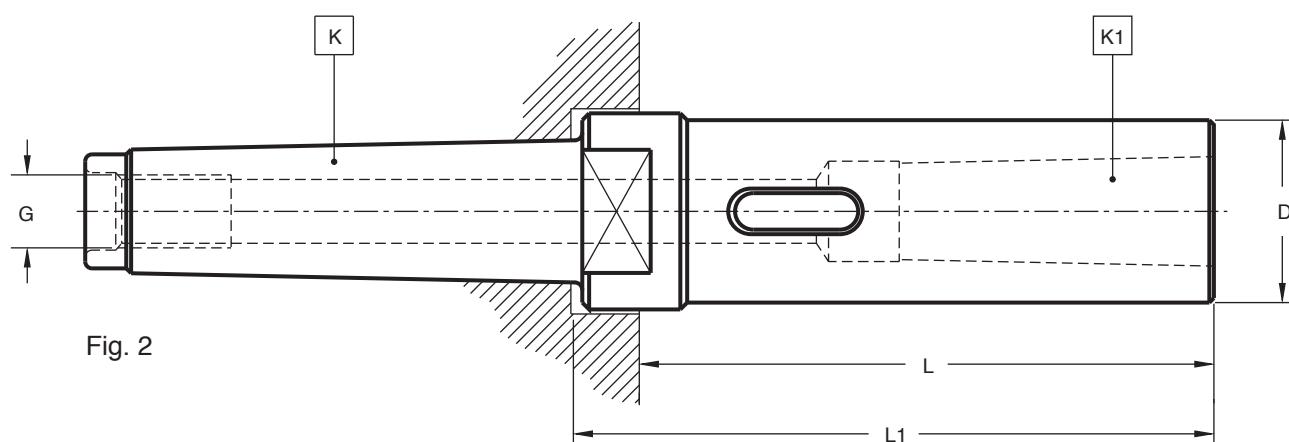


Fig. 2

Maximum circular deviation between K and K₁ ≤ 0,008

Fig.	K	K ₁	L	D	L ₁	G	COD.
1	M3	M1	17	25	29	M-12	003 01 11 04 20 
1	M4	M1	23	25	38	M-16	003 01 11 05 20 
1	M5	M2	23	32	41	M-20	003 01 11 06 30 
2	M5	M2	135	32	153	M-20	003 01 11 06 33 
2	M5	M3	150	40	165	M-20	003 01 11 06 43 
2	M5	M4	190	48	208	M-20	003 01 11 06 53 

 Product outside of our present production program. Price subject to availability.

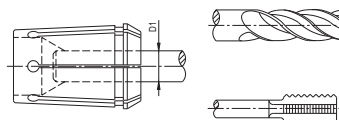
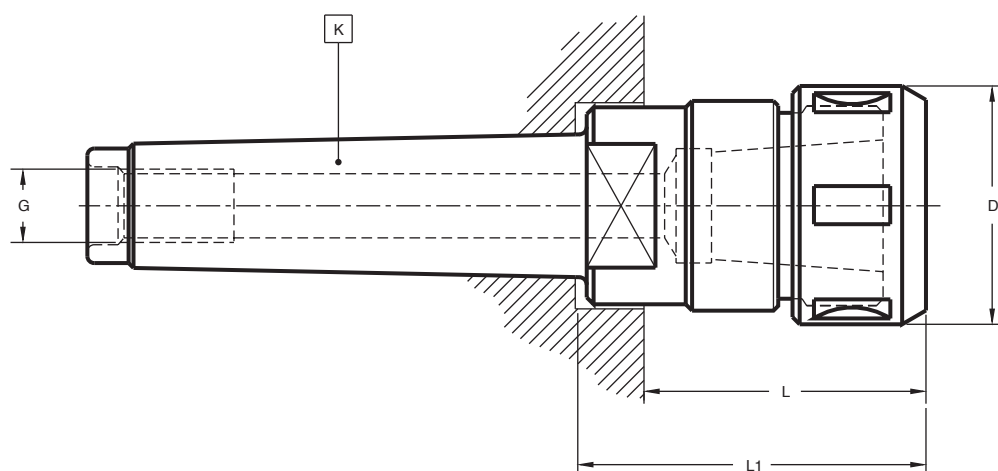
004 01 01

COLLET CHUCKS FOR DIN 6388 COLLETS

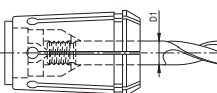
For tools with cylindrical straight shank DIN 1835-A or threaded cylindrical shank DIN 1835-D



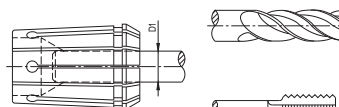
ALTERNATIVE SOLUTION 004 01 06 page 11



002 01



002 03



002 04

Maximum circular deviation between outer taper and collet housing $\leq 0,005$

COLLETS see pages 255-256

K	D ₁ máx.	L	L ₁	D	G	COD.
M3	25	78	90	60	M-12	004 01 01 04 05
M4	25	78	93	60	M-16	004 01 01 05 05
M5	25	52	70	60	M-20	004 01 01 06 05
M5	32	70	88	72	M-20	004 01 01 06 06

For boxes and composition or different sets see pages 265-266

Product outside of our present production program. Price subject to availability.

Accessories, see pages 267-293

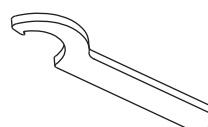
BALANCED
NUT



BEARING
NUT



WRENCH
(OPTIONAL)



D₁ máx.

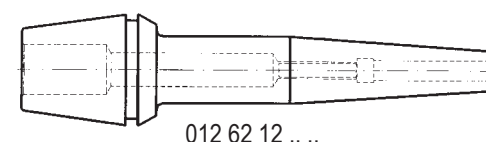
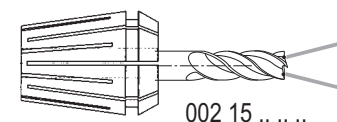
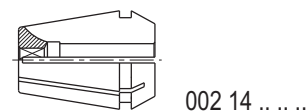
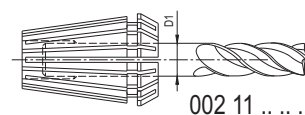
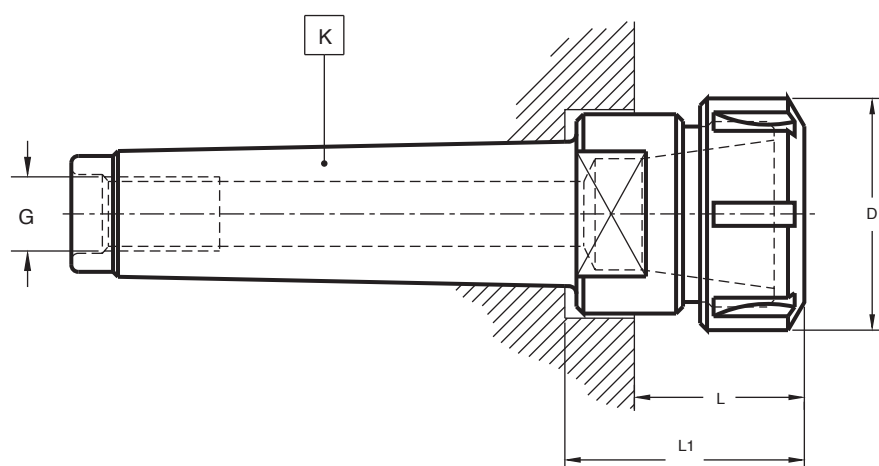
25
32

004 99 01 01 05
004 99 01 01 06

004 99 01 02 05
004 99 01 02 06

004 99 04 09 11
004 99 04 09 12

ALTERNATIVE SOLUTION 004 01 01 page 10

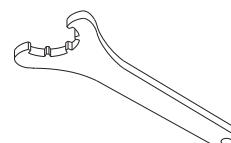
Maximum circular deviation between outer taper and collet housing $\leq 0,005$

COLLETS see pages 257-259

K	SIZE	D ₁ máx.	L	L ₁	D	G	COD.
M2	(ER25)	16	—	55	42	M-10	004 01 06 03 05
M3	(ER32)	20	58	70	50	M-12	004 01 06 04 06
M4	(ER32)	20	55	70	50	M-16	004 01 06 05 06
M4	(ER40)	26	75	90	63	M-16	004 01 06 05 07

For boxes and composition or different sets see pages 265-266

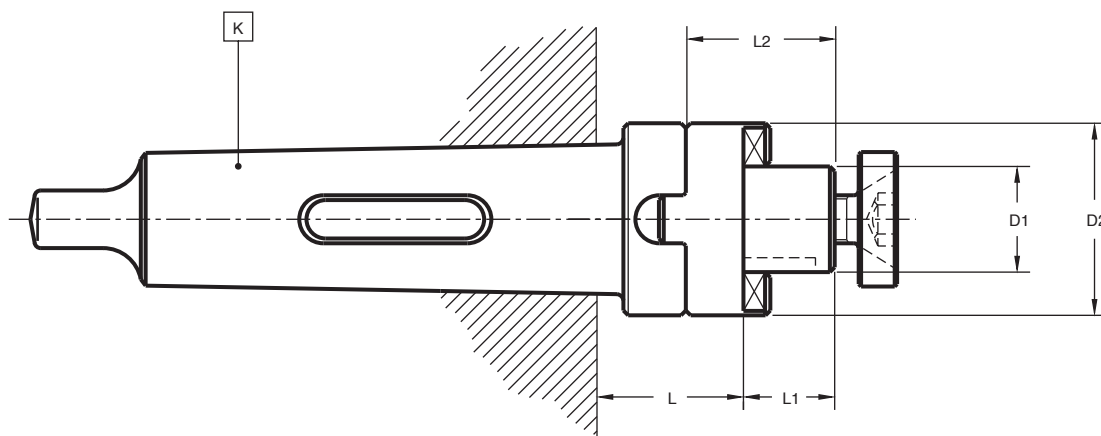
Accessories, see pages 267-293

BALANCED
NUT
(STANDARD)BEARING
NUT
(OPTIONAL)WRENCH
(OPTIONAL)

SIZE

ER 25	004 99 01 03 05	004 99 01 04 05	004 99 04 03 05
ER 32	004 99 01 03 06	004 99 01 04 06	004 99 04 03 06
ER 40	004 99 01 03 07	004 99 01 04 07	004 99 04 03 07
ER 50	004 99 01 03 08	004 99 01 04 08	004 99 04 03 08

ALTERNATIVE SOLUTIONS 003 02 54 + 001 54 0₅³ pages 16 and 233

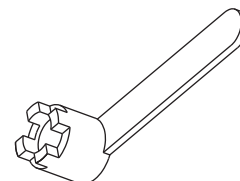
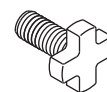


Maximum circular deviation between K and D₁ ≤ 0,008

K	D ₁	L	L ₁	L ₂	D ₂	COD.
M3	27	30	21	33	48	001 02 02 04 50 ⚠
M3	32	30	24	38	58	001 02 02 04 60 ⚠
M5	50	46	30	46	90	001 02 02 06 80 ⚠

⚠ Product outside of our present production program. Price subject to availability.

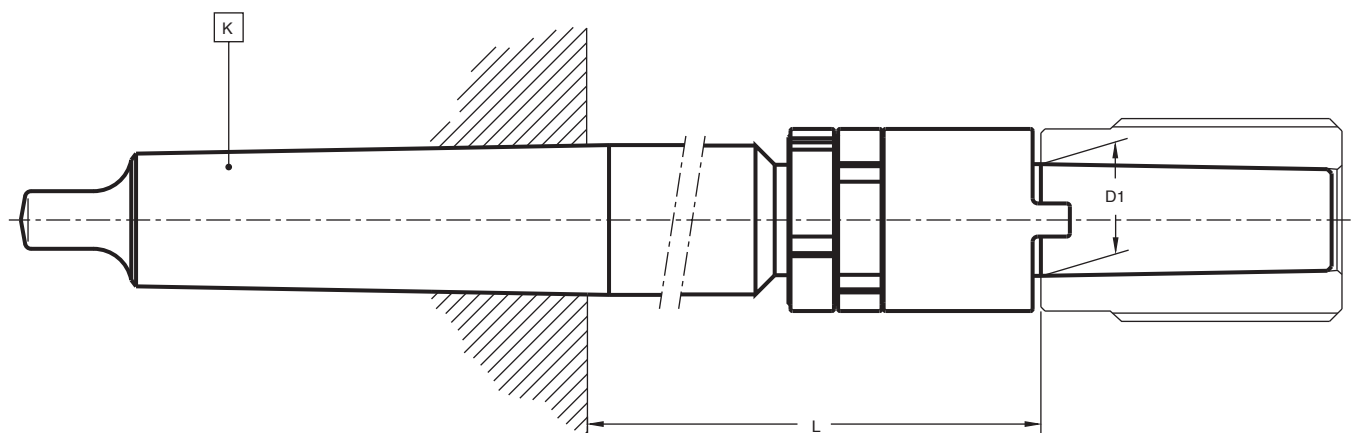
Accessories, see pages 267-293



D ₁					OPTIONALS	
16	001 99 02 01 30	001 99 01 22 30	001 99 01 12 30	001 99 03 02 30	001 99 01 01 30	001 99 04 01 30
22	001 99 02 01 40	001 99 01 22 40	001 99 01 12 40	001 99 03 02 40	001 99 01 01 40	001 99 04 01 40
27	001 99 02 01 50	001 99 01 22 50	001 99 01 12 50	001 99 03 02 50	001 99 01 01 50	001 99 04 01 50
32	001 99 02 01 60	001 99 01 22 60	001 99 01 12 60	001 99 03 02 60	001 99 01 01 60	001 99 04 01 60
40	001 99 02 01 70	001 99 01 22 70	001 99 01 12 70	001 99 03 02 70	001 99 01 01 70	001 99 04 01 70
50	001 99 02 01 80	001 99 01 22 80	001 99 01 12 80	001 99 03 02 80	001 99 01 01 80	001 99 04 01 80

ALTERNATIVE SOLUTIONS 003 02 54 + 001 54 51 pages 16 and 235

DIN 217

Maximum circular deviation between K and D₁ ≤ 0,008

K	D ₁	L	COD.			
M4	27	138	001 02 51 05 50 	001 99 12 01 40	001 99 11 01 50	001 99 13 01 50
M5	27	138	001 02 51 06 50 	001 99 12 01 40	001 99 11 01 50	001 99 13 01 50
M5	32	146	001 02 51 06 60 	001 99 12 01 60	001 99 11 01 60	001 99 13 01 60

 Product outside of our present production program. Price subject to availability.

ALTERNATIVE SOLUTIONS 003 02 54 + 003 54 12 pages 16 and 236

DIN 2185

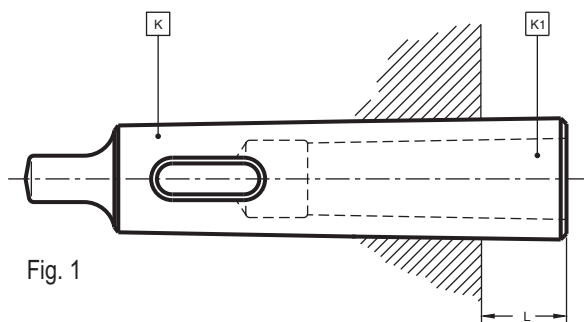


Fig. 1

DIN 2187

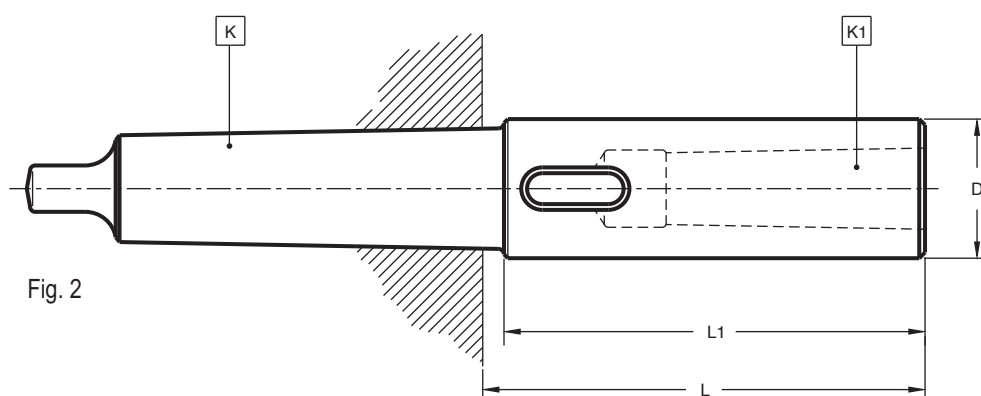


Fig. 2

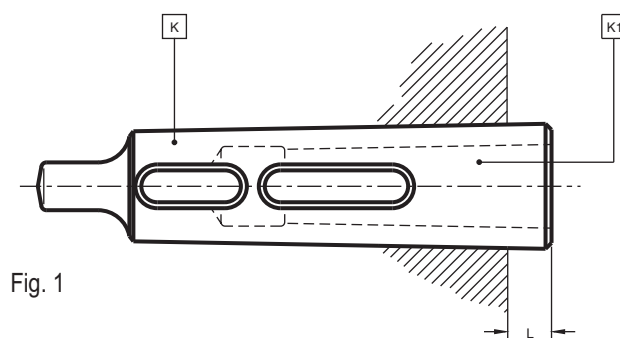
Maximum circular deviation between K and K₁ ≤ 0,008

Fig.	K	K ₁	L	L ₁	D	COD.
1	M2	M1	17	—	—	003 02 11 03 20
2	M2	M2	100	91	30	003 02 11 03 33
1	M3	M1	5	—	—	003 02 11 04 20
2	M3	M1	81	76	20	003 02 11 04 23 
1	M3	M2	18	—	—	003 02 11 04 30
2	M3	M3	121	112	36	003 02 11 04 43
1	M4	M1	6,5	—	—	003 02 11 05 20 
1	M4	M2	6,5	—	—	003 02 11 05 30
1	M4	M3	22,5	—	—	003 02 11 05 40
2	M4	M4	148	137	48	003 02 11 05 53
1	M5	M3	6,5	—	—	003 02 11 06 40
2	M5	M3	118,5	112	36	003 02 11 06 43 
1	M5	M4	21,5	—	—	003 02 11 06 50
2	M5	M5	185	172	63	003 02 11 06 63

 Product outside of our present production program. Price subject to availability.

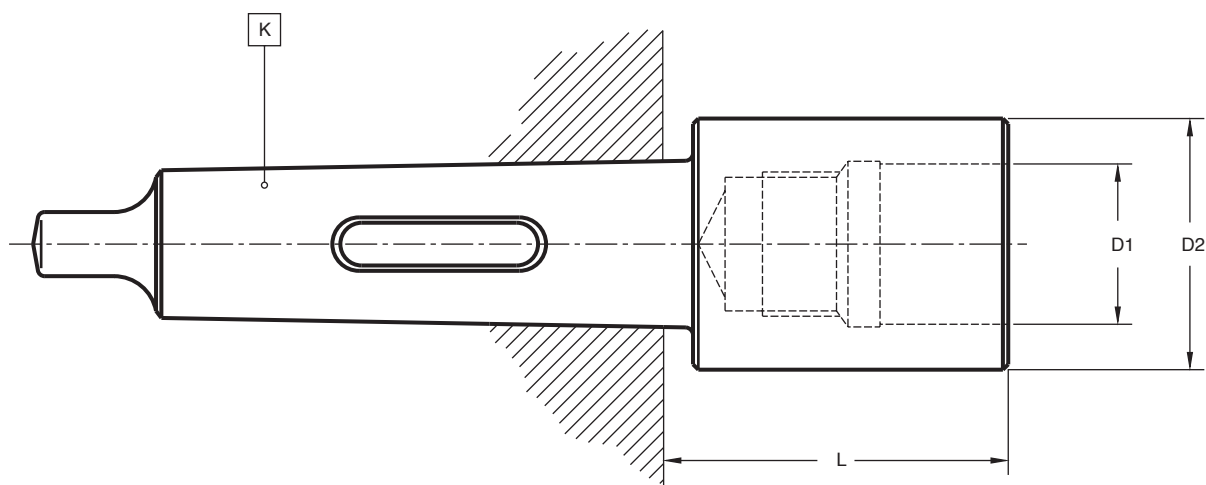
ALTERNATIVE SOLUTIONS 003 02 54 + 003 54 12 pages 16 and 236

DIN 1808

Maximum circular deviation between K and K₁ ≤ 0,008

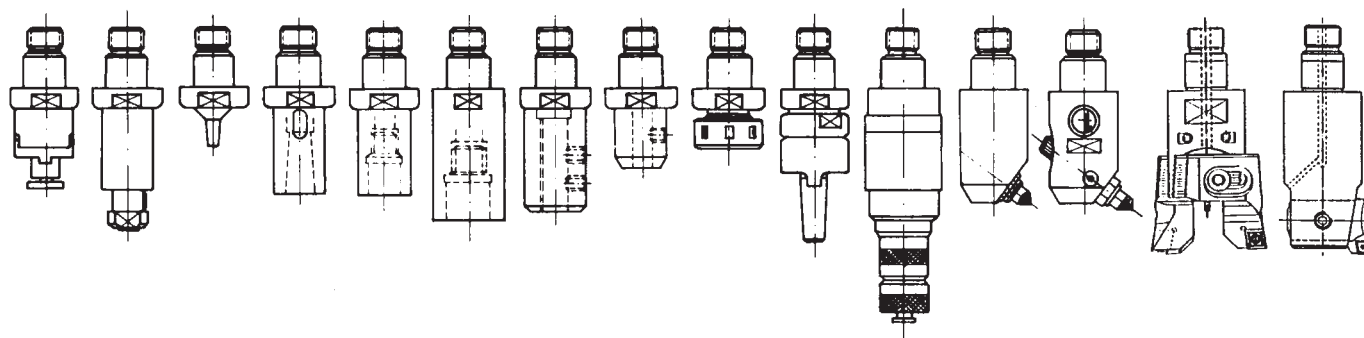
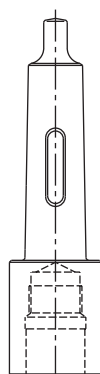
K	K ₁	L	L ₁	D	COD.
M5	M3	6,5	—	—	003 02 13 06 40 

 Product outside of our present production program. Price subject to availability.



Maximum circular deviation between K and $D_1 \leq 0,005$

K	D ₁ H5	D ₂	L	COD.
M4	30	46	66	003 02 54 05 06
M5	30	46	50	003 02 54 06 06
M5	46	63	90	003 02 54 06 07



See pages 231-251

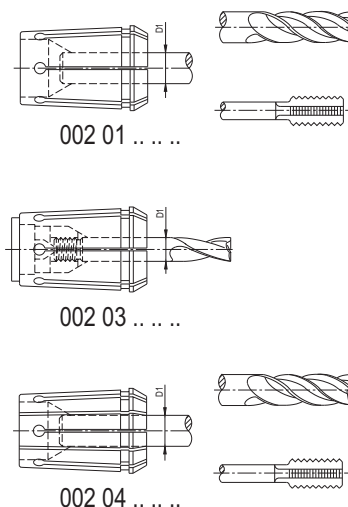
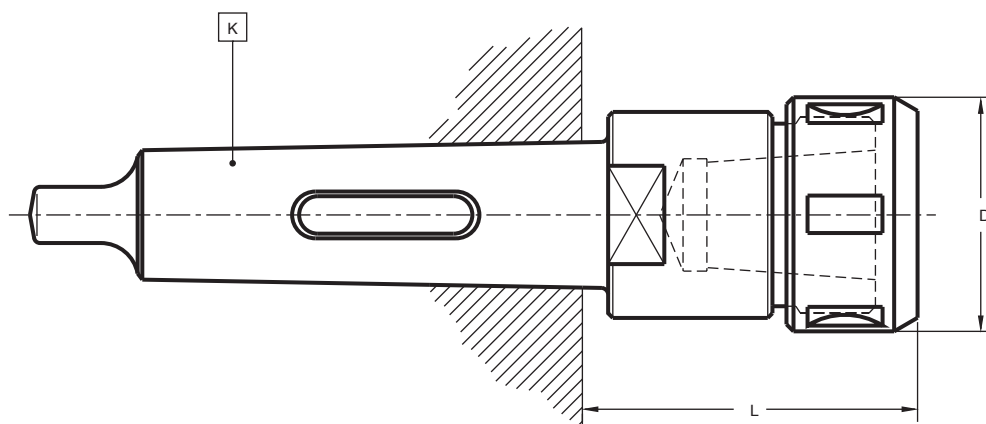
004 02 01

COLLET CHUCKS FOR DIN 6388 COLLETS

For tools with cylindrical straight shank DIN 1835-A or threaded cylindrical shank DIN 1835-D



ALTERNATIVE SOLUTIONS 004 02 06 page 18
003 02 54 + 004 54 06 pages 16 and 240



Maximum circular deviation between outer taper and collet housing $\leq 0,005$

COLLETS see pages 255-256

K	D ₁ máx.	L	D	COD.
M4	25	76	60	004 02 01 05 05
M5	25	70	60	004 02 01 06 05
M5	32	88	72	004 02 01 06 06

Product outside of our present production program. Price subject to availability.

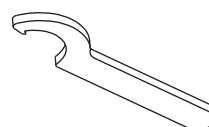
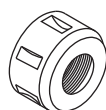
For boxes and composition of different sets see pages 265-266

Accessories, see pages 267-293

BALANCED
NUT

BEARING
NUT

WRENCH
(OPTIONAL)



D₁ max.

16

25

32

—

004 99 01 01 05

004 99 01 01 06

004 99 01 02 03

004 99 01 02 05

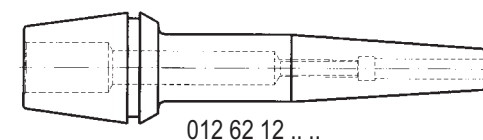
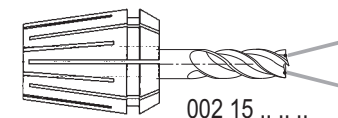
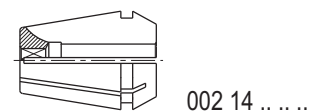
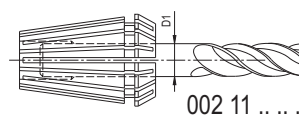
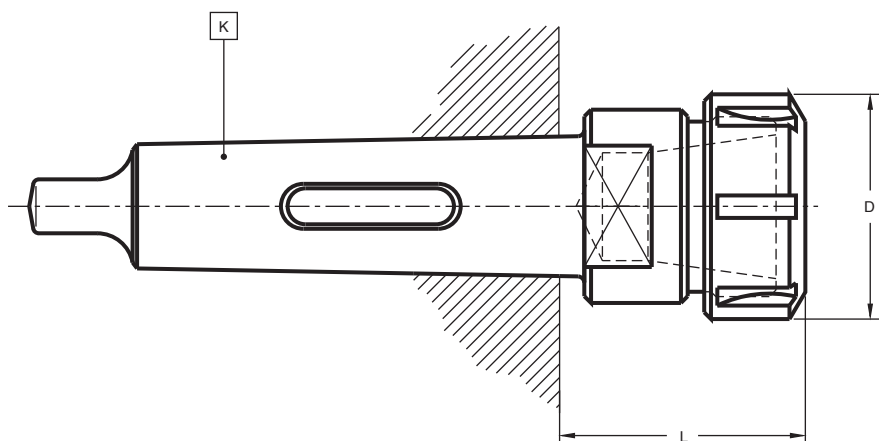
004 99 01 02 06

004 99 04 09 08

004 99 04 09 11

004 99 04 09 12

ALTERNATIVE SOLUTIONS 004 02 01 page 17
003 02 54 + 004 54 06 pages 16 and 240



Maximum circular deviation between outer taper and collet housing $\leq 0,005$

COLLETS see pages 257-259

K	SIZE	D ₁ máx.	L	D	COD.
M2	(ER25)	16	55	42	004 02 06 03 05
M3	(ER32)	20	62	50	004 02 06 04 06
M3	(ER40)	26	68	63	004 02 06 04 07
M4	(ER32)	20	64	50	004 02 06 05 06
M4	(ER40)	26	70	63	004 02 06 05 07
M5	(ER40)	26	70	63	004 02 06 06 07
M5	(ER50)	34	90	78	004 02 06 06 08

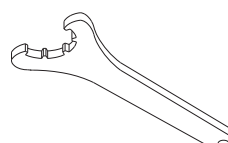
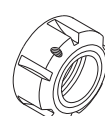
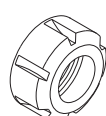
For boxes and composition of different sets see pages 265-266

Accessories, see pages 267-293

BALANCED
NUT
(STANDARD)

BEARING
NUT
(OPTIONAL)

WRENCH
(OPTIONAL)



SIZE

ER 25	004 99 01 03 05	004 99 01 04 05	004 99 04 03 05
ER 32	004 99 01 03 06	004 99 01 04 06	004 99 04 03 06
ER 40	004 99 01 03 07	004 99 01 04 07	004 99 04 03 07
ER 50	004 99 01 03 08	004 99 01 04 08	004 99 04 03 08

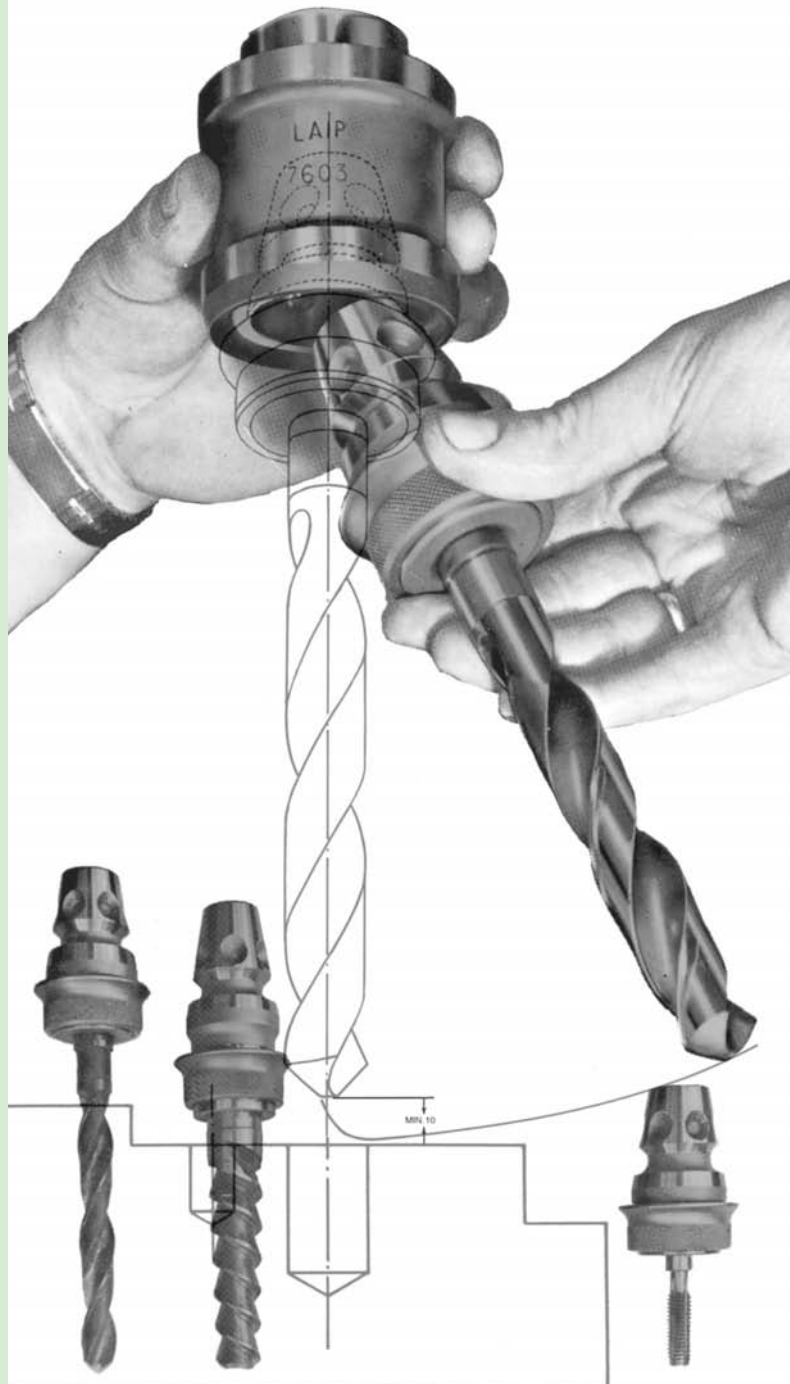
QUICK-CHANGE HOLDER



**WITHOUT
STOPPING THE
MACHINE**

**MAXIMUM
ROTATION
SPEED: 2000 r.p.m.**

**MAXIMUM
CONCENTRICITY
ACHIEVED BY TAPER
COUPLING**



**JUST 10 MM
CLEARANCE
BETWEEN
WORKPIECE AND
TOOL IS ENOUGH**

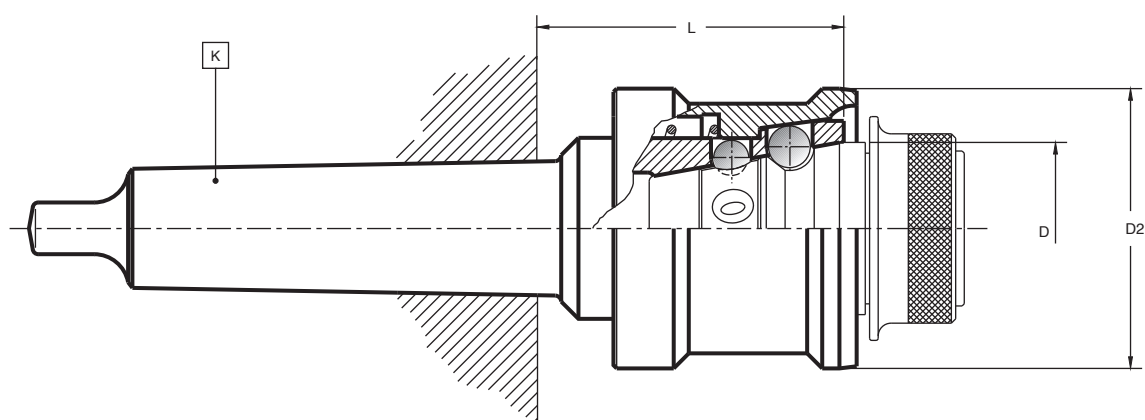
**ROTATION IN
EITHER DIRECTION**

**EQUALLY
EFFECTIVE IN
VERTICAL OR
HORIZONTAL PLAIN**

006 02 01

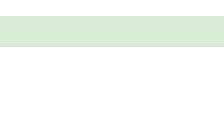
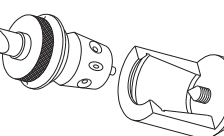
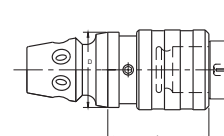
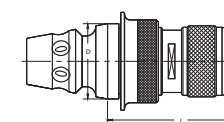
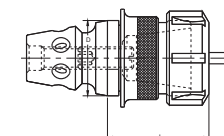
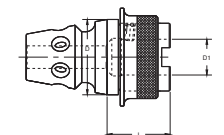
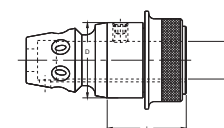
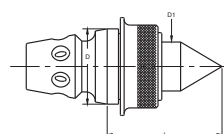
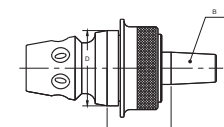
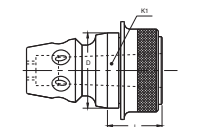
QUICK-CHANGE HOLDER

Patent n° 172316
Without stopping the machine



Maximum circular deviation between tapers $\leq 0,008$

K	D	L	D ₂	COD.
M2	27,1	62	47	006 02 01 03 01
M2	40	77	63	006 02 01 03 02
M3	40	77	63	006 02 01 04 02
M4	40	78	63	006 02 01 05 02
M4	51,5	95	83	006 02 01 05 03
M5	51,5	95	83	006 02 01 06 03
M5	68,7	116	100	006 02 01 06 04



COD.						
006 02 01 03 01	304 01 00 06 35	304 01 00 07 93	305 01 27 00 20	305 09 06 01 01	351 06 00 01 11	351 06 00 01 12
006 02 01 03 02	304 01 00 08 73	304 01 00 10 31	305 01 40 00 20	305 09 06 01 02	351 06 00 01 21	351 06 00 01 22
006 02 01 04 02	304 01 00 08 73	304 01 00 10 31	305 01 40 00 20	305 09 06 01 02	351 06 00 01 21	351 06 00 01 22
006 02 01 05 02	304 01 00 08 73	304 01 00 10 31	305 01 40 00 20	305 09 06 01 02	351 06 00 01 21	351 06 00 01 22
006 02 01 05 03	304 01 00 11 11	304 01 00 12 70	305 01 51 00 20	305 09 06 01 03	351 06 00 01 31	351 06 00 01 32
006 02 01 06 03	304 01 00 11 11	304 01 00 12 70	305 01 51 00 20	305 09 06 01 03	351 06 00 01 31	351 06 00 01 32
006 02 01 06 04	304 01 00 12 70	304 01 00 14 28	305 01 66 00 30	305 09 06 01 04	351 06 00 01 41	351 06 00 01 42
006 02 01 07 04	304 01 00 12 70	304 01 00 14 28	305 01 66 00 30	305 09 06 01 04	351 06 00 01 41	351 06 00 01 42

QUICK-CHANGE ADAPTERS

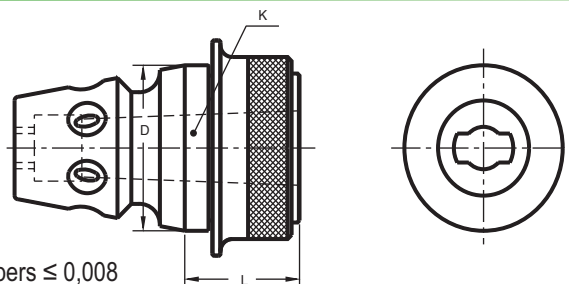
For more details see page 22 to 27



		D	27,1	40			51,5				68,7				
MORSE TAPER ADAPTERS For tanged Morse taper tools DIN 228-B FLOATING ADAPTERS	K ₁ Morse N°	1	1	2	3	1	2	3	4	1	2	3	4	5	
	L	25	29	29	44	34	34	34	55	34	34	34	43	70	
	COD. 006 99 01□□□□	0102	0202	0203	0204	0302	0303	0304	0305	0402	0403	0404	0405	0406	
	COD. 006 99 08□□□□	—	—	—	0204	—	—	0304	—	—	—	0404	—	—	
DRILL CHUCK ADAPTERS For DIN 238 or JACOBS	B	B. 12	B. 12	B. 16	B. 16				B. 16		B. 18				
	L	28	32	34	39				39		39				
	COD. 006 99 02□□□□	0101	0201	0202	0302				0402		0403				
60° CENTERING POINT ADAPTERS	L	49	61		66				66						
	D ₁	16	26		26				26						
	COD. 006 99 03□□□□	0101	0201		0301				0401						
AUTOMOTIVE ADAPTERS For tools with shank DIN 6327	D ₁	—	20		28				36						
	L	—	42		45				45						
	COD. 006 99 04□□□□	—	0204		0306				0408						
TAPPING ADAPTERS For “BILZ” tap adapters	D ₁	—	13	19	19	31	31		48						
	CAP.	—	M1-M10	M3-M12	M3-M12	M8-M20	M8-M20		M14-M33						
	L	—	29	29	41	41	41		54						
	COD. 006 99 05□□□□	—	0201	0202	0302	0303	0403		0404						
COLLET ADAPTERS For DIN 6499 (ER) collets	D ₁	0,5 - 10	0,5 - 16		0,5 - 16				0,5 - 16						
	L	50	60		63				63						
	COD. 006 99 06 06□□	13	25		35				45						
SHORT DRILL CHUCK ADAPTERS	D ₁	—	0 - 8		1 - 13				1 - 13		3 - 16				
	L	—	82		98				98		95				
	COD. 006 99 07□□□□	—	2008		3113				4113		4316				
TAPPING ADAPTERS To use with “BILZ” adapters	D ₁	19	19	31	19	31	31		48						
	CAP.	M3-M12	M3-M12	M8-M20	M3-M12	M8-M20	M8-M20		M14-M33						
	L	45	45	69	45	69	69		110						
	COD. 006 99 19 52□□	12	22	23	32	33	43		44						
EJECTOR DEVICE For tools set up on 006 99 01 and 006 99 08	COD. 006 99 09 01□□	01	02		03				04						

006 99 01**QUICK CHANGE MORSE TAPER ADAPTERS**

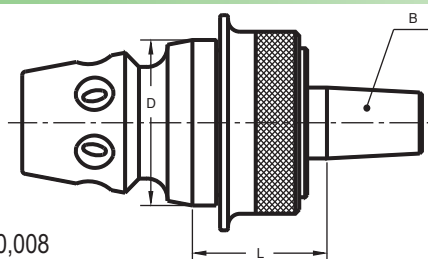
For tanged Morse taper tools DIN 228-B

Maximum circular deviation between tapers $\leq 0,008$

D	K	L	COD.		
27,1	M1	25	006 99 01 01 02	351 06 99 01 12	305 01 21 50 15
40	M1	29	006 99 01 02 02	351 06 99 01 22	305 01 34 00 20
40	M2	29	006 99 01 02 03	351 06 99 01 22	305 01 34 00 20
40	M3	44	006 99 01 02 04	351 06 99 01 22	305 01 34 00 20
51,5	M1	34	006 99 01 03 02	351 06 99 01 32	305 01 45 00 20
51,5	M2	34	006 99 01 03 03	351 06 99 01 32	305 01 45 00 20
51,5	M3	34	006 99 01 03 04	351 06 99 01 32	305 01 45 00 20
51,5	M4	55	006 99 01 03 05	351 06 99 01 32	305 01 45 00 20
68,7	M1	34	006 99 01 04 02	351 06 99 01 32	305 01 45 00 20
68,7	M2	34	006 99 01 04 03	351 06 99 01 32	305 01 45 00 20
68,7	M3	34	006 99 01 04 04	351 06 99 01 32	305 01 45 00 20
68,7	M4	43	006 99 01 04 05	351 06 99 01 32	305 01 45 00 20
68,7	M5	70	006 99 01 04 06	351 06 99 01 42	305 01 62 00 25

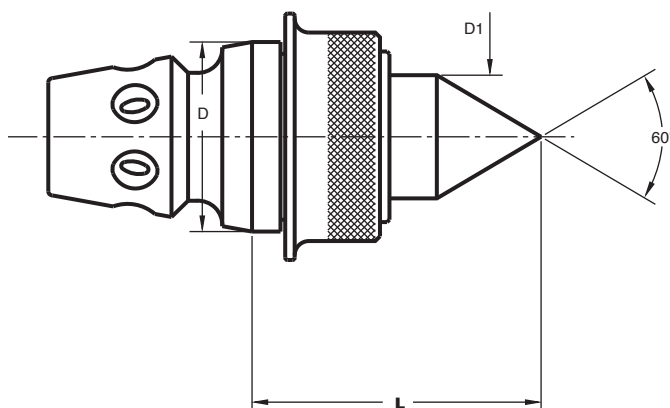
006 99 02**QUICK CHANGE DRILL CHUCK ADAPTERS**

For DIN 238 or JACOBS

Maximum circular deviation between tapers $\leq 0,008$

D	K	L	COD.		
27,1	B-12	28	006 99 02 01 01	351 06 99 01 12	305 01 21 50 15
40	B-12	32	006 99 02 02 01	351 06 99 01 22	305 01 34 00 20
40	B-16	34	006 99 02 02 02	351 06 99 01 22	305 01 34 00 20
40	J-2	34	006 99 02 02 13 	351 06 99 01 22	305 01 34 00 20
40	J-3	34	006 99 02 02 15 	351 06 99 01 22	305 01 34 00 20
40	J-6	34	006 99 02 02 18 	351 06 99 01 22	305 01 34 00 20
51,5	B-16	39	006 99 02 03 02 	351 06 99 01 32	305 01 45 00 20
51,5	J-6	39	006 99 02 03 18	351 06 99 01 32	305 01 45 00 20
68,7	B-16	39	006 99 02 04 02	351 06 99 01 32	305 01 45 00 20
68,7	B-18	39	006 99 02 04 03	351 06 99 01 32	305 01 45 00 20

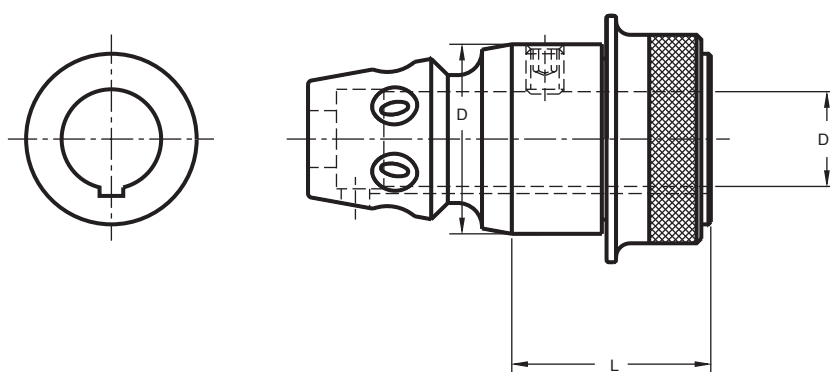
 Product outside of our present production program. Price subject to availability.

006 99 03**QUICK CHANGE 60° CENTERING POINT ADAPTERS**Maximum circular deviation between tapers $\leq 0,008$

D	D ₁	L	COD.		
27,1	16	49	006 99 03 01 01	351 06 99 01 12	305 01 21 50 15
40	26	61	006 99 03 02 01	351 06 99 01 22	305 01 34 00 20
51,5	26	66	006 99 03 03 01	351 06 99 01 32	305 01 45 00 20
68,7	26	66	006 99 03 04 01	351 06 99 01 32	305 01 45 00 20

006 99 04**AUTOMOTIVE QUICK-CHANGE ADAPTERS**

For tools with DIN-6327 shank

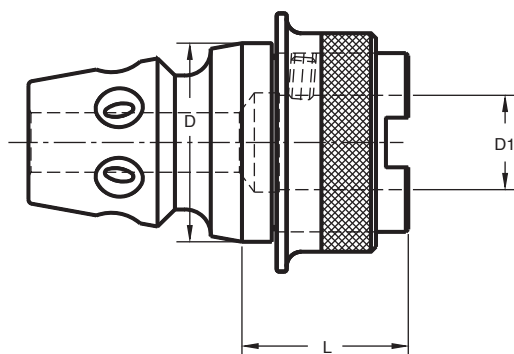
Maximum circular deviation between outer taper and hole $D_1 \leq 0,008$

D	D ₁	L	COD.			
40	20	42	006 99 04 02 04	301 01 03 08 10	351 06 99 01 22	305 01 34 00 20
51,5	28	45	006 99 04 03 06	301 01 03 08 12	351 06 99 01 32	305 01 45 00 20
68,7	36	45	006 99 04 04 08	301 01 03 08 16	351 06 99 01 32	305 01 45 00 20

006 99 05

QUICK CHANGE TAPPING ADAPTERS

To use with "BILZ" tap adapters

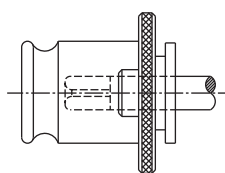


BILZ Adapter
↓

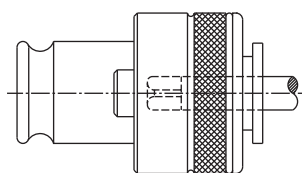
D	CAP.	D ₁	L	COD.			
27,1	M1-M10	13	29	006 99 05 01 01 	301 01 03 05 10	351 06 99 01 12	305 01 21 50 15
40	M1-M10	13	29	006 99 05 02 01 	301 01 03 05 10	351 06 99 01 22	305 01 34 00 20
40	M3-M12 (M16)*	19	29	006 99 05 02 02	301 01 03 05 08	351 06 99 01 22	305 01 34 00 20
51,5	M1-M10	13	41	006 99 05 03 01 	301 01 03 05 10	351 06 99 01 32	305 01 45 00 20
51,5	M3-M12 (M16)*	19	41	006 99 05 03 02	301 01 03 06 12	351 06 99 01 32	305 01 45 00 20
51,5	M8-M20 (M30)*	31	41	006 99 05 03 03	301 01 03 06 08	351 06 99 01 32	305 01 45 00 20
68,7	M8-M20 (M30)*	31	41	006 99 05 04 03	301 01 03 06 08	351 06 99 01 32	305 01 45 00 20
68,7	M14-M33 (M48)*	48	54	006 99 05 04 04	301 01 03 08 08	351 06 99 01 42	305 01 62 00 25

 Product outside of our present production program. Price subject to availability.

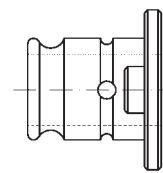
See page 263



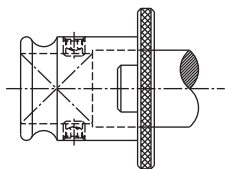
002 21 ..



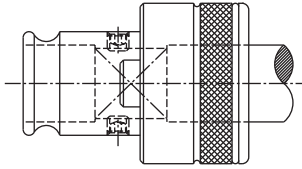
002 23 ..



002 20 ..



002 22 ..

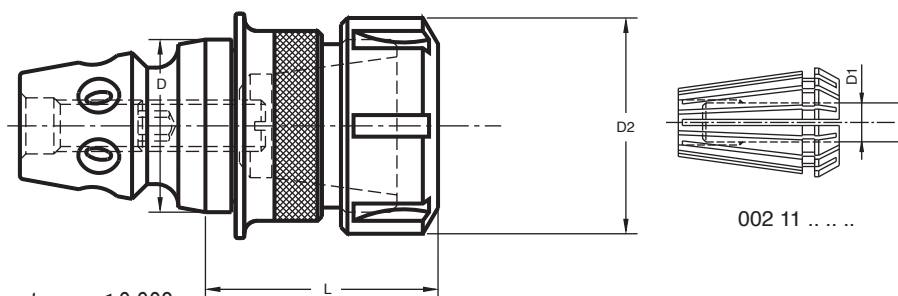


002 24 ..

D ₁				
13	002 21 01	—	002 23 01	—
19	002 21 02	002 22 02	002 23 02	002 24 02
31	002 21 03	002 22 03	002 23 03	002 24 03
48	002 21 04	002 22 04	002 23 04	002 24 04

006 99 06 ...

QUICK CHANGE COLLET ADAPTERS FOR DIN 6499 (ER) COLLETS



Maximum circular deviation between tapers $\leq 0,008$

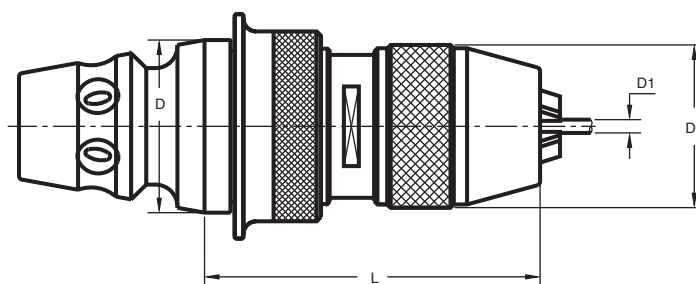
D	SIZE	D ₁ máx.	D ₂	L	COD.	COLLETS see page 257			
27,1	(ER16)	10	28	50	006 99 06 06 13	002 11 03 ...	301 99 02 10 01	351 06 99 01 12	305 01 21 50 15
40	(ER25)	16	42	60	006 99 06 06 25	002 11 05 ...	301 99 02 16 01	351 06 99 01 22	305 01 34 00 20
51,5	(ER25)	16	42	63	006 99 06 06 35	002 11 05 ...	301 99 02 16 01	351 06 99 01 32	305 01 45 00 20
68,7	(ER25)	16	42	63	006 99 06 06 45	002 11 05 ...	301 99 02 16 01	351 06 99 01 32	305 01 45 00 20

Accessories, see pages 267-293

	BALANCED NUT (STANDARD)	BEARING NUT (OPTIONAL)	WRENCH (OPTIONAL)
SIZE			
ER 16	004 99 01 08 03	004 99 01 04 03	004 99 04 06 25
ER 25	—	004 99 01 03 05	—
			004 99 04 03 05

006 99 07 ...

QUICK CHANGE SHORT DRILL CHUCK ADAPTERS

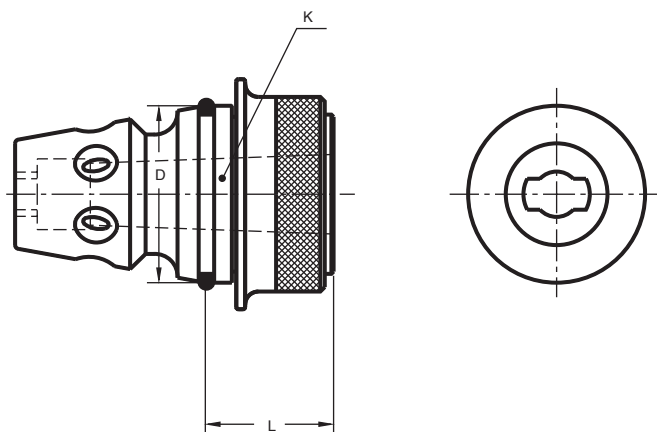


D	D ₁	L	D ₂	COD.		
40	0-8	82	36	006 99 07 20 08	351 06 99 01 22	305 01 34 00 20
51,5	1-13	89	48	006 99 07 31 13	351 06 99 01 32	305 01 45 00 20
68,7	1-13	98	48	006 99 07 41 13	351 06 99 01 32	305 01 45 00 20
68,7	3-16	95	54	006 99 07 43 16	351 06 99 01 42	305 01 62 00 25

D ₁			
0-8	351 02 60 00 08	351 02 61 00 08	020 99 03 00 08
1-13	351 02 60 01 13	351 02 61 01 13	020 99 03 01 13
3-16	351 02 60 03 16	351 02 61 03 16	020 99 03 03 16

006 99 08**QUICK CHANGE FLOATING ADAPTER**

For tapered Morse taper tools DIN 228-B

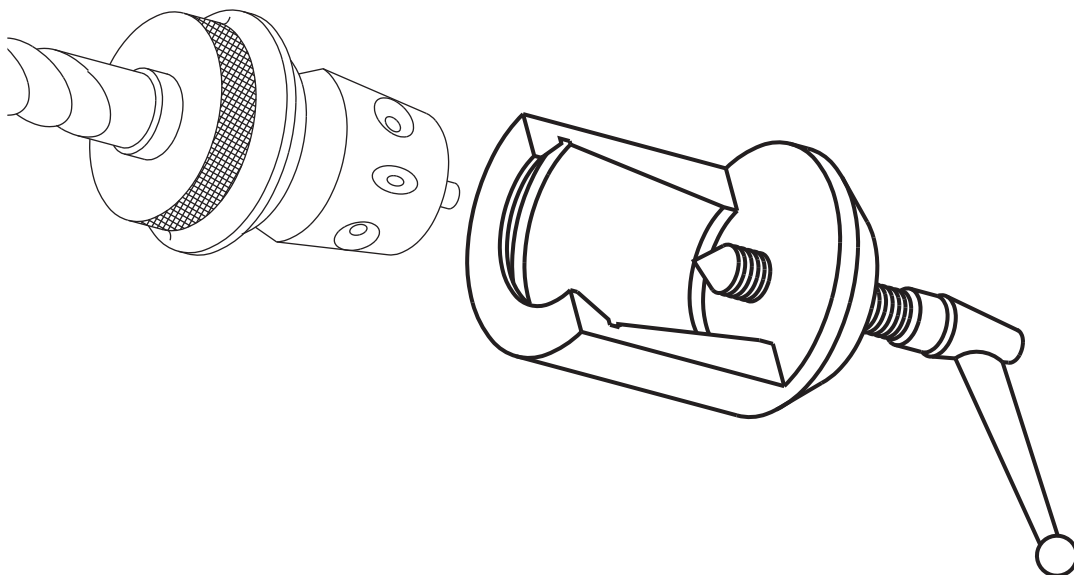


D	K	L	COD.			
40	M3	44	006 99 08 02 04 	305 04 03 53 20	351 06 99 01 22	305 01 34 00 20
51,5	M3	34	006 99 08 03 04 	305 04 04 42 30	351 06 99 01 32	305 01 45 00 20
68,7	M3	34	006 99 08 04 04 	305 04 06 43 00	351 06 99 01 32	305 01 45 00 20

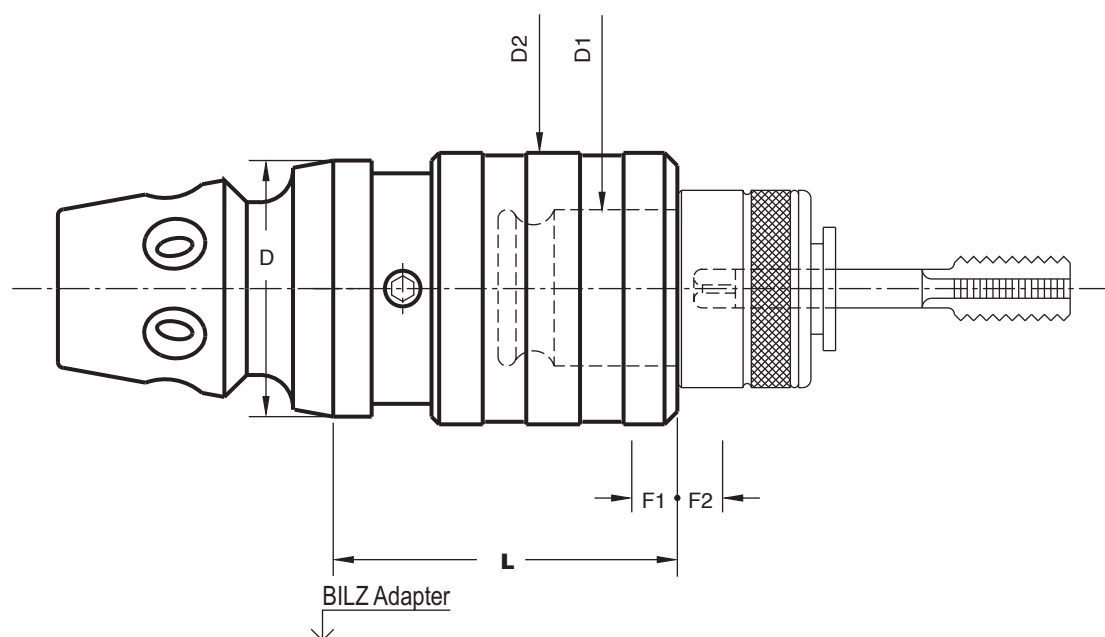
 Product outside of our present production program. Price subject to availability.

006 99 09**EJECTOR DEVICE**

For tools set up on 006 99 01 and 006 99 08



D	COD.
27,1	006 99 09 01 01
40	006 99 09 01 02
51,5	006 99 09 01 03
68,7	006 99 09 01 04

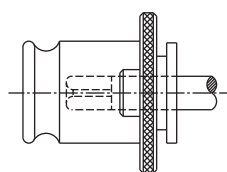


D	CAP.	D ₁	L	D ₂	F ₁	F ₂	COD.
27,1	M3-M12 (M16)*	19	45	36	7,5	7,5	006 99 19 52 12
40	M3-M12 (M16)*	19	45	36	7,5	7,5	006 99 19 52 22
40	M8-M20 (M30)*	31	69	53	12,5	12,5	006 99 19 52 23
51,5	M3-M12 (M16)*	19	46	36	7,5	7,5	006 99 19 52 32
51,5	M8-M20 (M30)*	31	69	53	12,5	12,5	006 99 19 52 33
68,7	M8-M20 (M30)*	31	69	53	12,5	12,5	006 99 19 52 43
68,7	M14-M33 (M48)*	48	110	78	20	20	006 99 19 52 44

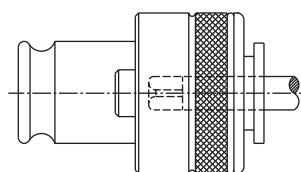
F₁ Compression runF₂ Extension run

* With 002 22 and 002 24 adapters

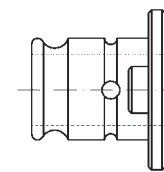
See page 263



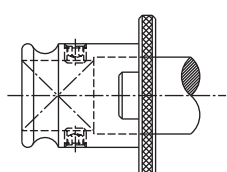
002 21 ..



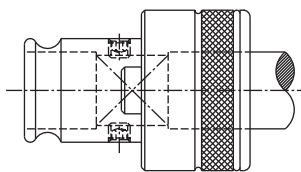
002 23 ..



002 20 ..



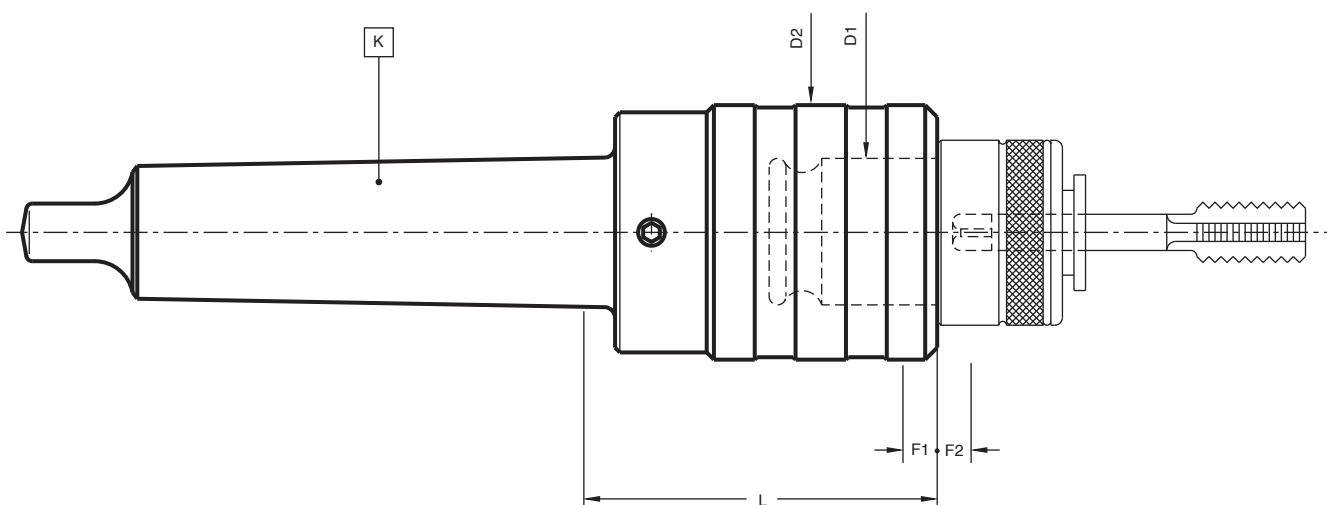
002 22 ..



002 24 ..

D₁

19	002 21 02	002 22 02	002 23 02	002 24 02
31	002 21 03	002 22 03	002 23 03	002 24 03
48	002 21 04	002 22 04	002 23 04	002 24 04



BILZ Adapter

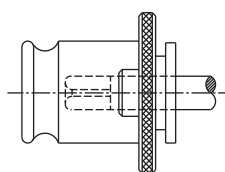
K	CAP.	D ₁	L	D ₂	F ₁	F ₂	COD.
M2	M3-M12 (M16)*	19	46	36	7,5	7,5	019 02 52 03 02
M3	M3-M12 (M16)*	19	46	36	7,5	7,5	019 02 52 04 02
M3	M8-M20 (M30)*	31	70	53	12,5	12,5	019 02 52 04 03
M4	M3-M12 (M16)*	19	46	36	7,5	7,5	019 02 52 05 02
M4	M8-M20 (M30)*	31	71	53	12,5	12,5	019 02 52 05 03
M4	M14-M33 (M48)*	48	104	78	20	20	019 02 52 05 04
M5	M14-M33 (M48)*	48	105	78	20	20	019 02 52 06 04

F₁ Compression run

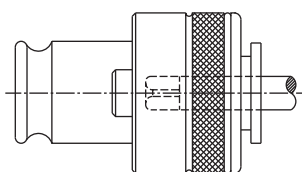
F₂ Extension run

* With 002 22 and 002 24 adapters

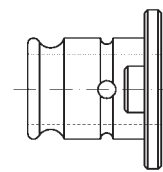
See page 263



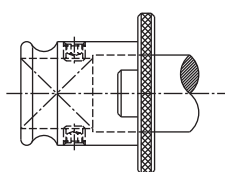
002 21 ..



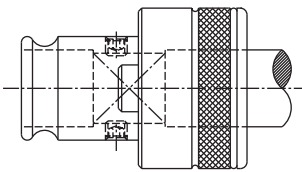
002 23 ..



002 20 ..



002 22 ..



002 24 ..

D₁

19	002 21 02	002 22 02	002 23 02	002 24 02
31	002 21 03	002 22 03	002 23 03	002 24 03
48	002 21 04	002 22 04	002 23 04	002 24 04