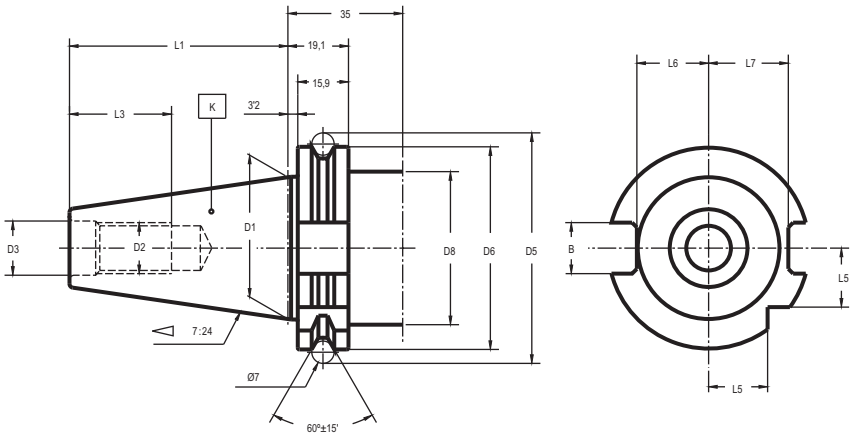
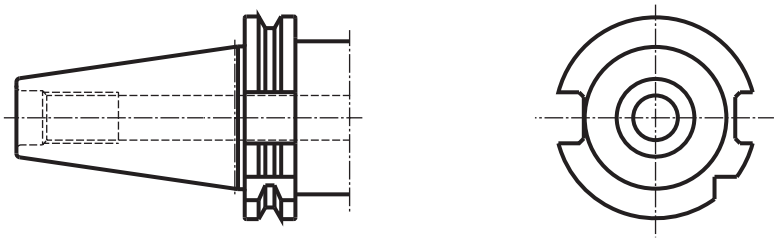

DIN 69871

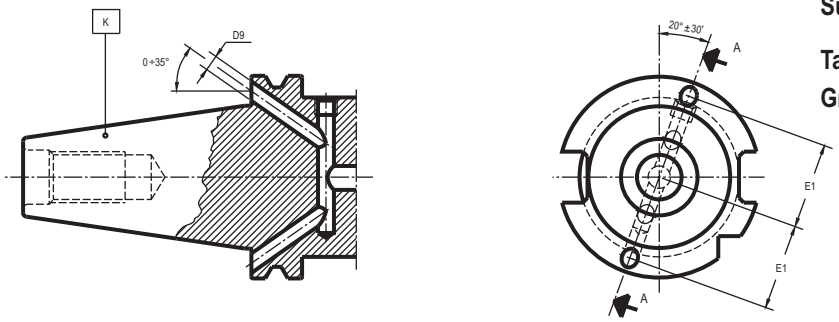
FORM A
Without coolant through.



FORM AD
With central through coolant channel.

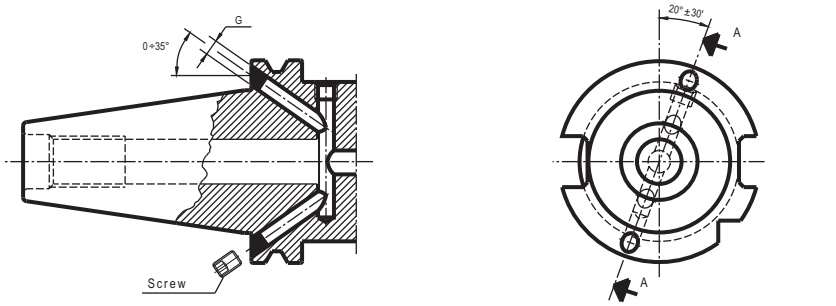


FORM B
With flange through coolant channels.



FORM AD + B
With central and flange through coolant channels.

Delivery:
With two bolts to sealed flange channels.



Material:

Case-hardening alloy steel.

Case-hardened and tempered. Minimum strength in core 880 N/mm².
Surface hardness Rc 57 ÷ 60

Taper tolerance:

Grade AT3.

The rest of the dimensions are according to DIN 69871-A

K	B H12	D_1	D_2	D_3 H7	D_5 ±0.05	D_6 $^{0}_{-0.1}$	D_8 máx.	D_9	L_1 $^{0}_{-0.3}$	L_3 mín.	L_5 $^{0}_{-0.3}$	L_6 $^{0}_{-0.4}$	L_7 $^{0}_{-0.4}$	E $^{+}_{-}$0.1	G
30	16.1	31.75	M-12	13	59.3	50	45	4	47.8	24	15	16.4	19	21	M4
40	16.1	44.45	M-16	17	72.3	63.55	50	4	68.4	32	18.5	22.8	25	27	M4
45	19.3	57.15	M-20	21	91.35	82.55	63	5	82.7	40	24	29.1	31.3	35	M6
50	25.7	69.85	M-24	25	107.25	97.5	80	6	101.75	47	30	35.5	37.7	42	M6

DYNAMIC BALANCING

- **WE HAVE THE LATEST METHODS FOR DYNAMIC BALANCING OF OUR TOOLHOLDERS** **(see page 303)**
- **PLEASE CONTACT US FOR FURTHER INFORMATION**

001 13 02 .. ..

UNIVERSAL ARBORS

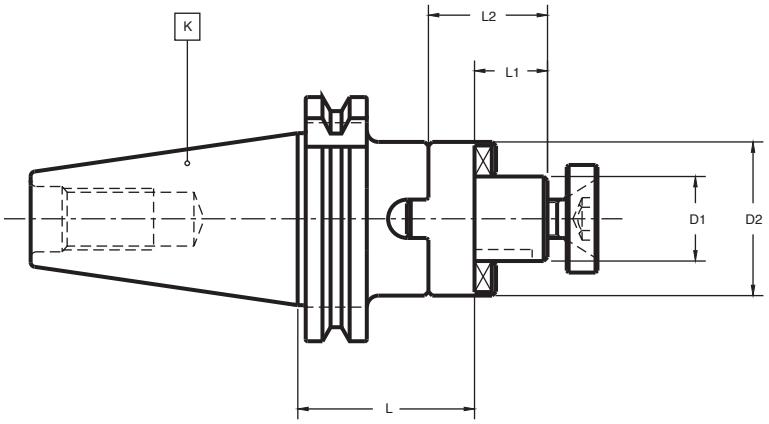
For milling cutters with longitudinal or tenon drive DIN 138

ALTERNATIVE SOLUTIONS 001 13 05 page 111

001 33 $^{33}_{35}$ page 112

003 $^{13}_{33}$ 54 + 001 54 0$^{3}_{5}$ pages 121 and 233

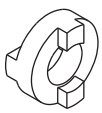
DIN 6358



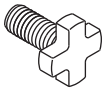
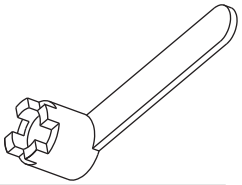
Maximum circular deviation between K and D_1 ≤ 0,008

K	D_1 h6	L	L_1	L_2	D_2	COD. Form A
30	16	50	17	27	32	**001 13 02 01 30**
30	22	50	19	31	40	**001 13 02 01 40**
30	27	55	21	33	48	**001 13 02 01 50**
40	16	55	17	27	32	**001 13 02 02 30**
40	16	100	17	27	32	**001 13 02 02 31**
40	22	55	19	31	40	**001 13 02 02 40**
40	22	100	19	31	40	**001 13 02 02 41**
40	27	55	21	33	48	**001 13 02 02 50**
40	27	100	21	33	48	**001 13 02 02 51**
40	32	60	24	38	58	**001 13 02 02 60**
40	32	100	24	38	58	**001 13 02 02 61**
40	40	60	27	41	70	**001 13 02 02 70**
40	40	100	27	41	70	**001 13 02 02 71**
50	16	55	17	27	32	**001 13 02 04 30**
50	16	100	17	27	32	**001 13 02 04 31**
50	22	55	19	31	40	**001 13 02 04 40**
50	22	100	19	31	40	**001 13 02 04 41**
50	27	55	21	33	48	**001 13 02 04 50**
50	27	100	21	33	48	**001 13 02 04 51**
50	32	55	24	38	58	**001 13 02 04 60**
50	32	100	24	38	58	**001 13 02 04 61**
50	40	55	27	41	70	**001 13 02 04 70**
50	40	100	27	41	70	**001 13 02 04 71**
50	50	70	30	46	90	**001 13 02 04 80**
50	50	125	30	46	90	**001 13 02 04 81**

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

001 13 03 05 .. ..

SHELL END MILL ARBORS

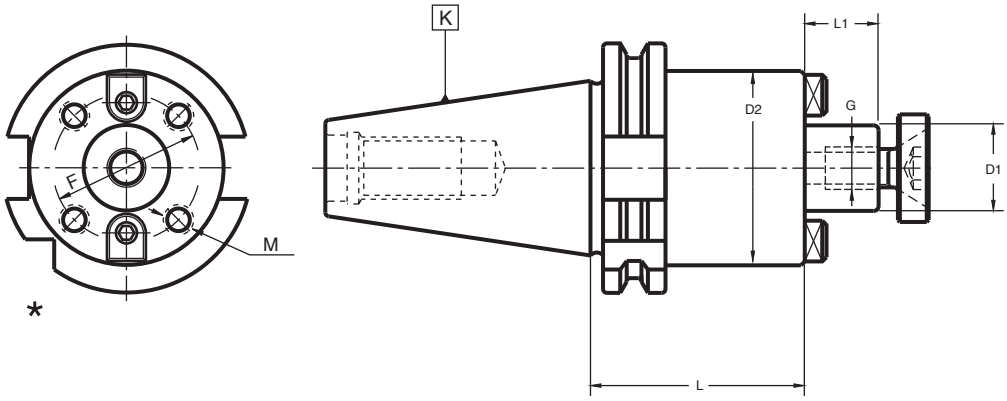
For shell end mills with driving slot DIN 138

ALTERNATIVE SOLUTIONS 001 13 02 page 110

001 33 33 35 page 112

003 13 33 54 + 001 54 0 3 5 pages 121 and 233

DIN 6357

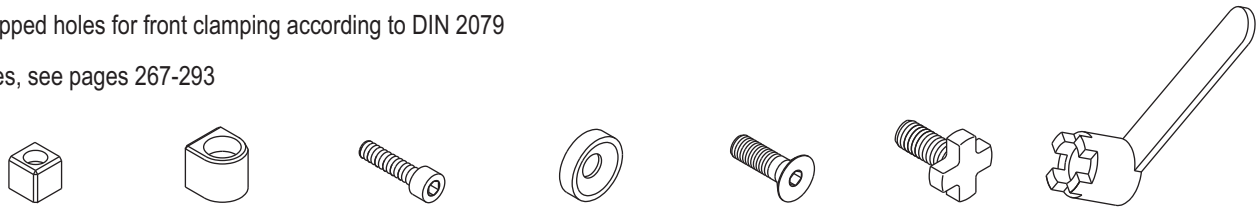


Maximum circular deviation between K and D_1 ≤ 0,008

K	D_1 h6	L	L_1	D_2	F	M	G	COD. Form A
40	16	55	17	38/40	–	–	M-8	**001 13 05 02 30**
40	16	120	17	38/40	–	–	M-8	**001 13 05 02 31**
40	22	55	19	40/50	–	–	M-10	**001 13 05 02 40**
40	22	120	19	40/50	–	–	M-10	**001 13 05 02 41**
40	27	55	21	60	–	–	M-12	**001 13 05 02 50**
40	27	120	21	60	–	–	M-12	**001 13 05 02 51**
40	32	60	24	70	–	–	M-16	**001 13 05 02 60**
40	32	120	24	70	–	–	M-16	**001 13 05 02 61**
*40	40	60	27	89	66,7	M-12	M-20	**001 13 03 02 70**
*40	40	120	27	89	66,7	M-12	M-20	**001 13 03 02 71**
50	16	55	17	38/40	–	–	M-8	**001 13 05 04 30**
50	16	120	17	38/40	–	–	M-8	**001 13 05 04 31**
50	22	55	19	48/50	–	–	M-10	**001 13 05 04 40**
50	22	120	19	48/50	–	–	M-10	**001 13 05 04 41**
50	27	55	21	60	–		M-12	**001 13 05 04 50**
50	27	120	21	60	–	–	M-12	**001 13 05 04 51**
50	32	55	24	70	–	–	M-16	**001 13 05 04 60**
50	32	120	24	70	–	–	M-16	**001 13 05 04 61**
*50	40	70	27	89	66,7	M-12	M-20	**001 13 03 04 70**
*50	40	120	27	89	66,7	M-12	M-20	**001 13 03 04 71**
*50	60	70	40	129	101,6	M-16	_	**001 13 03 04 90**
*50	60	120	40	129	101,6	M-16	–	**001 13 03 04 91**

* With 4 tapped holes for front clamping according to DIN 2079

Accessories, see pages 267-293

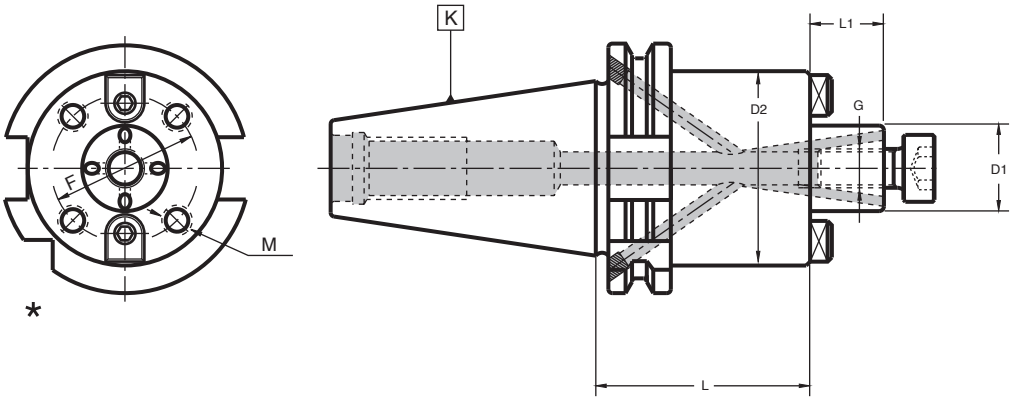


D_1						OPTIONALS	
16	———	303 05 05 00 30	301 01 00 03 15	001 99 01 22 30	001 99 01 12 30	001 99 01 01 30	001 99 04 01 30
22	———	303 05 05 00 40	301 01 01 04 12	001 99 01 22 40	001 99 01 12 40	001 99 01 01 40	001 99 04 01 40
27	———	303 05 05 00 50	301 01 01 05 12	001 99 01 22 50	001 99 01 12 50	001 99 01 01 50	001 99 04 01 50
32	———	303 05 05 00 60	301 01 01 05 16	001 99 01 22 60	001 99 01 12 60	001 99 01 01 60	001 99 04 01 60
40	003 99 01 01 01	———	301 01 01 06 16	001 99 01 22 70	001 99 01 12 70	001 99 01 01 70	001 99 04 01 70
60	———	303 05 04 00 02	301 01 01 12 25	———	———	———	———

001 33 33 35 .. ..

SHELL END MILL ARBORS FOR CUTTERS WITH INTERNAL COOLING

For shell end mills with driving slot DIN 138

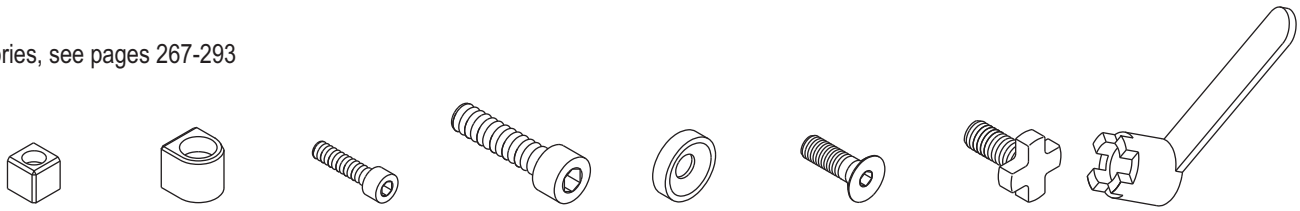


Maximum circular deviation between K and D_1 ≤ 0,008

K	D_1 h6	L	L_1	D_2	F	M	G	COD. Form AD + B
40	16	55	17	38/40	–	–	M-8	**001 33 35 02 30**
40	22	55	19	48/50	–	–	M-10	**001 33 35 02 40**
40	27	55	21	60	–	–	M-12	**001 33 35 02 50**
40	32	60	24	70	–	–	M-16	**001 33 35 02 60**
*40	40	60	27	89	66,7	M-12	M-20	**001 33 33 02 70**
50	16	55	17	38/40	–	–	M-8	**001 33 35 04 30**
50	22	55	19	48/50	–	–	M-10	**001 33 35 04 40**
50	27	55	21	60	–	–	M-12	**001 33 35 04 50**
50	32	55	24	70	–	–	M-16	**001 33 35 04 60**
*50	40	55	27	89	101,6	M-12	M-20	**001 33 33 04 70**
*50	60	70	40	129	101,6	M-16	–	**001 33 33 04 90**

* With 4 tapped holes for front clamping according to DIN 2079

Accessories, see pages 267-293



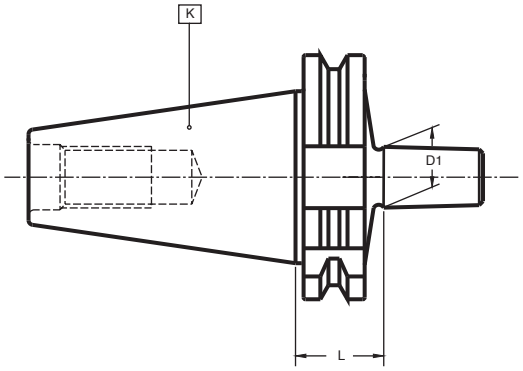
D_1							OPTIONALS	
16	—	303 05 05 00 30	301 01 00 03 15	301 01 09 08 20	—	—	001 99 01 01 30	001 99 04 01 30
22	—	303 05 05 00 40	301 01 01 04 12	301 01 09 10 25	—	—	001 99 01 01 40	001 99 04 01 40
27	—	303 05 05 00 50	301 01 01 05 12	301 01 01 12 25	—	—	001 99 01 01 50	001 99 04 01 50
32	—	303 05 05 00 60	301 01 01 05 16	301 01 01 16 30	—	—	001 99 01 01 60	001 99 01 01 60
40	003 99 01 01 01	—	301 01 01 06 16	—	001 99 01 22 70	001 99 01 12 70	001 99 01 01 70	001 99 01 01 70
60	—	303 05 04 00 02	301 01 01 12 25	—	—	—	—	—

001 13 50 .. ..

DRILL CHUCK ARBORS

For DIN 238 or JACOBS

ALTERNATIVE SOLUTIONS 003 $\frac{13}{33}$ 54 + 001 54 50 pages 121 and 234



Maximum circular deviation between K and D_1 ≤ 0,008

K	B - J	L	D_1	COD. Form A
40	B-12	25	12,06	001 13 50 02 01 ⚠
40	B-16	25	15,73	001 13 50 02 02
40	B-18	25	17,78	001 13 50 02 03 ⚠
45	B-12	25	12,06	001 13 50 03 01 ⚠
45	B-16	25	15,73	001 13 50 03 02 ⚠
50	B-16	25	15,73	001 13 50 04 02
50	B-18	25	17,78	001 13 50 04 03 ⚠
45	J-2	45	14,199	001 13 50 03 13 ⚠
45	J-33	45	15,85	001 13 50 03 19 ⚠
45	J-6	45	17,17	001 13 50 03 18 ⚠
50	J-33	45	15,85	001 13 50 04 19 ⚠
50	J-3	45	20,599	001 13 50 04 15 ⚠

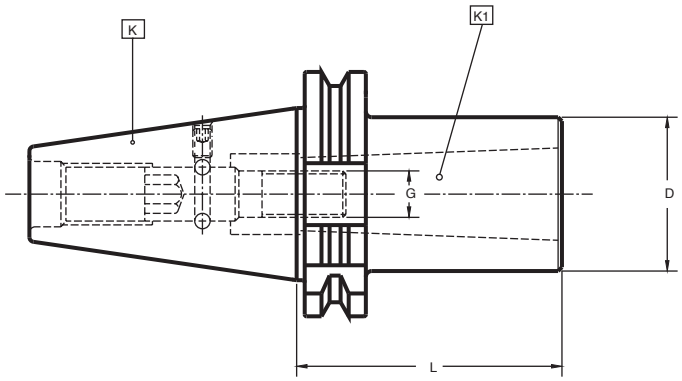
⚠ Product outside of our present production program. Price subject to availability.

003 13 02 .. ..

REDUCING ADAPTERS

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

DIN 6364 (*)



Maximum circular deviation between K and D_1 ≤ 0,008

K	K_1	L	D	G	COD. Form A			
30	1	50	25	M-6	**003 13 02 01 20** ⚠	003 99 08 01 21	304 01 00 03 00	301 01 03 04 05
30	3	85	40	M-12	**003 13 02 01 40** ⚠	003 99 08 01 40	304 01 00 03 00	301 01 03 04 05
40	2	50	32	M-10	**003 13 02 02 30**	003 99 08 02 30	304 01 00 04 00	301 01 03 05 08
40	3	70	40	M-12	**003 13 02 02 40**	003 99 08 02 40	304 01 00 04 00	301 01 03 05 08
*40	4	95	48	M-16	**003 13 02 02 50**	003 99 08 02 50	304 01 00 04 00	301 01 03 05 08
40	4	with driving slot DIN 2201 see page 115 COD. 003 13 04 02 50						
50	2	60	32	M-10	**003 13 02 04 30**	003 99 08 04 30	304 01 00 04 00	301 01 03 05 12
50	3	65	40	M-12	**003 13 02 04 40**	003 99 08 04 40	304 01 00 04 00	301 01 03 05 12
*50	4	75	40	M-16	**003 13 02 04 50**	003 99 08 04 50	304 01 00 04 00	301 01 03 05 12
50	4	with driving slot DIN 2201 see page 115 COD. 003 13 04 04 50						
*50	5	103	63	M-20	**003 13 02 04 60**	003 99 08 04 60	304 01 00 04 00	301 01 03 05 12
50	5	with driving slot DIN 2201 see page 115 COD. 003 13 04 04 60						

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

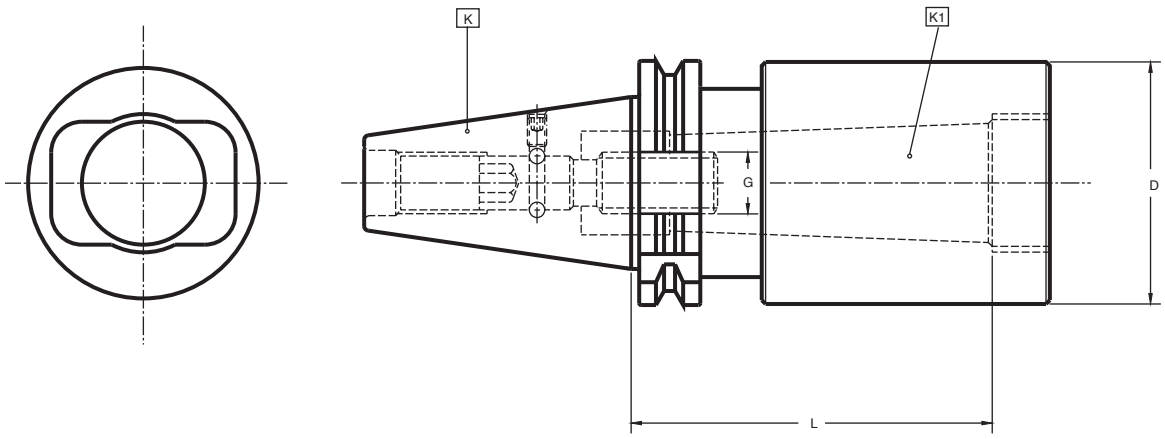
* These positions are not according to DIN 6364 (No driving slot DIN 2201).

003 13 04 .. ..

REDUCING ADAPTERS

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

DIN 6364 (DIN 2201)



Maximum circular deviation between K and D_1 ≤ 0,008

K	K_1	L	D	G	COD. Form A			
40	4	95	63	M-16	**003 13 04 02 50** ⚠	003 99 08 02 50	304 01 00 04 00	301 01 03 05 08
40	4	without driving slot DIN 2201 see page 114 COD. 003 13 02 02 50						
50	4	75	63	M-16	**003 13 04 04 50** ⚠	003 99 08 04 50	304 01 00 04 00	301 01 03 05 12
50	4	without driving slot DIN 2201 see page 114 COD. 003 13 02 02 50						
50	5	103	78	M-20	**003 13 04 04 60** ⚠	003 99 08 04 60	304 01 00 04 00	301 01 03 05 12
50	5	without driving slot DIN 2201 see page 114 COD. 003 13 02 02 60						

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

003 13/33 12 .. ..

EXTENSIONS AND REDUCING ADAPTERS

For tanged Morse taper tools DIN 228-B or Morse taper tools with thread DIN 228-A

ALTERNATIVE SOLUTIONS 003 13/33 54 + 003 54 12 pages 121 and 236

Fig. 1

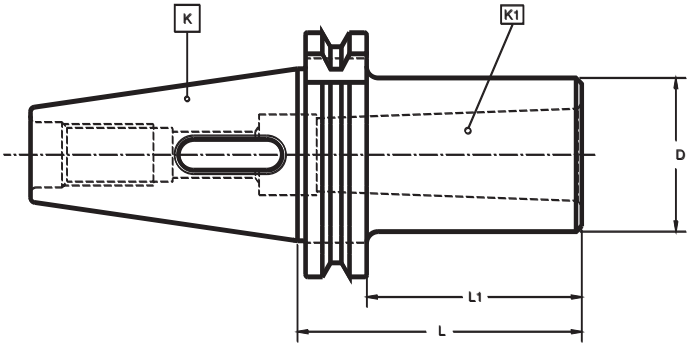
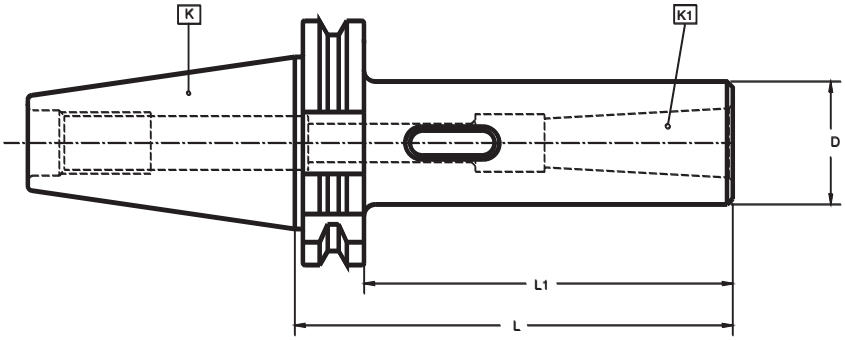


Fig. 2



Maximum circular deviation between K and K_1 ≤ 0,008

See pages 274-275

Figura	K	K_1	L	L_1	D	COD. Form AD	COD. Form AD+B	(*)	(*)
1	30	1	50	31	25	**003 13 12 01 20**	–	301 01 01 06 30	–
1	30	2	62	43	32	**003 13 12 01 30**	–	–	003 99 .. 01 30
1	30	3	80	61	40	**003 13 12 01 40**	–	–	003 99 .. 01 40
2	30	3	130	111	40	**003 13 12 01 41** ⚠	–	–	003 99 .. 01 41
1	40	1	50	31	25	**003 13 12 02 20**	**003 33 12 02 20** ⚠	301 01 01 06 40	–
2	40	1	100	81	25	**003 13 12 02 21**	–	301 01 01 06 80	–
1	40	2	60	41	32	**003 13 12 02 30**	–	003 99 07 06 15	–
2	40	2	115	96	32	**003 13 12 02 31**	–	003 99 07 06 20	–
1	40	3	75	56	40	**003 13 12 02 40**	–	–	003 99 .. 02 40
2	40	3	135	116	40	**003 13 12 02 41**	–	–	003 99 .. 02 41
1	40	4	95	76	48	**003 13 12 02 50**	**003 33 12 02 50** ⚠	–	003 99 .. 02 50
2	40	4	160	141	48	**003 13 12 02 51**	–	–	003 99 .. 02 51
1	45	1	100	31	25	**003 13 12 03 20** ⚠	–	301 01 01 06 80	–
1	45	3	135	61	40	**003 13 12 03 40** ⚠	–	–	003 99 .. 03 41
1	50	1	50	31	25	**003 13 12 04 20**	–	301 01 01 06 55	–
2	50	1	105	85	25	**003 13 12 04 21**	**003 33 12 04 20** ⚠	301 01 01 06 80	–
1	50	2	50	31	32	**003 13 12 04 30**	–	301 01 01 10 50	–
2	50	2	117	98	32	**003 13 12 04 31**	**003 33 12 04 30** ⚠	301 01 01 10 90	–
1	50	3	63	44	40	**003 13 12 04 40**	–	301 01 01 12 55	–
2	50	3	137	118	40	**003 13 12 04 41**	**003 33 12 04 40** ⚠	301 01 01 12 10	–
1	50	4	85	66	48	**003 13 12 04 50**	–	003 99 07 09 18	–
2	50	4	167	148	48	**003 13 12 04 51**	–	003 99 07 09 22	
1	50	5	108	89	63	**003 13 12 04 60**	–	–	003 99 .. 04 60
2	50	5	197	178	63	**003 13 12 04 61**	–	–	003 99 .. 04 61

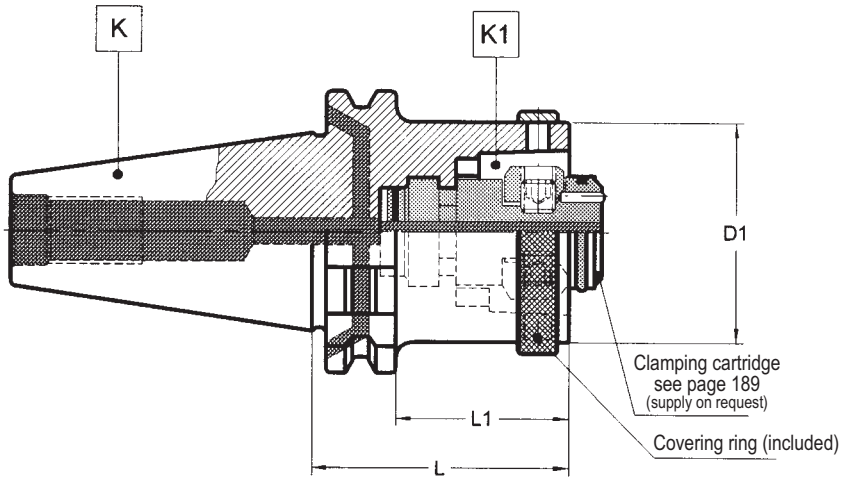
⚠ Product outside of our present production program. Price subject to availability.

(*) Pull stud for tools with tightening thread according to DIN 228-A

003 33 14 .. ..

ADAPTERS DIN 69871 TO DIN 69063-HSK

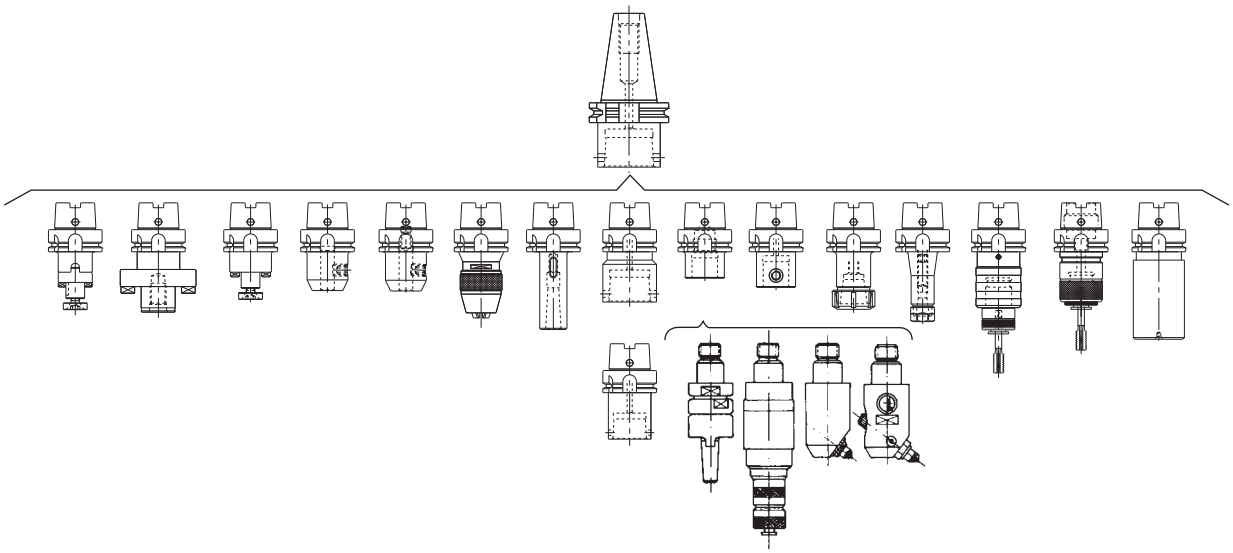
Prepared for MAPAL clamping system



Maximum circular deviation between K and K_1 ≤ 0,002

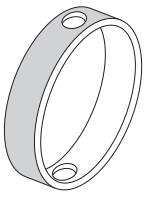
K	K_1	D_1	L	L_1	COD. Form AD + B
40	HSK-63	63	70	50,9	**003 33 14 02 04**
50	HSK-63	63	40	20,9	**003 33 14 04 04**
50	HSK-80	80	60	40,9	**003 33 14 04 05** ⚠

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



351 03 99 14 .. COVERING RING

Design
For DIN 69893-1 Form A and Form C toolholders.

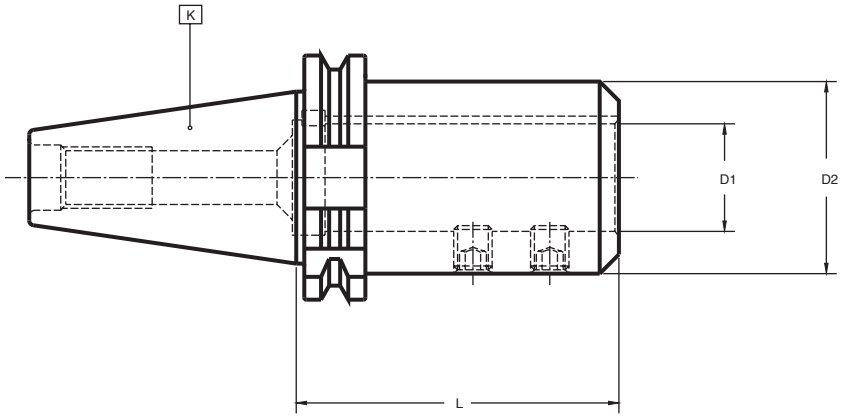


D_1-HSK	COD.
32	**351 03 99 14 01** ⚠
40	**351 03 99 14 02** ⚠
50	**351 03 99 14 03**
63	**351 03 99 14 04**
80	**351 03 99 14 05** ⚠
100	**351 03 99 14 06**

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

003 13/33 21 .. ..

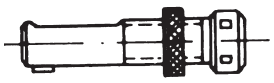
HOLDERS FOR ADJUSTABLE ADAPTERS DIN 6327



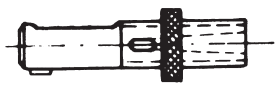
Maximum circular deviation between K and D_1 ≤ 0,008

K	D_1 H6	L	D_2	COD. Form AD	COD. Form AD + B	
40	20	60	45	**003 13 21 02 40** ⚠	–	301 01 03 08 12
40	32	150	55	**003 13 21 02 70** ⚠	–	301 01 03 08 12
40	36	120	63	**003 13 21 02 80** ⚠	**003 33 21 02 80** ⚠	301 01 03 12 14
50	20	100	45	**003 13 21 04 40** ⚠	–	301 01 03 08 12
50	36	100	63	**003 13 21 04 80** ⚠	–	301 01 03 12 14
50	48	100	80	**003 13 21 04 90** ⚠	**003 33 21 04 90** ⚠	301 01 03 12 16

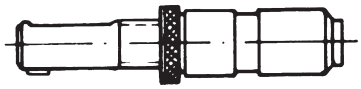
⚠ Product outside of our present production program. Price subject to availability.



004 51 ..



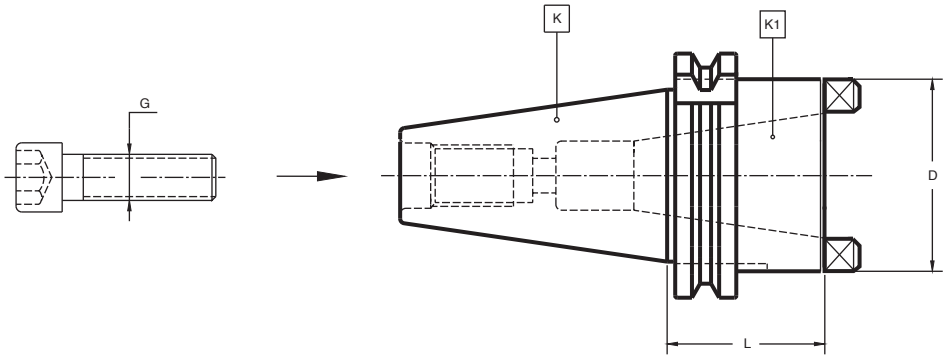
003 51 ..



019 51 ..

See pages 221-225

ALTERNATIVE SOLUTIONS 003 13 32 page 120



Maximum circular deviation between K and K_1 ≤ 0,008

K	K_1	L	D	G	COD. Form AD	(1)	(2)
50	40	51	70	M-16	**003 13 31 04 02**	003 99 07 09 14	003 99 07 09 18

(1) Pull stud necessary to use DIN-2080 shanks.
(2) Pull stud necessary to use DIN-69871 and BT shanks.

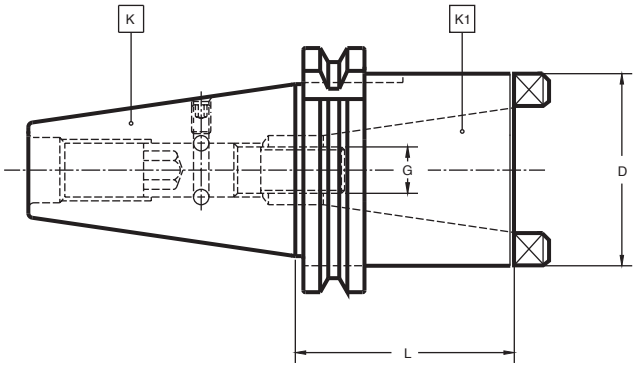
These pull studs are supplied on request.

003 13 32 01

REDUCING ADAPTERS

With double effect pull stud
For tools with DIN 2080 taper

ALTERNATIVE SOLUTION 003 13 31 page 119



Maximum circular deviation between K and K_1 ≤ 0,008

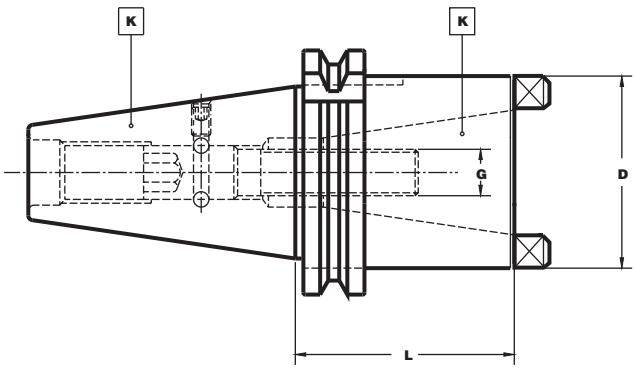
K	K_1	L	D	G	COD. Form AD			
40	30	58	50	M-12	**003 13 32 02 01 01**	003 99 08 02 40	304 01 00 04 00	301 01 03 05 08
40	40	85	68	M-16	**003 13 32 02 02 01**	003 99 08 02 50	304 01 00 04 00	301 01 03 05 08
50	40	63	70	M-16	**003 13 32 04 02 01**	003 99 08 04 50	304 01 00 04 00	301 01 03 05 12

003 13 32 02

REDUCING ADAPTERS

With double effect pull stud
For tools with DIN 69871 or MAS-BT taper

ALTERNATIVE SOLUTION 003 13 31 page 119



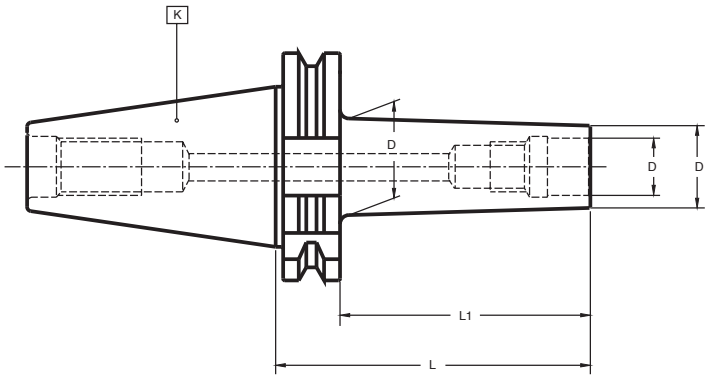
Maximum circular deviation between K and K_1 ≤ 0,008

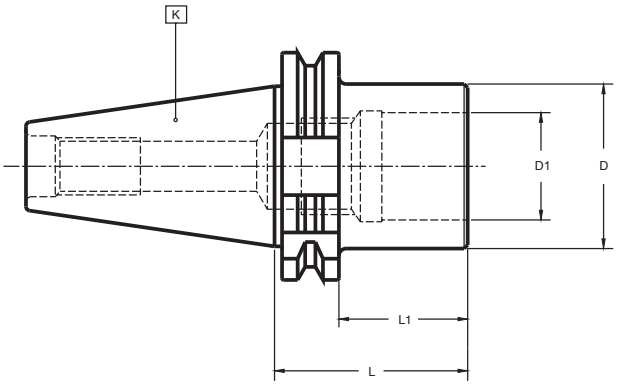
K	K_1	L	D	G	COD. Form AD			
40	30	58	50	M-12	**003 13 32 02 01 02**	003 99 08 02 01	304 01 00 04 00	301 01 03 05 08
40	40	85	68	M-16	**003 13 32 02 02 02**	003 99 08 02 02	304 01 00 04 00	301 01 03 05 08
50	40	63	70	M-16	**003 13 32 04 02 02**	003 99 08 04 02	304 01 00 04 00	301 01 03 05 12

BASIC ADAPTERS FOR MODULAR TOOLING

Interchangeable with C.O. system

* SHORT

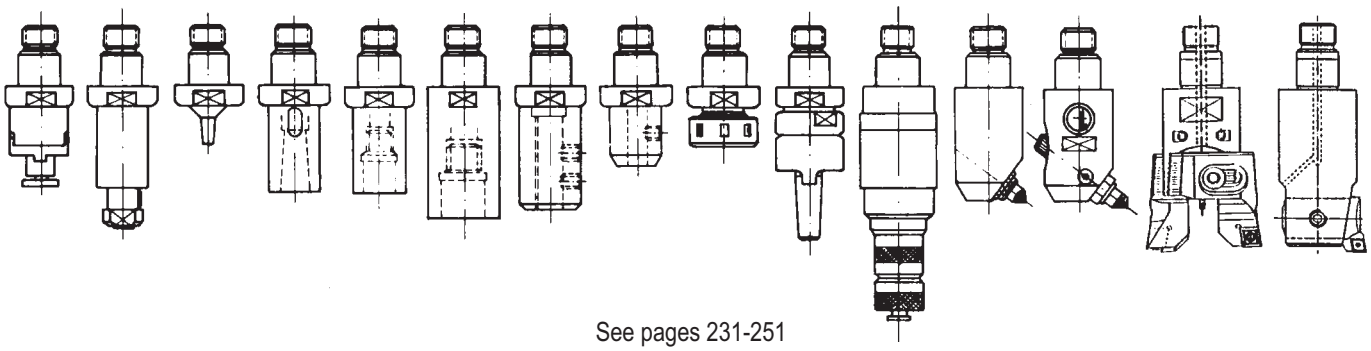




Maximum circular deviation between K and D_1 ≤ 0,005

K	D_1	D	L	L_1	D_2	COD. Form AD	COD. Form AD+B
*30	30	46	63	41	–	003 13 54 01 06	–
40	10,5	14,5	89	70	18,5	003 13 54 02 11 ⚠	–
40	13	18,5	89	70	22,5	003 13 54 02 12	–
40	16	23	89	70	27	003 13 54 02 13	–
40	20	29	89	70	33	003 13 54 02 14	–
40	26	36	89	70	40	003 13 54 02 15	–
40	30	46	89	70	50	003 13 54 02 16 ⚠	–
*40	30	46	55	36	–	003 13 54 02 06	003 33 54 02 06
*40	46	63	115	96	–	003 13 54 02 07	003 33 54 02 07
45	13	18,5	104	85	23,5	003 13 54 03 12 ⚠	–
45	20	29	104	85	34	003 13 54 03 14 ⚠	–
45	30	46	63	44	–	003 13 54 03 06 ⚠	–
*45	46	63	63	44	–	–	003 33 54 03 07 ⚠
50	10,5	14,5	119	100	20	003 13 54 04 11 ⚠	–
50	16	23	119	100	28,5	003 13 54 04 13	–
50	20	29	119	100	34,5	003 13 54 04 14	–
50	26	36	119	100	41,5	003 13 54 04 15	–
*50	30	46	63	44	–	003 13 54 04 06	003 33 54 04 06
*50	46	63	63	44	–	003 13 54 04 07	003 33 54 04 07
*50	46	90	63	44	–	003 13 54 04 08	003 33 54 04 08

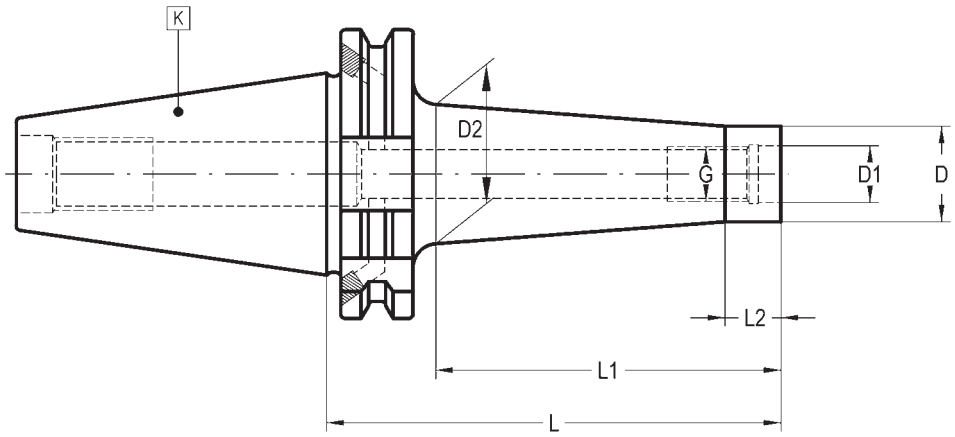
⚠ Product outside of our present production program. Price subject to availability.



See pages 231-251

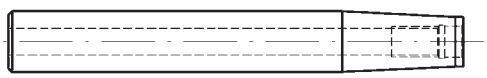
003 33 57 .. ..

FRONT CONTACT ADAPTERS FOR SCREW IN-TOOLS

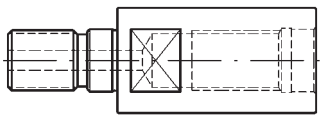


Maximum circular deviation between K and D_1 ≤ 0,003

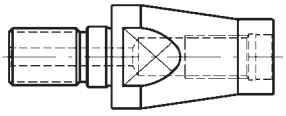
K	G	D	D_1	D_2	L	L_1	L_2	COD. Form AD+B
40	M-6	9,8	6,5	12	55	25	10	**003 33 57 12 01**
40	M-6	9,8	6,5	20	105	75	10	**003 33 57 32 01**
40	M-8	12,8	8,5	16	55	25	10	**003 33 57 12 02**
40	M-8	12,8	8,5	24	105	75	10	**003 33 57 32 02**
40	M-8	12,8	8,5	28	130	100	10	**003 33 57 42 02**
40	M-10	17,8	10,5	20	55	25	10	**003 33 57 12 03**
40	M-10	17,8	10,5	28	105	75	10	**003 33 57 32 03**
40	M-10	17,8	10,5	32	130	100	10	**003 33 57 42 03**
40	M-12	20,8	12,5	24	55	25	10	**003 33 57 12 04**
40	M-12	20,8	12,5	32	105	75	10	**003 33 57 32 04**
40	M-12	20,8	12,5	36	130	100	10	**003 33 57 42 04**
40	M-16	28,8	17	30	55	25	10	**003 33 57 12 05**
40	M-16	28,8	17	38	105	75	10	**003 33 57 32 05**
40	M-16	28,8	17	42	130	100	10	**003 33 57 42 05**
50	M-8	12,8	8,5	20	75	50	10	**003 33 57 24 02**
50	M-8	12,8	8,5	28	125	100	10	**003 33 57 44 02**
50	M-8	12,8	8,5	36	175	150	10	**003 33 57 64 02**
50	M-10	17,8	10,5	24	75	50	10	**003 33 57 24 03**
50	M-10	17,8	10,5	32	125	100	10	**003 33 57 44 03**
50	M-10	17,8	10,5	40	175	150	10	**003 33 57 64 03**
50	M-12	20,8	12,5	24	75	50	10	**003 33 57 24 04**
50	M-12	20,8	12,5	34	125	100	10	**003 33 57 44 04**
50	M-12	20,8	12,5	44	175	150	10	**003 33 57 64 04**
50	M-16	28,8	17	32	75	50	10	**003 33 57 24 05**
50	M-16	28,8	17	42	125	100	10	**003 33 57 44 05**
50	M-16	28,8	17	52	175	150	10	**003 33 57 64 05**



Cylindrical extensions (see page 219)



Extensions (see page 239)



Reducers (see page 239)

Delivery

– K40 Balanced according to ISO 1940-1 up to 15.000 R.p.m.
– We have latest methods for dynamic balancing up to 50.000 R.p.m.

004 13 01 / 33 51 (*) 01 .. ..

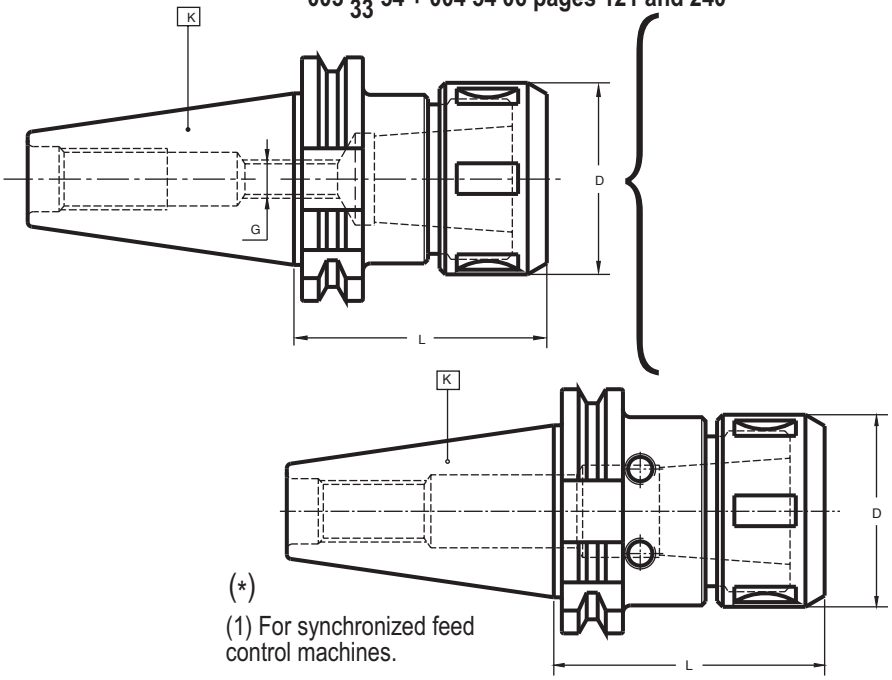
COLLET CHUCKS FOR DIN 6388 COLLETS
MILLING AND TAPPING(1) COLLET CHUCKS

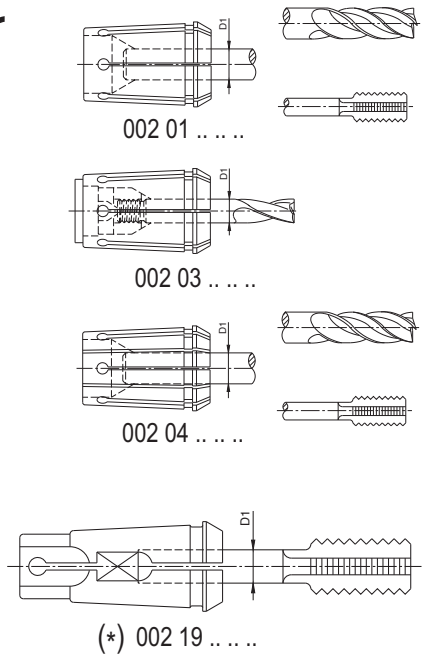
For tools with cylindrical straight shank DIN 1835-A or threaded cylindrical shank DIN 1835-D

ALTERNATIVE SOLUTIONS **004 13/33 06 pages 126 and 127**

004 13/33 05 page 124 and 125

003 13/33 54 + 004 54 06 pages 121 and 240





(*)

(1) For synchronized feed control machines.

COLLETS see pages 255-256

Maximum circular deviation between outer taper and collet housing ≤ 0,003

K	D_1 máx.	L	D	G	COD. Form AD	COD. Form AD+B
*30	20	75	60	–	**004 13 51 01 04** !	–
30	25	73	50	M12	**004 13 01 01 05** !	–
*40	16	70	43	–	**004 13 51 02 03** !	–
*40	20	75	50	–	**004 13 51 02 04** !	–
40	25	70	60	M16	–	**004 33 01 02 05** !
40	32	90	72	M16	**004 13 01 02 06** !	**004 33 01 02 06** !
45	32	70	72	M16	**004 13 01 03 06** !	–
50	20	70	50	M16	**004 13 01 04 04** !	**004 33 01 04 04** !
*50	20	75	50	–	**004 13 51 04 04** !	–
50	25	70	60	M16	**004 13 01 04 05** !	**004 33 01 04 05** !
50	32	80	72	M16	**004 13 01 04 06** !	**004 33 01 04 06** !
50	40	90	85	M16	**004 13 01 04 07** !	**004 33 01 04 07** !

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

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

K 30/40 - Balanced according to ISO 1940-1 up to 10.000 R.p.m.

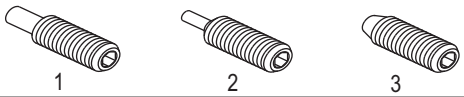
We have latest methods for dynamic balancing up to 50.000 R.p.m.

Accessories, see pages 267-293

D_1 max.	BALANCED NUT (STANDARD)	BEARING NUT (OPTIONAL)	WRENCH (OPTIONAL)
16	–	004 99 01 02 03	004 99 04 09 08
20	004 99 01 01 04	004 99 01 02 04	004 99 04 09 09
25	004 99 01 01 05	004 99 01 02 05	004 99 04 09 11
32	004 99 01 01 06	004 99 01 02 06	004 99 04 09 12
40	–	004 99 01 02 07	004 99 04 09 13

OPTIONAL

1 - LENGTH ADJUSTMENT SCREW
2 and 3 - LENGTH ADJUSTMENT SCREW WITH THROUGH HOLE

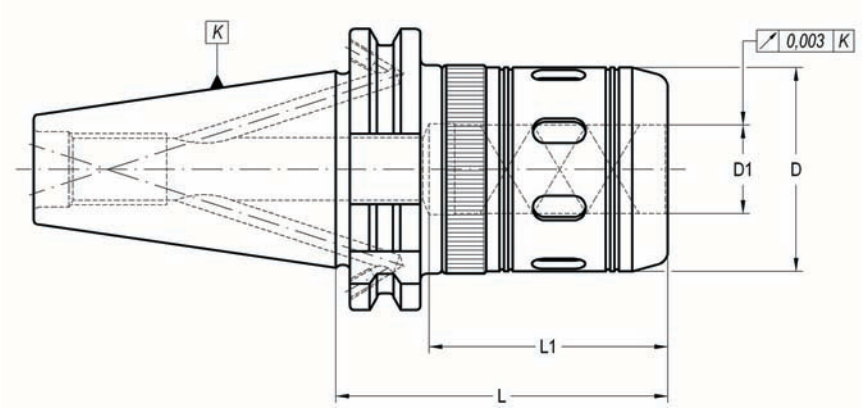


G	1	2	3
M-12	301 99 02 12 01	301 99 02 12 02	–
M-16	301 99 02 16 01	301 99 02 16 02	301 99 02 16 03

004 33 15 .. ..

GREAT POWER COLLET CHUCKS

For tools with plain cylindrical straight shank

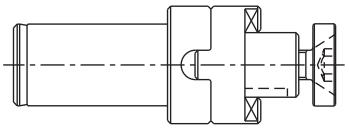


K	D_1	L	D	L_1	COD.		OPTIONAL
40	20	75	46	60	**004 33 15 02 04**	004 99 04 02 06	004 99 04 09 09
40	20	105	46	60	**004 33 15 02 14**	004 99 04 02 06	004 99 04 09 09
40	32	100	62	80	**004 33 15 02 06**	004 99 04 02 06	004 99 04 09 11
40	32	120	62	80	**004 33 15 02 16**	004 99 04 02 06	004 99 04 09 11
50	20	105	46	60	**004 33 15 04 04**	004 99 04 02 06	004 99 04 09 09
50	32	85	62	80	**004 33 15 04 06**	004 99 04 02 06	004 99 04 09 11
50	32	135	62	80	**004 33 15 04 26**	004 99 04 02 06	004 99 04 09 11
50	40	110	85	85	**004 33 15 04 07**	004 99 04 02 06	004 99 04 09 13
50	50	120	99	90	**004 33 15 04 09**	004 99 04 02 06	004 99 04 09 14

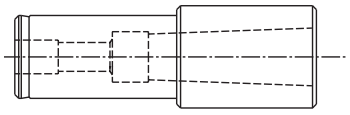
For tools with cylindrical straight shanks
For an optium performance of the chuck it is highly recomemnded to use h6 cylindrical tools
For tools with nominal diameter collet there is no need.

K40 balanced according to ISO 1940-1 up to 15.000 r.p.m.
K50 balanced according to ISO 1940-1 up to 10.000 r.p.m.
We have latest methods for dynamic balancing up to 50.ooo r.p.m.

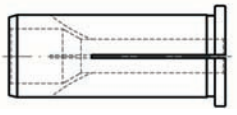
Accesories, see pages...



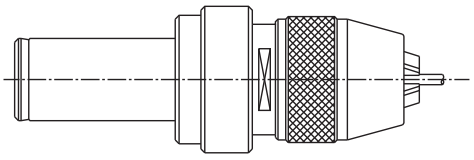
001 50 02 06 ..
See page 214



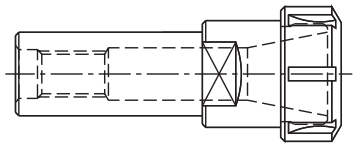
003 50 12 06 ..
See page 214



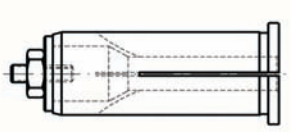
002 05 ..
See page 262



012 50 09 .. ..
See page 216



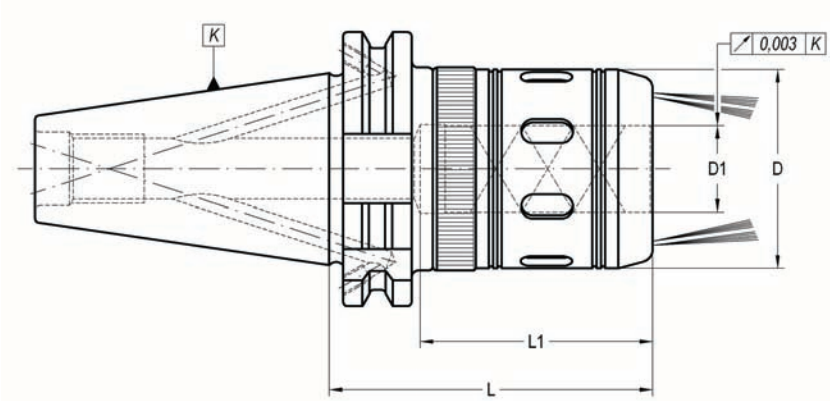
004 50 06 .. ..
See page 215



002 09 .. ..
See page 262

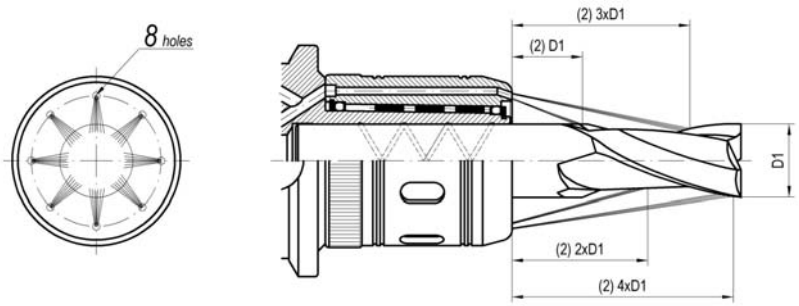
GREAT POWER COLLET CHUCKS – ELS –

For tools with plain cylindrical straight shank



K	D_1	L	D	L_1	COD.		
40	20	75	46	60	**004 33 25 02 04**	004 99 04 02 06	004 99 04 09 09
40	32	100	62	80	**004 33 25 02 06**	004 99 04 02 06	004 99 04 09 11
50	32	85	62	80	**004 33 25 04 06**	004 99 04 02 06	004 99 04 09 11

COLLETS, see page 262

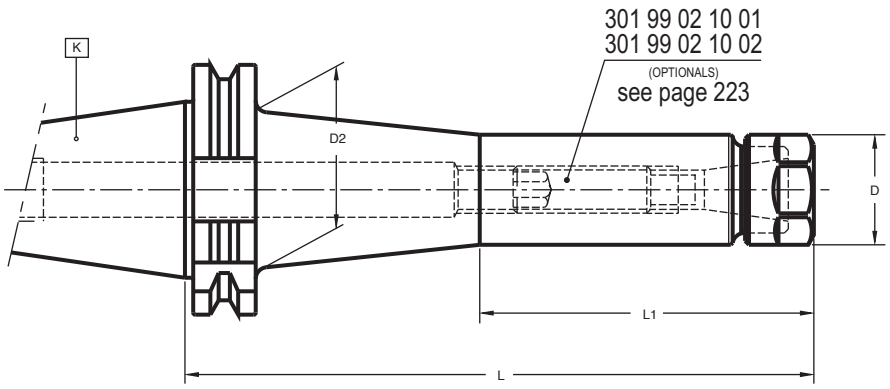


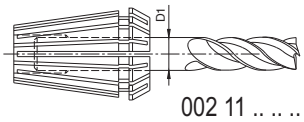
– Without o-rings, washers, rings, etc.
– No pressure limit
– Coolant directed to the cutting tool
– 8 coolant exits with different directions to assure correct cooling of the cutting tool.

004 13/33 06 .. .. (1/2) COLLET CHUCKS ER TYPE (DIN 6499)

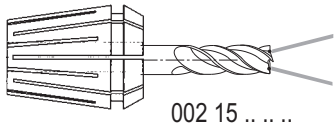
For tools with cylindrical straight shank DIN 1835-A

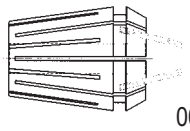
ALTERNATIVE SOLUTIONS 003 13/33 54 + 004 54 06 pages 121 and 240





002 11 .. .. ..


002 15 .. .. ..


002 16 .. .. ..

Maximum circular deviation between outer taper and collet housing ≤ 0,003

COLLETS see pages 257-259

K	TAMAÑO	D_1	L	D	D_2	L_1	COD. Form AD	COD. Form AD+B
30	(ER16)	0,5 - 10	60	28	–	38	**004 13 06 01 03**	**–**
30	(ER16)	0,5 - 10	100	28	–	78	**004 13 06 01 13**	**–**
40	(ER16)	0,5 - 10	70	28	–	48	**004 13 06 02 03**	**004 33 06 02 03**
40	(ER16)	0,5 - 10	100	28	–	78	**004 13 06 02 13**	**004 33 06 02 13**
40	(ER16)	0,5 - 10	160	28	40	85	**004 13 06 02 33**	**004 33 06 02 33**
50	(ER16)	0,5 - 10	100	28	–	78	**004 13 06 04 13**	**004 33 06 04 13**
50	(ER16)	0,5 - 10	200	28	40	95	**004 13 06 04 43**	**004 33 06 04 43**

K 30/40 - Balanced according to ISO 1940-1 up to 10.000 R.p.m.

We have latest methods for dynamic balancing up to 50.000 R.p.m.

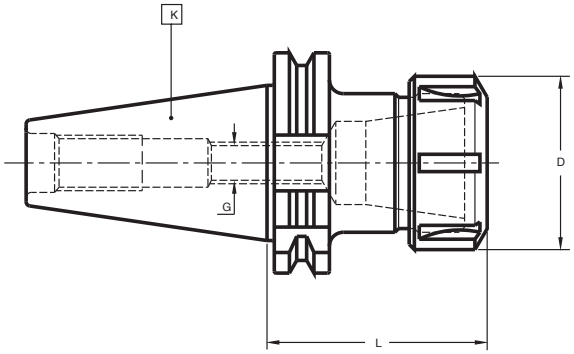
Accessories, see pages 267-293

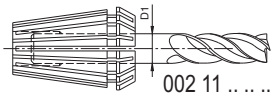
SIZE	BALANCED NUT (STANDARD)	BEARING NUT (OPTIONAL)	WRENCH (OPTIONAL)
ER 16	004 99 01 08 03	004 99 01 04 03	004 99 04 06 25

004 13/33 06 .. .. (2/2) COLLET CHUCKS ER TYPE (DIN 6499)

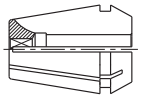
For tools with cylindrical straight shank DIN 1835-A

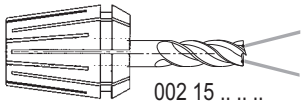
ALTERNATIVE SOLUTIONS 004 13/33 01 page 123
004 13/33 05 page 127
004 13/33 54 + 004 54 06 pages 121 and 240

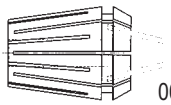


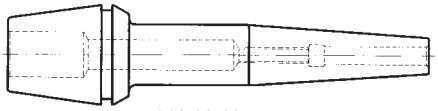


002 11 .. .. ..


002 14 .. .. ..


002 15 .. .. ..


002 16 .. .. ..


012 62 12 .. ..

K 30/40 - Balanced according to ISO 1940-1 up to 10.000 R.p.m.
We have latest methods for dynamic balancing up to 50.000 R.p.m.

Maximum circular deviation between outer taper and collet housing ≤ 0,003

COLLETS see pages 257-259

K	TAMAÑO	D_1 máx	L	D	G	COD. Form AD	COD. Form AD+B
30	(ER25)	16	70	42	M-12	**004 13 06 01 05**	–
30	(ER32)	20	70	50	M-12	**004 13 06 01 06**	–
40	(ER25)	16	70	42	M-16	**004 13 06 02 05**	**004 33 06 02 05**
40	(ER25)	16	100	42	M-16	**004 13 06 02 15**	–
40	(ER32)	20	70	50	M-16	**004 13 06 02 06**	**004 33 06 02 06**
40	(ER32)	20	100	50	M-16	**004 13 06 02 16**	–
40	(ER32)	20	150	50	M-16	**004 13 06 02 26**	–
40	(ER40)	26	70	63	M-16	**004 13 06 02 07**	**004 33 06 02 07**
40	(ER40)	26	100	63	M-16	**004 13 06 02 17**	–
40	(ER50)	34	90	78	M-16	**004 13 06 02 08**	**004 33 06 02 08**
50	(ER32)	20	100	50	M-16	**004 13 06 04 06**	**004 33 06 04 06**
50	(ER32)	20	150	50	M-16	**004 13 06 04 26**	–
50	(ER32)	20	200	50	M-16	**004 13 06 04 46** ⚠	**004 33 06 04 46**
50	(ER40)	26	100	63	M-16	**004 13 06 04 07**	**004 33 06 04 07**
50	(ER40)	26	150	63	M-16	**004 13 06 04 27**	–
50	(ER40)	26	200	63	M-16	**004 13 06 04 47** ⚠	**004 33 06 04 47**
50	(ER50)	34	100	78	M-16	**004 13 06 04 08**	**004 33 06 04 08**
50	(ER50)	34	150	78	M-16	**004 13 06 04 28**	–

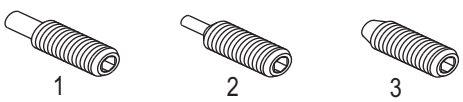
⚠ Product outside of our present production program. Price subject to availability.

For boxes and composition of different sets see pages 265-266
Accessories, see pages 267-293

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

OPTIONAL

1 - LENGTH ADJUSTMENT SCREW
2 and 3 - LENGTH ADJUSTMENT SCREW WITH THROUGH HOLE

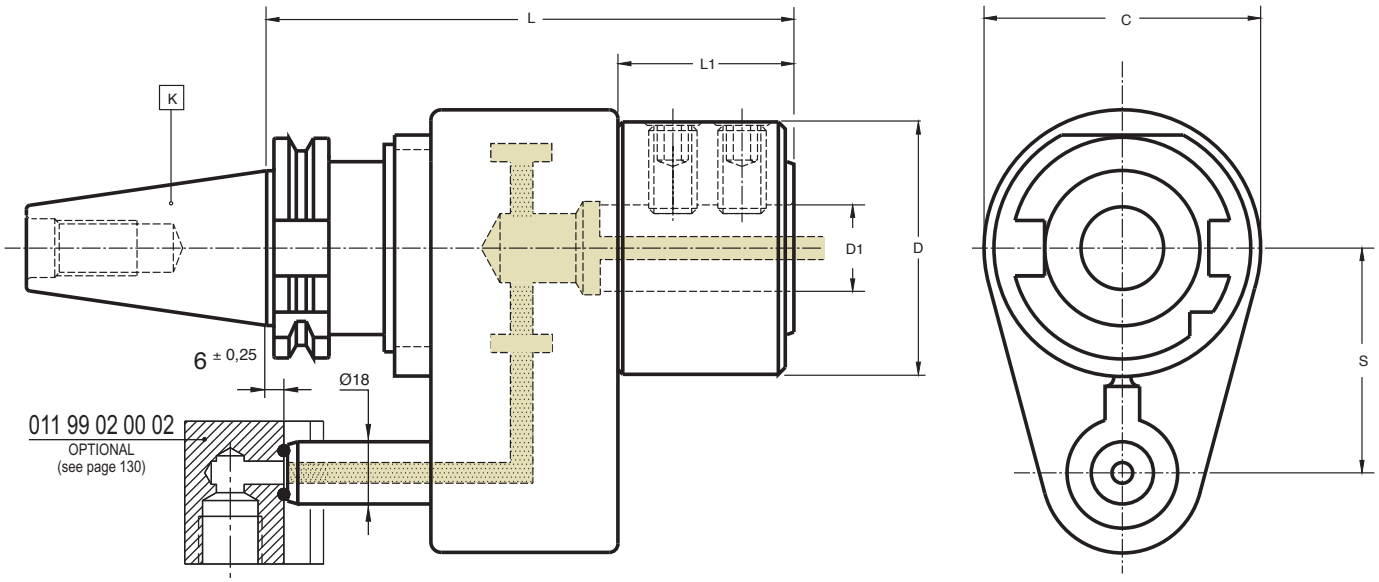


G	1	2	3
M-12	301 99 02 12 01	301 99 02 12 02	–
M-16	301 99 02 16 01	301 99 02 16 02	301 99 02 16 03

011 13 03 .. ..

ROTARY COOLANT ADAPTERS

For tools with cylindrical straight shank with locking surface

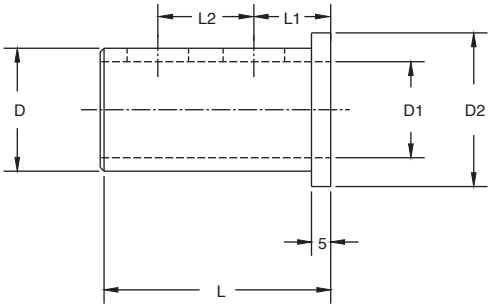


SPECIFICATIONS	
Max. RPM	6.000 rpm
Max. coolant pressure	20 bar
Min. coolant pressure	2 bar

Operating Instructions, see page 300

K	D_1	D	L	L_1	S	C	COD. Form A	
40	25	50	153	48	65	80	**011 13 03 02 25**	301 01 08 16 15
40	32	73	153	48	65	80	**011 13 03 02 32**	301 01 08 16 20
50	32	65	165	50	80	100	**011 13 03 04 32**	301 01 08 16 20
50	40	88	165	50	80	100	**011 13 03 04 40**	301 01 08 16 30

REDUCING ADAPTERS

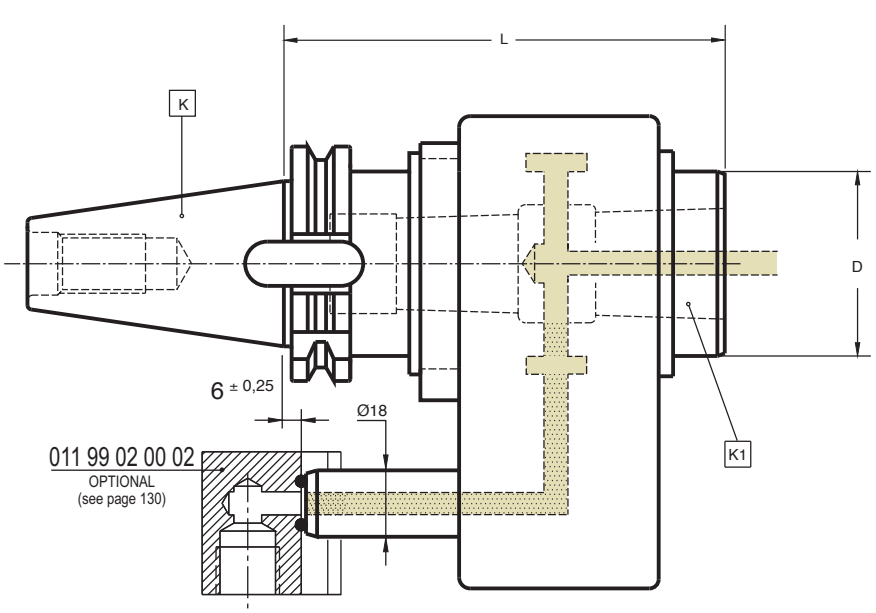


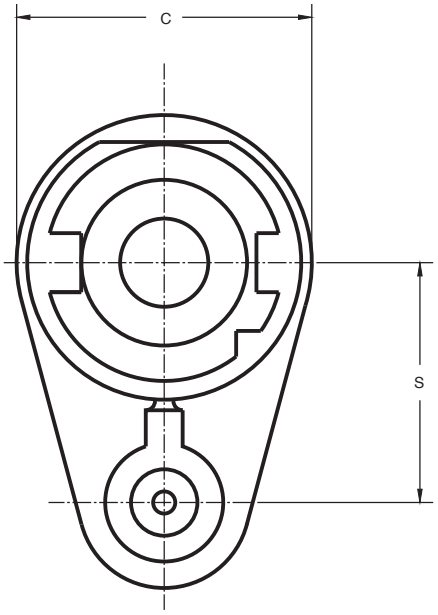
D	D_1	D_2	L	L_1	L_2	COD.
25	16	33	55	20	–	**011 99 03 03 01**
25	20	33	55	20	–	**011 99 03 03 02**
32	16	38	60	20	–	**011 99 03 04 01**
32	20	38	60	20	–	**011 99 03 04 02**
32	25	38	60	20	20	**011 99 03 04 03**
40	16	48	65	20	–	**011 99 03 05 01**
40	20	48	65	20	–	**011 99 03 05 02**
40	25	48	65	20	25	**011 99 03 05 03**
40	32	48	65	20	25	**011 99 03 05 04**

011 13 11 .. ..

ROTARY COOLANT ADAPTERS

For tanged Morse taper tools DIN 228-B





SPECIFICATIONS	
Max. RPM	6.000 rpm
Max. coolant pressure	20 bar
Min. coolant pressure	2 bar

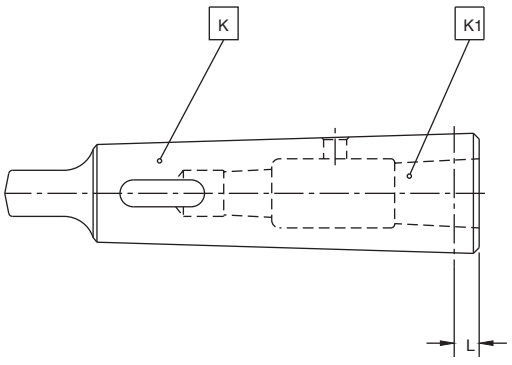
Operating Instructions, see page 300

K	K_1	D	L	S	C	COD. Form A
40	4	50	120	65	80	**011 13 11 02 50** ⚠
50	4	65	125	80	100	**011 13 11 04 50** ⚠

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

REDUCING ADAPTERS

For rotary coolant adapters



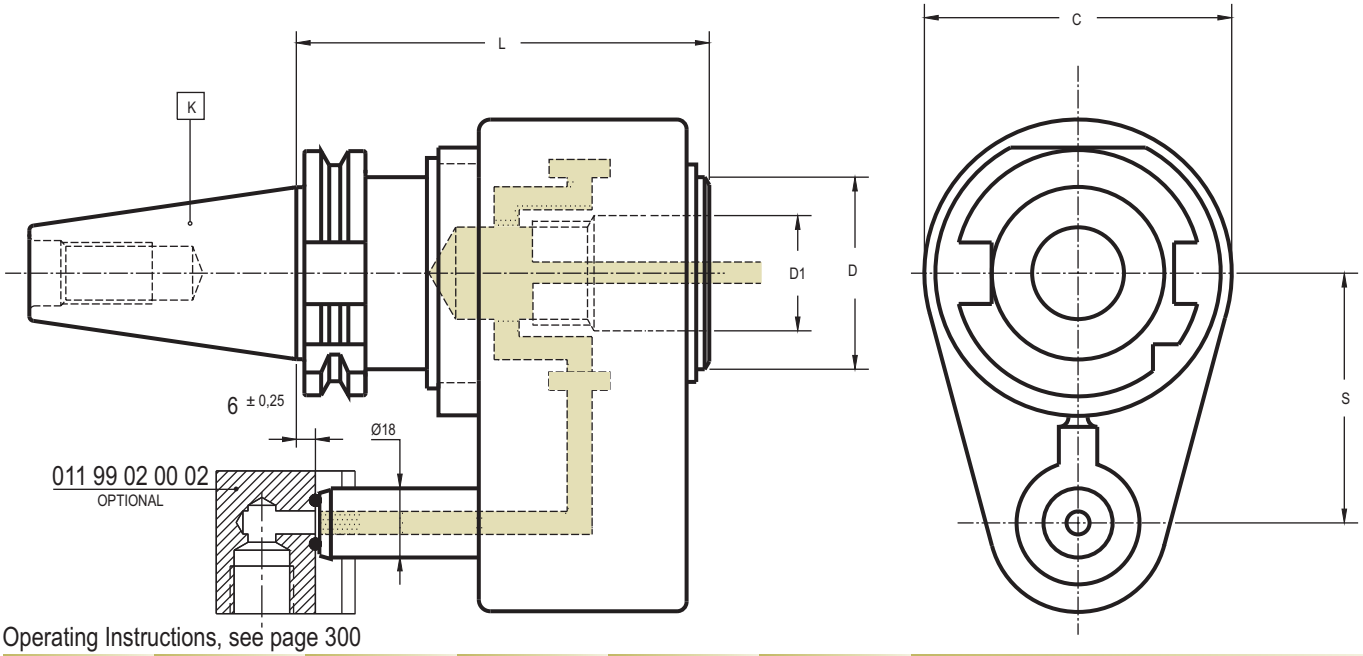
K	K_1	L	COD.
4	1	6,5	**011 99 05 05 20** ⚠
4	2	6,5	**011 99 05 05 30** ⚠
4	3	22,5	**011 99 05 05 40** ⚠

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

011 13 54 .. ..

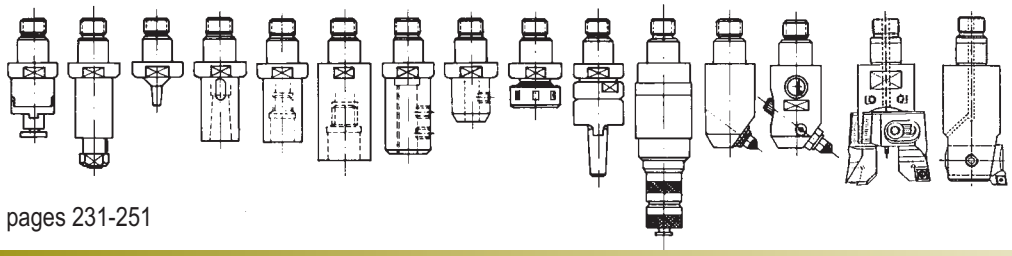
ROTARY COOLANT ADAPTERS

For C.O. modular system tooling



Operating Instructions, see page 300

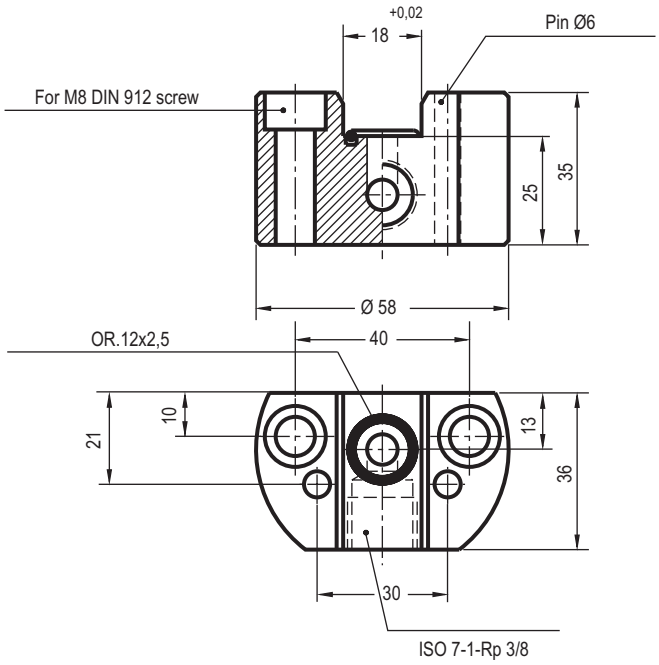
K	D_1	D	L	S	C	COD. Form A
40	30	46	110	65	80	**011 13 54 02 06**
50	46	63	120	80	100	**011 13 54 04 07**



See pages 231-251

011 99 02 00 02

POSITIONING BLOCK



012 13/33 01 .. ..

WELDON HOLDERS

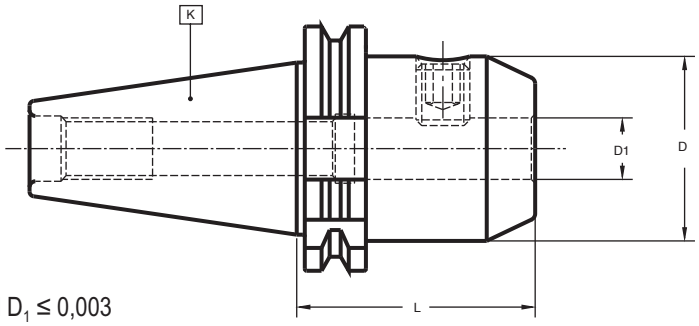
For end mills with shank DIN 1835-B - DIN 6535 HB

ALTERNATIVE SOLUTIONS

003 13/33 54 + 012 54 04

pages 123 and 248

DIN 6359



*Maximum circular deviation between K and D_1 ≤ 0,003

K	D_1	* tol.	L	D_2	COD. Form AD	COD. Form AD+B	
30	6		50	25	**012 13 01 11 06**	–	301 01 05 06 10
30	8	+0,005 −0	50	28	**012 13 01 11 08**	–	301 01 05 08 10
30	10		50	35	**012 13 01 11 10**	–	301 01 05 10 12
30	12		50	42	**012 13 01 11 12**	–	301 01 05 12 16
30	14		50	44	**012 13 01 11 14**	–	301 01 05 12 16
30	16		63	48	**012 13 01 11 16**	–	301 01 05 14 16
40	6		50	25	**012 13 01 12 06**	–	301 01 05 06 10
40	6		120	25	–	**012 33 01 22 06**	301 01 05 06 10
40	8		50	28	**012 13 01 12 08**	–	301 01 05 08 10
40	8		120	28	–	**012 33 01 22 08**	301 01 05 08 10
40	10	+0,005 −0	50	35	**012 13 01 12 10**	**012 33 01 12 10**	301 01 05 10 12
40	10		120	35	–	**012 33 01 22 10**	301 01 05 10 12
40	12		50	42	**012 13 01 12 12**	**012 33 01 12 12** ⚠	301 01 05 12 16
40	12		120	42	–	**012 33 01 22 12**	301 01 05 12 16
40	14		50	44	**012 13 01 12 14**	–	301 01 05 12 16
40	14		120	44	–	**012 33 01 22 14**	301 01 05 12 16
40	16		63	48	**012 13 01 12 16**	**012 33 01 12 16**	301 01 05 14 16
40	16		120	48	–	**012 33 01 22 16**	301 01 05 14 16
40	18		63	50	**012 13 01 12 18**	–	301 01 05 14 16
40	18		120	50	–	**012 33 01 22 18**	301 01 05 14 16
40	20		63	52	**012 13 01 12 20**	**012 33 01 12 20**	301 01 05 16 16
40	20		120	52	–	**012 33 01 22 20**	301 01 05 16 16
40	25	+0,007 −0	100	65	**012 13 01 12 25**	**012 33 01 12 25**	301 01 05 18 20
40	25		160	65	–	**012 33 01 32 25** ⚠	301 01 05 18 20
40	32		100	72	**012 13 01 12 32**	–	301 01 05 20 20
40	32		160	72	–	**012 33 01 32 32**	301 01 05 20 20
40	40	+0,009 −0	100	80	-	**012 33 01 12 40**	301 01 05 20 20
40	40		160	80	–	**012 33 01 32 40**	301 01 05 20 20
45	8		50	28	**012 13 01 13 08** ⚠	**012 33 01 13 08** ⚠	301 01 05 08 10
45	12	+0,005 −0	50	42	**012 13 01 13 12** ⚠	–	301 01 05 12 16
45	16		63	48	–	**012 33 01 13 16** ⚠	301 01 05 14 16
50	6		63	25	**012 13 01 14 06**	–	301 01 05 06 10
50	6		120	25	–	**012 33 01 24 06**	301 01 05 06 10
50	8		63	28	**012 13 01 14 08**	**012 33 01 14 08**	301 01 05 08 10
50	8	+0,005 −0	120	28	–	**012 33 01 24 08**	301 01 05 08 10
50	10		63	35	**012 13 01 14 10**	**012 33 01 14 10**	301 01 05 10 12
50	10		120	35	–	**012 33 01 24 10**	301 01 05 10 12
50	12		63	42	**012 13 01 14 12**	**012 33 01 14 12**	301 01 05 12 16
50	12		120	42	–	**012 33 01 24 12**	301 01 05 12 16
50	14		63	44	**012 13 01 14 14**	**012 33 01 14 14**	301 01 05 12 16
50	14		120	44	–	**012 33 01 24 14**	301 01 05 12 16
50	16		63	48	**012 13 01 14 16**	–	301 01 05 14 16
50	16		120	48	–	**012 33 01 24 16**	301 01 05 14 16
50	18		63	50	**012 13 01 14 18**	**012 33 01 14 18**	301 01 05 14 16
50	18		120	50	–	**012 33 01 24 18**	301 01 05 14 16
50	20		63	52	**012 13 01 14 20**	–	301 01 05 16 16
50	20	+0,007 −0	120	52	–	**012 33 01 24 20**	301 01 05 16 16
50	25		80	65	**012 13 01 14 25**	–	301 01 05 18 20
50	25		160	65	–	**012 33 01 34 25**	301 01 05 18 20
50	32		100	72	**012 13 01 14 32**	–	301 01 05 20 20
50	32		160	72	–	**012 33 01 34 32**	301 01 05 20 20
50	40	+0,009 −0	100	80	**012 13 01 14 40**	**012 33 01 14 40**	301 01 05 20 20
50	40		160	80	–	**012 33 01 34 40**	301 01 05 20 20
50	50		130	98	**012 13 01 14 50**	**012 33 01 14 50**	301 01 05 24 25
50	50		200	98	–	**012 33 01 44 50**	301 01 05 24 25

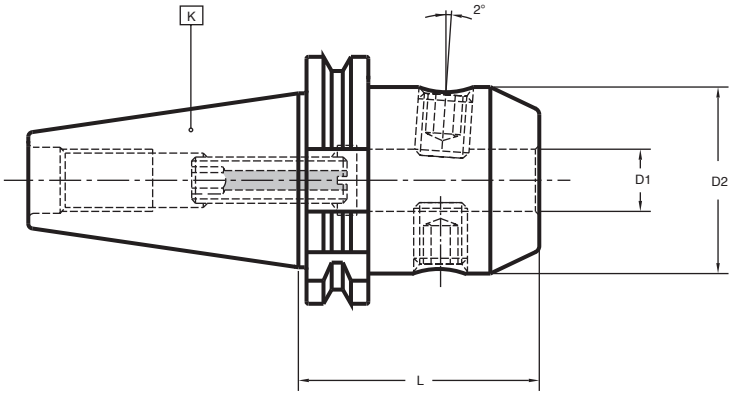
⚠ Product outside of our present production program. Price subject to availability.

012 13/33 04 .. ..

WELDON AND WHISTLE-NOTCH HOLDERS

For end mills with shank DIN 1835-B and / or DIN 1835-E

ALTERNATIVE SOLUTIONS 003 13/33 54 + 012 54 04 pages 123 and 248



*Maximum circular deviation between K and D_1 ≤ 0,003

K	D_1	* tol.	L	D_2	COD. Form AD	COD. Form AD+B		
30	14	+0,005 0	50	44	**012 13 04 11 14** ⚠	–	301 02 70 12 01	301 01 05 12 16
30	16		63	48	**012 13 04 11 16** ⚠	–	301 02 70 12 01	301 01 05 14 16
40	6		50	25	–	**012 33 04 12 06**	301 02 70 05 01	301 01 05 06 10
40	8		50	28	–	**012 33 04 12 08**	301 02 70 06 01	301 01 05 08 10
40	10		50	35	–	**012 33 04 12 10**	301 02 70 08 01	301 01 05 10 12
40	12		50	42	–	**012 33 04 12 12**	301 02 70 10 01	301 01 05 12 16
40	14	+0,005 0	50	44	–	**012 33 04 12 14**	301 02 70 10 01	301 01 05 12 16
40	16		63	48	–	**012 33 04 12 16**	301 02 70 12 01	301 01 05 14 16
40	18		63	50	**012 13 04 12 18** ⚠	**012 33 04 12 18**	301 02 70 12 01	301 01 05 14 16
40	20		63	52	–	**012 33 04 12 20**	301 02 70 16 01	301 01 05 16 16
40	25	+0,007 0	100	65	–	**012 33 04 12 25**	301 02 70 20 01	301 01 05 18 20
40	32		100	72	–	**012 33 04 12 32**	301 02 70 20 01	301 01 05 20 20
45	14	+0,005 0	50	44	**012 13 04 13 14** ⚠	–	301 02 70 10 01	301 01 05 12 16
45	18		63	50	**012 13 04 13 18** ⚠	–	301 02 70 12 01	301 01 05 14 16
50	6		63	25	**012 13 04 14 06** ⚠	**012 33 04 14 06**	301 02 70 05 01	301 01 05 06 10
50	8		63	28	–	**012 33 04 14 08**	301 02 70 06 01	301 01 05 08 10
50	10		63	35	**012 13 04 14 10** ⚠	**012 33 04 14 10**	301 02 70 08 01	301 01 05 10 12
50	12	+0,005 0	63	42	**012 13 04 14 12** ⚠	**012 33 04 14 12**	301 02 70 10 01	301 01 05 12 16
50	14		63	44	**012 13 04 14 14** ⚠	**012 33 04 14 14**	301 02 70 10 01	301 01 05 12 16
50	16		63	48	**012 13 04 14 16** ⚠	**012 33 04 14 16**	301 02 70 12 01	301 01 05 14 16
50	18		63	50	**012 13 04 14 18** ⚠	**012 33 04 14 18**	301 02 70 12 01	301 01 05 14 16
50	20		63	52	**012 13 04 14 20** ⚠	**012 33 04 14 20**	301 02 70 16 01	301 01 05 16 16
50	25	+0,007 0	80	65	**012 13 04 14 25** ⚠	**012 33 04 14 25**	301 02 70 20 01	301 01 05 18 20
50	32		100	72	**012 13 04 14 32** ⚠	**012 33 04 14 32**	301 02 70 20 01	301 01 05 20 20

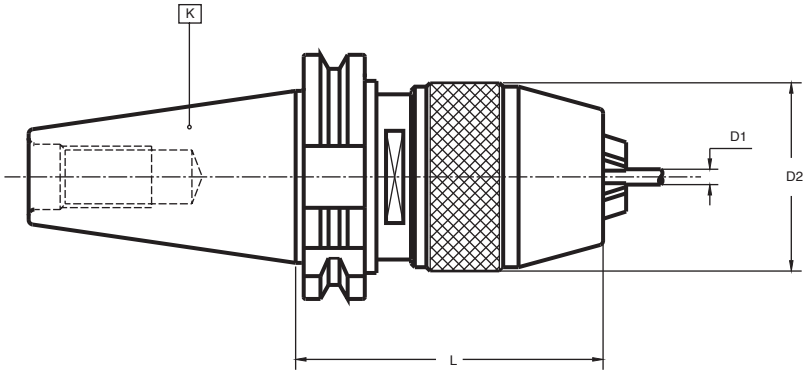
⚠ Product outside of our present production program. Price subject to availability.

* The hole diameter and circular deviation tolerances have been significantly tightened up compared with DIN 1835 in order to achieve the highest levels of machining precision.

We have latest methods for dynamic balancing up to 50.000 R.p.m.

D_1 = > 25 mm: two clamping holes.

012 13 09 .. .. SHORT DRILL CHUCKS



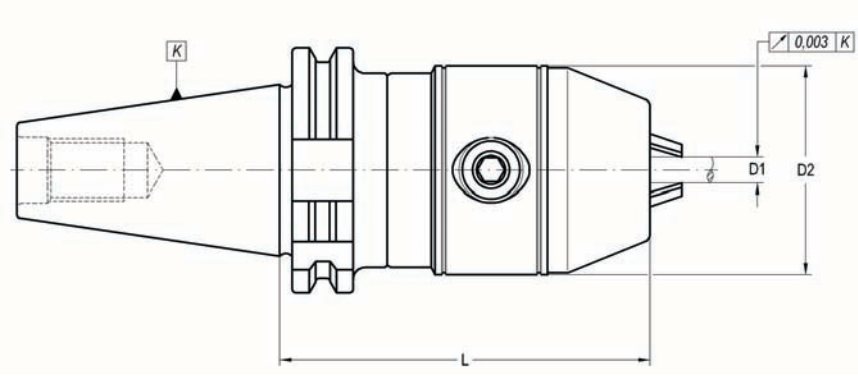
K	D_1	L	D_2	COD. Form A			
30	0-8	86	36	**012 13 09 11 08**	351 02 60 00 08	351 02 61 00 08	020 99 03 00 08
40	1-13	81	48	**012 13 09 12 13**	351 02 60 01 13	351 02 61 01 13	020 99 03 01 13
40	3-16	120	54	**012 13 09 12 16**	351 02 60 03 16	351 02 61 03 16	020 99 03 03 16
50	3-16	76	54	**012 13 09 14 16**	351 02 60 03 16	351 02 61 03 16	020 99 03 03 16

K $\frac{30}{40}$ - Balanced according to ISO 1940-1 up to 10.000 R.p.m.

We have latest methods for dynamic balancing up to 50.000 R.p.m.

012 $\frac{13}{33}$ 19 .. .. SHORT DRILL CHUCKS – HIGH PRECISION –

CENTRAL COOLANT

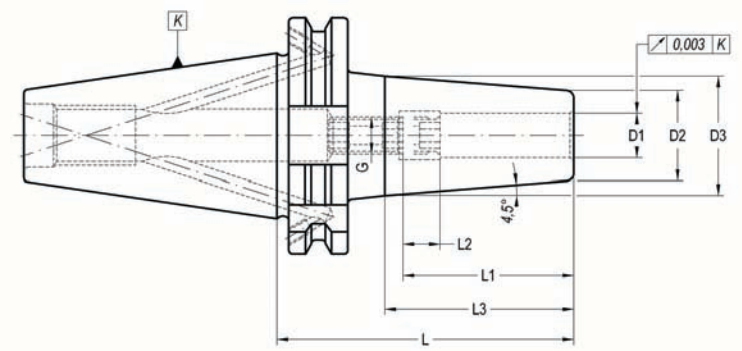


K	D_1	D_2	L	COD. Form A	COD. Form AD + B
40	1-13	54	91	**012 13 19 12 13**	-
40	1-13	54	91	-	012 33 19 12 13
40	3-16	57	94	**012 13 19 12 16**	-
40	3-16	57	94	-	012 33 19 12 16
50	1-13	54	93	**012 13 19 14 13**	-
50	1-13	54	93	-	012 33 19 14 13
50	3-16	57	96	**012 13 19 14 16**	-
50	3-16	57	96	-	012 33 19 14 16

K $\frac{30}{40}$ - Balanced according to ISO 1940-1 up to 10.000 R.p.m.

We have latest methods for dynamic balancing up to 50.000 R.p.m.

012 33 12 .. .. SHRINK FIT CHUCKS – STANDARD –



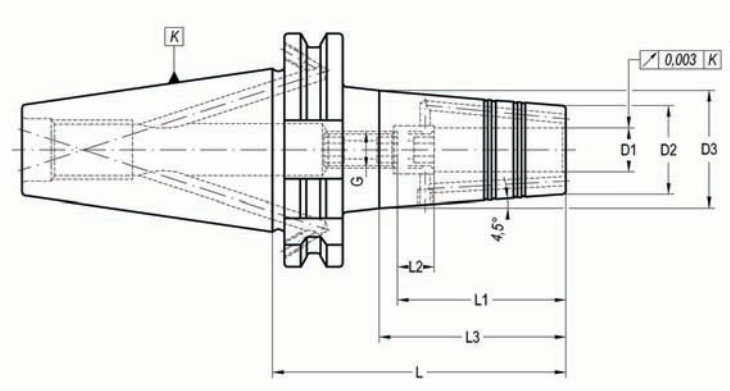
K	D_1	D_2	D_3	D_4	L_1	L_2	L_3	G	L	COD. Form AD+B	
40	3	12	18	-	20	-	-	-	120	**012 33 12 22 03**	-
40	4	14	20	-	20	-	-	-	120	**012 33 12 22 04**	-
40	5	16	22	-	25	-	-	-	120	**012 33 12 22 05**	-
40	6	21	27	-	36	10	-	M-5	80	**012 33 12 12 06**	301 02 33 05 02
40	6	21	27	-	36	10	-	M-5	120	**012 33 12 22 06**	301 02 33 05 02
40	8	21	27	-	36	10	-	M-6	80	**012 33 12 12 08**	301 02 33 06 02
40	8	21	27	-	36	10	-	M-6	120	**012 33 12 22 08**	301 02 33 06 02
40	10	24	32	-	41	10	-	M-8	80	**012 33 12 12 10**	301 02 33 08 02
40	10	24	32	-	41	10	-	M-8	120	**012 33 12 22 10**	301 02 33 08 02
40	12	24	32	-	46	10	-	M-10	80	**012 33 12 12 12**	301 02 33 10 02
40	12	24	32	-	46	10	-	M-10	120	**012 33 12 22 12**	301 02 33 10 02
40	14	27	34	-	46	10	-	M-10	80	**012 33 12 12 14**	301 02 33 10 02
40	14	27	34	-	49	10	-	M-10	120	**012 33 12 22 14**	301 02 33 10 02
40	16	27	34	-	49	10	-	M-12	80	**012 33 12 12 16**	301 02 33 12 02
40	16	27	34	-	49	10	-	M-12	120	**012 33 12 22 16**	301 02 33 12 02
40	18	33	42	-	49	10	-	M-12	80	**012 33 12 12 18**	301 02 33 12 02
40	18	33	42	-	49	10	-	M-12	120	**012 33 12 22 18**	301 02 33 12 02
40	20	33	42	-	51	10	-	M-16	80	**012 33 12 12 20**	301 02 33 16 02
40	20	33	42	-	51	10	-	M-16	120	**012 33 12 22 20**	301 02 33 16 02
40	25	44	53	-	57	10	-	M-16	100	**012 33 12 12 25**	301 02 33 16 02
40	32	44	53	-	61	10	-	M-16	100	**012 33 12 12 32**	301 02 33 16 02
50	6	21	27	-	36	10	-	M-5	80	**012 33 12 14 06**	301 02 33 05 02
50*	6	21	27	36	36	10	140*	M-6	200*	**012 33 12 44 06***	301 02 33 05 02
50	8	21	27	-	36	10	-	M-6	80	**012 33 12 14 08**	301 02 33 06 02
50*	8	21	27	36	36	10	140*	M-6	200*	**012 33 12 44 08***	301 02 33 06 02
50	10	24	32	-	41	10	-	M-8	80	**012 33 12 14 10**	301 02 33 08 02
50*	10	24	32	41	41	10	140*	M-8	200*	**012 33 12 44 10***	301 02 33 08 02
50	12	24	32	-	46	10	-	M-10	80	**012 33 12 14 12**	301 02 33 10 02
50*	12	24	32	41	46	10	140*	M-10	200*	**012 33 12 44 12***	301 02 33 10 02
50	14	27	34	-	46	10	-	M-10	80	**012 33 12 14 14**	301 02 33 10 02
50*	14	27	34	43	46	10	140*	M-10	200*	**012 33 12 44 14***	301 02 33 10 02
50	16	27	34	-	49	10	-	M-12	80	**012 33 12 14 16**	301 02 33 12 02
50*	16	27	34	43	49	10	140*	M-12	200*	**012 33 12 44 16***	301 02 33 12 02
50	18	33	42	-	49	10	-	M-12	80	**012 33 12 14 18**	301 02 33 12 02
50*	18	33	42	51	49	10	140*	M-12	200*	**012 33 12 44 18***	301 02 33 12 02
50	20	33	42	-	51	10	-	M-16	80	**012 33 12 14 20**	301 02 33 16 02
50*	20	33	42	51	51	10	140*	M-16	200*	**012 33 12 44 20***	301 02 33 16 02
50	25	44	53	-	57	10	-	M-16	100	**012 33 12 14 25**	301 02 33 16 02
50*	25	44	53	61	57	10	140*	M-16	200*	**012 33 12 44 25***	301 02 33 16 02
50	32	44	53	-	61	10	-	M-16	100	**012 33 12 14 32**	301 02 33 16 02
50*	32	44	53	91	61	10	140*	M-16	200*	**012 33 12 44 32***	301 02 33 16 02

* Reifored design

Characteristics, applications and deliveries the same as page 135

012 33 22 .. ..

SHRINK FIT CHUCKS – ELS –



K	D_1	D_2	D_3	L	L_1	L_2	G	COD. Forma AD+B	
40	6	21	27	80	36	10	M-5	**012 33 22 12 06**	301 02 33 05 04
40	8	21	27	80	36	10	M-6	**012 33 22 12 08**	301 02 33 06 04
40	10	24	32	80	41	10	M-8	**012 33 22 12 10**	301 02 33 08 04
40	12	24	32	80	46	10	M-10	**012 33 22 12 12**	301 02 33 10 04
40	14	27	34	80	46	10	M-10	**012 33 22 12 14**	301 02 33 10 04
40	16	27	34	80	49	10	M-12	**012 33 22 12 16**	301 02 33 12 04
40	18	33	42	80	49	10	M-12	**012 33 22 12 18**	301 02 33 12 04
40	20	33	42	80	51	10	M-16	**012 33 22 12 20**	301 02 33 16 04
40	25	44	50	100	57	10	M-16	**012 33 22 12 25**	301 02 33 16 04
40	32	44	50	100	61	10	M-16	**012 33 22 12 32**	301 02 33 16 04
50	6	21	27	80	36	10	M-5	**012 33 22 14 06**	301 02 33 05 04
50	8	21	27	80	36	10	M-6	**012 33 22 14 08**	301 02 33 06 04
50	10	24	32	80	41	10	M-8	**012 33 22 14 10**	301 02 33 08 04
50	12	24	32	80	46	10	M-10	**012 33 22 14 12**	301 02 33 10 04
50	14	27	34	80	46	10	M-10	**012 33 22 14 14**	301 02 33 10 04
50	16	27	34	80	49	10	M-12	**012 33 22 14 16**	301 02 33 12 04
50	18	33	42	80	49	10	M-12	**012 33 22 14 18**	301 02 33 12 04
50	20	33	42	80	51	10	M-16	**012 33 22 14 20**	301 02 33 16 04
50	25	44	53	100	57	10	M-16	**012 33 22 14 25**	301 02 33 16 04
50	32	44	53	100	61	10	M-16	**012 33 22 14 32**	301 02 33 16 04

Other dimension on request.

Characteristics:

- Heat resistant hot-working steel.
- Tempered: 54 -2 HRc.
- Taper manufactured according DIN -69871.
- Balanced acording to ISO-1940-1 to G2,5 at 25.000 rpm.

Application:

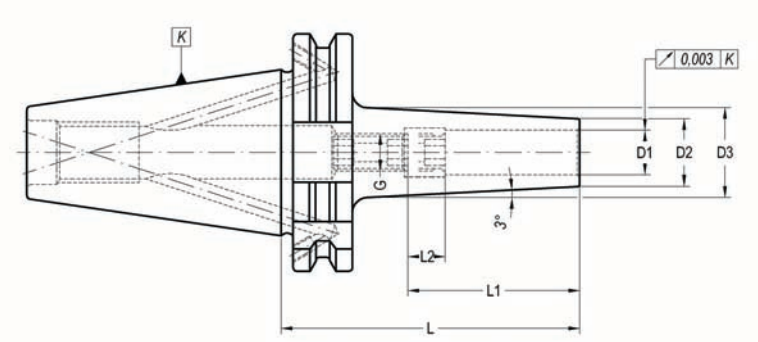
- Machining where it requires a exceptional high accurancy.
- For carbide, cermet and HSS tools with h6 tolerance.

Delivery:

- With built-in bored through stop screw.
- With two screws to AD form transform.

012 33 32 .. ..

SHRINK FIT CHUCKS – SLIM LINE –



K	D_1	D_2	D_3	L_1	L_2	G	L	COD. Forma AD+B	
40	3	8	14	20	5	–	80	**012 33 32 12 03**	–
40	4	9	15	20	5	–	80	**012 33 32 12 04**	–
40	5	10	16	25	5	–	80	**012 33 32 12 05**	–
40	6	12	16	36	10	M-5	80	**012 33 32 12 06**	301 02 33 05 02
40	8	14	18	36	10	M-6	80	**012 33 32 12 08**	301 02 33 06 02
40	10	16	20	41	10	M-8	80	**012 33 32 12 10**	301 02 33 08 02
40	12	18	22	46	10	M-10	80	**012 33 32 12 12**	301 02 33 10 02

Characteristics:

- Heat resistant hot-working steel.
- Tempered: 54 -2 HRc.
- Taper manufactured according DIN -69871.
- Balanced acording to ISO-1940-1 to G2,5 at 25.000 rpm.

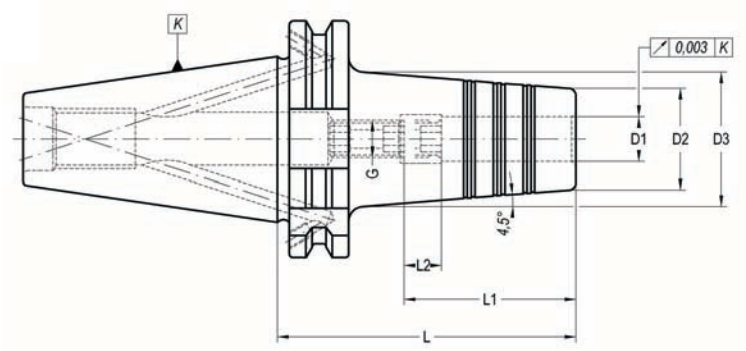
Application:

- Machining where it requires a exceptional high accurancy.
- For carbide, cermet and HSS tools with h6 tolerance.

Delivery:

- With built-in bored through stop screw.
- With two screws to AD form transform.

012 33 42 .. .. SHRINK FIT CHUCKS – VULCANO –



K	D_1	D_2	D_3	L	L_1	L_2	G	COD. Forma AD+B	
40	12	27	36	80	46	10	M-10	**012 33 42 12 12**	301 02 33 10 02
40	16	33	43	80	49	10	M-12	**012 33 42 12 16**	301 02 33 12 02
40	20	44	50	80	51	10	M-16	**012 33 42 12 20**	301 02 33 16 02
40	25	48	50	100	57	10	M-16	**012 33 42 12 25**	301 02 33 16 02
50	12	27	35	80	46	10	M-10	**012 33 42 14 12**	301 02 33 10 02
50	16	33	42	80	49	10	M-12	**012 33 42 14 16**	301 02 33 12 02
50	20	44	54	80	51	10	M-16	**012 33 42 14 20**	301 02 33 16 02
50	25	48	56	100	57	10	M-16	**012 33 42 14 25**	301 02 33 16 02

Other dimension on request.

Characteristics:

- Heat resistant hot-working steel.
- Tempered: 54 -2 HRc.
- Taper manufactured according DIN -69871.
- Balanced acording to ISO-1940-1 to G2,5 at 25.000 rpm.

Application:

- Machining where it requires a exceptional high accurancy.
- Only for hard metal tools with h6 tolerance.

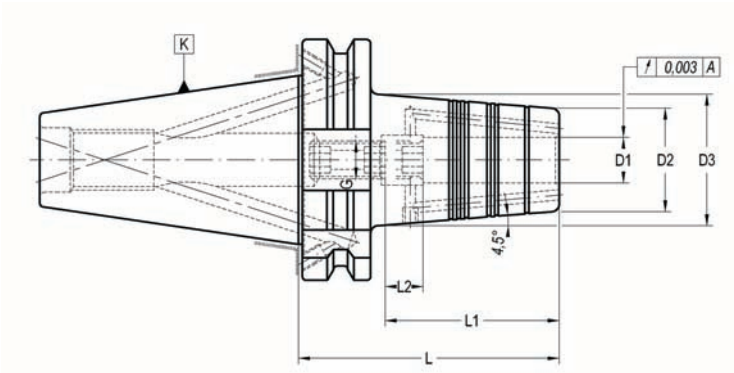
Delivery:

- With built-in bored through stop screw.
- With two screws to AD form transform.

012 53 62 .. ..

SHRINK FIT CHUCKS – VULCANO ELS –

DIN 69871
(DOUBLE CONTACT)



K	D_1	D_2	D_3	L	L_1	L_2	G	COD. Forma AD+B	
40	12	27	35	70	46	10	M-10	**012 53 62 02 12**	301 02 33 10 04
40	16	33	41	75	49	10	M-12	**012 53 62 02 16**	301 02 33 12 04
40	20	44	50	75	51	10	M-16	**012 53 62 02 20**	301 02 33 16 04
40	25	48	50	85	57	10	M-16	**012 53 62 02 25**	301 02 33 16 04
50	12	27	34	70	46	10	M-10	**012 53 62 04 12**	301 02 33 10 04
50	16	33	41	75	49	10	M-12	**012 53 62 04 16**	301 02 33 12 04
50	20	44	53	75	51	10	M-16	**012 53 62 04 20**	301 02 33 16 04
50	25	48	56	85	57	10	M-16	**012 53 62 04 25**	301 02 33 16 04

Other dimension on request.

Characteristics:
- Heat resistant hot-working steel.
- Tempered: 54 -2 HRc.
- Taper manufactured similar to DIN -69871.
- Balanced acording to ISO-1940-1 to G2,5 at 25.000 rpm.

Application:
- Machining where it requires a exceptional high accurancy.
- Only for hard metal tools with h6 tolerance.

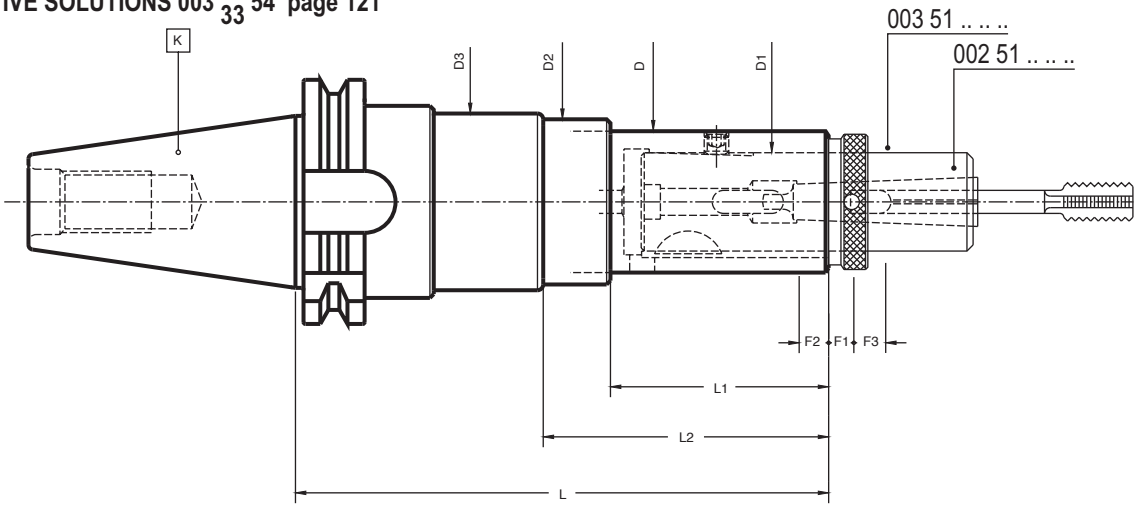
Delivery:
- With built-in bored through stop screw.
- With two screws to AD form transform.

019 13 51 .. .. 1.

TAPPING CHUCKS

Self feed and compression system. Releasing drive system.
For axial adjustable adapter DIN 6327

ALTERNATIVE SOLUTIONS 003 $\frac{13}{33}$ 54 page 121



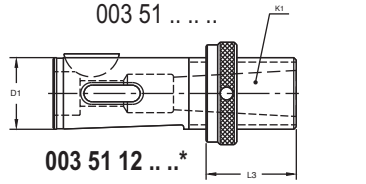
K	CAP.	D_1	L	D	L_1	D_2	L_2	D_3	F_1	F_2	F_3	COD. Form A
40	M3-M16	25	171	37	61	44	80	49	5	10	10	**019 13 51 02 02 12** !
40	M8-M24	32	203	51	59	60	85	66	6	10	12	**019 13 51 02 03 13** !
45	M3-M16	25	153	37	61	44	80	49	5	10	10	**019 13 51 03 02 12** !
45	M8-M24	32	190	51	59	60	85	66	6	10	12	**019 13 51 03 03 13** !
50	M3-M16	25	156	37	61	44	80	49	5	10	10	**019 13 51 04 02 12** !
50	M8-M24	32	186	51	59	60	85	66	6	10	12	**019 13 51 04 03 13** !

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

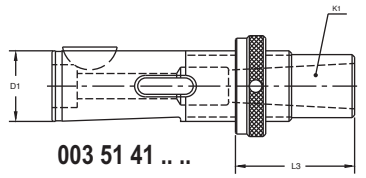
Axial compensation (compression and extensions) values are F_1 and F_2. F_3 is the release value (the tap receives only reversing rotation). The release system allows to easily and accurately set up tapping depth, specially adapt for blind holes.

DIN 6327

003 51 .. .. ..



003 51 12 .. ..*



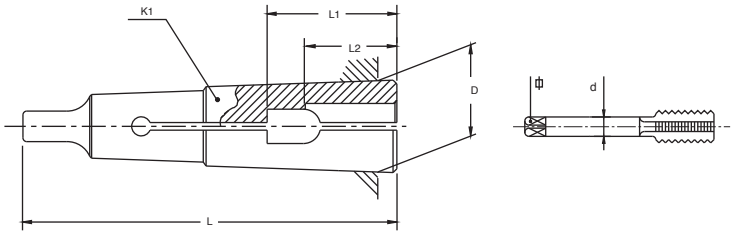
003 51 41 .. ..

Complete program, see pages 221-225

D_1	K_1	L_3	COD.
25	MORSE 1	12- 42	003 51 12 05 20*
		37- 67	003 51 41 05 21
		62- 92	003 51 41 05 22
		87-117	003 51 41 05 23
		112-142	003 51 41 05 24
	MORSE 2	12- 42	003 51 12 05 30*
		37- 67	003 51 41 05 31
		62- 92	003 51 41 05 32
		87-117	003 51 41 05 33
		112-142	003 51 41 05 34
32		12- 50	003 51 12 07 30*
		42- 80	003 51 41 07 31
		72-110	003 51 41 07 32
		102-140	003 51 41 07 33
		132-170	003 51 41 07 34
	MORSE 3	12- 50	003 51 12 07 40*
		42- 80	003 51 41 07 41
		72-110	003 51 41 07 42
		102-140	003 51 41 07 43
		132-170	003 51 41 07 44

DIN 6328

002 51 .. .. .. (see page 264)



To order: CODE + Diameter **d** x ⌀ • Example: 002 51 02 - 4 x 3

002 51 02 .. .. ..

D	L
12,06	65,5

d	2,5	2,8	3,15	3,5	3,55	4	4,5	5	5,5	5,6	6	6,3	7	7,1	8
⌀	2,1	2,1	2,5	2,7	2,8	3	3,4	4	4,3	4,5	4,9	5	5,5	5,6	6,2
L_1	19		22	21	22	21		25	24	25	26	28	26	28	27
L_2	15		18	16	18	16		19	18	19	19,5	22	19,5	22	19,5

002 51 03 .. .. ..

D	L
17,78	80

d	4,5	5	5,5	5,6	6	6,3	7	7,1	8	9	9,5	10	11	11,2	12	12,5
⌀	3,4	4	4,3	4,5	4,9	5	5,5	5,6	6,2	7	8		9			10
L_1	21	25	24	25	26	28	26	28	27	30	32		34	36	36	36
L_2	16	19	18	19	19,5	22	19,5	22	19,5	22	23		24	26	25	26

002 51 04 .. .. ..

D	L
23,82	99

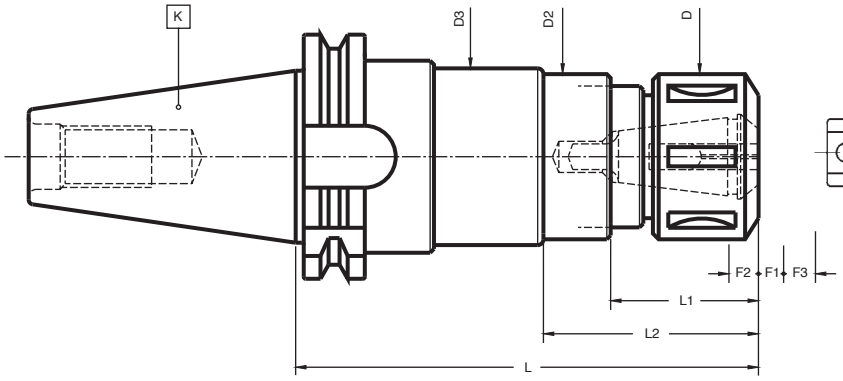
d	8	9	9,5	10	11	11,2	12	12,5	14	16	18
⌀	6,2	7	8		9			10	11	12	14,5
L_1	27	30	32		34	36			38	44	48
L_2	19,5	22	23		24	26	25	26		30	33

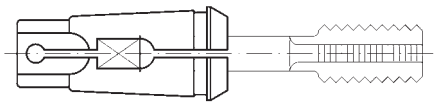
019 13 51 .. .. 2.

TAPPING CHUCKS

Self feed and compression system. Releasing drive system.
For LAIP 0219 collet

ALTERNATIVE SOLUTIONS 003 $\frac{13}{33}$ 54 + 019 54 51 .. 2. pages 121 and 249





002 19 .. .. ..

COLLET see page 256

K	CAP.	L	D	L_1	D_2	L_2	D_3	F_1	F_2	F_3	COD. Form A
40	M3-M16	150	43	39	44	58	49	5	10	10	**019 13 51 02 02 22** ⚠
40	M8-M28	173	50	42	60	68	66	6	10	12	**019 13 51 02 03 23** ⚠
45	M3-M16	131	43	39	44	58	49	5	10	10	**019 13 51 03 02 22** ⚠
45	M8-M28	173	50	42	60	68	66	6	10	12	**019 13 51 03 03 23** ⚠
50	M3-M16	135	43	39	44	58	49	5	10	10	**019 13 51 04 02 22** ⚠
50	M8-M28	156	50	42	60	68	66	6	10	12	**019 13 51 04 03 23** ⚠

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

Axial compensation (compression and extensions) values are F_1 and F_2. F_3 is the release value (the tap receives only reversing rotation). The release system allows to easily and accurately set up tapping depth, specially adapt for blind holes.

Accessories, see pages 267-293

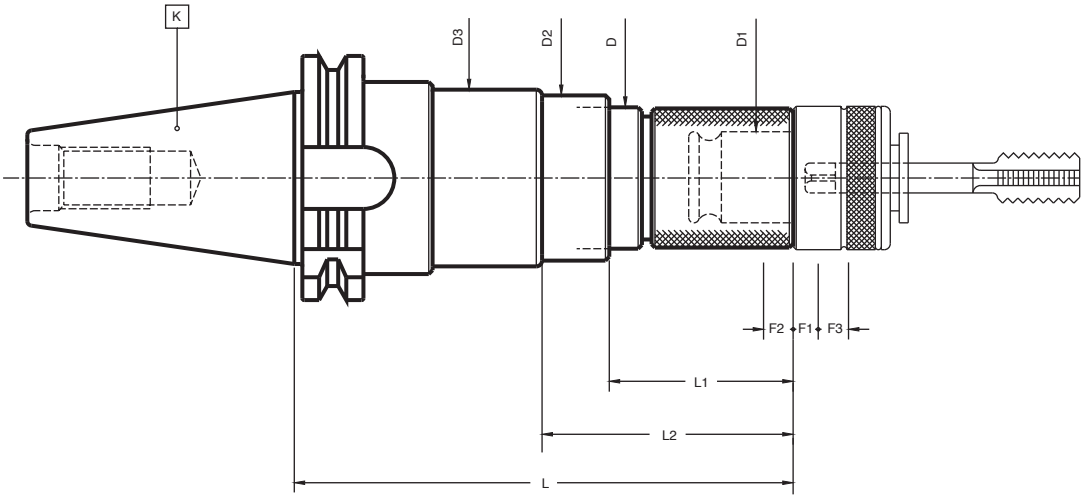
CAP.	BALANCED NUT (STANDARD)	BEARING NUT (OPTIONAL)	WRENCH (OPTIONAL)
M3-M16	–	004 99 01 02 03	004 99 04 09 08
M8-M28	004 99 01 01 04	004 99 01 02 04	004 99 04 09 09

019 13 51 .. .. 3.

QUICK-CHANGE TAPPING CHUCKS

Self feed and compression system. Releasing drive system.
For BILZ system tap adapter

ALTERNATIVE SOLUTIONS 003 $\frac{13}{33}$ 54 + 019 54 51 .. 3. pages 121 and 250



BILZ Adapter

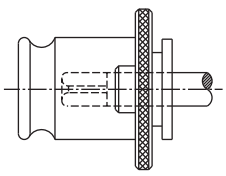
K	CAP.	D_1	L	D	L_1	D_2	L_2	D_3	F_1	F_2	F_3	COD. Form A
40	M3-M12 (M16)*	19	154	37	44	44	63	49	5	10	10	**019 13 51 02 02 32** ⚠
40	M8-M20 (M30)*	31	195	51	63	60	89	66	6	10	12	**019 13 51 02 03 33** ⚠
45	M3-M12 (M16)*	19	136	37	44	44	63	49	5	10	10	**019 13 51 03 02 32** ⚠
45	M8-M20 (M30)*	31	194	51	63	60	89	66	6	10	12	**019 13 51 03 03 33** ⚠
50	M3-M12 (M16)*	19	139	37	44	44	63	49	5	10	10	**019 13 51 04 02 32** ⚠
50	M8-M20 (M30)*	31	177	51	63	60	89	66	6	10	12	**019 13 51 04 03 33** ⚠

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

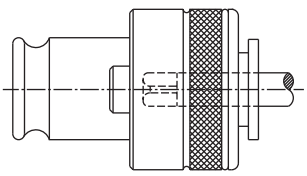
Axial compensation (compression and extensions) values are F_1 and F_2. F_3 is the release value (the tap receives only reversing rotation). The release system allows to easily and accurately set up tapping depth, specially adapt for blind holes.

* With 002 22 .. .. .. and 002 24 .. .. .. adapters

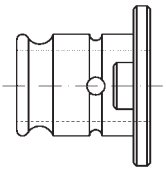
See page 263



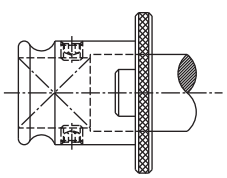
002 21 ..



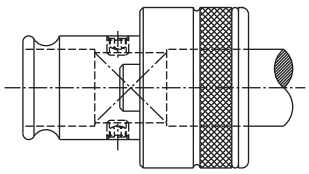
002 23 ..



002 20 ..



002 22 ..



002 24 ..

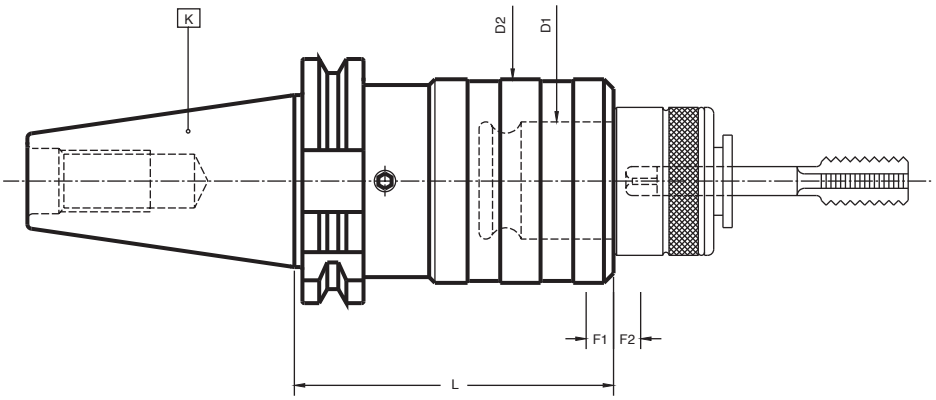
D_1				
19	002 21 02	002 22 02	002 23 02	002 24 02
31	002 21 03	002 22 03	002 23 03	002 24 03

019 13 52 .. ..

QUICK-CHANGE TAPPING CHUCKS

With self feed and compression system. For BILZ system tap adapter

ALTERNATIVE SOLUTIONS 012 13 $\frac{01}{04}$ + 019 55 52 pages 131 and 132 + 229



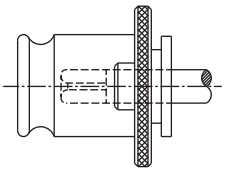
BILZ Adapter

K	CAP.	D_1	L	D_2	F_1	F_2	COD. Form A
30	M3-M12 (M16)*	19	65	36	7,5	7,5	**019 13 52 01 02**
40	M3-M12 (M16)*	19	60	36	7,5	7,5	**019 13 52 02 02**
40	M8-M20 (M30)*	31	98	53	12,5	12,5	**019 13 52 02 03**
40	M14-M33 (M48)*	48	150	78	20	20	**019 13 52 02 04**
50	M3-M12 (M16)*	19	75	36	7,5	7,5	**019 13 52 04 02**
50	M8-M20 (M30)*	31	85	53	12,5	12,5	**019 13 52 04 03**
50	M14-M33 (M48)*	48	140	78	20	20	**019 13 52 04 04**

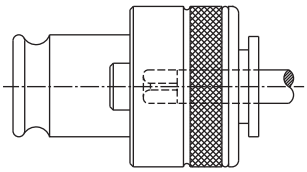
F_1 Compression run
F_2 Extension run

* With 002 22 .. .. .. and 002 24 .. .. .. adapters

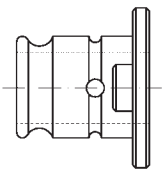
See page 263



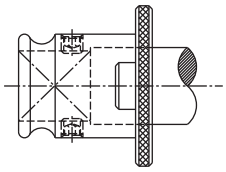
002 21 ..



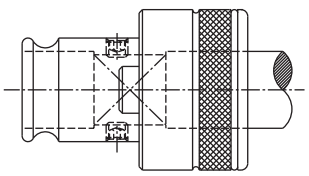
002 23 ..



002 20 ..



002 22 ..



002 24 ..

D_1				
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

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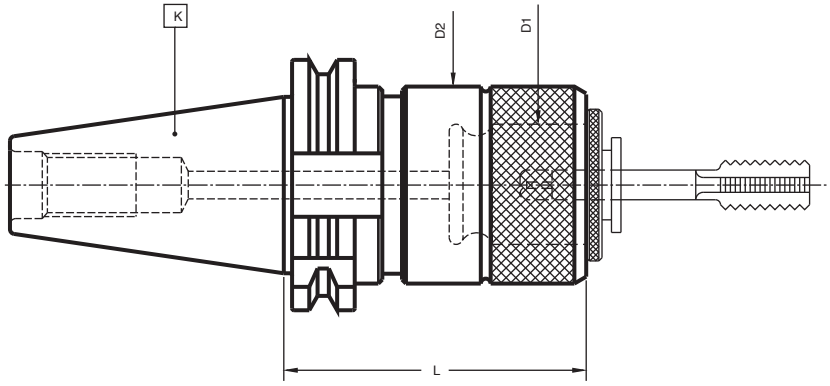
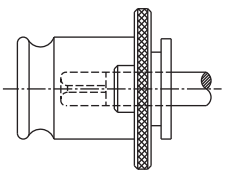


BILZ Adapter

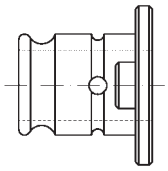
K	CAP.	D_1	L	D_2	COD. Forma AD	COD. Forma AD+B
40	M3-M12 (M16)*	19	60	32	**019 13 53 02 02**	**019 33 53 02 02**
40	M8-M20 (M30)*	31	80	50	**019 13 53 02 03**	**019 33 53 02 03**
50	M3-M12 (M16)*	19	60	32	**019 13 53 04 02**	**019 33 53 04 02**
50	M8-M20 (M30)*	31	80	50	**019 13 53 04 03**	**019 33 53 04 03**
50	M14-M33 (M48)*	48	110	72	**019 33 53 04 04**	**019 33 53 04 04**

* With 002 22 .. .. .. adapters

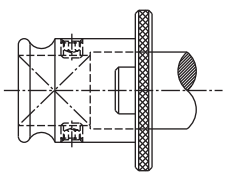
See page 263



002 21 ..



002 20 ..



002 22 ..

D_1		
19	002 21 02	002 22 02
31	002 21 03	002 22 03
48	002 21 04	002 22 04

020 13 02 .. .. TOOLHOLDER BLANKS

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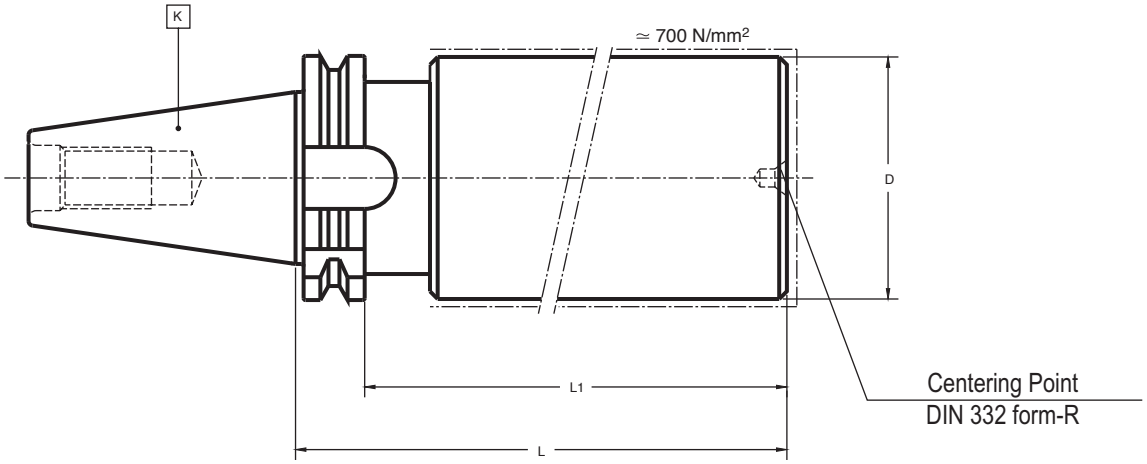

K	D	L	L_1	COD. Form A
30	45	100	81	**020 13 02 01 51**
40	62	160	141	**020 13 02 02 73**
40	62	250	231	**020 13 02 02 75**
45	80	160	141	**020 13 02 03 83**
50	90	160	141	**020 13 02 04 93**
50	90	250	231	**020 13 02 04 95**

– The area of diameter D and length L_1 has 700 N/mm².
– Rest is hardened to 57 ÷ 60 Rc.