

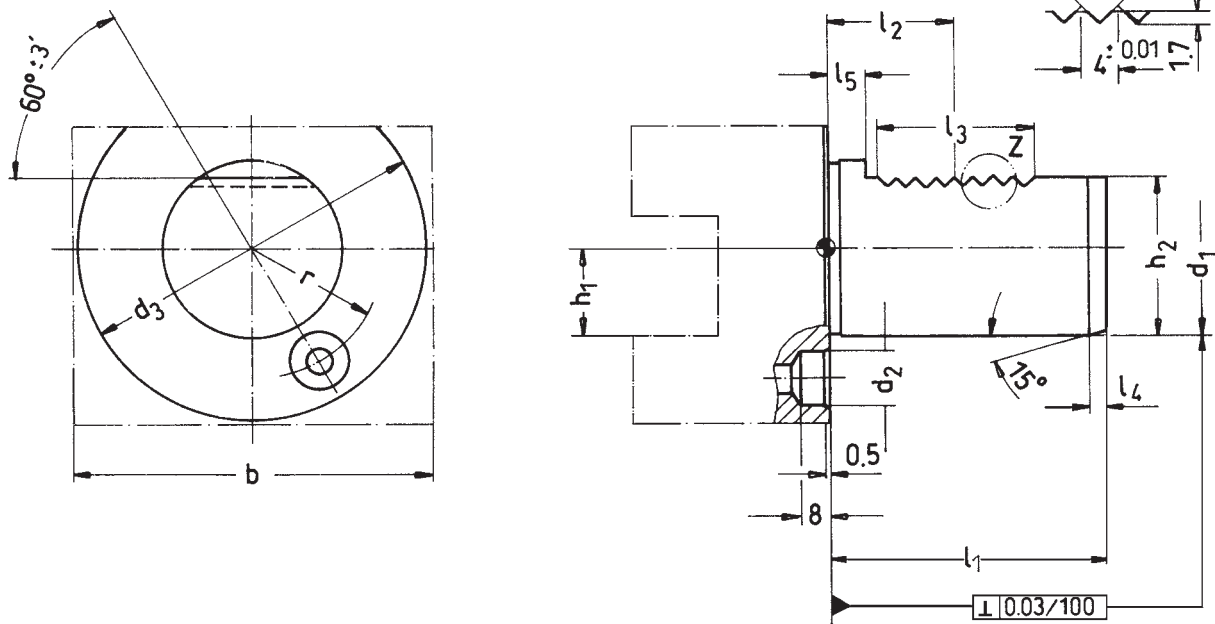
Werkzeugaufnahmen DIN 69880 (VDI 3425)

Toolholders

Porte-outils

Toolholders

Porte-outils



d1 h6	b	h1 max	d2	d3	h2 ± 0,1	r ± 0,02	l1 max.	l2 ± 0,05	l3 max.	l4 max.	l5
16	42	12	8	40	15,0	14,5	32	12,7	16	2	3,5
20	52	16	10	50	18,0	18,0	40	21,7	24	2	7,0
25	60	16	10	58	23,5	21,0	48	21,7	24	2	7,0
30	70	20	14	68	27,0	25,0	55	29,7	40	2	7,0
40	85	25	14	83	36,0	32,0	63	29,7	40	3	7,0
50	100	32	16	98	45,0	37,0	78	35,7	48	3	8,0

Ausführung: Die Werkzeughalter sind aus 16MnCr5 hergestellt, einsatzgehärtet HRC 60 ± 2 (HV 800 N/mm²), Härtetiefe 0,8 mm ± 0,2 mm, komplett brüniert und präzisionsgeschliffen.

Sämtliche Werkzeughalter haben eine große verstellbare Kugelspritzdüse und Gewindeanschluß für Rohrverschraubung bzw. innerer Kühlmittelzufuhr.

Description: The tools are manufactured of hardened steel 16MnCr5 with a hardness of HRC 60 ± 2 (HV 800 N/mm²).

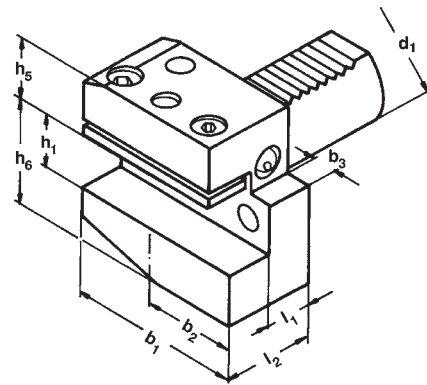
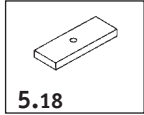
The shaft teeth surface 0,8 mm ± 0,2 mm and the holder are completely black-finished and grinded.

All tool holders have a big moveable coolant nozzle and a thread for external coolant.

Exécution: Les porte-outils sont fabriqués en 16NC6, cémentés, trempés

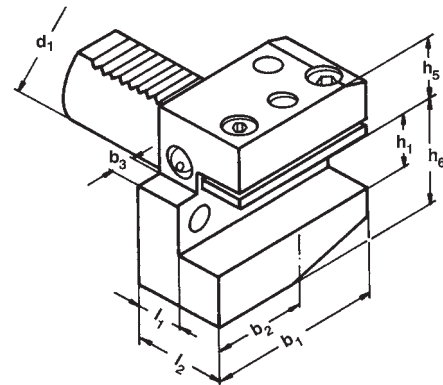
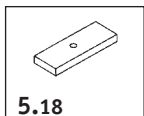
à HRC 60 ± 2 (HV 800 N/mm²), profondeur de trempé 0,8 mm ± 0,2 mm et entièrement brunis.

La queue de fixation, la denture, la face d'appui et le logement de l'outil sont rectifiés. Tous les porte-outils ont une bille d'arrosage avec un grand angle d'orientation et un trou taraudé pour un arrosage par le centre.

Radial-toolholder form B1 right, short
Porte-outil radial forme B1 droite, court

Zubehör / Accessories / Accessoires

 Unterlegplatte
 Shim
 Plaque entretoise

5.18

Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × h1 × l2	l1	b1	b2	b3	h5	h6
169.31.12	B1 – 16 × 12 × 24	13	42	23	5	20	22
209.31.16	B1 – 20 × 16 × 30	16	55	30	7	25	30
259.31.16	B1 – 25 × 16 × 30	16	55	30	7	25	30
309.31.20	B1 – 30 × 20 × 40	22	70	35	10	28	38
409.31.25	B1 – 40 × 25 × 44	22	85	42,5	12,5	32,5	48
509.31.32	B1 – 50 × 32 × 55	30	100	50	16	35	60

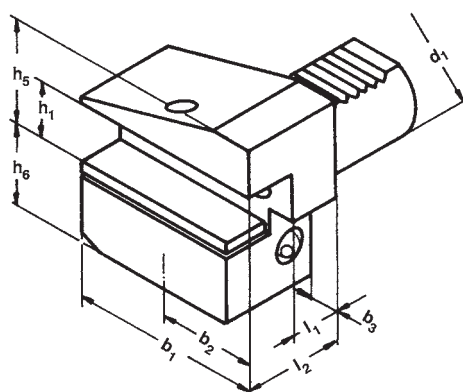
Radial-Werkzeughalter Form B2 links, kurz
DIN 69880 B2
Radial-toolholder form B2 left, short
Porte-outil radial forme B2 gauche, court

Zubehör / Accessories / Accessoires

 Unterlegplatte
 Shim
 Plaque entretoise

5.18

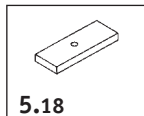
Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × h1 × l2	l1	b1	b2	b3	h5	h6
169.32.12	B2 – 16 × 12 × 24	13	42	23	5	20	22
209.32.16	B2 – 20 × 16 × 30	16	55	30	7	25	30
259.32.16	B2 – 25 × 16 × 30	16	55	30	7	25	30
309.32.20	B2 – 30 × 20 × 40	22	70	35	10	28	38
409.32.25	B2 – 40 × 25 × 44	22	85	42,5	12,5	32,5	48
509.32.32	B2 – 50 × 32 × 55	30	100	50	16	35	60

Radial-toolholder form B3 overhead right, short

Porte-outil radial forme B3 inversé droite, court



Zubehör / Accessories / Accessoires



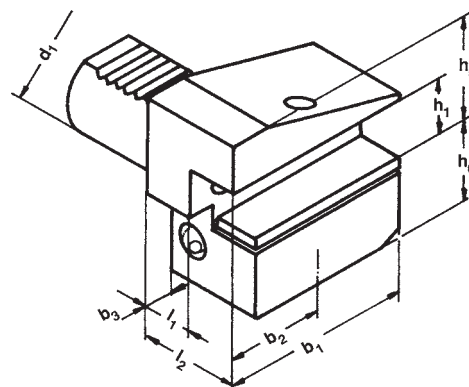
Unterlegplatte
Shim
Plaque entretoise

Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × h1 × l2	l1	b1	b2	b3	h5	h6
169.33.12	B3 – 16 × 12 × 24	13	42	23	5	22	20
209.33.16	B3 – 20 × 16 × 30	16	55	30	7	30	25
259.33.16	B3 – 25 × 16 × 30	16	55	30	7	30	25
309.33.20	B3 – 30 × 20 × 40	22	70	35	10	38	35
409.33.25	B3 – 40 × 25 × 44	22	85	42,5	12,5	48	42,5
509.33.32	B3 – 50 × 32 × 55	30	100	50	16	60	50

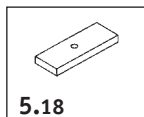
Radial-Werkzeughalter Form B4 Überkopf links, kurz

Radial-toolholder form B4 overhead left, short

Porte-outil radial forme B4 inversé gauche, court

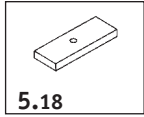


Zubehör / Accessories / Accessoires

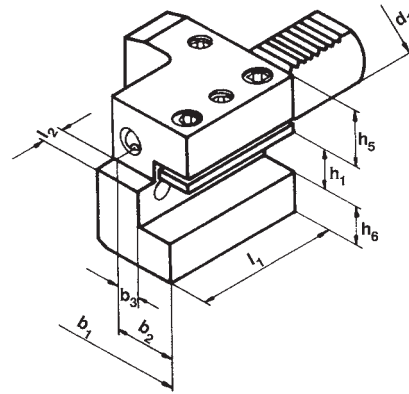


Unterlegplatte
Shim
Plaque entretoise

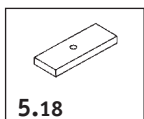
Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × h1 × l2	l1	b1	b2	b3	h5	h6
169.34.12	B4 – 16 × 12 × 24	13	42	23	5	22	20
209.34.16	B4 – 20 × 16 × 30	16	55	30	7	30	35
259.34.16	B4 – 25 × 16 × 30	16	55	30	7	30	35
309.34.20	B4 – 30 × 20 × 40	22	70	35	10	38	35
409.34.25	B4 – 40 × 25 × 44	22	85	42,5	12,5	48	42,5
509.34.32	B4 – 50 × 32 × 55	30	100	50	16	60	50

Axial-toolholder form C1 right
Porte-outil axial forme C1 droite
Zubehör / Accessories / Accessoires


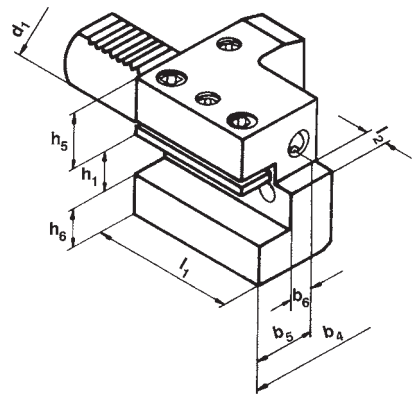
Unterlegplatte
Shim
Plaque entretoise

5.18


Bestell-Nr. Order no. Référence	d1 × h1	b1	b2	b3	l1	l2	h5	h6	
169.41.12	C1 – 16 × 12		43	24	13	44	5	20	22
209.41.16	C1 – 20 × 16		52	27	13	50	7	25	30
259.41.16	C1 – 25 × 16		58	33	19	55	7	25	30
309.41.20	C1 – 30 × 20		70	35	17	70	10	28	38
409.41.25	C1 – 40 × 25		85	42,5	21	85	12,5	32,5	48
509.41.32	C1 – 50 × 32		100	50	26	100	16	35	60

Axial-Werkzeughalter Form C2 links
DIN 69880 C2
Axial-toolholder form C2 left
Porte-outil axial forme C2 gauche


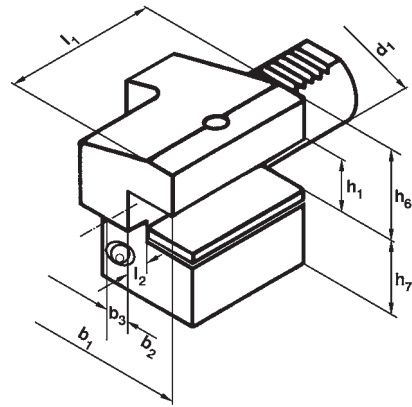
Unterlegplatte
Shim
Plaque entretoise

5.18


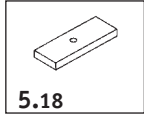
Bestell-Nr. Order no. Référence	d1 × h1	b4	b5	b6	l1	l2	h5	h6	
169.42.12	C2 – 16 × 12	43	24	13	44	5	20	22	
209.42.16	C2 – 20 × 16	65	40	26	50	7	25	30	
259.42.16	C2 – 25 × 16	58	33	19	55	7	25	30	
309.42.20	C2 – 30 × 20	76	41	23	70	10	28	38	
409.42.25	C2 – 40 × 25	90	47,5	25,5	85	12,5	32,5	48	
509.42.32	C2 – 50 × 32	105	55	30,5	100	16	35	60	

Axial-toolholder form C3 overhead right, short

Porte-outil axial forme C3 inversé droite, court



Zubehör / Accessories / Accessoires



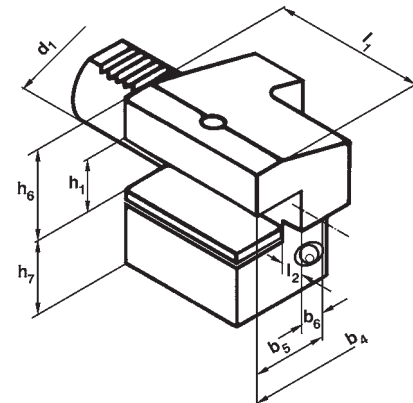
Unterlegplatte
Shim
Plaque entretoise

Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × h1	b1	b2	b3	l1	l2	h6	h7
169.43.12	C3 – 16 × 12	43	24	13	44	5	22	20
209.43.16	C3 – 20 × 16	52	27	13	50	7	30	25
259.43.16	C3 – 25 × 16	58	33	19	55	7	30	25
309.43.20	C3 – 30 × 20	70	35	17	70	10	38	35
409.43.25	C3 – 40 × 25	85	42,5	21	85	12,5	48	42,5
509.43.32	C3 – 50 × 32	100	50	26	100	16	60	50

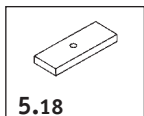
Axial-Werkzeughalter Form C4 Überkopf links, kurz

Axial-toolholder form C4 overhead left, short

Porte-outil axial forme C4 inversé gauche, court

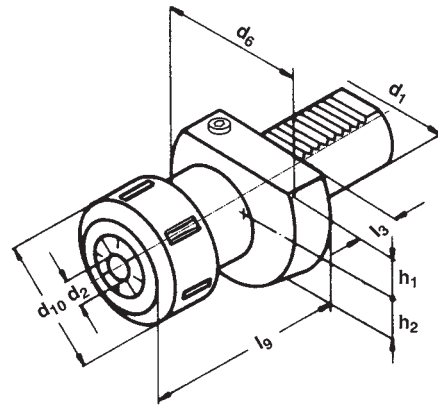


Zubehör / Accessories / Accessoires



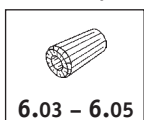
Unterlegplatte
Shim
Plaque entretoise

Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × h1	b4	b5	b6	l1	l2	h6	h7
169.44.12	C4 – 16 × 12	43	24	13	44	5	22	20
209.44.16	C4 – 20 × 16	65	40	26	50	7	30	25
259.44.16	C4 – 25 × 16	58	33	19	55	7	30	25
309.44.20	C4 – 30 × 20	76	41	23	70	10	38	35
409.44.25	C4 – 40 × 25	90	47,5	25,5	85	12,5	48	42,5
509.44.32	C4 – 50 × 32	105	55	30,5	100	16	60	50

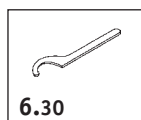
Collet holder form E3 for collets DIN 6388
**Porte-outil forme E3
pour pinces de serrage DIN 6388**


Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × d2	d6	d10	h1	h2	l3	l9
169.01.16	E3 – 16 × 2 – 16	40	43	18	18	13	45,5
209.01.16	E3 – 20 × 2 – 16	50	43	23	23	18	57
259.01.16	E3 – 25 × 2 – 16	58	43	25	25	18	57
309.01.16	E3 – 30 × 2 – 16	68	43	28	30	22	57
309.01.25	E3 – 30 × 2 – 25	68	60	28	30	22	75
409.01.25	E3 – 40 × 2 – 25	83	60	32,5	–	22	75
409.01.32	E3 – 40 × 3 – 32	83	72	32,5	–	22	90
509.01.25	E3 – 50 × 2 – 25	98	60	35	–	30	75
509.01.32	E3 – 50 × 3 – 32	98	72	35	–	30	90

Lieferumfang: Inkl. Spannmutter
Included: Clamping nuts
Inclus: Ecrou de serrage

Zubehör / Accessories / Accessoires


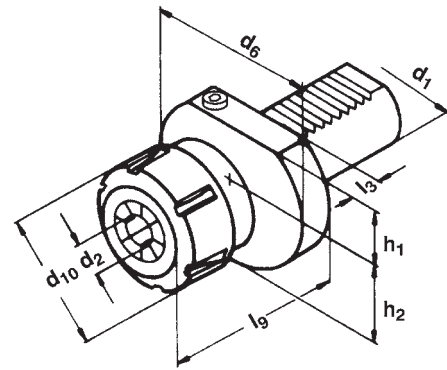
Spannzangen DIN 6388 B
Collets DIN 6388 form B
Pinces de serrage DIN 6388, forme B

6.03 – 6.05


Hakenschlüssel DIN 1810 A
Wrench DIN 1810 A
Clé à ergot DIN 1810 A

6.30

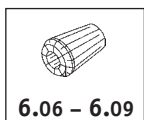
Collet holder form E4 for collets DIN 6499 Type ER

Porte-outils forme E4 pour pinces de serrage
DIN 6499 Type ER

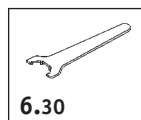
Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × d2	d6	d10	h1	l3	l9
169.02.10	E4-16 × ER16 1 - 10	40	32	18	13	50
209.02.10	E4-20 × ER16 1 - 10	50	32	22	16	55
209.02.16	E4-20 × ER25 2 - 16	50	42	22	16	57
259.02.16	E4-25 × ER25 2 - 16	58	42	24	18	57
309.02.16	E4-30 × ER25 2 - 16	68	42	28	22	57
309.02.20	E4-30 × ER32 2 - 20	68	50	28	22	75
309.02.26	E4-30 × ER40 3 - 26	68	63	28	22	75
409.02.16	E4-40 × ER25 2 - 16	83	42	32,5	22	75
409.02.20	E4-40 × ER32 2 - 20	83	50	32,5	22	75
409.02.26	E4-40 × ER40 3 - 26	83	63	32,5	22	75
509.02.26	E4-50 × ER40 3 - 26	98	63	35	30	75

Lieferumfang: Inkl. Spannmutter
Included: Clamping nuts
Inclus: Ecrou de serrage

Zubehör / Accessories / Accessoires



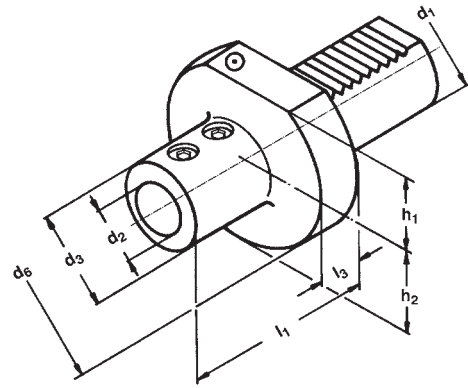
Spannzangen System ER
Collets system ER
Pinces de serrage system ER



Spannschlüssel ER
Wrench ER
Clé de serrage ER

Boring holder for drills
with indexable inserts form E1

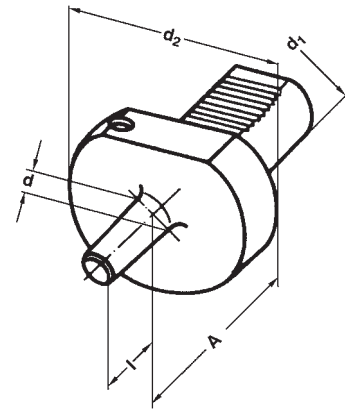
Porte foret pour foret
à plaquettes réversibles forme E1



Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × d2	d3	d6	h1	h2	l1	l3
209.51.16	E1 – 20 × 16	40	50	22	22	67	16
209.51.20	E1 – 20 × 20	40	50	22	22	67	16
209.51.25	E1 – 20 × 25	45	50	22	22	71	16
259.51.16	E1 – 25 × 16	40	58	25	25	67	18
259.51.20	E1 – 25 × 20	40	58	25	25	67	18
259.51.25	E1 – 25 × 25	45	58	25	25	71	18
309.51.16	E1 – 30 × 16	36	68	28	30	64	22
309.51.20	E1 – 30 × 20	40	68	28	30	67	22
309.51.25	E1 – 30 × 25	45	68	28	30	71	22
309.51.32	E1 – 30 × 32	52	68	28	30	75	22
309.51.40	E1 – 30 × 40	60	68	28	30	95	22
409.51.16	E1 – 40 × 16	36	83	32,5	–	64	22
409.51.20	E1 – 40 × 20	40	83	32,5	–	67	22
409.51.25	E1 – 40 × 25	45	83	32,5	–	75	22
409.51.32	E1 – 40 × 32	52	83	32,5	–	75	22
409.51.40	E1 – 40 × 40	60	83	32,5	–	90	22
509.51.16	E1 – 50 × 16	40	98	35	–	66	30
509.51.20	E1 – 50 × 20	40	98	35	–	66	30
509.51.25	E1 – 50 × 25	45	98	35	–	80	30
509.51.32	E1 – 50 × 32	52	98	35	–	80	30
509.51.40	E1 – 50 × 40	65	98	35	–	90	30
509.51.50	E1 – 50 × 50	75	98	35	–	100	30

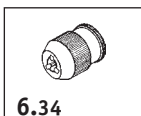
Drill chuck adaptor DIN 238

Arbre pour mandrin de perçage DIN 238

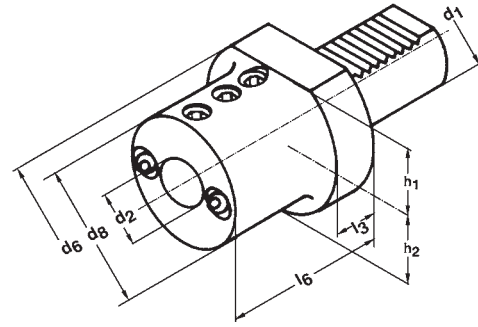


Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × d	d2	A	l
309.14.16	30 × B16	68	27	24
409.14.16	40 × B16	83	27	24
509.14.16	50 × B16	98	35	24

Zubehör / Accessories / Accessoires



Bohrfutter
Drill chuck
Mandrin de perçage



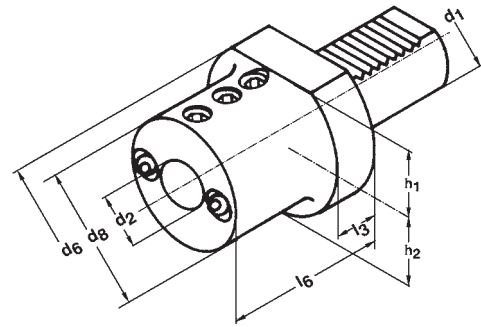
Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × d2	d6	d8	h1	h2	l3	l6
169.52.06	E2 – 16 × 06	40	32	18	18	13	44
169.52.08	E2 – 16 × 08	40	32	18	18	13	44
169.52.10	E2 – 16 × 10	40	32	18	18	13	44
169.52.12	E2 – 16 × 12	40	40	18	18	13	44
169.52.16	E2 – 16 × 16	40	40	18	18	13	44
209.52.08	E2 – 20 × 08	50	40	–	23	18	50
209.52.10	E2 – 20 × 10	50	40	–	23	18	50
209.52.12	E2 – 20 × 12	50	40	–	23	18	50
209.52.16	E2 – 20 × 16	50	40	–	23	18	50
209.52.20	E2 – 20 × 20	50	50	–	23	18	50
209.52.25	E2 – 20 × 25	50	50	–	23	18	60
259.52.08	E2 – 25 × 08	58	40	25	25	18	50
259.52.10	E2 – 25 × 10	58	40	25	25	18	50
259.52.12	E2 – 25 × 12	58	40	25	25	18	50
259.52.16	E2 – 25 × 16	58	40	25	25	18	50
259.52.20	E2 – 25 × 20	58	58	25	25	18	50
259.52.25	E2 – 25 × 25	58	58	25	25	18	60

Zubehör / Accessories / Accessoires


Reduzierbuchsen
Reducing sleeves
Douilles de réduction

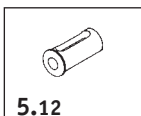
Boring bar holder form E2

Porte-outil pour barre d'alésage forme E2



Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × d2	d6	d8	h1	h2	l3	l6
309.52.08	E2 – 30 × 08	68	55	28	30	22	60
309.52.10	E2 – 30 × 10	68	55	28	30	22	60
309.52.12	E2 – 30 × 12	68	55	28	30	22	60
309.52.16	E2 – 30 × 16	68	55	28	30	22	60
309.52.20	E2 – 30 × 20	68	55	28	30	22	60
309.52.25	E2 – 30 × 25	68	55	28	30	22	60
309.52.32	E2 – 30 × 32	68	68	28	30	22	75
409.52.08	E2 – 40 × 08	83	55	32,5	–	22	75
409.52.10	E2 – 40 × 10	83	55	32,5	–	22	75
409.52.12	E2 – 40 × 12	83	55	32,5	–	22	75
409.52.16	E2 – 40 × 16	83	55	32,5	–	22	75
409.52.20	E2 – 40 × 20	83	55	32,5	–	22	75
409.52.25	E2 – 40 × 25	83	55	32,5	–	22	75
409.52.32	E2 – 40 × 32	83	83	32,5	–	22	75
409.52.40	E2 – 40 × 40	83	83	32,5	–	22	90
509.52.12	E2 – 50 × 12	98	68	35	–	30	90
509.52.16	E2 – 50 × 16	98	68	35	–	30	90
509.52.20	E2 – 50 × 20	98	68	35	–	30	90
509.52.25	E2 – 50 × 25	98	68	35	–	30	90
509.52.32	E2 – 50 × 32	98	68	35	–	30	90
509.52.40	E2 – 50 × 40	98	98	35	–	30	90
509.52.50	E2 – 50 × 50	98	98	35	–	30	100

Zubehör / Accessories / Accessoires



5.12

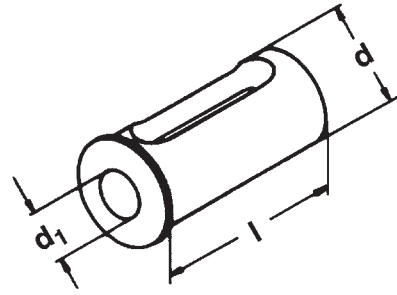
Reduzierbuchsen
Reducing sleeves
Douilles de réduction



Reduzierbuchse für Bohrstangenhalter

Reduction bushes for boring bar holders

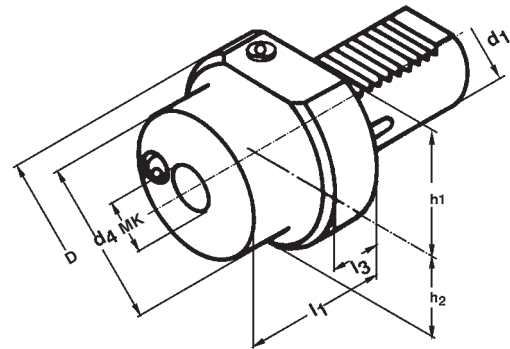
Douilles de réduction pour barres d'alésage



Bestell-Nr. Order no. Référence	d	d1	l
709.25.06	25	6	50
709.25.08	25	8	50
709.25.10	25	10	50
709.25.12	25	12	50
709.25.16	25	16	50
709.25.20	25	20	50
709.32.06	32	6	70
709.32.08	32	8	70
709.32.10	32	10	70
709.32.12	32	12	70
709.32.16	32	16	70
709.32.20	32	20	70
709.32.25	32	25	70
709.40.06	40	6	80
709.40.08	40	8	80
709.40.10	40	10	80
709.40.12	40	12	80
709.40.16	40	16	80
709.40.20	40	20	80
709.40.25	40	25	80
709.40.32	40	32	80

Holder for M.T. shanks form F1

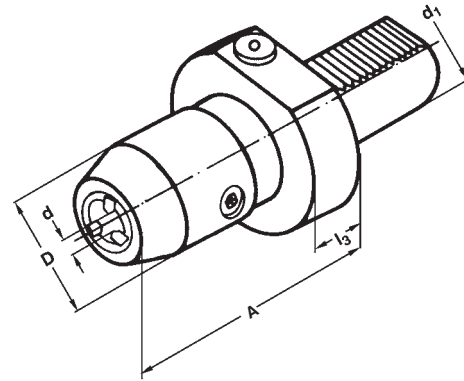
Porte-foret pour outil à cône Morse forme F1



Bestell-Nr. Order no. Référence	Abmessung Size / Dimension d1 × MK	d4	D	l1	l3	h1	h2
169.07.01	F1 16 × MK1	32	40	32	13	18	18
209.07.01	F1 20 × MK1	–	50	23	–	22	23
209.07.02	F1 20 × MK2	40	50	90	30	22	23
259.07.01	F1 25 × MK1	–	58	23	–	25	25
259.07.02	F1 25 × MK2	–	58	27	–	25	25
309.07.01	F1 30 × MK1	–	68	27	–	28	30
309.07.02	F1 30 × MK2	–	68	27	–	28	30
309.07.03	F1 30 × MK3	58	68	40	22	28	30
409.07.02	F1 40 × MK2	55	83	36	22	32,5	–
409.07.03	F1 40 × MK3	55	83	36	22	32,5	–
409.07.04	F1 40 × MK4	68	83	80	22	32,5	–
509.07.02	F1 50 × MK2	55	98	36	30	35	–
509.07.03	F1 50 × MK3	58	98	36	30	35	–
509.07.04	F1 50 × MK4	68	98	50	30	35	–
509.07.05	F1 50 × MK5	75	98	72	30	35	–

NC-Drill chucks for left and right rotation,
centre coolant

Mandrin de perçage CNC avec rotation gauche-droite
et arrosage par le centre

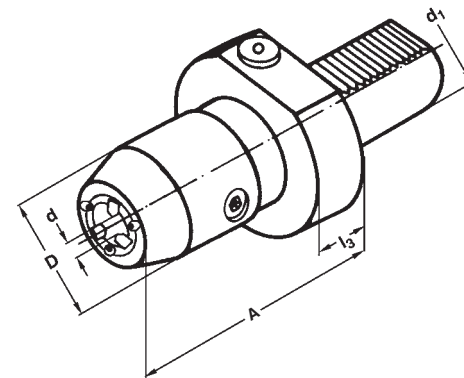


Bestell-Nr. Order no. Référence	d1	d Spannbereich Capacity Capacité	A	D	l3
209.15.08	20	0,5 – 8	68	36	18
209.15.13	20	1 – 13	90	50	18
259.15.13	25	1 – 13	90	50	18
309.15.13	30	1 – 13	90	50	22
309.15.16	30	3 – 16	90	57	22
409.15.13	40	1 – 13	90	50	22
409.15.16	40	3 – 16	90	57	22
509.15.16	50	3 – 16	90	57	30

NC-Bohrfutter für Rechts- und Linkslauf Kühlmittelzuführung über Kugelspritzdüsen

NC-Drill chucks for left and right rotation
Coolant supply via ball coolant nozzle

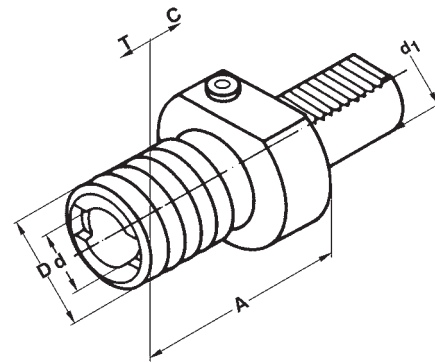
Mandrin de perçage CNC avec rotation
gauche-droite et arrosage par buses de picot



Bestell-Nr. Order no. Référence	d1	d Spannbereich Capacity Capacité	A	D	l3
309.15.13.K	30	1 – 13	80	44	22
309.15.16.K	30	1,5 – 16	87,5	49	22
409.15.13.K	40	1 – 13	80	44	22
409.15.16.K	40	1,5 – 16	87,5	49	22

Quick-change tapping chucks
with length compensation

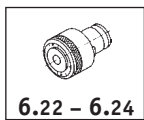
Appareil à tarauder avec
compensation longitudinale



Bestell-Nr. Order no. Référence	d1	Spannbereich Capacity Capacité	A	D	d	C	T
209.16.12	20	M3/M14	55	38	19	7	7
259.16.12	25	M3/M14	55	38	19	7	7
309.16.12	30	M3/M14	55	38	19	7	7
309.16.20	30	M5/M22	77	54	31	12	12
409.16.12	40	M3/M14	55	38	19	7	7
409.16.20	40	M5/M22	77	54	31	12	12
509.16.12	50	M3/M14	55	38	19	7	7
509.16.20	50	M5/M22	77	54	31	12	12

Ausführung mit Kugelführungsbuchse
Version with ball retainer
Version comprenant douille de glissière à bille

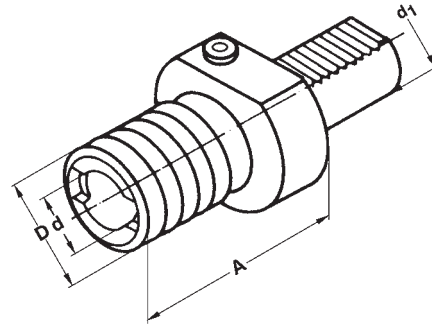
Zubehör / Accessories / Accessoires



Schnellwechseleinsätze
Tapping collets
Douilles de taraudage

**Quick-change tapping chucks
without length compensation**

**Appareil à tarauder sans
compensation longitudinale**



Bestell-Nr. Order no. Référence	d1	Spannbereich Capacity Capacité	A	D	d
209.16.12.1	20	M3 / M14	55	38	19
259.16.12.1	25	M3 / M14	55	38	19
309.16.12.1	30	M3 / M14	55	38	19
309.16.20.1	30	M5 / M22	77	54	31
409.16.12.1	40	M3 / M14	55	38	19
409.16.20.1	40	M5 / M22	77	54	31
509.16.12.1	50	M3 / M14	55	38	19
509.16.20.1	50	M5 / M22	77	54	31

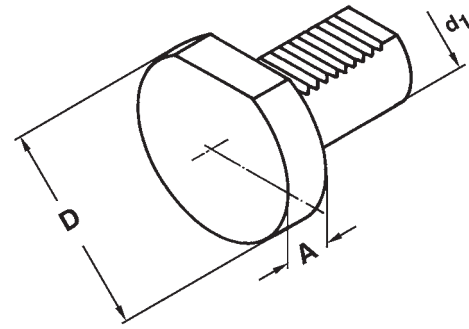
Zubehör / Accessories / Accessoires



Schnellwechseleinsätze
Tapping collets
Douilles de taraudage

Protection steel plug

Bouchon de protection

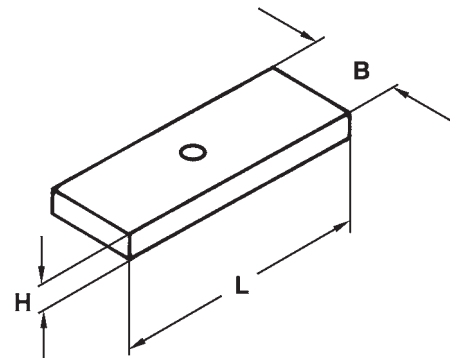


Bestell-Nr. Order no. Référence	d1	A	D
169.29.13	16 × 13	13	40
209.29.16	20 × 16	16	50
259.29.16	25 × 16	16	58
309.29.20	30 × 20	20	68
409.29.20	40 × 20	20	83
509.29.20	50 × 20	20	98

Unterlegplatte

Shim

Plaque entretoise



Bestell-Nr. Order no. Référence	B × H × L
209.16.01	14 × 4 × 54
309.20.01	18 × 4 × 69
409.25.01	22 × 5 × 84
509.32.01	25 × 7 × 99

