

Reduzierhülsen Reducing sleeves

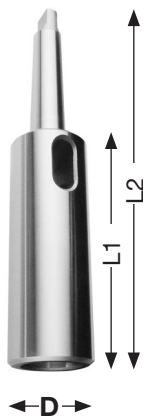
DIN 2185, ganz gehärtet und geschliffen DIN 2185, completely hardened and ground



Außenkegel / External taper	Innenkegel / Internal taper	L mm	ca. g	Art.-Nr. / Order no.
1	0	80	30	● 01-52-1/0
2	1	92	95	● 01-52-2/1
3	1	99	190	● 01-52-3/1
3	2	112	250	● 01-52-3/2
4	1	124	550	● 01-52-4/1
4	2	124	480	● 01-52-4/2
4	3	140	360	● 01-52-4/3
5	1	156	1700	● 01-52-5/1
5	2	156	1520	● 01-52-5/2
5	3	156	1360	● 01-52-5/3
5	4	171	950	● 01-52-5/4
6	1	218	4400	✘ 01-52-6/1
6	2	218	4300	● 01-52-6/2
6	3	218	4100	● 01-52-6/3
6	4	218	3600	● 01-52-6/4
6	5	218	2550	● 01-52-6/5

Verlängerungshülsen Extension sleeves

DIN 2187, ganz gehärtet und geschliffen DIN 2187, completely hardened and ground



Außenkegel / External taper	Innenkegel / Internal taper	D mm	L1 mm	L2 mm	ca. g	Art.-Nr. / Order no.
1	1	20	83	145	190	● 01-65-1/1
1	2	30	98	160	340	● 01-65-1/2
2	1	20	85	160	250	● 01-65-2/1
2	2	30	100	175	400	● 01-65-2/2
2	3	36	121	196	840	● 01-65-2/3
2	4	48	145	220	1300	● 01-65-2/4
3	1	20	81	175	400	● 01-65-3/1
3	2	30	100	194	550	● 01-65-3/2
3	3	36	112	215	1000	● 01-65-3/3
3	4	48	146	240	1500	● 01-65-3/4
4	1	20	82,5	200	800	● 01-65-4/1
4	2	30	97,5	215	850	● 01-65-4/2
4	3	36	122,5	240	1300	● 01-65-4/3
4	4	48	147,5	265	1900	● 01-65-4/4
4	5	63	182,5	300	3310	● 01-65-4/5
5	1	20	82,5	232	1800	● 01-65-5/1
5	2	30	97,5	247	1900	● 01-65-5/2
5	3	36	118,5	268	2150	● 01-65-5/3
5	4	48	150,5	300	2750	● 01-65-5/4
5	5	63	182,5	335	4200	● 01-65-5/5
5	6	82	247	396	640	● 01-65-5/6
6	3	36	120	330	4580	● 01-65-6/3
6	4	48	180	355	5420	● 01-65-6/4
6	5	63	180	390	6750	● 01-65-6/5
6	6	82	241	451	11890	● 01-65-6/6

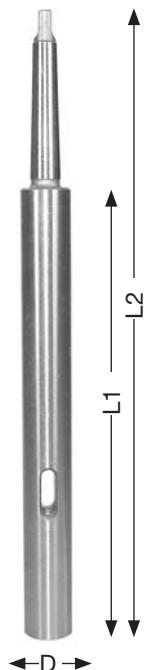
Sonderhülsen auf Anfrage Special sleeves available upon request

- Lagerstandard / in stock
- ▶ innerhalb weniger Tage / within a few days
- auf Anfrage / on request
- ✘ auslaufende Größe / as stock lasts

Bohrer- und Reibahlen-Verlängerungen

Drill and reamer extensions

Ganz geschliffen, Kegel gehärtet
Completely ground, taper hardened



Außenkegel / External taper	Innenkegel / Internal taper	D mm	L1 mm	L2 mm	ca. g	Art.-Nr. / Order no.
1	1	20	138	200	250	01-75-1/1-200
1	1	20	188	250	375	01-75-1/1-250
1	1	20	238	300	500	01-75-1/1-300
1	1	20	288	350	625	01-75-1/1-350
1	1	20	338	400	750	01-75-1/1-400
1	1	20	388	450	900	01-75-1/1-450
1	1	20	438	500	1000	01-75-1/1-500
2	2	25	125	200	430	01-75-2/2-200
2	2	25	175	250	625	01-75-2/2-250
2	2	25	225	300	820	01-75-2/2-300
2	2	25	275	350	1015	01-75-2/2-350
2	2	25	325	400	1200	01-75-2/2-400
2	2	25	375	450	1400	01-75-2/2-450
2	2	25	425	500	1600	01-75-2/2-500
2	2	25	525	600	1800	01-75-2/2-600
3	3	32	156	250	1000	01-75-3/3-250
3	3	32	206	300	1300	01-75-3/3-300
3	3	32	256	350	1550	01-75-3/3-350
3	3	32	306	400	1850	01-75-3/3-400
3	3	32	356	450	2100	01-75-3/3-450
3	3	32	405	500	2400	01-75-3/3-500
3	3	32	506	600	2700	01-75-3/3-600
4	4	40	182,5	300	1650	01-75-4/4-300
4	4	40	232,5	350	2150	01-75-4/4-350
4	4	40	282,5	400	2650	01-75-4/4-400
4	4	40	332,5	450	3100	01-75-4/4-450
4	4	40	382,5	500	3600	01-75-4/4-500
4	4	40	482,5	600	4200	01-75-4/4-600

Sonderhülsen auf Anfrage
Special sleeves available upon request

Reduzierhülsen für Hydrodehnspannfutter

Reducing sleeves for hydraulic expansion mandrels

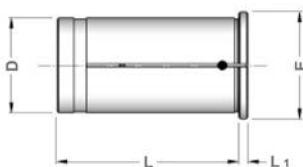


Für die Reduzierung des Spanndurchmessers bei Hydrodehnspannfuttern.

For diameter reduction of hydraulic expansion mandrels.

Kühlmitteldicht bis 60 bar
Mechanically sealed up to 60 bar

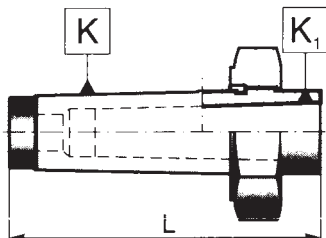
D mm	Bohrungen / Bores Ø mm	E mm	L mm	L1 mm	Art.-Nr. / Order no.
20	3, 4, 5, 6, 8, 10, 12, 14, 16	24	50,5	2	94-52-20/Ø
32	10, 12, 16, 18, 20, 25	36	60,5	3	94-52-32/Ø



Weitere Abmessungen auf Anfrage
Further sizes available upon request

Spindelhülsen für Werkzeuge mit Morsekegel Spindle sleeves for tools with morse taper

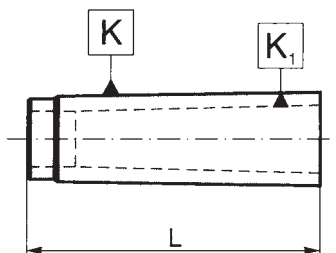
Mit Abdrückgewinde und Mutter With draw-off thread and nut



Außenkegel-MK / External taper-MT	Innenkegel-MK / Internal taper-MT	L mm	Art.-Nr. / Order no.
2*	1	84	● 01-84-2/1
3*	1	102	● 01-84-3/1
4*	1	122	● 01-84-4/1
3	2	102	● 01-84-3/2
4	2	122	● 01-84-4/2
4	3	122	● 01-84-4/3
5	2	153	● 01-84-5/2
5	3	153	● 01-84-5/3
5	4	153	● 01-84-5/4
6	3	212	* 01-84-6/3
6	4	212	● 01-84-6/4
6	5	212	● 01-84-6/5

* mit Austreibschlitz
* with drift slot

Spindelhülsen für Werkzeuge mit Morsekegel Spindle sleeves for tools with morse taper



Außenkegel-MK / External taper-MT	Innenkegel-MK / Internal taper-MT	L mm	Art.-Nr. / Order no.
2	1	60	● 01-83-2/1
3	1	70	● 01-83-3/1
3	2	70	● 01-83-3/2
4	2	70	● 01-83-4/2
4	3	70	● 01-83-4/3
5	2	77	● 01-83-5/2
5	3	77	● 01-83-5/3
5	4	77	● 01-83-5/4
6	3	110	● 01-83-6/3
6	4	110	● 01-83-6/4
6	5	110	● 01-83-6/5
metrisch / metric 80	5	110	● 01-83-80/5
metrisch / metric 80	6	110	● 01-83-80/6

Spindelhülsen zylindrisch für Werkzeuge mit Morsekegel Cylindrical spindle sleeves for tools with morse taper



Zylindrisch / Cylindrical	Morsekegel / Morse taper	L mm	Art.-Nr. / Order no.
16	1	90	● 01-85-16/1
25	2	95	● 01-85-25/2
30	3	115	● 01-85-30/3
40	4	152	● 01-85-40/4

- Lagerstandard / in stock
- ▶ innerhalb weniger Tage / within a few days
- auf Anfrage / on request
- * auslaufende Größe / as stock lasts

Klemmhülsen Clamping sleeves



Ganz gehärtet und geschliffen
Completely hardened and ground

Nach DIN 6328 für Gewindebohrer According to DIN 6328 for taps

MK / MT	Außen-Ø / External-Ø mm	L mm	Bohrung / Bore mm	Art.-Nr. / Order no.
1	12,2	65,5	2,5/2,8/ 3,5/4,0/4,5/5,0/ 5,5/6,0/7,0/8,0	● 06-501E-Ø
2	18,0	78,5	4,5/5,5/6,0/7,0/ 8,0/9,0/10,0/ 11,0/12,0/12,5	● 06-504E-Ø
3	24,0	98,0	8,0/9,0/10,0/ 11,0/12,0/ 12,5/14,0/16,0	● 06-535E-Ø
4	31,5	123,0	12,0/14,0/ 16,0/18,0/20,0/ 22,0/25,0	● 06-538E-Ø
5	44,7	156,0	22,0/25,0/28,0/ 30,0/32,0/36,0	● 06-589E-Ø

Nach DIN 6329 für Spiralbohrer According to DIN 6329 for spiral drills

MK / MT	Außen-Ø / External-Ø mm	L mm	Abmessungen / Dimensions	Steigung / Pitch mm	Art.-Nr. / Order no.
1	12,2	65,5	3,0 - 8,0	0,5	● 06-511E-Ø
2	18,0	78,5	5,0 - 13,0	0,5	● 06-514E-Ø
3	24,0	98,0	10,0 - 16,0	1,0	● 06-545E-Ø
4	31,5	123,0	12,0 - 20,0	1,0	✱ 06-548E-Ø
5	44,7	156,0	20,0 - 36,0	1,0	✱ 06-599E-Ø

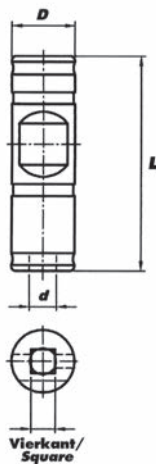
Weitere Abmessungen lieferbar auf Anfrage
Further dimensions available upon request

Für Maschinen mit steigungssynchronem Vorschub

For machines with rigid tapping



- einsetzbar in herkömmlichen Weldon Spannfuttern nach DIN 1835 B
- kein Schlupf zwischen Hülse und Bohrer
- bei innerer Kühlmittelzufuhr 100% Kühlung an der Schneide
- suitable for standard Weldon chucks according to DIN 1835 B
- no slip between tap holder and drill
- 100% blade cooling if internal coolant supply is selected



D mm	d mm	Vierkant / Square mm	L mm	Art.-Nr. / Order no.
8	2,5	2,1	27	● 81-GEW-8X2,5
8	2,8	2,1	27	● 81-GEW-8X2,8
10	3,5	2,7	35	● 81-GEW-10X3,5
10	4,0	3,0	35	● 81-GEW-10X4,0
10	4,5	3,4	35	● 81-GEW-10X4,5
12	6,0	4,9	45	● 81-GEW-12X6,0
14	7,0	5,5	45	● 81-GEW-14X7,0
14	8,0	6,2	45	● 81-GEW-14X8,0
16	9,0	7,0	48	● 81-GEW-16X9,0
16	10,0	8,0	48	● 81-GEW-16X10,0
18	11,0	9,0	48	● 81-GEW-18X11,0
20	12,0	9,0	50	● 81-GEW-20X12,0
25	14,0	11,0	56	● 81-GEW-25X14,0
25	16,0	12,0	56	● 81-GEW-25X16,0
32	18,0	14,5	60	● 81-GEW-32X18,0
32	20,0	16,0	60	● 81-GEW-32X20,0
32	22,0	18,0	60	● 81-GEW-32X22,0
40	25,0	20,0	70	● 81-GEW-40X25,0
40	28,0	22,0	70	● 81-GEW-40X28,0
50	32,0	24,0	80	● 81-GEW-50X32,0
50	36,0	29,0	80	● 81-GEW-50X36,0
50	40,0	32,0	80	● 81-GEW-50X40,0



Gewindebohrerhalter mit Schnellwechselsystem

Tap holders with quick change mechanism



Gewindebohrerhalter mit Weldon-Spannfläche

Tap holders for weldon chucks

- mit Innenvierkant
- für den Einsatz von Gewindebohrern in Weldonfuttern
- mit Schnellwechselsystem
- with internal square
- to use tapping collets in weldon chucks
- with quick change mechanism

D mm	d mm	Vierkant / Square mm	L mm	Art.-Nr. / Order no.
16	3,5	2,7	56	● 09-GBE-16/3,5
16	4,0	3,0	56	● 09-GBE-16/4,0
16	4,5	3,4	56	● 09-GBE-16/4,5
16	6,0	4,9	56	● 09-GBE-16/6,0
20	4,5	3,4	58	● 09-GBE-20/4,5
20	6,0	4,9	58	● 09-GBE-20/6,0
20	7,0	5,5	58	● 09-GBE-20/7,0
20	8,0	6,2	58	● 09-GBE-20/8,0
20	9,0	7,0	58	● 09-GBE-20/9,0
20	10,0	8,0	58	● 09-GBE-20/10
25	4,5	3,4	66	● 09-GBE-25/4,5
25	6,0	4,9	66	● 09-GBE-25/6,0
25	7,0	5,5	66	● 09-GBE-25/7,0
25	8,0	6,2	66	● 09-GBE-25/8,0
25	9,0	7,0	66	● 09-GBE-25/9,0
25	10,0	8,0	66	● 09-GBE-25/10,0
25	11,0	9,0	66	● 09-GBE-25/11,0
25	12,0	9,0	66	● 09-GBE-25/12,0
32	6,0	4,9	70	✘ 09-GBE-32/6,0
32	7,0	5,5	70	✘ 09-GBE-32/7,0
32	8,0	6,2	70	✘ 09-GBE-32/8,0
32	9,0	7,0	70	✘ 09-GBE-32/9,0
32	10,0	8,0	70	● 09-GBE-32/10,0
32	11,0	9,0	70	● 09-GBE-32/11,0
32	12,0	9,0	70	● 09-GBE-32/12,0
32	14,0	11,0	70	● 09-GBE-32/14,0
32	16,0	12,0	70	● 09-GBE-32/16,0
32	18,0	14,5	70	● 09-GBE-32/18,0



DIN 238, Kegeldorne mit Morsekegelschaft DIN 238, taper arbors with morse taper shanks

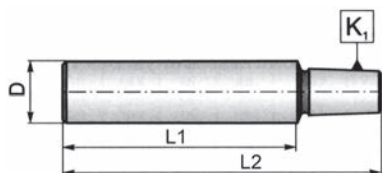


MK / MT	Kegel / Taper	L mm	ca. g	Art.-Nr. / Order no.
1	B 10	86	55	● 41-1/B10
1	B 12	90	60	● 41-1/B12
1	B 16	97	90	● 41-1/B16
1	B 18	105	110	● 41-1/B18
1	B 18 VK	97	95	✘ 41-1/B18VK
2	B 10	101	130	● 41-2/B10
2	B 12	105	135	● 41-2/B12
2	B 16	112	160	● 41-2/B16
2	B 18	120	180	● 41-2/B18
2	B 18 VK	108,5	165	✘ 41-2/B18VK
2	B 22	128	245	● 41-2/B22
3	B 12	124	280	● 41-3/B12
3	B 16	131	310	● 41-3/B16
3	B 18	139	320	● 41-3/B18
3	B 18 VK	132	320	✘ 41-3/B18VK
3	B 22	147	390	● 41-3/B22
3	B 24	157	440	● 41-3/B24
4	B 16	156	625	● 41-4/B16
4	B 18	164	660	● 41-4/B18
4	B 22	172	715	● 41-4/B22
4	B 24	182	770	● 41-4/B24
5	B 16	188	1600	● 41-5/B16
5	B 18	196	1600	● 41-5/B18
5	B 22	204	1650	● 41-5/B22
5	B 24	214	1700	● 41-5/B24

Ganz gehärtet und geschliffen
Completely hardened and ground

VK = verkürzter Bohrfutterkegel
VK = shortened drill chuck taper

Kegeldorne mit Zylinderschaft Taper arbors with cylinder shanks

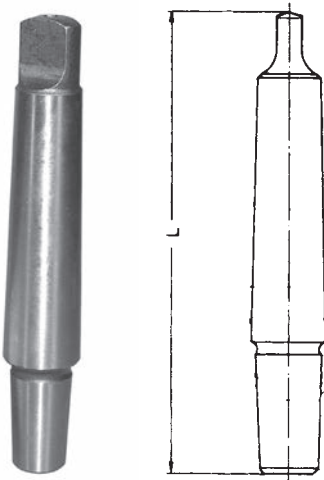


D mm	L1 mm	Kegel / Taper	L2 mm	Art.-Nr. / Order no.
8	35	B 10	55	● 13-5348-8-35-B10
10	50	B 10	70	● 13-5348-10-50-B10
10	50	B 12	75	● 13-5348-10-50-B12
10	50	B 16	82	● 13-5348-10-50-B16
12	50	B 16	82	● 13-5348-12-50-B16
12	60	B 16	92	● 13-5348-12-60-B16
16	50	B 16	81	● 13-5348-16-50-B16
16	70	B 16	101	● 13-5348-16-70-B16
16	70	B 18	110	✘ 13-5348-16-70-B18
20	60	B 12	87	● 13-5348-20-60-B12
20	60	B16	93	● 13-5348-20-60-B16
20	60	B 18	100	● 13-5348-20-60-B18
25	75	B 16	107	● 13-5348-25-75-B16
30	70	B 16	106	✘ 13-5348-30-70-B16
30	70	B 18	112	✘ 13-5348-30-70-B18

Ganz gehärtet und geschliffen
Completely hardened and ground

Kegeldorne mit Jacobs-Kegel Taper arbors with Jacobs taper

Typ 236 Type 236

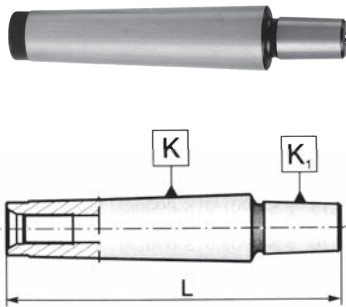


Ganz gehärtet und geschliffen
Completely hardened and ground

MK / MT	Kegel / Taper	L mm	Art.-Nr. / Order no.
1	J1	85	* 41-1/J1
1	J2	90	● 41-1/J2
1	J3	99	● 41-1/J3
1	J6	94	● 41-1/J6
2	J1	100	* 41-2/J1
2	J2	105	● 41-2/J2
2	J3	114	● 41-2/J3
2	J6	108	● 41-2/J6
3	J2	124	● 41-3/J2
3	J3	133	● 41-3/J3
3	J33	127	● 41-3/J33
3	J4	144	● 41-3/J4
3	J6	127	● 41-3/J6
4	J3	158	● 41-4/J3
4	J6	152	● 41-4/J6

Kegeldorne mit Morsekegel und Anzugsgewinde Taper arbors with morse taper and internal thread

DIN 228 A DIN 228 A



MK / MT	L mm	Gewinde / Thread	Kegel / Taper	Art.-Nr. / Order no.
2	90	M 10	B 10	● 41-2/B10-M10
2	95	M 10	B 12	● 41-2/B12-M10
2	101	M 10	B 16	● 41-2/B16-M10
3	121	M 12	B 16	● 41-3/B16-M12
4	143	M 16	B 16	● 41-4/B16-M16

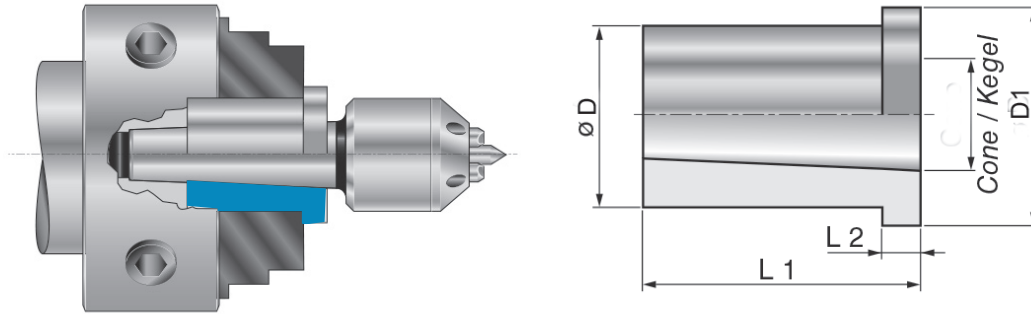
Kegeldorne mit Gewinde Taper arbors with thread



MK / MT	Gewinde / Thread	L mm	kg	Art.-Nr. / Order no.
2	3/8-24	101	0,2	● 41-2-3/8-24
2	1/2-20	104	0,2	● 41-2-1/2-20
2	5/8-16	106	0,2	● 41-2-5/8-16
3	M20	122	0,4	● 41-3-3/M20

Kegelhülsen Conic bushes

Kegelhülsen, zylindrisch mit Innenkegel (MK) Conic bushes, cylindrical with internal taper (MT)



MK / MT	L1 mm	L2 mm	Ø D mm	D1 mm	kg	Art.-Nr. / Order no.
3	65	8	35	44	0,3	▶ 03-KH-3
4	70	8	42	49	0,45	▶ 03-KH-4
5	80	10	54	59	0,6	▶ 03-KH-5
6	85	10	75	84	0,75	▶ 03-KH-6