

Clarkson GmbH



MAS 403 BT

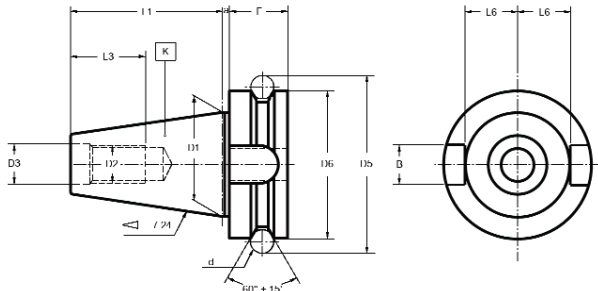
02/2019



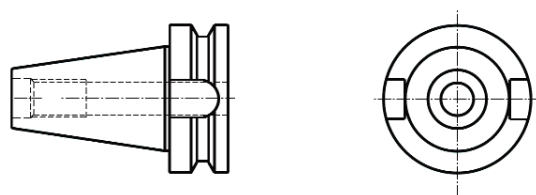


Werkzeugaufnahme MAS 403 BT
Toolholders MAS 403 BT

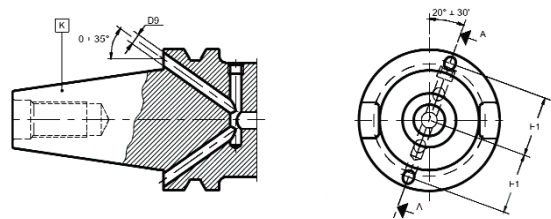
Form: A
ohne Durchgangsbohrung
Form: A
without through hole



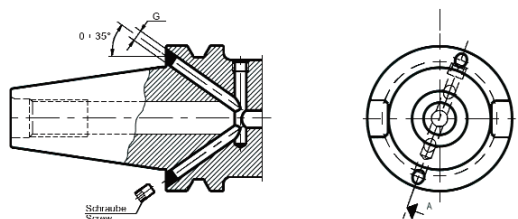
Form: AD
mit Durchgangsbohrung
Form: AD
with through hole



Form: B
mit innerer Kühlmittelzufuhr über den Bund
Form: B
with internal coolant through the flange



Form: AD/B
mit innerer Kühlmittelzufuhr über den Bund
(verschließbar). Bei Lieferung mit
Gewindestiften verschlossen.
Form: AD/B
with internal coolant through the flange (clo-
seable). Delivery with headless screws in
closed position.



K	B H12	D1	D2	D3 H8	D5	D6 h8	D9	L1 ^{+0,15}	L3 min.	L6 ^{+0,2}	a ^{+0,4}	d	E1 ^{+0,4}	F	G
30	16,1	31,75	M-12	12,5	56,14	46	4	48,4	24	16,3	2	8	21	20	M-4
35	16,1	38,10	M-12	12,5	65,68	53	4	56,4	24	19,6	2	10	-	22	M-4
40	16,1	44,45	M-16	17	75,68	63	4	65,4	30	22,6	2	10	27	25	M-4
45	19,3	57,15	M-20	21	100,21	85	5	82,8	38	29,1	3	12	35	30	M-6
50	25,7	69,85	M-24	25	119,02	100	6	101,8	45	35,4	3	15	42	35	M-6

Werkstoff:
Legierter Einzelstahl mit einer Zugfestigkeit im Kern von min. 1100 N/mm²
Einsatzgehärtet HRC 60±2 (HV 700±50) Härtetiefe 0,8±2mm

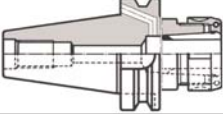
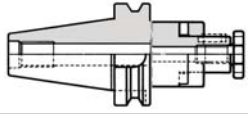
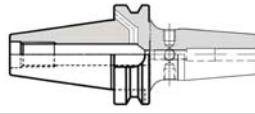
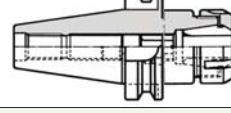
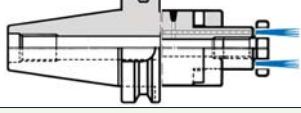
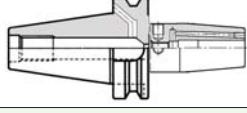
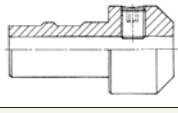
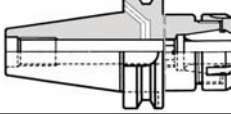
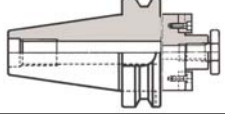
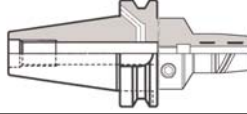
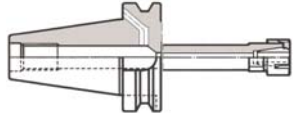
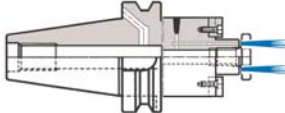
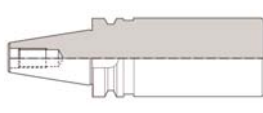
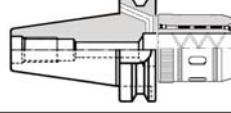
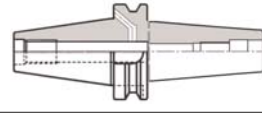
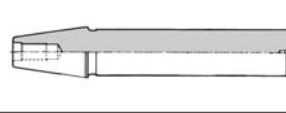
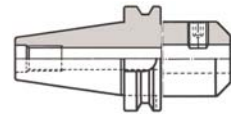
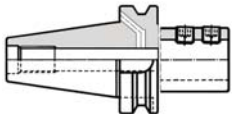
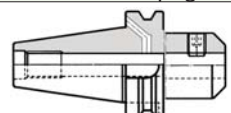
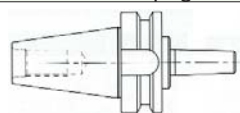
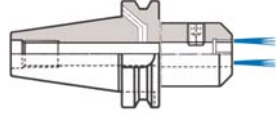
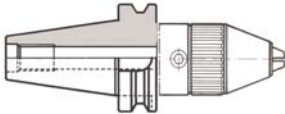
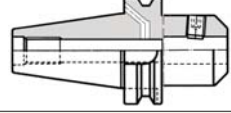
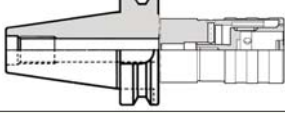
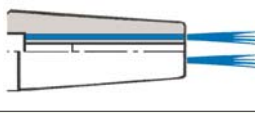
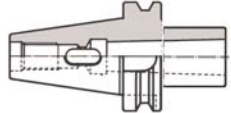
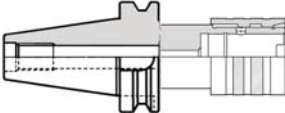
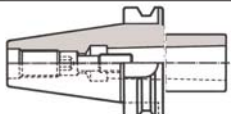
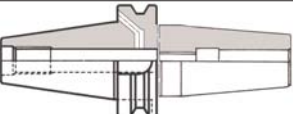
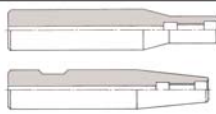
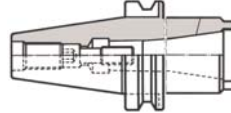
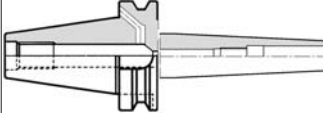
Material:
alloyed case-hardened steel, tensile core strength of min. 1100 N/mm²
Case hardened HRC 60±2 (HV 700±50) hardening depth 0,8±2mm

Genauigkeit:
Kegelwinkel - Toleranzqualität AT 3 nach DIN 7187 und DIN 2080

Accuracy:
Quality of taper AT 3 according to DIN 7187 and DIN 2080



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252A Seite/page : 18	272AD/B Seite/page : 32	257 Seite/page : 51	Seite/page : 67-70
			Ersatzteile Spar-parts

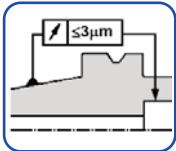
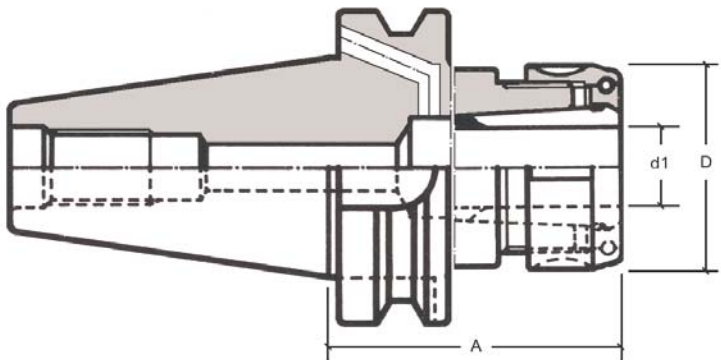


Zangenfutter für OZ-Spannzangen DIN 6388

Collet chucks for OZ-Collets to DIN 6388

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	Zange Collet OZ	Spannbereich Capacity d1	A mm	D mm
255.830.016.060	BT30	OZ16	2-16	60	43
255.830.025.080	BT30	OZ25	2-25	80	60
255.840.016.070	BT40	OZ16	2-16	70	43
255.840.025.070	BT40	OZ25	2-25	70	60
255.840.032.090	BT40	OZ32	3-32	90	72
255.850.025.085	BT50	OZ25	2-25	85	60
255.850.032.090	BT50	OZ32	3-32	90	72

BT30 = AD



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Lieferumfang:
Mit kugellagerter Spannmutter
Delivery:
With ball bearing clamping nut

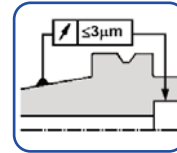
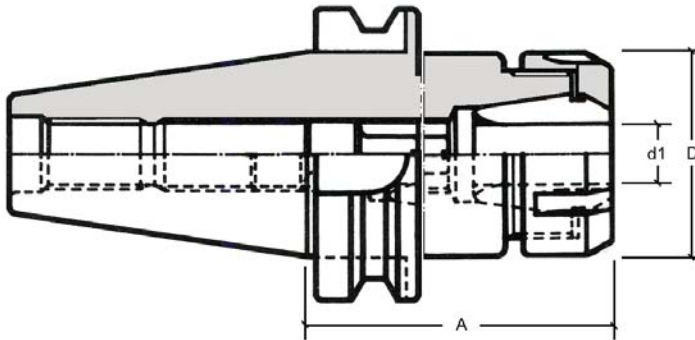


Zangenfutter für ER-Spannzangen DIN 6499

Collet chucks for ER-Collets to DIN 6499

MAS 403 BT AD

MAS 403 BT AD



Bestell Nr. Code No.	Kegel Taper BT	Zange Collet ER	Spannbereich Capacity d1	A mm	D mm
241.830.A16.070	BT30	ER16	1-10	70	32
241.830.A16.100	BT30	ER16	1-10	100	32
241.830.A25.070	BT30	ER25	2-16	70	42
241.830.A25.100	BT30	ER25	2-16	100	42
241.830.A32.070	BT30	ER32	2-20	70	50
241.830.A32.100	BT30	ER32	2-20	100	50
241.830.A40.070	BT30	ER40	3-26	70	63
241.840.A16.063	BT40	ER16	1-10	63	32
241.840.A16.100	BT40	ER16	1-10	100	32
241.840.A16.160	BT40	ER16	1-10	160	28
241.840.A25.060	BT40	ER25	2-16	60	42
241.840.A25.100	BT40	ER25	2-16	100	42
241.840.A25.160	BT40	ER25	2-16	160	42
241.840.A32.070	BT40	ER32	2-20	70	50
241.840.A32.100	BT40	ER32	2-20	100	50
241.840.A32.160	BT40	ER32	2-20	160	50
241.840.A40.080	BT40	ER40	3-26	80	63
241.840.A40.100	BT40	ER40	3-26	100	63
241.840.A40.160	BT40	ER40	3-26	160	63
241.850.A16.070	BT50	ER16	1-10	70	28
241.850.A16.100	BT50	ER16	1-10	100	28
241.850.A16.160	BT50	ER16	1-10	160	28
241.850.A25.070	BT50	ER25	2-16	70	42
241.850.A25.100	BT50	ER25	2-16	100	42
241.850.A25.160	BT50	ER25	2-16	160	42
241.850.A32.070	BT50	ER32	2-20	70	50
241.850.A32.100	BT50	ER32	2-20	100	50
241.850.A32.160	BT50	ER32	2-20	160	50
241.850.A40.080	BT50	ER40	3-26	80	63
241.850.A40.100	BT50	ER40	3-26	100	63
241.850.A40.160	BT50	ER40	3-26	160	63



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Lieferumfang:
Mit gewuchteter Spannmutter
Delivery:
With balanced clamping nut

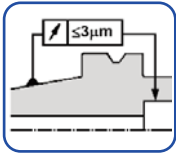
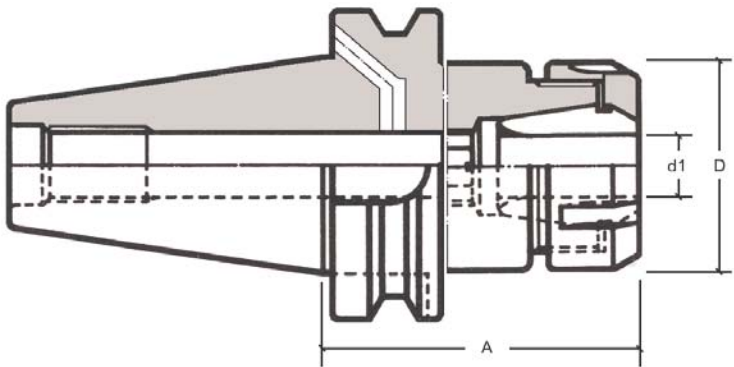


Zangenfutter für ER-Spannzangen DIN 6499

Collet chucks for ER-Collets to DIN 6499

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	Zange Collet ER	Spannbereich Capacity d1	A mm	D mm
241.840.016.063	BT40	ER16	1-10	63	32
241.840.016.100	BT40	ER16	1-10	100	32
241.840.016.160	BT40	ER16	1-10	160	32
241.840.016.200	BT40	ER16	1-10	200	28
241.840.025.060	BT40	ER25	2-16	60	42
241.840.025.100	BT40	ER25	2-16	100	42
241.840.025.160	BT40	ER25	2-16	160	42
241.840.025.200	BT40	ER25	2-16	200	42
241.840.032.070	BT40	ER32	2-20	70	50
241.840.032.100	BT40	ER32	2-20	100	50
241.840.032.160	BT40	ER32	2-20	160	50
241.840.032.200	BT40	ER32	2-20	200	50
241.840.040.080	BT40	ER40	3-26	80	63
241.840.040.100	BT40	ER40	3-26	100	63
241.840.040.160	BT40	ER40	3-26	160	63
241.840.040.200	BT40	ER40	3-26	200	63
241.850.016.070	BT50	ER16	1-10	70	32
241.850.016.100	BT50	ER16	1-10	100	32
241.850.016.160	BT50	ER16	1-10	160	32
241.850.016.200	BT50	ER16	1-10	200	32
241.850.025.070	BT50	ER25	2-16	70	42
241.850.025.100	BT50	ER25	2-16	100	42
241.850.025.160	BT50	ER25	2-16	160	42
241.850.025.200	BT50	ER25	2-16	200	42
241.850.032.070	BT50	ER32	2-20	70	50
241.850.032.100	BT50	ER32	2-20	100	50
241.850.032.160	BT50	ER32	2-20	160	50
241.850.032.200	BT50	ER32	2-20	200	50
241.850.040.080	BT50	ER40	3-26	80	63
241.850.040.100	BT50	ER40	3-26	100	63
241.850.040.160	BT50	ER40	3-26	160	63
241.850.040.200	BT50	ER40	3-26	200	63



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Lieferumfang:
Mit gewuchteter Spannmutter
Delivery:
Withbalanced clamping nut

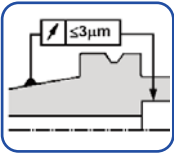
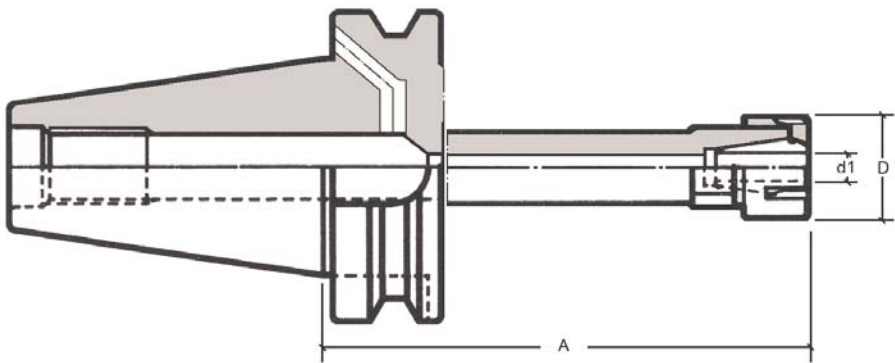


Mini-Zangenfutter für ER-Spannzangen DIN 6499

MAS 403 BT AD/B

Mini-Collet chucks for ER-Collets to DIN 6499

MAS 403 BT AD/B



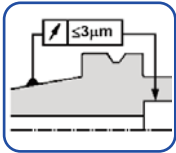
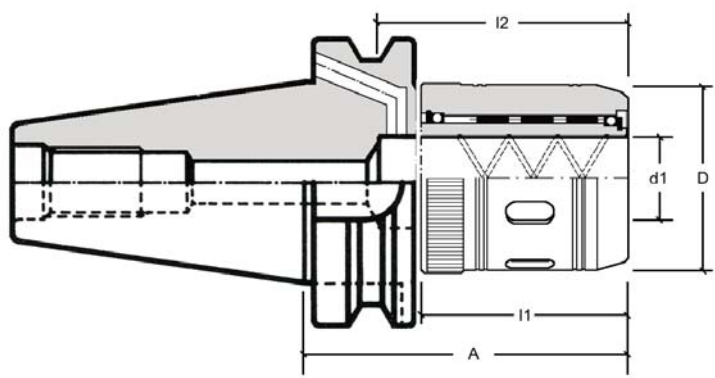
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242.840.011.070	BT40	ER11	1-7	70	16
242.840.011.100	BT40	ER11	1-7	100	16
242.840.011.160	BT40	ER11	1-7	160	16
242.840.016.070	BT40	ER16	1-10	70	22
242.840.016.100	BT40	ER16	1-10	100	22
242.840.016.160	BT40	ER16	1-10	160	22
242.840.025.070	BT40	ER25	1-16	70	35
242.840.025.100	BT40	ER25	1-16	100	35
242.840.025.160	BT40	ER25	1-16	160	35
242.850.016.070	BT50	ER16	1-10	70	22
242.850.016.100	BT50	ER16	1-10	100	22
242.850.016.160	BT50	ER16	1-10	160	22
242.850.025.070	BT50	ER25	1-16	70	35
242.850.025.100	BT50	ER25	1-16	100	35
242.850.025.160	BT50	ER25	1-16	160	35





Präzisions-Zangenkraftspannfutter
Precision Great Power Collet chuck

MAS 403 BT AD/B
MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	Spannbereich Capacity d1	l1 mm	l2 mm	A mm	D mm
250.840.020.080	BT40	20	53	60	80	46
250.840.020.105	BT40	20	78	60	105	46
250.840.032.085	BT40	32	58	75	85	62
250.840.032.105	BT40	32	78	80	105	62
250.850.020.100	BT50	20	62	60	100	46
250.850.032.100	BT50	32	62	80	100	62
250.850.032.135	BT50	32	97	80	135	62



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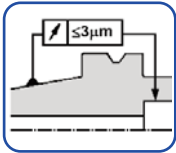
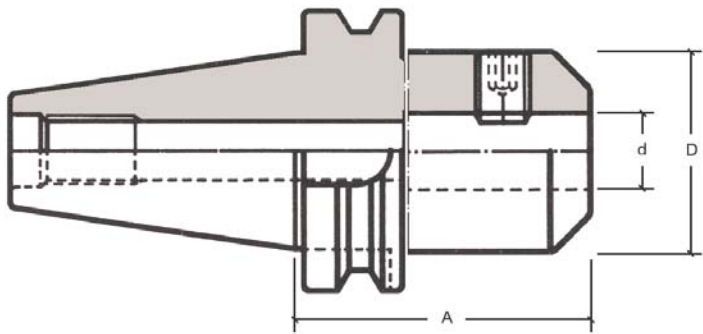


Fräsfutter DIN 6359 für Zylinderschäfte DIN1835B

MAS 403 BT AD

Weldon chucks DIN 6359 for shanks to DIN1835B

MAS 403 BT AD



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
269.830.A06.050	BT30	6	50	25
269.830.A08.050	BT30	8	50	28
269.830.A10.050	BT30	10	50	35
269.830.A12.050	BT30	12	50	42
269.830.A14.050	BT30	14	50	44
269.830.A16.063	BT30	16	63	48
269.830.A18.063	BT30	18	63	50
269.830.A20.063	BT30	20	63	52

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
269.840.A06.050	BT40	6	50	25
269.840.A06.100	BT40	6	100	25
269.840.A06.160	BT40	6	160	25
269.840.A08.050	BT40	8	50	28
269.840.A08.100	BT40	8	100	28
269.840.A08.160	BT40	8	160	28
269.840.A10.063	BT40	10	63	35
269.840.A10.100	BT40	10	100	35
269.840.A10.160	BT40	10	160	35
269.840.A12.063	BT40	12	63	42
269.840.A12.100	BT40	12	100	42
269.840.A12.160	BT40	12	160	42
269.840.A14.063	BT40	14	63	44
269.840.A14.100	BT40	14	100	44
269.840.A14.160	BT40	14	160	44
269.840.A16.035	BT40	16	35	45
269.840.A16.063	BT40	16	63	48
269.840.A16.100	BT40	16	100	48
269.840.A16.160	BT40	16	160	48
269.840.A18.063	BT40	18	63	50
269.840.A18.100	BT40	18	100	50
269.840.A18.160	BT40	18	160	50
269.840.A20.035	BT40	20	35	45
269.840.A20.063	BT40	20	63	52
269.840.A20.100	BT40	20	100	52
269.840.A20.160	BT40	20	160	52
269.840.A25.035	BT40	25	35	45
269.840.A25.090	BT40	25	90	63
269.840.A25.160	BT40	25	160	63
269.840.A32.065	BT40	32	65	62
269.840.A32.100	BT40	32	100	72
269.840.A32.160	BT40	32	160	72
269.840.A40.120	BT40	40	120	80



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Hinweis:
Ab Ød 25mm mit 2 Spannschrauben
Note:
From Ød 25mm with 2 clamping screws

Lieferumfang:
Mit Spannschraube(n)
Delivery:
With clamping screw(s)

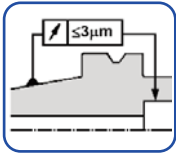
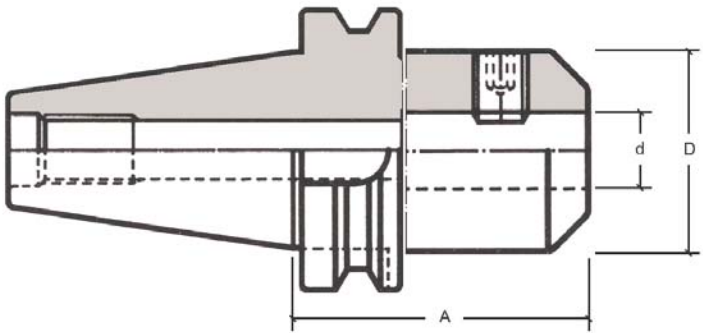


Fräsfutter DIN 6359 für Zylinderschäfte DIN1835B

MAS 403 BT AD

Weldon chucks DIN 6359 for shanks to DIN1835B

MAS 403 BT AD



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
269.850.A06.063	BT50	6	63	25
269.850.A06.100	BT50	6	100	25
269.850.A06.160	BT50	6	160	25
269.850.A08.063	BT50	8	63	28
269.850.A08.100	BT50	8	100	28
269.850.A08.160	BT50	8	160	28
269.850.A10.063	BT50	10	63	35
269.850.A10.100	BT50	10	100	35
269.850.A10.160	BT50	10	160	35
269.850.A12.080	BT50	12	80	42
269.850.A12.100	BT50	12	100	42
269.850.A12.160	BT50	12	160	42
269.850.A14.080	BT50	14	80	44
269.850.A14.100	BT50	14	100	44
269.850.A14.160	BT50	14	160	44

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
269.850.A16.080	BT50	16	80	48
269.850.A16.100	BT50	16	100	48
269.850.A16.160	BT50	16	160	48
269.850.A18.080	BT50	18	80	50
269.850.A18.100	BT50	18	100	50
269.850.A18.160	BT50	18	160	50
269.850.A20.080	BT50	20	80	52
269.850.A20.100	BT50	20	100	52
269.850.A20.160	BT50	20	160	52
269.850.A25.100	BT50	25	100	63
269.850.A25.120	BT50	25	120	63
269.850.A25.160	BT50	25	160	63
269.850.A32.105	BT50	32	105	72
269.850.A32.160	BT50	32	160	72
269.850.A40.110	BT50	40	110	80
269.850.A40.160	BT50	40	160	80



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Hinweis:
Ab Ød 25mm mit 2 Spannschrauben
Note:
From Ød 25mm with 2 clamping screws

Lieferumfang:
MitSpannschraube(n)
Delivery:
With clamping screw(s)

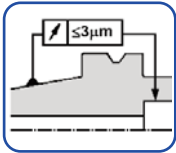
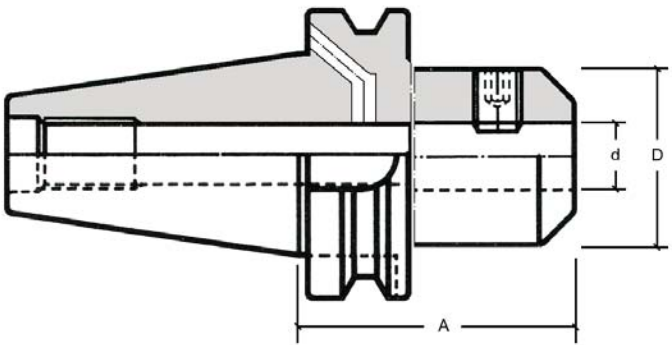


Fräsfutter DIN 6359 für Zylinderschäfte DIN1835B

Weldon chucks DIN 6359 for shanks to DIN1835B

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
269.840.006.050	BT40	6	50	25
269.840.006.100	BT40	6	100	25
269.840.006.130	BT40	6	130	25
269.840.006.160	BT40	6	160	25
269.840.006.200	BT40	6	200	25
269.840.008.050	BT40	8	50	28
269.840.008.100	BT40	8	100	28
269.840.008.130	BT40	8	130	28
269.840.008.160	BT40	8	160	28
269.840.008.200	BT40	8	200	28
269.840.010.063	BT40	10	63	35
269.840.010.100	BT40	10	100	35
269.840.010.130	BT40	10	130	35
269.840.010.160	BT40	10	160	35
269.840.010.200	BT40	10	200	35
269.840.012.063	BT40	12	63	42
269.840.012.100	BT40	12	100	42
269.840.012.130	BT40	12	130	42
269.840.012.160	BT40	12	160	42
269.840.012.200	BT40	12	200	42
269.840.014.063	BT40	14	63	44
269.840.014.100	BT40	14	100	44
269.840.014.130	BT40	14	130	44
269.840.014.160	BT40	14	160	44
269.840.014.200	BT40	14	200	44
269.840.016.063	BT40	16	63	48
269.840.016.100	BT40	16	100	48
269.840.016.130	BT40	16	130	48
269.840.016.160	BT40	16	160	48
269.840.016.200	BT40	16	200	48

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
269.840.018.063	BT40	18	63	50
269.840.018.100	BT40	18	100	50
269.840.018.130	BT40	18	130	50
269.840.018.160	BT40	18	160	50
269.840.018.200	BT40	18	200	50
269.840.020.063	BT40	20	63	52
269.840.020.100	BT40	20	100	52
269.840.020.130	BT40	20	130	52
269.840.020.160	BT40	20	160	52
269.840.020.200	BT40	20	200	52
269.840.025.090	BT40	25	90	63
269.840.025.130	BT40	25	130	63
269.840.025.160	BT40	25	160	63
269.840.025.200	BT40	25	200	63
269.840.032.100	BT40	32	100	72
269.840.032.130	BT40	32	130	72
269.840.032.160	BT40	32	160	72
269.840.040.120	BT40	40	120	80



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Hinweis:
Ab Ød 25mm mit 2 Spannschrauben
Note:
From Ød 25mm with 2 clamping screws

Lieferumfang:
MitSpannschraube(n)
Delivery:
With clamping screw(s)

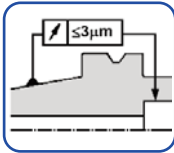
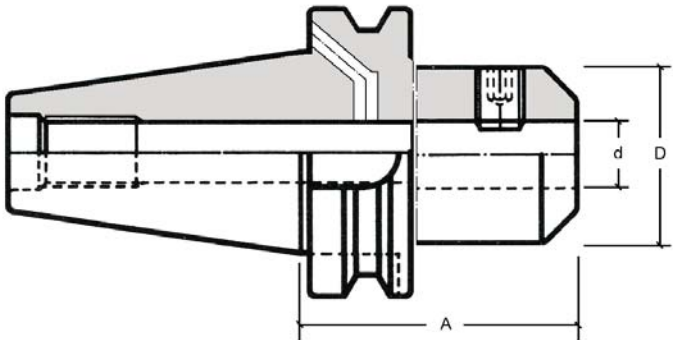


Fräsfutter DIN 6359 für Zylinderschäfte DIN1835B

Weldon chucks DIN 6359 for shanks to DIN1835B

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
269.850.006.063	BT50	6	63	25
269.850.006.100	BT50	6	100	25
269.850.006.130	BT50	6	130	25
269.850.006.160	BT50	6	160	25
269.850.006.200	BT50	6	200	25
269.850.008.063	BT50	8	63	28
269.850.008.100	BT50	8	100	28
269.850.008.130	BT50	8	130	28
269.850.008.160	BT50	8	160	28
269.850.008.200	BT50	8	200	28
269.850.010.063	BT50	10	63	35
269.850.010.100	BT50	10	100	35
269.850.010.130	BT50	10	130	35
269.850.010.160	BT50	10	160	35
269.850.010.200	BT50	10	200	35
269.850.012.080	BT50	12	80	42
269.850.012.100	BT50	12	100	42
269.850.012.130	BT50	12	130	42
269.850.012.160	BT50	12	160	42
269.850.012.200	BT50	12	200	42
269.850.014.080	BT50	14	80	44
269.850.014.100	BT50	14	100	44
269.850.014.130	BT50	14	130	44
269.850.014.160	BT50	14	160	44
269.850.014.200	BT50	14	200	44

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
269.850.016.080	BT50	16	80	48
269.850.016.100	BT50	16	100	48
269.850.016.130	BT50	16	130	48
269.850.016.160	BT50	16	160	48
269.850.016.200	BT50	16	200	48
269.850.018.080	BT50	18	80	50
269.850.018.100	BT50	18	100	50
269.850.018.130	BT50	18	130	50
269.850.018.160	BT50	18	160	50
269.850.018.200	BT50	18	200	50
269.850.020.080	BT50	20	80	52
269.850.020.100	BT50	20	100	52
269.850.020.130	BT50	20	130	52
269.850.020.160	BT50	20	160	52
269.850.020.200	BT50	20	200	52
269.850.025.100	BT50	25	100	63
269.850.025.120	BT50	25	120	63
269.850.025.160	BT50	25	160	63
269.850.032.105	BT50	32	105	72
269.850.032.130	BT50	32	130	72
269.850.032.160	BT50	32	160	72
269.850.040.110	BT50	40	110	80
269.850.040.160	BT50	40	160	80



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Hinweis:
Ab Ød 25mm mit 2 Spannschrauben
Note:
From Ød 25mm with 2 clamping screws

Lieferumfang:
MitSpannschraube(n)
Delivery:
With clamping screw(s)

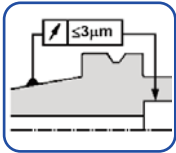
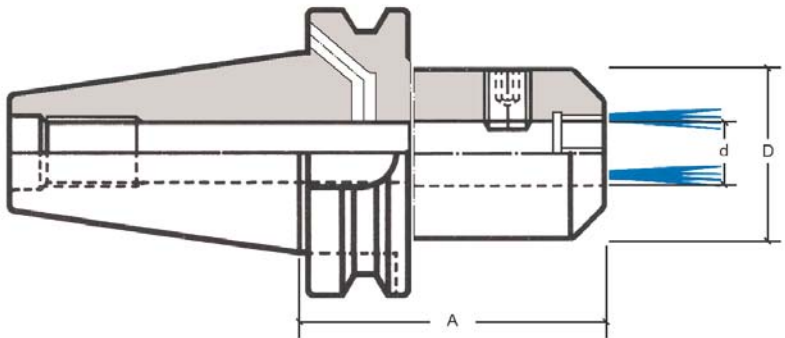


Fräsfutter DIN 6359 für Zylinderschäfte DIN1835B

Weldon chucks DIN 6359 for shanks to DIN1835B

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
279.840.006.050	BT40	6	50	25
279.840.006.100	BT40	6	100	25
279.840.008.050	BT40	8	50	28
279.840.008.100	BT40	8	100	28
279.840.010.063	BT40	10	63	35
279.840.010.100	BT40	10	100	35
279.840.012.063	BT40	12	63	42
279.840.012.100	BT40	12	100	42
279.840.014.063	BT40	14	63	44
279.840.014.100	BT40	14	100	44
279.840.016.063	BT40	16	63	48
279.840.016.100	BT40	16	100	48
279.840.018.063	BT40	18	63	50
279.840.018.100	BT40	18	100	50
279.840.020.063	BT40	20	63	52
279.840.020.100	BT40	20	100	52
279.840.025.090	BT40	25	90	63
279.840.032.100	BT40	32	100	72
279.840.040.120	BT40	40	120	80

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
279.850.006.063	BT50	6	63	25
279.850.008.063	BT50	8	63	28
279.850.010.063	BT50	10	63	35
279.850.012.080	BT50	12	80	42
279.850.014.080	BT50	14	80	44
279.850.016.080	BT50	16	80	48
279.850.018.080	BT50	18	80	50
279.850.020.080	BT50	20	80	52
279.850.025.100	BT50	25	100	63
279.850.032.105	BT50	32	105	72
279.850.040.110	BT50	40	110	80



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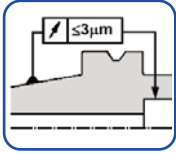
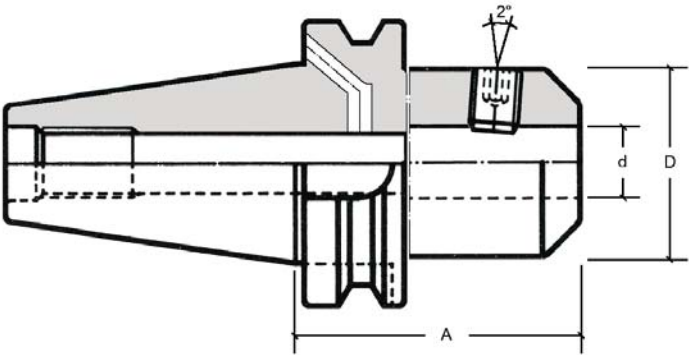
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Hinweis:
Ab Ød 25mm mit 2 Spannschrauben
von Ød 6 bis 14mm mit 2 Kühlkanälen
von Ød 16 bis 40mm mit 4 Kühlkanälen
Für Werkzeuge mit IK ist ein O-Ring erforderlich

Lieferumfang:
Mit Spannschraube(n) und O-Ring
Delivery:
With clamping screw(s) and O-ring



Fräsfutter DIN 6359 Whistle Notch für Zylinderschäfte DIN1835E MAS 403 BT AD/B
Whistle Notch chucks DIN 6359 for shanks to DIN1835E MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
268.840.006.050	BT40	6	50	25
268.840.008.050	BT40	8	50	28
268.840.010.063	BT40	10	63	35
268.840.012.063	BT40	12	63	42
268.840.014.063	BT40	14	63	44
268.840.016.063	BT40	16	63	48
268.840.018.063	BT40	18	63	50
268.840.020.063	BT40	20	63	52
268.840.025.090	BT40	25	90	63
268.840.032.100	BT40	32	100	72
268.840.040.120	BT40	40	120	80

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	D mm
268.850.006.063	BT50	6	63	25
268.850.008.063	BT50	8	63	28
268.850.010.063	BT50	10	63	35
268.850.012.080	BT50	12	80	42
268.850.014.080	BT50	14	80	44
268.850.016.080	BT50	16	80	48
268.850.018.080	BT50	18	80	50
268.850.020.080	BT50	20	80	52
268.850.025.100	BT50	25	100	63
268.850.032.105	BT50	32	105	72
268.850.040.110	BT50	40	110	80



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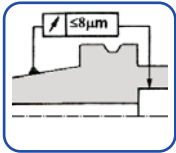
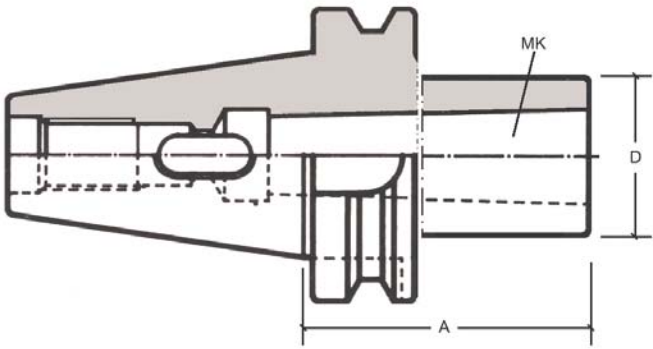
Hinweis:
Ab Ød 25mm mit 2 Spannschrauben
Note:
From Ød 25mm with 2 clamping screws

Lieferumfang:
Mit Spannschraube(n) und axialer
Anschlagschraube
Delivery:
With clamping screw(s) and stopscrew



Zwischenhülse für MK mit Austreibblappen DIN 6383
Morse taper adaptor for MT with tang DIN 6383

MAS 403 BT AD
MAS 403 BT AD



Bestell Nr. Code No.	Kegel Taper BT	Morse Kegel Morse Taper MK	A mm	D mm
220.830.001.045	BT30	1	45	25
220.830.002.060	BT30	2	60	32
220.830.003.075	BT30	3	75	40
220.840.001.050	BT40	1	50	25
220.840.002.050	BT40	2	50	32
220.840.002.117	BT40	2	117	32
220.840.003.070	BT40	3	70	40
220.840.003.135	BT40	3	135	40
220.840.004.095	BT40	4	95	48
220.840.004.160	BT40	4	160	48
220.850.001.045	BT50	1	45	25
220.850.002.060	BT50	2	60	32
220.850.002.125	BT50	2	125	32
220.850.003.065	BT50	3	65	40
220.850.003.147	BT50	3	147	40
220.850.004.070	BT50	4	70	48
220.850.004.095	BT50	4	95	48
220.850.004.170	BT50	4	170	48
220.850.005.085	BT50	5	85	63
220.850.005.105	BT50	5	105	63
220.850.005.205	BT50	5	205	63



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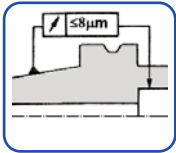
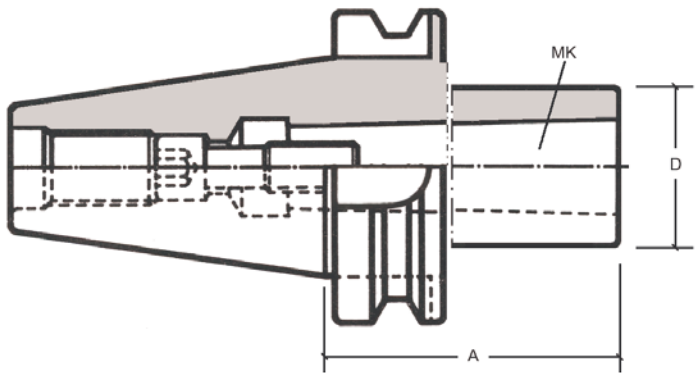


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Zwischenhülse für MK mit Anzugsgewinde DIN 6364
Morse taper adaptor for MT with tang DIN 6364

MAS 403 BT A
MAS 403 BT A



Bestell Nr. Code No.	Kegel Taper BT	Morse Kegel Morse Taper MK	M	A mm	D mm
221.840.001.050	BT40	1	M6	50	25
221.840.002.050	BT40	2	M10	50	32
221.840.003.070	BT40	3	M12	70	40
221.840.004.095	BT40	4	M16	95	48
224.840.004.110	BT40	4	M16	110	63
221.850.001.045	BT50	1	M6	45	25
221.850.002.060	BT50	2	M10	60	32
221.850.003.065	BT50	3	M12	65	40
221.850.004.070	BT50	4	M16	70	48
224.850.004.085	BT50	4	M16	85	63
221.850.005.100	BT50	5	M20	100	63
224.850.005.118	BT50	5	M20	118	78



Lieferumfang:
Mit Fräseranzugsschraube
Delivery:
With tightening bold

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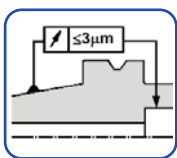
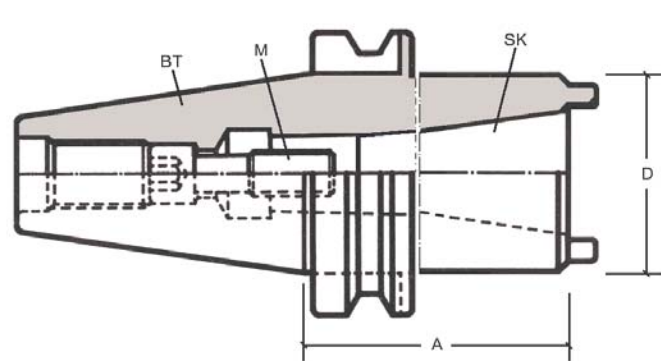


Zwischenhülse für SK-Aufnahmen

Adapter sleeves for toolholder with ISO taper

MAS 403 BT A

MAS 403 BT A



Bestell Nr. Code No.	Kegel Taper BT	Morse Kegel Morse Taper SK	M	A mm	D mm
252.840.030.060	BT40	SK30	M12	60	63
252.840.040.100	BT40	SK40	M16	100	63
252.850.040.070	BT50	SK40	M16	70	70
252.850.050.120	BT50	SK50	M24	120	97



Lieferumfang:
Mit Fräseranzugsschraube
Delivery:
With tightening bold

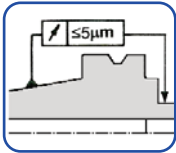
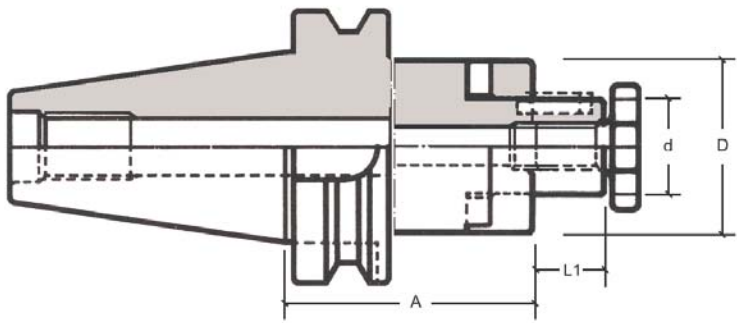


Kombi-Aufsteckfräserdorne DIN 6358

Combi shell mill holders DIN 6358

MAS 403 BT AD

MAS 403 BT AD



Bestell Nr. Code No.	Kegel Taper BT	d mm	L1 mm	A mm	D mm
238.830.016.045	BT30	16	17	45	32
238.830.022.047	BT30	22	19	47	40
238.830.027.049	BT30	27	21	49	48
238.830.032.052	BT30	32	24	52	58
238.840.016.055	BT40	16	17	55	32
238.840.016.100	BT40	16	17	100	32
238.840.016.160	BT40	16	17	160	32
238.840.022.055	BT40	22	19	55	40
238.840.022.100	BT40	22	19	100	40
238.840.022.160	BT40	22	19	160	40
238.840.027.055	BT40	27	21	55	48
238.840.027.100	BT40	27	21	100	48
238.840.027.160	BT40	27	21	160	48
238.840.032.060	BT40	32	24	60	58
238.840.032.100	BT40	32	24	100	58
238.840.032.160	BT40	32	24	160	58
238.840.040.060	BT40	40	27	60	70
238.840.040.100	BT40	40	27	100	70
238.840.040.160	BT40	40	27	160	70
238.850.016.070	BT50	16	17	70	32
238.850.016.100	BT50	16	17	100	32
238.850.016.160	BT50	16	17	160	32
238.850.022.070	BT50	22	19	70	40
238.850.022.100	BT50	22	19	100	40
238.850.022.160	BT50	22	19	160	40
238.850.027.070	BT50	27	21	70	48
238.850.027.100	BT50	27	21	100	48
238.850.027.160	BT50	27	21	160	48
238.850.032.070	BT50	32	24	70	58
238.850.032.100	BT50	32	24	100	58
238.850.032.160	BT50	32	24	160	58
238.850.040.070	BT50	40	27	70	70
238.850.040.100	BT50	40	27	100	70
238.850.040.160	BT50	40	27	160	70



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Lieferumfang:
Mit Fräseranzugsschraube, Mitnehmerring und
Passfeder
Delivery:
With retaining screw, driving ring and feather key

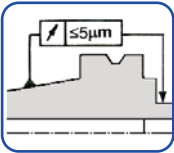
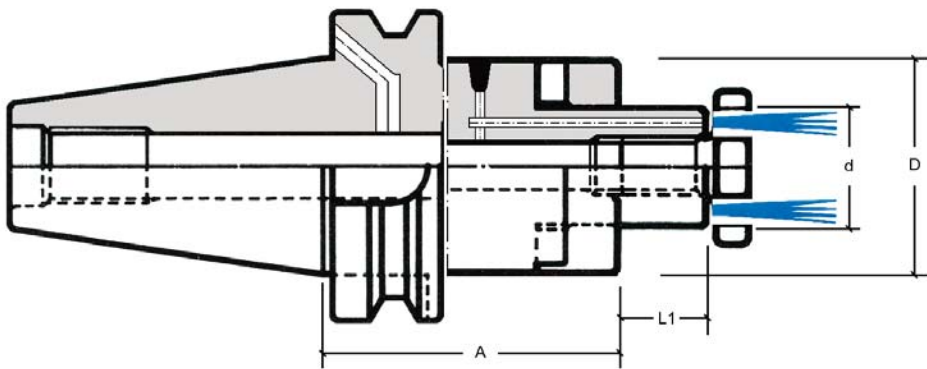


Kombi-Aufsteckfräserdorne DIN 6358

Combi shell mill holders DIN 6358

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	L1 mm	A mm	D mm
237.840.016.055	BT40	16	17	55	32
237.840.016.100	BT40	16	17	100	32
237.840.016.130	BT40	16	17	130	32
237.840.016.160	BT40	16	17	160	32
237.840.016.200	BT40	16	17	200	32
237.840.022.055	BT40	22	19	55	40
237.840.022.100	BT40	22	19	100	40
237.840.022.130	BT40	22	19	130	40
237.840.022.160	BT40	22	19	160	40
237.840.022.200	BT40	22	19	200	40
237.840.027.055	BT40	27	21	55	48
237.840.027.100	BT40	27	21	100	48
237.840.027.130	BT40	27	21	130	48
237.840.027.160	BT40	27	21	160	48
237.840.027.200	BT40	27	21	200	48
237.840.032.060	BT40	32	24	60	58
237.840.032.100	BT40	32	24	100	58
237.840.032.130	BT40	32	24	130	58
237.840.032.160	BT40	32	24	160	58
237.840.032.200	BT40	32	24	200	58
237.840.040.060	BT40	40	27	60	70



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Lieferumfang:
Mit Fräseranzugsschraube, Mitnehmerring und
Passfeder
Delivery:
With retaining screw, driving ring and feather key

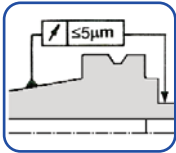
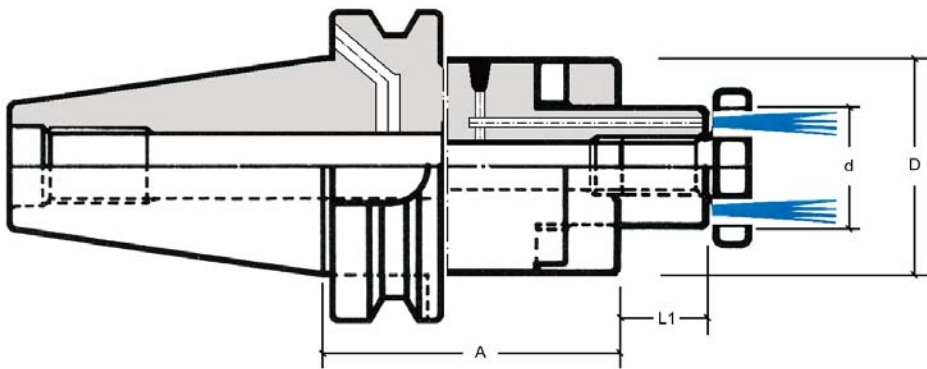


Kombi-Aufsteckfräserdorne DIN 6358

Combi shell mill holders DIN 6358

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	L1 mm	A mm	D mm
237.850.016.070	BT50	16	17	70	32
237.850.016.100	BT50	16	17	100	32
237.850.016.130	BT50	16	17	130	32
237.850.016.160	BT50	16	17	160	32
237.850.016.200	BT50	16	17	200	32
237.850.022.070	BT50	22	19	70	40
237.850.022.100	BT50	22	19	100	40
237.850.022.130	BT50	22	19	130	40
237.850.022.160	BT50	22	19	160	40
237.850.022.200	BT50	22	19	200	40
237.850.027.070	BT50	27	21	70	48
237.850.027.100	BT50	27	21	100	48
237.850.027.130	BT50	27	21	130	48
237.850.027.160	BT50	27	21	160	48
237.850.027.200	BT50	27	21	200	48
237.850.032.070	BT50	32	24	70	58
237.850.032.100	BT50	32	24	100	58
237.850.032.130	BT50	32	24	130	58
237.850.032.160	BT50	32	24	160	58
237.850.032.200	BT50	32	24	200	58
237.850.040.070	BT50	40	27	70	70
237.850.040.100	BT50	40	27	100	70
237.850.040.130	BT50	40	27	130	70
237.850.040.160	BT50	40	27	160	70
237.850.040.200	BT50	40	27	200	70



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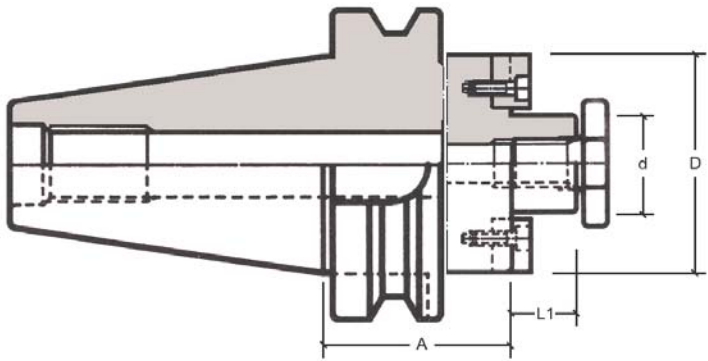


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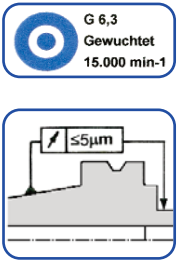
Lieferumfang:
Mit Fräseranzugsschraube, Mitnehmerring und
Passfeder
Delivery:
With retaining screw, driving ring and feather key



Quernut-Aufsteckfräserdorne DIN 6357 mit vergrößertem Bunddurchmesser MAS 403 BT AD
Shell mill holders DIN 6357 with enlarged contact face MAS 403 BT AD



d Ø40 und Ø60
mit zusätzlichen 4
Gewindebohrungen
nach DIN 2079
with additional 4
screw hole to
DIN 2079



Bestell Nr. Code No.	Kegel Taper BT	d mm	L1 mm	A mm	D mm
239.830.016.040	BT30	16	17	40	38
239.830.022.040	BT30	22	19	40	48
239.830.027.040	BT30	27	21	40	58
239.830.032.050	BT30	32	24	50	78
239.840.016.040	BT40	16	17	40	38
239.840.016.100	BT40	16	17	100	38
239.840.022.040	BT40	22	19	40	48
239.840.022.100	BT40	22	19	100	48
239.840.022.160	BT40	22	19	160	48
239.840.027.040	BT40	27	21	40	58
239.840.027.100	BT40	27	21	100	58
239.840.027.160	BT40	27	21	160	58
239.840.032.050	BT40	32	24	50	78
239.840.032.100	BT40	32	24	100	78
239.840.032.160	BT40	32	24	160	78
239.840.040.050	BT40	40	27	50	88
239.850.022.055	BT50	22	19	55	48
239.850.022.100	BT50	22	19	100	48
239.850.022.160	BT50	22	19	160	48
239.850.027.055	BT50	27	21	55	58
239.850.027.100	BT50	27	21	100	58
239.850.027.160	BT50	27	21	160	58
239.850.032.055	BT50	32	24	55	78
239.850.032.100	BT50	32	24	100	78
239.850.032.160	BT50	32	24	160	78
239.850.040.055	BT50	40	27	55	88
239.850.040.100	BT50	40	27	100	88
239.850.040.160	BT50	40	27	160	88
239.850.060.080	BT50	60	40	80	128



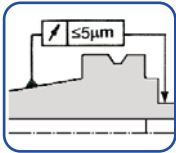
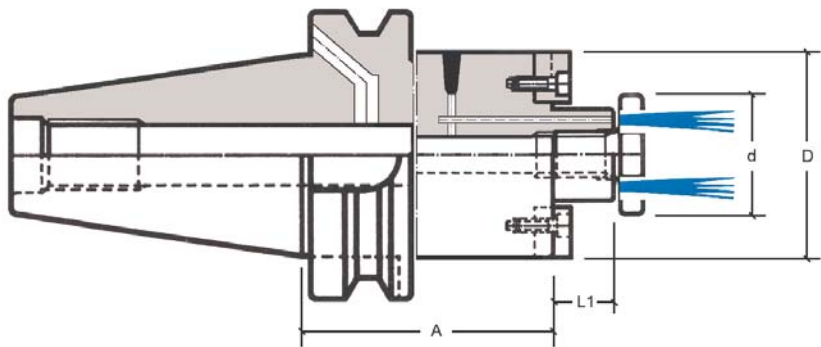
Lieferumfang:
Mit Mitnehmersteinen, Kreuzschraube und Schraube DIN912
Delivery:
With drivers, cross head retaining screw and screw DIN912



Quernut-Aufsteckfräserdorne DIN 6357 mit vergrößertem Bunddurchmesser MAS 403 BT AD/B

Shell mill holders DIN 6357 with enlarged contact face

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	L1 mm	A mm	D mm
240.840.016.040	BT40	16	17	40	38
240.840.016.100	BT40	16	17	100	38
240.840.016.160	BT40	16	17	160	38
240.840.022.040	BT40	22	19	40	48
240.840.022.100	BT40	22	19	100	48
240.840.022.160	BT40	22	19	160	48
240.840.027.040	BT40	27	21	40	58
240.840.027.100	BT40	27	21	100	58
240.840.027.160	BT40	27	21	160	58
240.840.032.050	BT40	32	24	50	78
240.840.032.100	BT40	32	24	100	78
240.840.032.160	BT40	32	24	160	78
240.840.040.050	BT40	40	27	50	88
240.840.040.100	BT40	40	27	100	88
240.840.040.160	BT40	40	27	160	88
240.850.016.050	BT50	16	17	50	38
240.850.016.100	BT50	16	17	100	38
240.850.016.160	BT50	16	17	160	38
240.850.022.055	BT50	22	19	55	48
240.850.022.100	BT50	22	19	100	48
240.850.022.160	BT50	22	19	160	48
240.850.027.055	BT50	27	21	55	58
240.850.027.100	BT50	27	21	100	58
240.850.027.160	BT50	27	21	160	58
240.850.032.055	BT50	32	24	55	78
240.850.032.100	BT50	32	24	100	78
240.850.032.160	BT50	32	24	160	78
240.850.040.055	BT50	40	27	55	88
240.850.040.100	BT50	40	27	100	88
240.850.040.160	BT50	40	27	160	88
240.850.060.080	BT50	60	40	80	128



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Lieferumfang:
Mit Mitnehmersteinen, Kreuzschraube und Schraube DIN912
Delivery:
With drivers, cross head retaining screw and screw DIN912

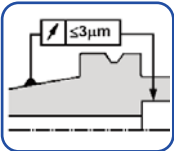
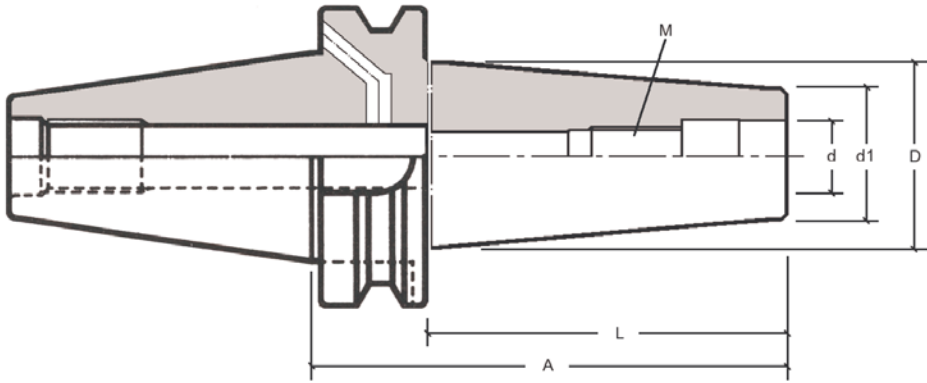


Fräseraufnahme für Einschraubfräser

Milling abors for screw in tool

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	M	d mm	d1 mm	D mm	A mm	L mm
254.840.M06.052	BT40	M 6	6,5	10	13	52	25
254.840.M06.077	BT40	M 6	6,5	10	20	77	50
254.840.M06.102	BT40	M 6	6,5	10	23	102	75
254.840.M08.052	BT40	M 8	8,5	13	15	52	25
254.840.M08.077	BT40	M 8	8,5	13	23	77	50
254.840.M08.102	BT40	M 8	8,5	13	23	102	75
254.840.M08.127	BT40	M 8	8,5	13	25	127	100
254.840.M10.032	BT40	M 10	10,5	18	18	32	5
254.840.M10.052	BT40	M 10	10,5	18	20	52	25
254.840.M10.077	BT40	M 10	10,5	18	23	77	50
254.840.M10.102	BT40	M 10	10,5	18	28	102	75
254.840.M10.102Z	BT40	M 10	10,5	18	-	102	75
254.840.M10.127	BT40	M 10	10,5	18	32	127	100
254.840.M10.127Z	BT40	M 10	10,5	18	-	127	100
254.840.M10.177	BT40	M 10	10,5	18	36,5	177	150
254.840.M10.177Z	BT40	M 10	10,5	18	-	177	150
254.840.M12.032	BT40	M 12	12,5	21	21	32	5
254.840.M12.052	BT40	M 12	12,5	21	24	52	25
254.840.M12.077	BT40	M 12	12,5	21	24	77	50
254.840.M12.102	BT40	M 12	12,5	21	31	102	75
254.840.M12.102Z	BT40	M 12	12,5	21	-	102	75
254.840.M12.127	BT40	M 12	12,5	21	31	127	100
254.840.M12.127Z	BT40	M 12	12,5	21	-	127	100
254.840.M12.152	BT40	M 12	12,5	21	36	152	125
254.840.M12.152Z	BT40	M 12	12,5	21	-	152	125
254.840.M12.177	BT40	M 12	12,5	21	38	177	150
254.840.M12.177Z	BT40	M 12	12,5	21	-	177	150
254.840.M16.032	BT40	M 16	17	29	29	32	5
254.840.M16.052	BT40	M 16	17	29	29	52	25
254.840.M16.077	BT40	M 16	17	29	34	77	50
254.840.M16.102	BT40	M 16	17	29	34	102	75
254.840.M16.102Z	BT40	M 16	17	29	-	102	75
254.840.M16.127	BT40	M 16	17	29	36	127	100
254.840.M16.127Z	BT40	M 16	17	29	-	127	100
254.840.M16.152	BT40	M 16	17	29	40	152	125
254.840.M16.152Z	BT40	M 16	17	29	-	152	125
254.840.M16.177	BT40	M 16	17	29	42,5	177	150
254.840.M16.177Z	BT40	M 16	17	29	-	177	150

Z= zylindrische Ausführung



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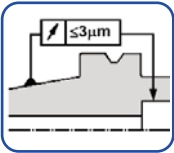
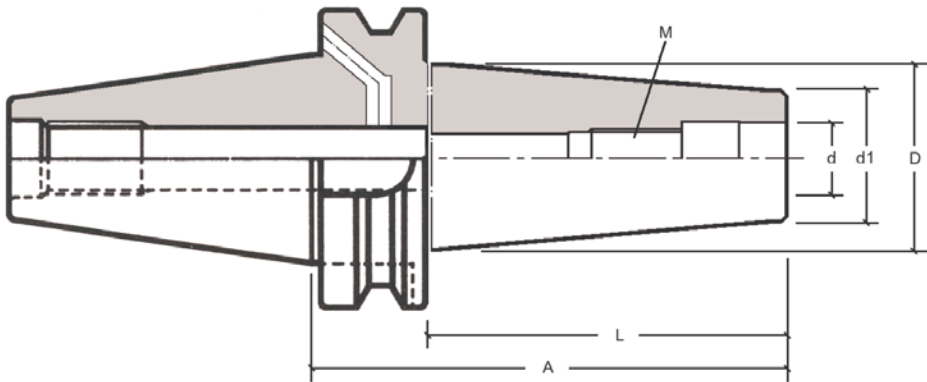


Fräseraufnahme für Einschraubfräser

Milling abors for screw in tool

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	M	d mm	d1 mm	D mm	A mm	L mm
254.850.M08.088	BT50	M 8	8,5	13	23	88	50
254.850.M08.138	BT50	M 8	8,5	13	25	138	100
254.850.M08.188	BT50	M 8	8,5	13	30	188	150
254.850.M10.088	BT50	M 10	10,5	18	23	88	50
254.850.M10.138	BT50	M 10	10,5	18	32	138	100
254.850.M10.138Z	BT50	M 10	10,5	18	-	138	100
254.850.M10.188	BT50	M 10	10,5	18	36,5	188	150
254.850.M10.188Z	BT50	M 10	10,5	18	-	188	150
254.850.M12.088	BT50	M 12	12,5	21	24	88	50
254.850.M12.138	BT50	M 12	12,5	21	33	138	100
254.850.M12.138Z	BT50	M 12	12,5	21	-	138	100
254.850.M12.188	BT50	M 12	12,5	21	40	188	150
254.850.M12.188Z	BT50	M 12	12,5	21	-	188	150
254.850.M16.088	BT50	M 16	17	29	34	88	50
254.850.M16.138	BT50	M 16	17	29	36	138	100
254.850.M16.138Z	BT50	M 16	17	29	-	138	100
254.850.M16.188	BT50	M 16	17	29	42,5	188	150
254.850.M16.188Z	BT50	M 16	17	29	-	188	150

Z= zylindrische Ausführung



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Seite 61



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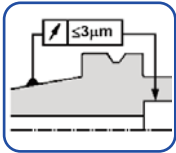
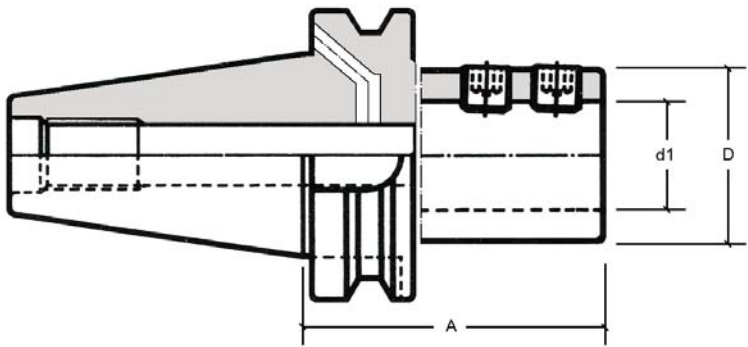


Bohrerhalter für Wendepplattenbohrer E1

Holder for drills with indexable inserts form E1

MAS 403 BT AD/B

MAS 403 BT AD/B



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Bestell Nr. Code No.	Kegel Taper BT	d1 mm	A mm	D mm
227.840.020.072	BT40	20	72	40
227.840.025.076	BT40	25	76	45
227.840.032.080	BT40	32	80	52
227.840.040.100	BT40	40	100	65
227.850.020.090	BT50	20	90	40
227.850.025.090	BT50	25	90	45
227.850.032.090	BT50	32	90	52
227.850.040.100	BT50	40	100	60

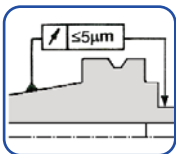
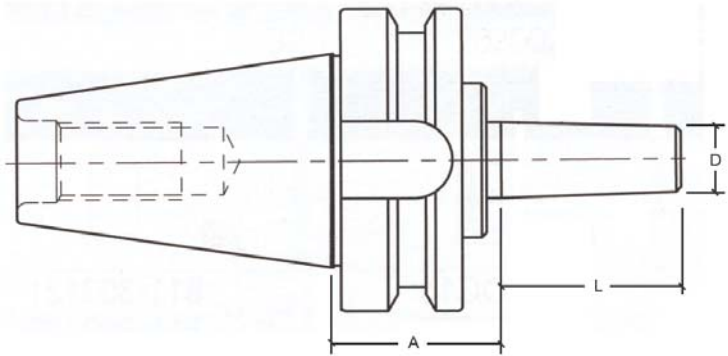
Lieferumfang:
Mit Spannschraube(n)
Delivery:
With clamping screw(s)

Bohrfutteraufnahme DIN 238

Drill chuck adaptor DIN 238

MAS 403 BT A

MAS 403 BT A



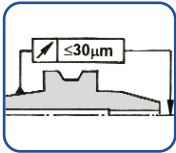
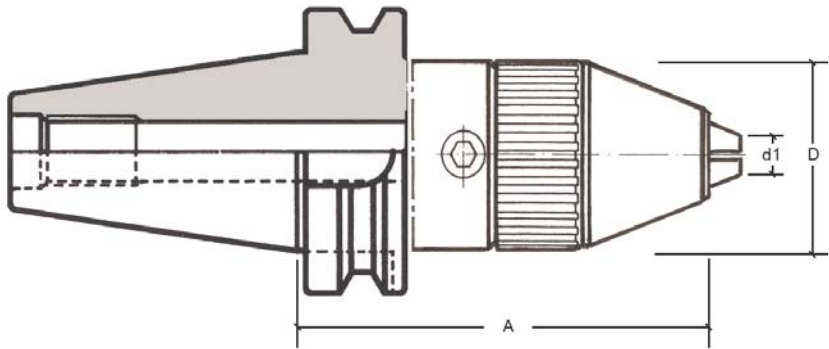
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Bestell Nr. Code No.	Kegel Taper BT	D	A mm	L mm
201.830.B12.027	BT30	B12	27	18,5
201.830.B16.029	BT30	B16	29	24
201.840.B12.032	BT40	B12	32	18,5
201.840.B16.034	BT40	B16	34	24
201.840.B18.034	BT40	B18	34	32
201.850.B16.045	BT50	B16	45	24
201.850.B18.045	BT50	B18	45	32



NC-Bohrfutter für Rechts- und Linkslauf
NC-Drill chuck for right- and left hand rotation

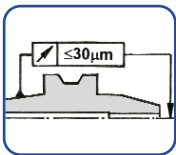
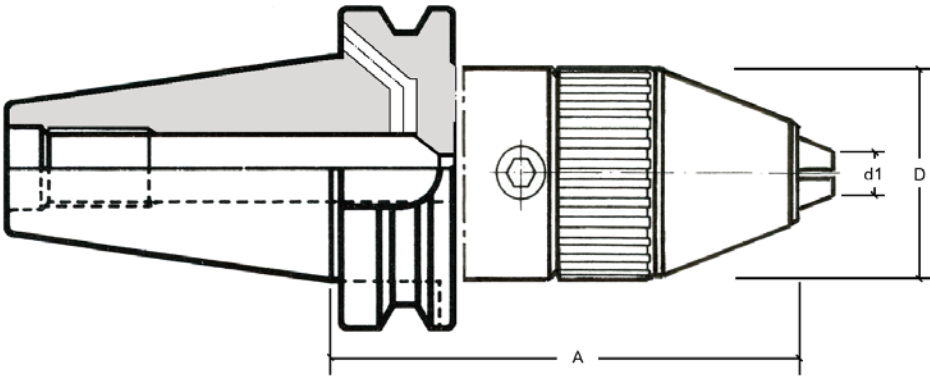
MAS 403 BT AD
MAS 403 BT AD



Bestell Nr. Code No.	Kegel Taper BT	d1 mm	A mm	D mm
342.830.A08.073	BT30	0-8	73	36
342.830.A13.093	BT30	1-13	93	50
342.830.A16.098	BT30	3-16	98	50
342.840.A08.078	BT40	0-8	78	36
342.840.A13.098	BT40	1-13	98	50
342.840.A16.103	BT40	3-16	103	50
342.850.A13.111	BT50	1-13	111	50
342.850.A16.113	BT50	3-16	113	50

NC-Bohrfutter für Rechts- und Linkslauf
NC-Drill chuck for right- and left hand rotation

MAS 403 BT AD/B
MAS 403 BT AD/B



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Bestell Nr. Code No.	Kegel Taper BT	d1 mm	A mm	D mm
342.840.058.078	BT40	0,5-8	78	36
342.840.113.098	BT40	1-13	98	50
342.840.316.103	BT40	3-16	103	57
342.850.113.110	BT50	1-13	110	50
342.850.316.115	BT50	3-16	115	57

Höchste Präzision sowie genauester Rundlauf, mechanische Spannkraftverstärkung garantiert eine sichere Spannung. Während der Bearbeitung, ob Rechts- oder Linkslauf sowie bei Spindelstop, ist ein selbständiges Lösen nicht möglich. High precision and accurate concentricity, mechanical amplification is the guarantee of the very high clamping force. During the working process, if with right- or left-hand rotation or spindle stop, no automatic slackening will be possible.

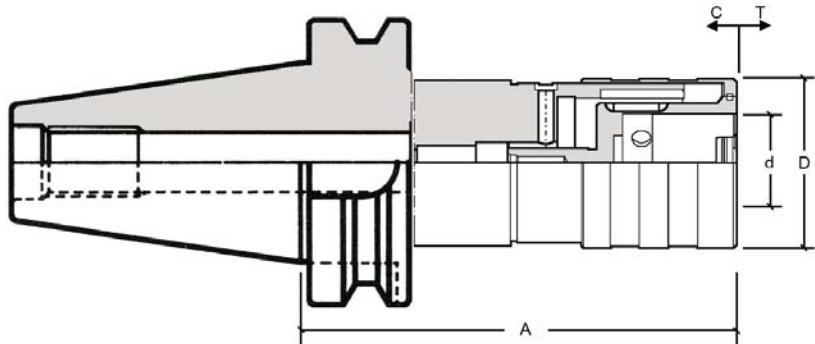


Gewindeschneidfutter mit Längenausgleich auf Druck und Zug

MAS 403 BT A

Quick-change tapping chucks with length compensation

MAS 403 BT A



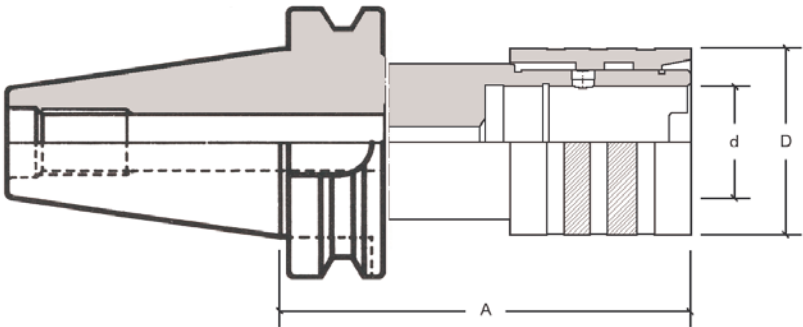
Bestell Nr. Code No.	Kegel Taper BT	Spannbereich Capacity	d mm	A mm	D mm	C mm	T mm
340.830.019.064	BT30	M2-M14	19	64	36,5	7	7
340.830.031.095	BT30	M5-M24	31	95	53,5	12	12
340.840.019.067	BT40	M2-M14	19	67	36,5	7	7
340.840.031.093	BT40	M5-M24	31	93	53,5	12	12
340.840.048.136	BT40	M14-M36	48	136	78	20	20
340.850.019.082	BT50	M2-M14	19	82	36,5	7	7
340.850.031.100	BT50	M5-M24	31	100	53,5	12	12
340.850.048.142	BT50	M14-M36	48	142	78	17,5	17,5

Gewindeschneidfutter ohne Längenausgleich auf Druck und Zug

MAS 403 BT A

Quick-change tapping chucks without length compensation

MAS 403 BT A



Bestell Nr. Code No.	Kegel Taper BT	Spannbereich Capacity	d mm	A mm	D mm
350.830.019.065	BT30	M2-M14	19	65	38
350.830.031.080	BT30	M5-M24	31	80	52
350.840.019.067	BT40	M2-M14	19	67,5	38
350.840.031.093	BT40	M5-M24	31	93	52
350.840.048.126	BT40	M14-M36	48	126	78
350.850.019.080	BT50	M2-M14	19	80	38
350.850.031.100	BT50	M5-M24	31	100	52
350.850.048.142	BT50	M14-M36	48	142	78



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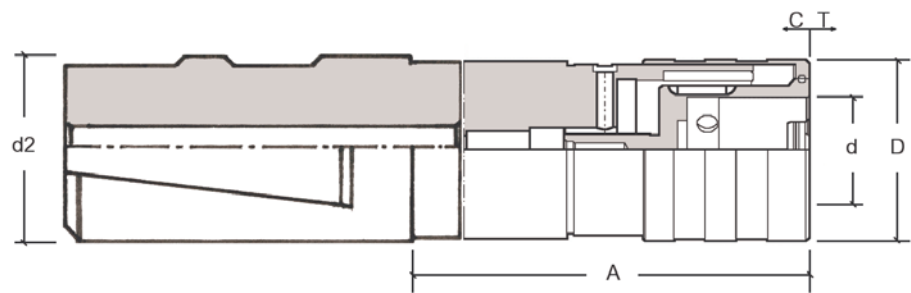


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Gewindeschneidfutter mit Längenausgleich auf Druck und Zug Zyl.Schaft nach DIN 1835 B+E

Quick-change tapping chucks with length compensation tool shank to DIN 1835 B+E



Bestell Nr. Code No.	Schaft Shank d2	Spannbereich Capacity	d mm	A mm	D mm	C mm	T mm
340.W20.019.041	20	M3-M12	19	39	36	7,5	7,5
340.W25.019.041	25	M3-M12	19	39	36	7,5	7,5
340.W25.031.063	25	M6-M20	31	63	55	12,5	12,5
340.W32.031.063	32	M6-M20	31	63	53	12,5	12,5
340.W32.048.097	32	M14-M33	48	124	78	20	20



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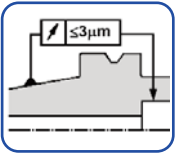
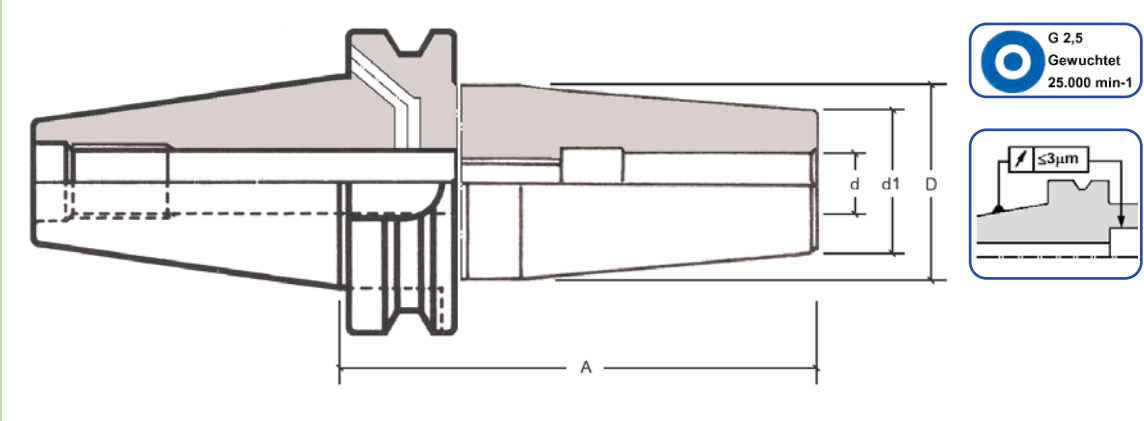


Schrumpffutter zum Spannen von HM und HSS Schäften

MAS 403 BT AD/B

Shrink chucks for mounting solid carbide and HSS shanks

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm
271.830.003.080*	BT30	3	80	10	16
271.830.004.080*	BT30	4	80	12	20
271.830.005.080*	BT30	5	80	12	21
271.830.006.080*	BT30	6	80	21	27
271.830.008.080*	BT30	8	80	21	27
271.830.010.080*	BT30	10	80	24	32
271.830.012.080*	BT30	12	80	24	32
271.830.014.080*	BT30	14	80	27	34
271.830.016.080*	BT30	16	80	27	34
271.830.018.080*	BT30	18	80	33	42
271.830.020.080*	BT30	20	80	33	42

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm
271.840.003.090	BT40	3	90	10	16
271.840.003.120	BT40	3	120	10	16
271.840.003.160	BT40	3	160	10	16
271.840.004.090	BT40	4	90	12	20
271.840.004.120	BT40	4	120	12	20
271.840.004.160	BT40	4	160	12	20
271.840.005.090	BT40	5	90	12	22
271.840.005.120	BT40	5	120	12	22
271.840.005.160	BT40	5	160	12	22
271.840.006.090	BT40	6	90	21	27
271.840.006.120	BT40	6	120	21	27
271.840.006.160	BT40	6	160	21	27

*BT30 = AD

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm
271.840.008.090	BT40	8	90	21	27
271.840.008.120	BT40	8	120	21	27
271.840.008.160	BT40	8	160	21	27
271.840.010.090	BT40	10	90	24	32
271.840.010.120	BT40	10	120	24	32
271.840.010.160	BT40	10	160	24	32
271.840.012.090	BT40	12	90	24	32
271.840.012.120	BT40	12	120	24	32
271.840.012.160	BT40	12	160	24	32
271.840.014.090	BT40	14	90	27	34
271.840.014.120	BT40	14	120	27	34
271.840.014.160	BT40	14	160	27	34
271.840.016.090	BT40	16	90	27	34
271.840.016.120	BT40	16	120	27	34
271.840.016.160	BT40	16	160	27	34
271.840.018.090	BT40	18	90	33	42
271.840.018.120	BT40	18	120	33	42
271.840.018.160	BT40	18	160	33	42
271.840.020.090	BT40	20	90	33	42
271.840.020.120	BT40	20	120	33	42
271.840.020.160	BT40	20	160	33	42
271.840.025.090	BT40	25	90	44	53
271.840.025.120	BT40	25	120	44	53
271.840.025.160	BT40	25	160	44	53
271.840.032.090	BT40	32	90	44	53
271.840.032.120	BT40	32	120	44	53
271.840.032.160	BT40	32	160	44	53



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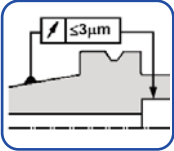
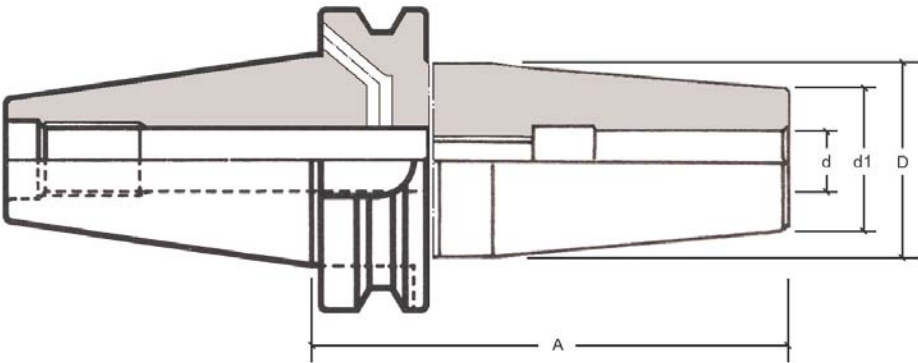


Schrumpffutter zum Spannen von HM und HSS Schäften

Shrink chucks for mounting solid carbide and HSS shanks

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm
271.850.003.100	BT50	3	100	10	16
271.850.003.120	BT50	3	120	10	16
271.850.003.160	BT50	3	160	10	16
271.850.004.100	BT50	4	100	12	20
271.850.004.120	BT50	4	120	12	20
271.850.004.160	BT50	4	160	12	20
271.850.005.100	BT50	5	100	12	21,7
271.850.005.120	BT50	5	120	12	22
271.850.005.160	BT50	5	160	12	22
271.850.006.100	BT50	6	100	21	27
271.850.006.120	BT50	6	120	21	27
271.850.006.160	BT50	6	160	21	27
271.850.008.100	BT50	8	100	21	27
271.850.008.120	BT50	8	120	21	27
271.850.008.160	BT50	8	160	21	27
271.850.010.100	BT50	10	100	24	32
271.850.010.120	BT50	10	120	24	32
271.850.010.160	BT50	10	160	24	32
271.850.012.100	BT50	12	100	24	32
271.850.012.120	BT50	12	120	24	32
271.850.012.160	BT50	12	160	24	32

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm
271.850.014.100	BT50	14	100	27	34
271.850.014.120	BT50	14	120	27	34
271.850.014.160	BT50	14	160	27	34
271.850.016.100	BT50	16	100	27	34
271.850.016.120	BT50	16	120	27	34
271.850.016.160	BT50	16	160	27	34
271.850.018.110	BT50	18	110	33	42
271.850.018.120	BT50	18	120	33	42
271.850.018.160	BT50	18	160	33	42
271.850.020.110	BT50	20	110	33	42
271.850.020.120	BT50	20	120	33	42
271.850.020.160	BT50	20	160	33	42
271.850.025.110	BT50	25	110	44	53
271.850.025.120	BT50	25	120	44	53
271.850.025.160	BT50	25	160	44	53
271.850.032.110	BT50	32	110	44	53
271.850.032.120	BT50	32	120	44	53
271.850.032.160	BT50	32	160	44	53



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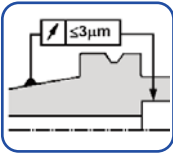
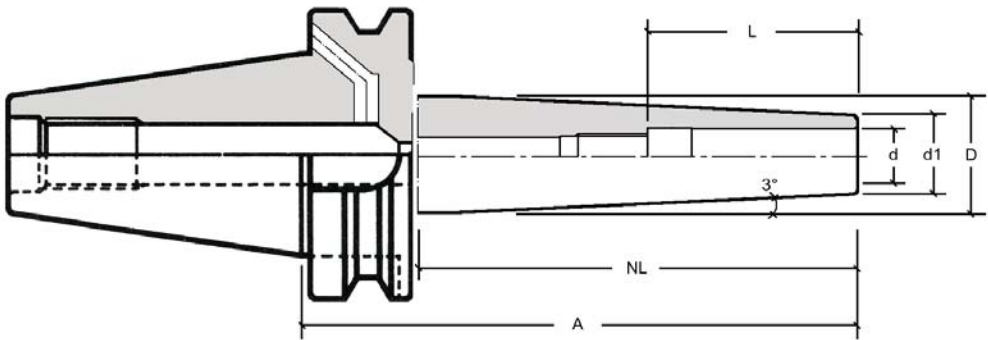


Schrumpffutter zum Spannen von HM und HSS Schäften

MAS 403 BT AD/B

Shrink chucks for mounting solid carbide and HSS shanks

MAS 403 BT AD/B



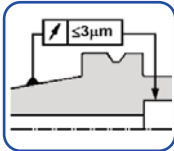
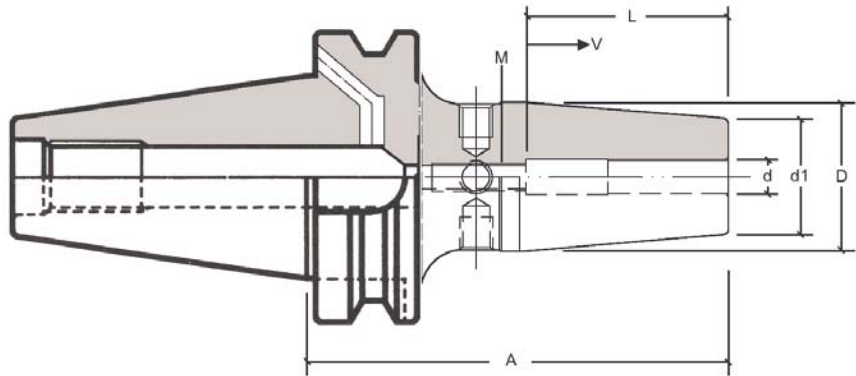
Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	NL mm	d1 mm	D mm	L mm
272.840.003.090	BT40	3	90	58	9	15	14
272.840.003.120	BT40	3	120	88	9	18	9
272.840.004.090	BT40	4	90	58	10	16	17
272.840.004.120	BT40	4	120	88	10	19	12
272.840.005.090	BT40	5	90	58	11	17	20
272.840.005.120	BT40	5	120	88	11	20	15
272.840.006.090	BT40	6	90	58	12	18	36
272.840.006.120	BT40	6	120	88	12	21	36
272.840.006.160	BT40	6	160	128	12	25	36
272.840.008.090	BT40	8	90	58	14	20	36
272.840.008.120	BT40	8	120	88	14	23	36
272.840.008.160	BT40	8	160	128	14	27	36
272.840.010.090	BT40	10	90	58	16	22	42
272.840.010.120	BT40	10	120	88	16	25	42
272.840.010.160	BT40	10	160	128	16	29	42
272.840.012.090	BT40	12	90	58	18	24	47
272.840.012.120	BT40	12	120	88	18	27	47
272.840.012.160	BT40	12	160	128	18	31	47
272.850.003.100	BT50	3	100	57	9	15,5	14
272.850.003.120	BT50	3	120	77	9	17,5	9
272.850.004.100	BT50	4	100	57	10	16,5	17
272.850.004.120	BT50	4	120	77	10	18,5	12
272.850.005.100	BT50	5	100	57	11	17,5	20
272.850.005.120	BT50	5	120	77	11	19,5	15
272.850.006.100	BT50	6	100	57	12	18,5	36
272.850.006.120	BT50	6	120	77	12	20,5	36
272.850.006.160	BT50	6	160	117	12	25	36
272.850.008.100	BT50	8	100	57	14	20,5	36
272.850.008.120	BT50	8	120	77	14	22,5	36
272.850.008.160	BT50	8	160	117	14	27	36
272.850.010.100	BT50	10	100	57	16	22,5	42
272.850.010.120	BT50	10	120	77	16	24,5	42
272.850.010.160	BT50	10	160	117	16	29	42
272.850.012.100	BT50	12	100	57	18	24,5	47
272.850.012.120	BT50	12	120	77	18	26,5	47
272.850.012.160	BT50	12	160	117	18	31	47





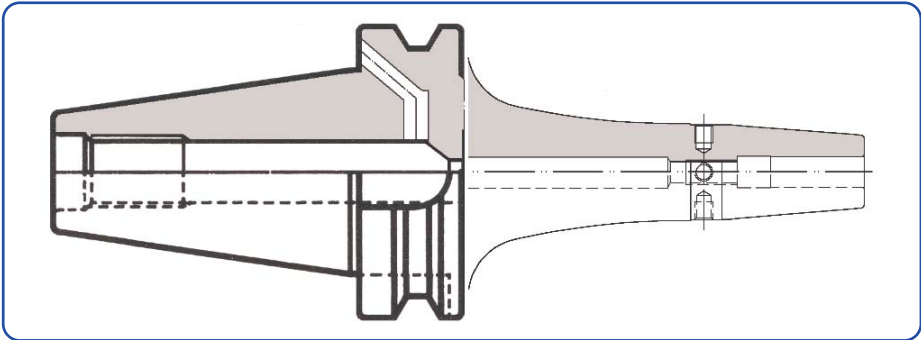
Schrumpffutter zum Spannen von HM und HSS Schäften
Shrink chucks for mounting solid carbide and HSS shanks

MAS 403 BT AD/B
MAS 403 BT AD/B



Mit vier zusätzlichen Gewinden am Umfang zum nachträglichen Feinwuchten.

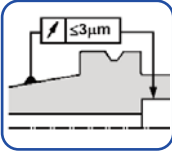
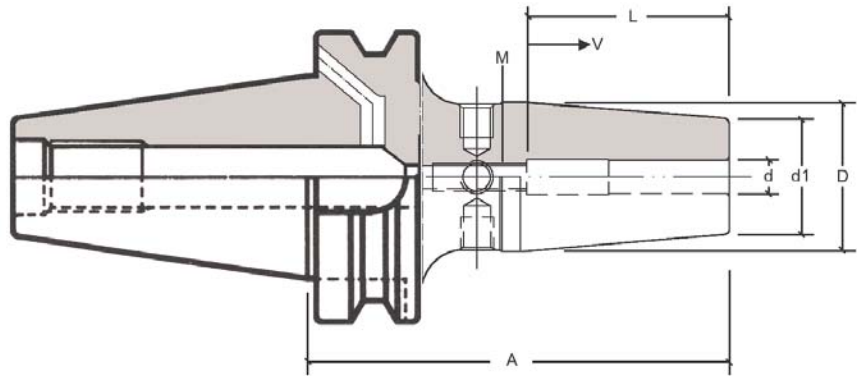
Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm	V mm	L mm	M
280.840.003.090	BT40	3	90	12	17	~	~	~
280.840.004.090	BT40	4	90	12	17	~	~	~
280.840.005.090	BT40	5	90	12	17	~	~	~
280.840.006.090	BT40	6	90	21	27	10	37	M5
280.840.006.120	BT40	6	120	21	27	10	37	M5
280.840.006.130	BT40	6	130	21	27	10	37	M5
280.840.006.160	BT40	6	160	21	27	10	37	M5
280.840.006.200	BT40	6	200	21	27	10	37	M5
280.840.008.090	BT40	8	90	21	27	10	37	M6
280.840.008.120	BT40	8	120	21	27	10	37	M6
280.840.008.130	BT40	8	130	21	27	10	37	M6
280.840.008.160	BT40	8	160	21	27	10	37	M6
280.840.008.200	BT40	8	200	21	27	10	37	M6
280.840.010.090	BT40	10	90	24	32	10	42	M8x1
280.840.010.120	BT40	10	120	24	32	10	42	M8x1
280.840.010.130	BT40	10	130	24	32	10	42	M8x1
280.840.010.160	BT40	10	160	24	32	10	42	M8x1
280.840.010.200	BT40	10	200	24	32	10	42	M8x1
280.840.012.090	BT40	12	90	24	32	10	48	M10x1
280.840.012.120	BT40	12	120	24	32	10	48	M10x1
280.840.012.130	BT40	12	130	24	32	10	48	M10x1
280.840.012.160	BT40	12	160	24	32	10	48	M10x1
280.840.012.200	BT40	12	200	24	32	10	48	M10x1
280.840.014.090	BT40	14	90	27	34	10	48	M10x1
280.840.014.120	BT40	14	120	27	34	10	48	M10x1
280.840.014.130	BT40	14	130	27	34	10	48	M10x1
280.840.014.160	BT40	14	160	27	34	10	48	M10x1
280.840.014.200	BT40	14	200	27	34	10	48	M10x1





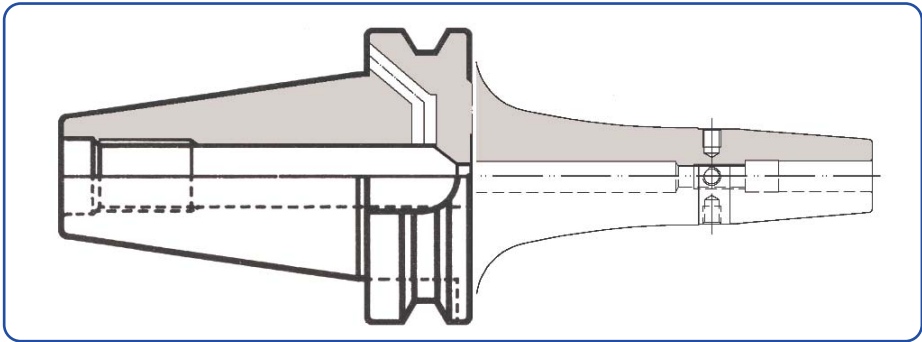
Schrumpffutter zum Spannen von HM und HSS Schäften
Shrink chucks for mounting solid carbide and HSS shanks

MAS 403 BT AD/B
MAS 403 BT AD/B



Mit vier zusätzlichen Gewinden am Umfang zum nachträglichen Feinwuchten.

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm	V mm	L mm	M
280.840.016.090	BT40	16	90	27	34	10	51	M12x1
280.840.016.120	BT40	16	120	27	34	10	51	M12x1
280.840.016.130	BT40	16	130	27	34	10	51	M12x1
280.840.016.160	BT40	16	160	27	34	10	51	M12x1
280.840.016.200	BT40	16	200	27	34	10	51	M12x1
280.840.018.090	BT40	18	90	33	42	10	51	M12x1
280.840.018.120	BT40	18	120	33	42	10	51	M12x1
280.840.018.130	BT40	18	130	33	42	10	51	M12x1
280.840.018.160	BT40	18	160	33	42	10	51	M12x1
280.840.018.200	BT40	18	200	33	42	10	51	M12x1
280.840.020.090	BT40	20	90	33	42	10	53	M16x1
280.840.020.120	BT40	20	120	33	42	10	53	M16x1
280.840.020.130	BT40	20	130	33	42	10	53	M16x1
280.840.020.160	BT40	20	160	33	42	10	53	M16x1
280.840.020.200	BT40	20	200	33	42	10	53	M16x1
280.840.025.100	BT40	25	100	44	53	10	59	M16x1
280.840.025.120	BT40	25	120	44	53	10	59	M16x1
280.840.025.130	BT40	25	130	44	53	10	59	M16x1
280.840.025.160	BT40	25	160	44	53	10	59	M16x1
280.840.025.200	BT40	25	200	44	53	10	59	M16x1

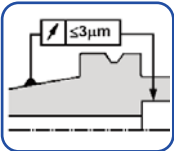
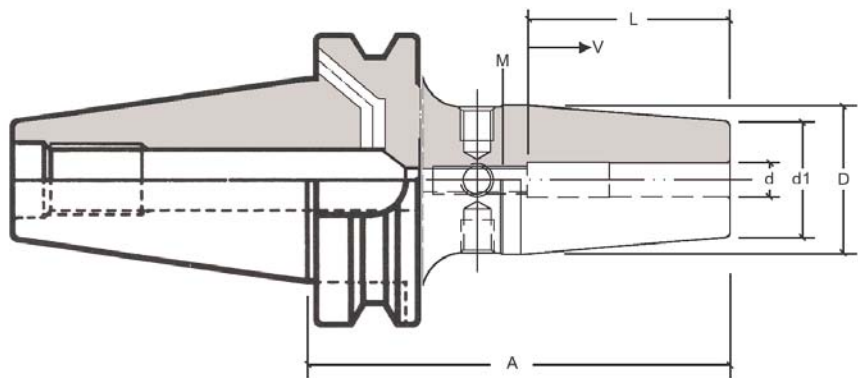


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Schrumpffutter zum Spannen von HM und HSS Schäften
Shrink chucks for mounting solid carbide and HSS shanks

MAS 403 BT AD/B
MAS 403 BT AD/B

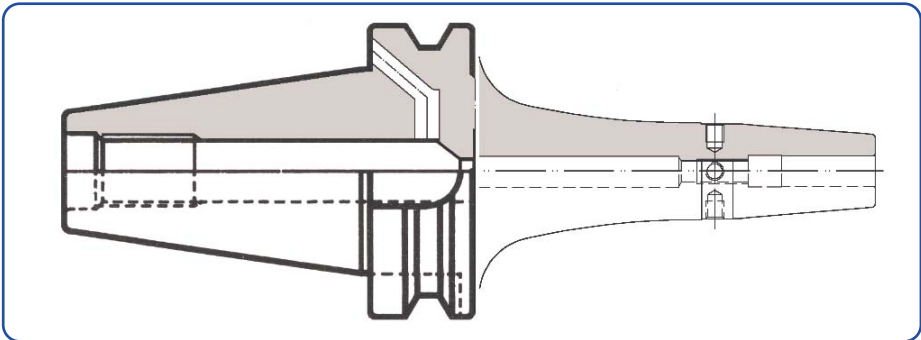


Mit vier zusätzlichen Gewinden am Umfang zum nachträglichen Feinwuchten.

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm	V mm	L mm	M
280.850.006.100	BT50	6	100	21	27	10	37	M5
280.850.006.130	BT50	6	130	21	27	10	37	M5
280.850.006.160	BT50	6	160	21	27	10	37	M5
280.850.006.200	BT50	6	200	21	27	10	37	M5
280.850.008.100	BT50	8	100	21	27	10	37	M6
280.850.008.130	BT50	8	130	21	27	10	37	M6
280.850.008.160	BT50	8	160	21	27	10	37	M6
280.850.008.200	BT50	8	200	21	27	10	37	M6
280.850.010.100	BT50	10	100	24	32	10	42	M10x1
280.850.010.130	BT50	10	130	24	32	10	42	M10x1
280.850.010.160	BT50	10	160	24	32	10	42	M10x1
280.850.010.200	BT50	10	200	24	32	10	42	M10x1
280.850.012.100	BT50	12	100	24	32	10	48	M10x1
280.850.012.130	BT50	12	130	24	32	10	48	M10x1
280.850.012.160	BT50	12	160	24	32	10	48	M10x1
280.850.012.200	BT50	12	200	24	32	10	48	M10x1
280.850.014.100	BT50	14	100	27	34	10	48	M10x1
280.850.014.130	BT50	14	130	27	34	10	48	M10x1
280.850.014.160	BT50	14	160	27	34	10	48	M10x1
280.850.014.200	BT50	14	200	27	34	10	48	M10x1



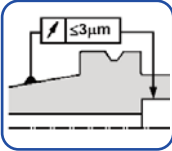
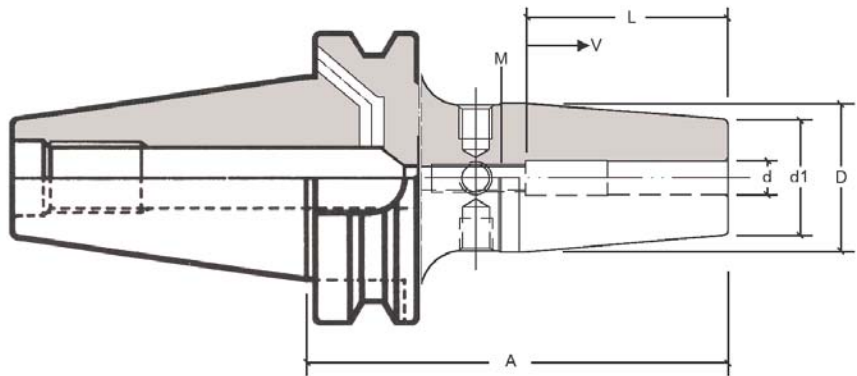
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Schrumpffutter zum Spannen von HM und HSS Schäften
Shrink chucks for mounting solid carbide and HSS shanks

MAS 403 BT AD/B
MAS 403 BT AD/B

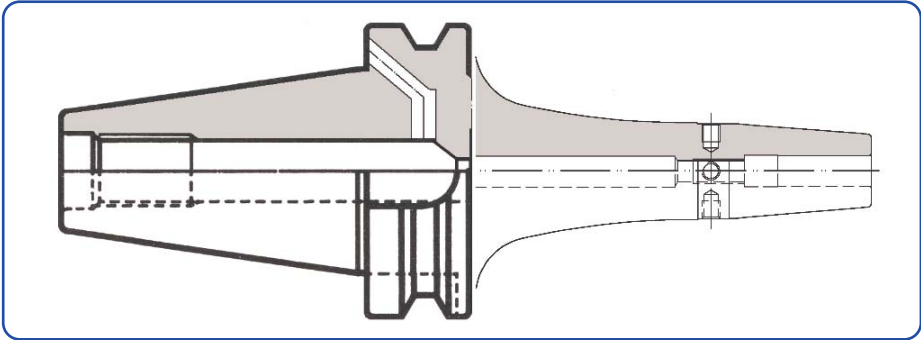


Mit vier zusätzlichen Gewinden am Umfang zum nachträglichen Feinwuchten.

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm	V mm	L mm	M
280.850.016.100	BT50	16	100	27	34	10	51	M12x1
280.850.016.130	BT50	16	130	27	34	10	51	M12x1
280.850.016.160	BT50	16	160	27	34	10	51	M12x1
280.850.016.200	BT50	16	200	27	34	10	51	M12x1
280.850.018.100	BT50	18	100	33	42	10	51	M12x1
280.850.018.130	BT50	18	130	33	42	10	51	M12x1
280.850.018.160	BT50	18	160	33	42	10	51	M12x1
280.850.018.200	BT50	18	200	33	42	10	51	M12x1
280.850.020.100	BT50	20	100	33	42	10	53	M16x1
280.850.020.130	BT50	20	130	33	42	10	53	M16x1
280.850.020.160	BT50	20	160	33	42	10	53	M16x1
280.850.020.200	BT50	20	200	33	42	10	53	M16x1
280.850.025.100	BT50	25	100	44	53	10	59	M16x1
280.850.025.130	BT50	25	130	44	53	10	59	M16x1
280.850.025.160	BT50	25	160	44	53	10	59	M16x1
280.850.025.200	BT50	25	200	44	53	10	59	M16x1
280.850.032.100	BT50	32	100	44	53	10	63	M16x1
280.850.032.130	BT50	32	130	44	53	10	63	M16x1
280.850.032.160	BT50	32	160	44	53	10	63	M16x1
280.850.032.200	BT50	32	200	44	53	10	63	M16x1



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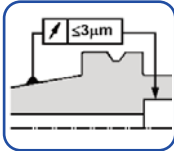
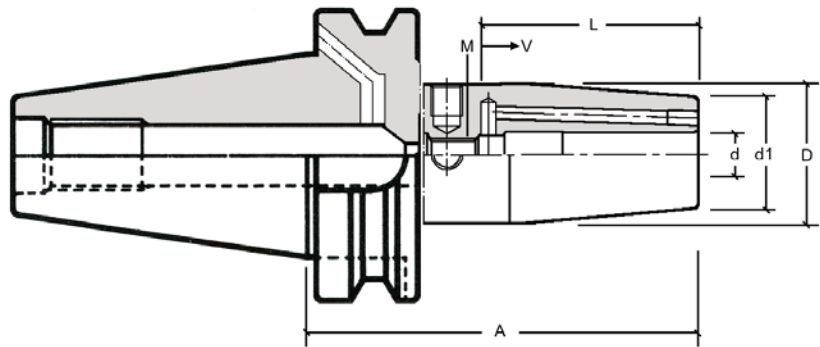


Schrumpffutter für HM und HSS Schäfte mit Kühlkanälen

MAS 403 BT AD/B

Shrink chucks with cooling for solid carbide and HSS shanks

MAS 403 BT AD/B



Mit vier zusätzlichen Gewinden am Umfang zum nachträglichen Feinwuchten.

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	D mm	V mm	L mm	M
281.840.006.090	BT40	6	90	21	27	10	37	M5
281.840.008.090	BT40	8	90	21	27	10	37	M6
281.840.010.090	BT40	10	90	24	32	10	42	M8x1
281.840.012.090	BT40	12	90	24	32	10	48	M10x1
281.840.014.090	BT40	14	90	27	34	10	48	M10x1
281.840.016.090	BT40	16	90	27	34	10	51	M12x1
281.840.018.090	BT40	18	90	33	42	10	51	M12x1
281.840.020.090	BT40	20	90	33	42	10	53	M16x1
281.840.025.100	BT40	25	100	44	53	10	59	M16x1



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Seite 65-67

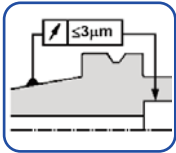
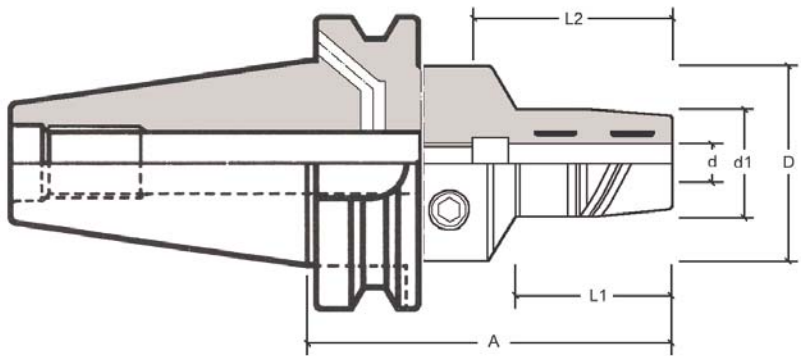


Hydro-Dehnspannfutter kurz

Hydraulic expansibles chuck short

MAS 403 BT AD/B

MAS 403BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	L1 mm	L2 mm	D mm
260.830.012.085*	BT30	12	85	26,5	46	46	44,5
260.830.020.090*	BT30	20	90	36	40	51	44,5
260.840.006.090	BT40	6	90	26	40	37	49,5
260.840.008.090	BT40	8	90	28	40	37	49,5
260.840.010.090	BT40	10	90	30	40	41	49,5
260.840.012.090	BT40	12	90	32	40	46	49,5
260.840.014.090	BT40	14	90	34	40	46	49,5
260.840.016.090	BT40	16	90	38	46	49	49,5
260.840.018.090	BT40	18	90	40	46	49	49,5
260.840.020.090	BT40	20	90	42	46	51	49,5
260.840.025.090	BT40	25	90	49,5	63	57	55
260.840.032.090	BT40	32	90	56	63	61	63
260.850.006.110	BT50	6	110	26	40	37	49,5
260.850.008.110	BT50	8	110	28	40	37	49,5
260.850.010.110	BT50	10	110	30	40	41	49,5
260.850.012.110	BT50	12	110	32	40	46	49,5
260.850.014.110	BT50	14	110	34	40	46	49,5
260.850.016.110	BT50	16	110	38	46	49	49,5
260.850.018.110	BT50	18	110	40	46	49	49,5
260.850.020.110	BT50	20	110	42	46	51	49,5
260.850.025.110	BT50	25	110	55	55	57	60
260.850.032.115	BT50	32	115	63	55	61	70

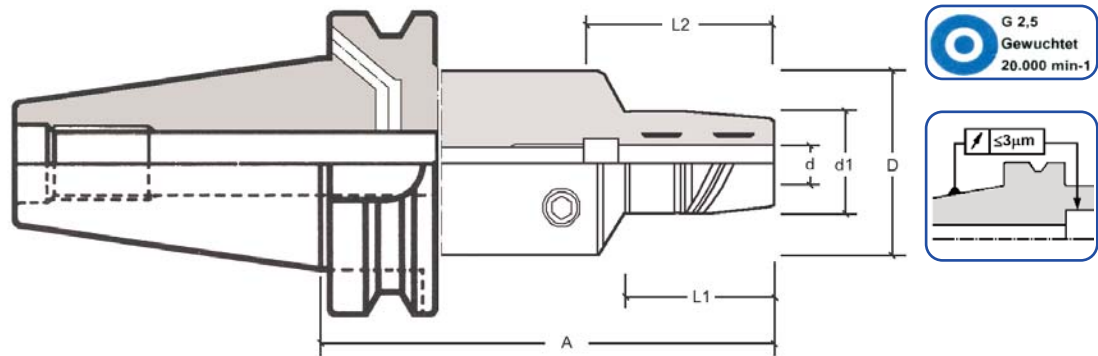
* Form AD





Hydro-Dehnspannfutter lang
Hydraulic expansibles chuck long

MAS 403 BT AD/B
MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	l1 mm	L2 mm	D mm
260.840.006.140	BT40	6	140	26	40	37	49,5
260.840.008.140	BT40	8	140	28	40	37	49,5
260.840.010.140	BT40	10	140	30	40	41	49,5
260.840.012.140	BT40	12	140	32	40	46	49,5
260.840.014.140	BT40	14	140	34	40	46	49,5
260.840.016.140	BT40	16	140	38	46	49	49,5
260.840.018.140	BT40	18	140	40	46	49	49,5
260.840.020.140	BT40	20	140	42	46	51	49,5
260.840.025.140	BT40	25	140	49,5	113	57	55
260.840.032.140	BT40	32	140	56	113	61	63
260.850.006.140	BT50	6	140	26	40	37	49,5
260.850.008.140	BT50	8	140	28	40	37	49,5
260.850.010.140	BT50	10	140	30	40	41	49,5
260.850.012.140	BT50	12	140	32	40	46	49,5
260.850.014.140	BT50	14	140	34	40	46	49,5
260.850.016.140	BT50	16	140	38	46	49	49,5
260.850.018.140	BT50	18	140	40	46	49	49,5
260.850.020.140	BT50	20	140	42	46	51	49,5
260.850.025.140	BT50	25	140	55	55	57	60
260.850.032.140	BT50	32	140	63	55	61	70

Hydro-Dehnspannfutter lang schlanke Ausführung
Hydraulic expansibles chuck long slimline design

MAS 403 BT AD/B
MAS 403 BT AD/B

Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	l1 mm	L2 mm	D mm
261.840.012.120	BT40	12	120	25	60	46	49,5
261.850.012.120	BT50	12	120	25	60	46	49,5



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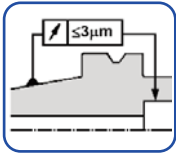
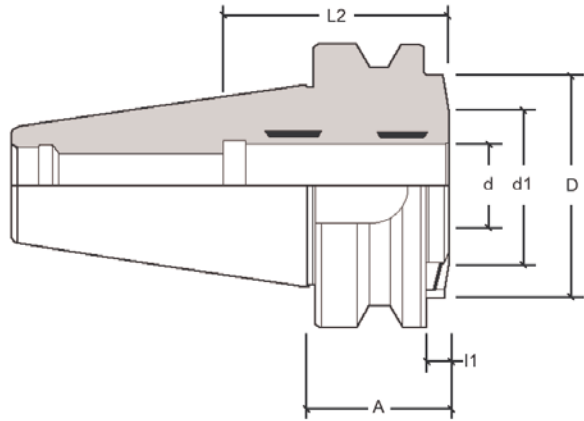


Hydro-Dehnspannfutter extra kurz

Hydraulic expansibles chuck extra short

MAS 403 BT AD

MAS 403 BT AD



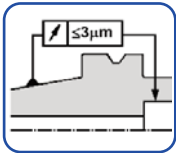
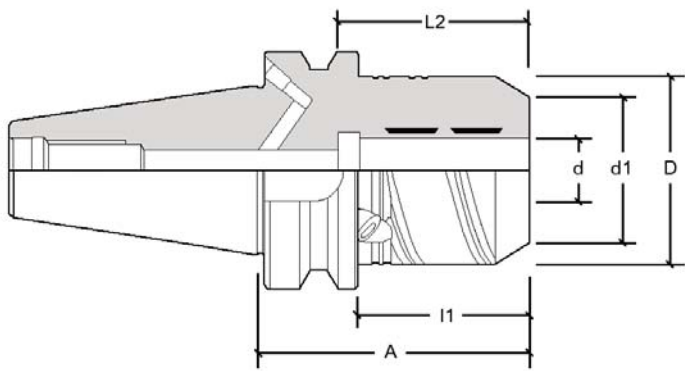
Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	l1 mm	L2 mm	D mm
260.840.020.032	BT40	20	32,5	34	5,5	51	49,5

Hydro-Dehnspannfutter stabil / kurz

Hydraulic expansibles chuck stabil / short

MAS 403 BT AD/B

MAS 403 BT AD/B



Bestell Nr. Code No.	Kegel Taper BT	d mm	A mm	d1 mm	l1 mm	L2 mm	D mm
260.840.020.072	BT40	20	72,5	39	45,5	51	49,5
260.850.020.083	BT50	20	83	39	45,5	51	49,5
260.850.032.090	BT50	32	90	60	52	61	72



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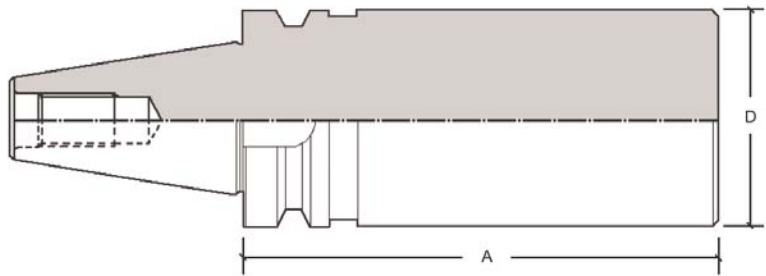


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Rohlinge zur Anfertigung von Sonderwerkzeugen
Blanks for production of special tools

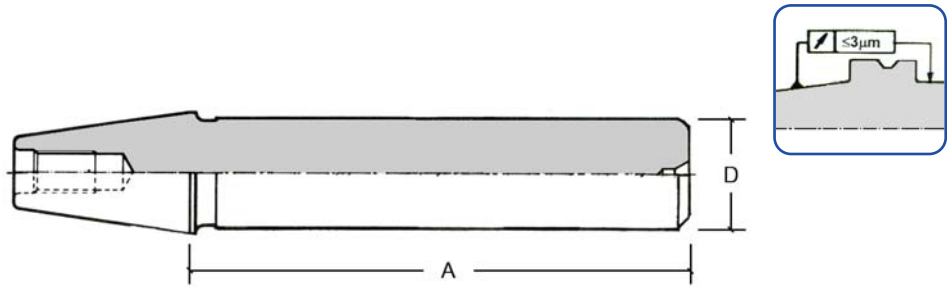
MAS 403 BT A
MAS 403 BT A



Bestell Nr. Code No.	Kegel Taper BT	D mm	A mm
361.840.063.250	BT40	63	250
361.850.097.315	BT50	97	315

Kontrolldorne
Test abors

MAS 403 BT A
MAS 403 BT A



Bestell Nr. Code No.	Kegel Taper BT	D mm	A mm
898.830.032.200	BT30	32	200
898.840.040.300	BT40	40	300
898.850.050.300	BT50	50	300





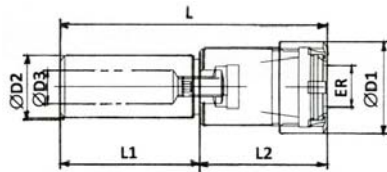
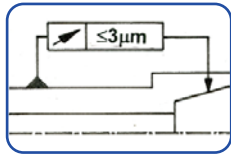
Schrumpfmaschinen
(auf Anfrage)





ER-Spannfutter mit Zylinderschaft mit Standard Spannmutter

ER-Collet with cylindrical shank and with standard nut



Bestell Nr. Code No.	$\varnothing D2$ h6	Spannbereich Capacity	$\varnothing D1$ mm	$\varnothing D3$ mm	L1 mm	L2 mm	L mm
ER16							
253.W16.N16.166	16	1-10	32	7	130	36	166
253.W20.N16.081	20	1-10	32	11	50	31	81
253.W20.N16.131	20	1-10	32	11	100	31	131
253.W20.N16.161	20	1-10	32	11	130	31	161
253.W25.N16.087	25	1-10	32	11	60	27	87
ER20							
253.W20.N20.082	20	1-13	35	11	46	36	82
253.W20.N20.096	20	1-13	35	11	60	36	96
253.W20.N20.136	20	1-13	35	11	100	36	136
253.W25.N20.088	25	1-13	35	13	60	28	88



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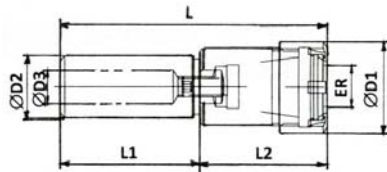
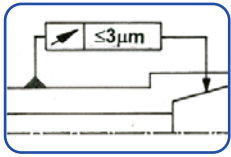
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Lieferumfang: Mit gewuchteter Spannmutter und axialer Anschlagschraube
Delivery: With balanced clamping nut and axial stopscrew



ER-Spannfutter mit Zylinderschaft mit Standard Spannmutter

ER-Collet with cylindrical shank and with standard nut



Bestell Nr. Code No.	ØD2 h6	Spannbereich Capacity	ØD1 mm	ØD3 mm	L1 mm	L2 mm	L mm
ER25							
253.W16.N25.116	16	1-16	42	9	70	46	116
253.W20.N25.096	20	1-16	42	11	50	46	96
253.W20.N25.146	20	1-16	42	11	100	46	146
253.W20.N25.206	20	1-16	42	11	160	46	206
253.W25.N25.082	25	1-16	42	13	50	32	82
253.W25.N25.102	25	1-16	42	13	70	32	102
253.W25.N25.132	25	1-16	42	13	100	32	132
253.W25.N25.192	25	1-16	42	13	160	32	192
253.W32.N25.098	32	1-16	42	19	70	28	98
253.W32.N25.128	32	1-16	42	19	100	28	128
253.W32.N25.148	32	1-16	42	19	120	28	148
253.W32.N25.178	32	1-16	42	19	150	28	178
253.W40.N25.112	40	1-16	42	19	70	42	112
ER32							
253.W20.N32.104	20	2-20	50	13	50	54	104
253.W20.N32.154	20	2-20	50	13	100	54	154
253.W20.N32.214	20	2-20	50	13	160	54	214
253.W25.N32.104	25	2-20	50	13	50	54	104
253.W25.N32.124	25	2-20	50	13	70	54	124
253.W25.N32.154	25	2-20	50	13	100	54	154
253.W25.N32.184	25	2-20	50	13	130	54	184
253.W32.N32.088	32	2-20	50	23	50	38	88
253.W32.N32.108	32	2-20	50	23	70	38	108
253.W32.N32.138	32	2-20	50	23	100	38	138
253.W32.N32.158	32	2-20	50	23	120	38	158
253.W32.N32.188	32	2-20	50	23	150	38	188
253.W40.N32.100	40	2-20	50	23	70	30	100
253.W40.N32.130	40	2-20	50	23	100	30	130
253.W40.N32.160	40	2-20	50	23	130	30	160

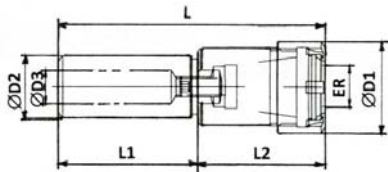
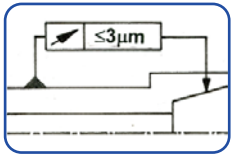


Lieferumfang: Mit gewuchteter Spannmutter und axialer Anschlagschraube
Delivery: With balanced clamping nut and axial stopscrew



ER-Spannfutter mit Zylinderschaft mit MINI Spannmutter

ER-Collet with cylindrical shank and with MINI nut



Bestell Nr. Code No.	$\varnothing D2$ h6	Spannbereich Capacity	$\varnothing D1$ mm	$\varnothing D3$ mm	L1 mm	L2 mm	L mm
ER11							
253.W10.011.100	10	1-7	16	~	75	25	100
253.W12.011.100	12	1-7	16	~	75	25	100
253.W16.011.100	16	1-7	16	~	75	25	100
253.W16.011.130	16	1-7	16	~	105	25	130
253.W16.011.160	16	1-7	16	~	135	25	160
253.W20.011.050	20	1-7	16	~	25	25	50
253.W20.011.100	20	1-7	16	~	75	25	100
253.W20.011.130	20	1-7	16	~	105	25	130
253.W20.011.160	20	1-7	16	~	135	25	160
ER16							
253.W12.016.080	12	1-10	22	5	50	30	80
253.W12.016.120	12	1-10	22	5	90	30	120
253.W16.016.100	16	1-10	22	5	70	30	100
253.W16.016.130	16	1-10	22	5	100	30	130
253.W16.016.160	16	1-10	22	5	130	30	160
253.W16.016.200	16	1-10	22	5	170	30	200
253.W20.016.100	20	1-10	22	5	70	30	100
253.W20.016.130	20	1-10	22	5	100	30	130
253.W20.016.160	20	1-10	22	5	130	30	160
ER20							
253.W20.020.100	20	1-13	28	9	60	40	100
253.W20.020.160	20	1-13	28	9	120	40	160
253.W20.020.200	20	1-13	28	9	160	40	200
253.W25.020.160	25	1-13	28	9	120	40	160



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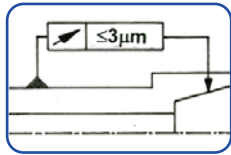
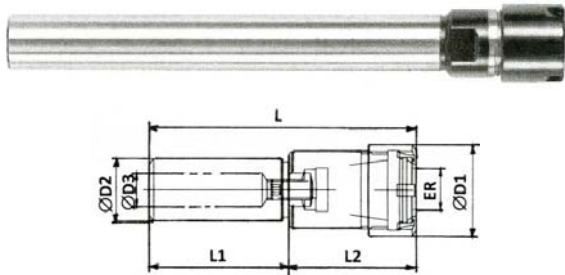
Seite 68

Lieferumfang: Mit gewuchteter Spannmutter und axialer Anschlagschraube
Delivery: With balanced clamping nut and axial stopscrew



ER-Spannfutter mit Zylinderschaft mit MINI Spannmutter

ER-Collet with cylindrical shank and with MINI nut



Bestell Nr. Code No.	ØD2 h6	Spannbereich Capacity	ØD1 mm	ØD3 mm	L1 mm	L2 mm	L mm
ER11							
253.006.011.070	6	1-7	16	~	45	25	70
253.007.011.070	7	1-7	16	~	45	25	70
253.008.011.080	8	1-7	16	~	55	25	80
253.008.011.125	8	1-7	16	~	100	25	125
253.010.011.080	10	1-7	16	5	55	25	80
253.010.011.105	10	1-7	16	5	80	25	105
253.010.011.125	10	1-7	16	5	100	25	125
253.010.011.155	10	1-7	16	5	130	25	155
253.012.011.080	12	1-7	16	7	55	25	80
253.012.011.095	12	1-7	16	7	70	25	95
253.012.011.125	12	1-7	16	7	100	25	125
253.012.011.165	12	1-7	16	7	140	25	165
253.016.011.062	16	1-7	16	7	40	22	62
253.016.011.082	16	1-7	16	7	60	22	82
253.016.011.102	16	1-7	16	7	80	22	102
253.016.011.122	16	1-7	16	7	100	22	122
253.016.011.152	16	1-7	16	7	130	22	152
253.016.011.182	16	1-7	16	7	160	22	182
253.016.011.222	16	1-7	16	7	200	22	222
ER16							
253.008.016.092	8	1-10	22	~	55	37	92
253.010.016.097	10	1-10	22	5	60	37	97
253.010.016.137	10	1-10	22	5	100	37	137
253.012.016.092	12	1-10	22	7	55	37	92
253.012.016.117	12	1-10	22	7	80	37	117
253.012.016.157	12	1-10	22	7	120	37	157
253.016.016.072	16	1-10	22	7	35	37	72
253.016.016.097	16	1-10	22	7	60	37	97
253.016.016.117	16	1-10	22	7	80	37	117
253.016.016.137	16	1-10	22	7	100	37	137
253.016.016.167	16	1-10	22	7	130	37	167
253.016.016.197	16	1-10	22	7	160	37	197
253.016.016.237	16	1-10	22	7	200	37	237
ER20							
253.016.020.095	16	1-13	28	9	55	40	95
253.016.020.140	16	1-13	28	9	100	40	140
253.016.020.200	16	1-13	28	9	160	40	200



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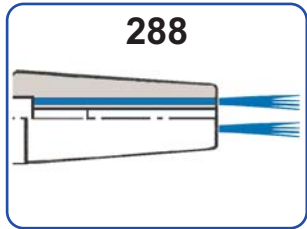
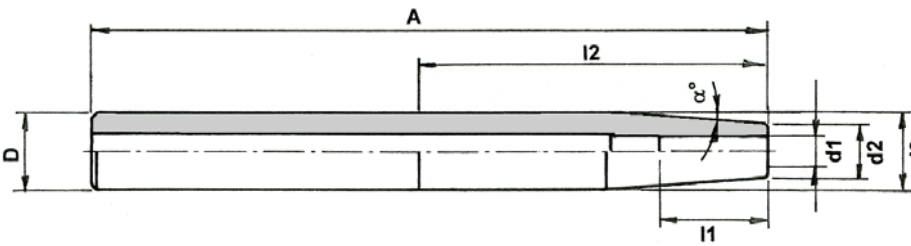
Seite 68

Lieferumfang: Mit gewichteter Spannmutter und axialer Anschlagschraube
Delivery: With balanced clamping nut and axial stopscrew



Schrumpfverlängerungen ohne Längeneinstellschraube

Shrink fit extensions without length adjustment screw

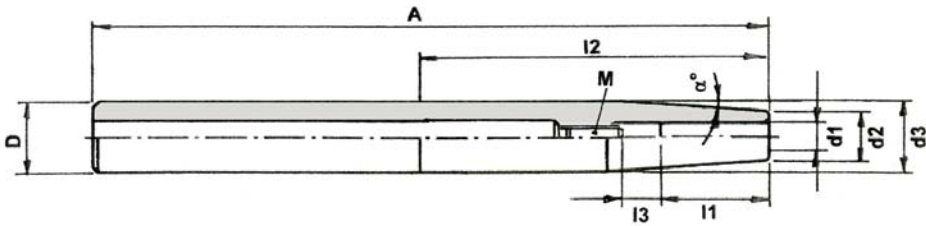


Bestell Nr. Code No.	D h6	d1 mm	d2 mm	d3 mm	α°	l1 mm	l2 mm	A mm
286.012.003.110	12	3	8	11,8	3°	12	63	110
286.012.003.160	12	3	8	12	4°30'	12	~	160
286.012.004.110	12	4	10	11,8	3°	16	63	110
286.012.004.160	12	4	8	12	4°30'	16	~	160
286.012.005.110	12	5	11	11,8	3°	20	63	110
286.016.003.160	16	3	10	16	4°30'	12	~	160
286.016.003.200	16	3	9	16	3°	12	150	200
286.016.004.160	16	4	10	16	4°30'	16	~	160
286.016.004.200	16	4	10	16	3°	16	150	200
286.016.005.160	16	5	10	16	4°30'	20	~	160
286.016.005.200	16	5	10	16	3°	20	150	200
286.016.006.160	16	6	10	16	4°30'	26	~	160
286.020.005.160	20	5	14	20	4°30'	20	~	160
286.020.006.160	20	6	14	20	4°30'	26	~	160
286.020.006.300	20	6	14	20	4°30'	26	~	300
286.020.008.160	20	8	14	20	4°30'	26	~	160
286.020.008.300	20	8	14	20	4°30'	26	~	300
286.025.008.160	25	8	19	25	4°30'	26	~	160
286.025.008.300	25	8	19	25	4°30'	26	~	300
286.025.010.160	25	10	20	25	4°30'	32	~	160
286.025.010.300	25	10	20	25	4°30'	32	~	300
286.025.012.160	25	12	20	25	4°30'	37	~	160
286.025.012.300	25	12	20	25	4°30'	37	~	300
286.025.014.160	25	14	20	25	4°30'	37	~	160
286.025.014.300	25	14	20	25	4°30'	37	~	300
286.025.016.160	25	16	22	25	4°30'	40	~	160
286.025.016.300	25	16	22	25	4°30'	40	~	300
286.032.010.160	32	10	24	32	4°30'	32	~	160
286.032.010.300	32	10	24	32	4°30'	32	~	300
286.032.012.160	32	12	24	32	4°30'	37	~	160
286.032.012.300	32	12	24	32	4°30'	37	~	300
286.032.014.160	32	14	27	32	4°30'	37	~	160
286.032.014.300	32	14	27	32	4°30'	37	~	300
286.032.016.160	32	16	27	32	4°30'	40	~	160
286.032.016.300	32	16	27	32	4°30'	40	~	300
286.032.018.160	32	18	27	32	4°30'	40	~	160
286.032.020.160	32	20	27	32	4°30'	42	~	160
286.032.020.300	32	20	27	32	4°30'	42	~	300
288.020.006.160	25	6	14	20	4°30'	26	~	160
288.025.008.160	25	8	19	25	4°30'	26	~	160
288.025.010.160	25	10	20	25	4°30'	32	~	160
288.032.010.160	32	10	24	32	4°30'	32	~	160
288.032.012.160	32	12	24	32	4°30'	37	~	160
288.032.014.160	32	14	27	32	4°30'	37	~	160
288.032.016.160	32	16	27	32	4°30'	40	~	160



Schrumpfverlängerungen mit Längeneinstellschraube

Shrink fit extensions with length adjustment screw



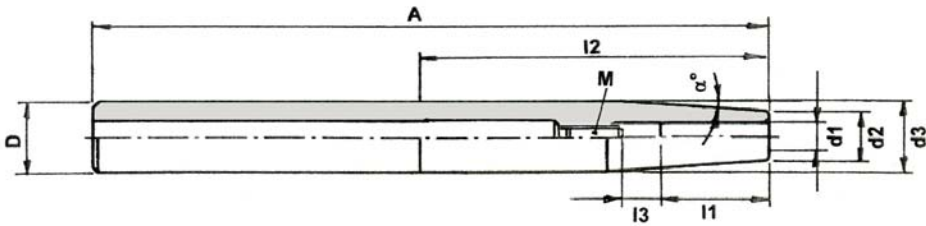
Bestell Nr. Code No.	D h6	d1 mm	d2 mm	d3 mm	α°	I1 mm	I2 mm	I3 mm	M	A mm
283.012.003.150	12	3	8	12	4°30'	12	~	~	M5	150
283.012.004.150	12	4	8	12	4°30'	16	~	~	M5	150
283.012.006.110	12	6	12	17	3°	26	63	10	M5	110
283.012.008.110	12	8	14	19	3°	26	63	10	M6	110
283.016.003.110	16	3	9	13	3°	12	60	10	M6	110
283.016.003.150	16	3	10	16	4°30'	12	~	~	M5	150
283.016.004.110	16	4	10	14	3°	16	60	10	M6	110
283.016.004.150	16	4	10	16	4°30'	16	~	~	M5	150
283.016.005.110	16	5	11	15	3°	20	58	10	M6	110
283.016.005.150	16	5	10	16	4°30'	20	~	~	M6	150
283.016.006.110	16	6	12	15,8	3°	26	60	10	M5	110
283.016.006.150	16	6	10	16	4°30'	26	~	10	M5	150
283.016.006.200	16	6	12	16	3°	26	150	10	M5	200
283.016.008.110	16	8	14	19	3°	26	60	10	M6	110
283.016.008.160	16	8	14	16	4°30'	26	~	10	M5	160
283.020.003.110	20	3	9	13	3°	12	58	10	M6	110
283.020.003.150	20	3	10	20	4°30'	12	~	~	M5	150
283.020.004.110	20	4	10	14	3°	16	58	10	M6	110
283.020.004.150	20	4	10	20	4°30'	16	~	~	M5	150
283.020.005.110	20	5	11	15	3°	20	58	10	M6	110
283.020.005.150	20	5	10	20	4°30'	20	~	~	M6	150
283.020.006.110	20	6	12	16	3°	26	58	10	M5	110
283.020.006.150	20	6	10	20	4°30'	26	~	10	M5	150
283.020.006.160	20	6	14	20	4°30'	26	~	10	M5	160
283.020.006.250	20	6	12	20	3°	26	198	10	M5	250
283.020.008.110	20	8	14	19	3°	26	58	10	M6	110
283.020.008.150	20	8	12	20	4°30'	26	~	10	M6	150
283.020.008.160	20	8	14	20	4°30'	26	~	10	M6	160
283.020.008.250	20	8	14	20	3°	26	198	10	M6	250
283.020.010.110	20	10	16	19,8	3°	32	58	10	M8x1	110
283.020.010.150	20	10	14	20	4°30'	32	~	10	M6	150
283.020.010.250	20	10	16	20	3°	32	198	10	M8x1	250
283.020.012.110	20	12	18	19,8	3°	37	58	10	M10x1	110
283.020.012.150	20	12	16	20	4°30'	37	~	10	M10x1	150





Schrumpfverlängerungen mit Längeneinstellschraube

Shrink fit extensions with length adjustment screw



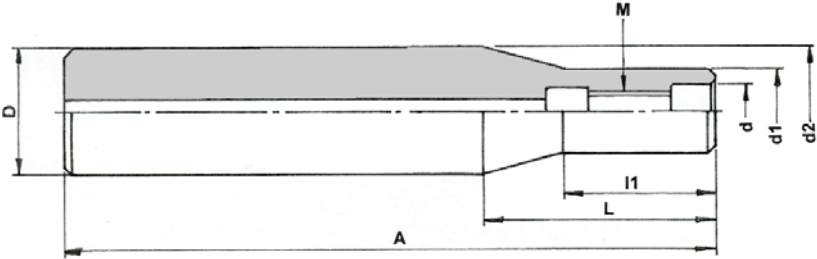
Bestell Nr. Code No.	D h6	d1 mm	d2 mm	d3 mm	α°	I1 mm	I2 mm	I3 mm	M	A mm
283.025.008.150	25	8	20	25	4°30'	26	~	10	M6	150
283.025.008.160	25	8	19	25	4°30'	26	~	10	M6	160
283.025.010.150	25	10	20	25	4°30'	32	~	10	M6	150
283.025.010.160	25	10	20	25	4°30'	32	~	10	M8x1	160
283.025.012.150	25	12	20	25	4°30'	37	~	10	M10x1	150
283.025.012.160	25	12	20	25	4°30'	37	~	10	M10x1	160
283.025.012.250	25	12	18	25	3°	37	193	10	M10x1	250
283.025.014.150	25	14	20	25	4°30'	37	~	10	M10x1	150
283.025.014.160	25	14	20	25	4°30'	37	~	10	M10x1	160
283.025.016.150	25	16	22	25	4°30'	40	~	10	M10x1	150
283.025.016.160	25	16	22	25	4°30'	40	~	10	M12x1	160
283.025.016.250	25	16	22	25	3°	40	193	10	M12x1	250
283.032.010.150	32	10	24	32	4°30'	32	~	10	M6	150
283.032.010.160	32	10	24	32	4°30'	32	~	10	M8x1	160
283.032.012.150	32	12	24	32	4°30'	37	~	10	M10x1	150
283.032.012.160	32	12	24	32	4°30'	37	~	10	M10x1	160
283.032.014.150	32	14	27	32	4°30'	37	~	10	M10x1	150
283.032.014.160	32	14	27	32	4°30'	37	~	10	M10x1	160
283.032.016.150	32	16	27	32	4°30'	40	~	10	M10x1	150
283.032.016.160	32	16	27	32	4°30'	40	~	10	M12x1	160
283.032.018.150	32	18	27	32	4°30'	40	~	10	M10x1	150
283.032.018.160	32	18	27	32	4°30'	40	~	10	M12x1	160
283.032.020.150	32	20	27	32	4°30'	42	~	10	M10x1	150
283.032.020.160	32	20	27	32	4°30'	42	~	10	M16x1	160



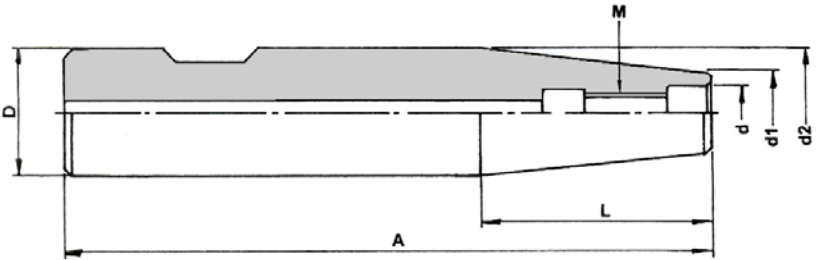


Fräsdorne mit Zyl.Schaft nach DIN 1835A + B für Einschraubfräser

Milling arbors with shank to DIN 1835A + B for screw in tools



Bestell Nr. Code No.	D mm	M	d mm	d1 mm	d2 mm	l1 mm	A mm	L mm
267.020.M10.160	20	M10	10,5	18,5	20	67	160	68,7
267.025.M12.240	25	M12	12,5	23	25	77	240	87,5
267.032.M12.160	32	M12	12,5	23	32	23	160	54
267.032.M12.300	32	M12	12,5	23	32	59,5	300	134
267.032.M16.160	32	M16	17,0	30	32	66	160	68,7
267.032.M16.300	32	M16	17,0	30	32	146	300	148,7

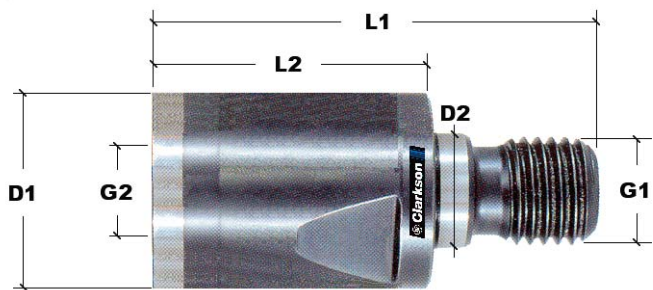


Bestell Nr. Code No.	D mm	M	d mm	d1 mm	d2 mm	A mm	L mm
267.W20.M06.075	20	M6	6,5	10	18	75	25
267.W20.M06.100	20	M6	6,5	10	18	100	50
267.W20.M06.125	20	M6	6,5	10	18	125	75
267.W16.M08.088	16	M8	8,5	13	16	88	40
267.W20.M08.075	20	M8	8,5	13	18	75	25
267.W20.M08.100	20	M8	8,5	13	18	100	50
267.W20.M08.125	20	M8	8,5	13	18	125	75
267.W20.M10.075	20	M10	10,5	18	18	75	25
267.W20.M10.080	20	M10	10,5	18,5	20	80	25
267.W20.M10.100	20	M10	10,5	18	18	100	50
267.W20.M10.125	20	M10	10,5	18	18	125	75
267.W20.M10.152	20	M10	10,5	18,5	20	152	97
267.W25.M12.081	25	M12	12,5	21	25	81	35
267.W25.M12.101	25	M12	12,5	23	25	101	40
267.W25.M12.131	25	M12	12,5	21	25	131	75
267.W25.M12.170	25	M12	12,5	23	25	170	109
267.W25.M12.181	25	M12	12,5	21	25	181	125
267.W32.M12.170	32	M12	12,5	23	25	170	170
267.W32.M16.085	32	M16	17,0	29	32	85	25
267.W32.M16.105	32	M16	17,0	30	32	105	40
267.W32.M16.135	32	M16	17,0	29	32	135	75
267.W32.M16.185	32	M16	17,0	29	32	185	125



Verlängerungen für Einschraubfräser

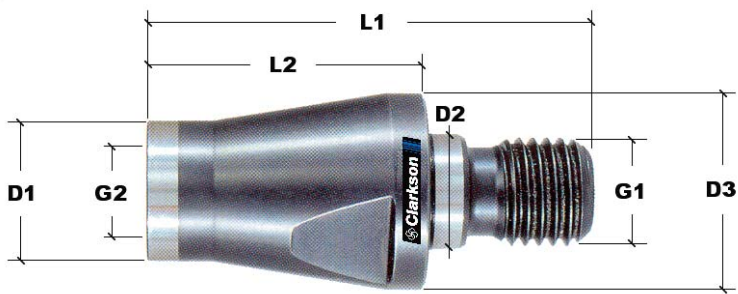
Extensions for screw in tools



Bestell Nr. Code No.	G1 M	G2 M	D1 mm	D2 mm	L1 mm	L2 mm
257.M06.M06.025	M6	M6	9,8	6,5	40	25
257.M08.M08.030	M8	M8	12,8	8,5	48	30
257.M10.M10.A35	M10	M10	15,4	10,5	55	35
257.M10.M10.035	M10	M10	17,8	10,5	55	35
257.M12.M12.040	M12	M12	20,8	12,5	62	40
257.M16.M16.045	M16	M16	28,8	17,0	64	45

Reduzierung für Einschraubfräser

Reductions for screw in tools

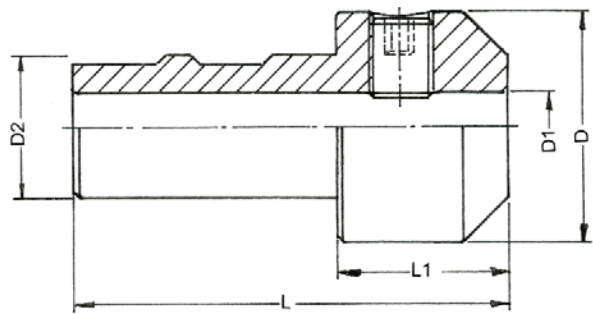


Bestell Nr. Code No.	G1 M	G2 M	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm
258.M08.M06.025	M8	M6	9,8	8,5	12,8	43	25
258.M10.M08.030	M10	M8	12,8	10,5	17,8	50	30
258.M12.M06.040	M12	M6	9,8	12,5	20,8	62	40
258.M12.M08.040	M12	M8	12,8	12,5	20,8	62	40
258.M12.M10.035	M12	M10	15,4	12,5	20,8	57	35
258.M12.M10.A35	M12	M10	17,8	12,5	20,8	57	35
258.M16.M08.060	M16	M8	12,8	17,0	28,8	84	60
258.M16.M10.060	M16	M10	15,4	17,0	28,8	84	60
258.M16.M10.A60	M16	M10	17,8	17,0	28,8	84	60
258.M16.M12.040	M16	M12	20,8	17,0	28,8	64	40



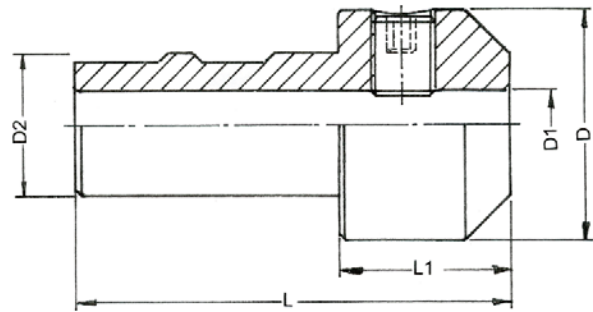
Reduziereinsätze DIN 1835B für Zylinderschäfte DIN 1835B + E

Reducing bushes DIN 1835B for cylindrical shanks DIN 1835B + E



Form: AD
mit Durchgangsbohrung

Bestell Nr. Code No.	D1 mm	D2 h6	D mm	L1 mm	L mm
276.020.006.030	6	20	25	30	80
276.020.008.030	8	20	28	30	80
276.020.010.030	10	20	35	30	80
276.020.012.035	12	20	42	35	85



Bestell Nr. Code No.	D1 mm	D2 h6	D mm	L1 mm	L mm
276.032.006.030	6	32	25	30	90
276.032.008.030	8	32	28	30	90
276.032.010.030	10	32	35	30	90
276.032.012.035	12	32	42	35	95
276.032.014.035	14	32	44	35	95
276.032.016.038	16	32	48	38	98
276.032.018.038	18	32	50	38	98
276.032.020.040	20	32	52	40	100

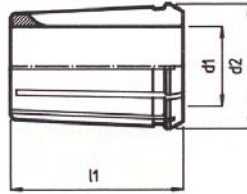


Seite 68



Spannzangen DIN 6388 B (ISO 10897 B) System OZ

Collets DIN 6388 B (ISO 10897 B) OZ system



Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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OZ 16				
435.016.002.000	OZ 16	2	25,5	40
435.016.003.000	OZ 16	3	25,5	40
435.016.004.000	OZ 16	4	25,5	40
435.016.005.000	OZ 16	5	25,5	40
435.016.006.000	OZ 16	6	25,5	40
435.016.007.000	OZ 16	7	25,5	40
435.016.008.000	OZ 16	8	25,5	40
435.016.009.000	OZ 16	9	25,5	40
435.016.010.000	OZ 16	10	25,5	40
435.016.011.000	OZ 16	11	25,5	40
435.016.012.000	OZ 16	12	25,5	40
435.016.013.000	OZ 16	13	25,5	40
435.016.014.000	OZ 16	14	25,5	40
435.016.015.000	OZ 16	15	25,5	40
435.016.016.000	OZ 16	16	25,5	40

OZ 25				
435.025.002.000	OZ 25	2	35,05	52
435.025.003.000	OZ 25	3	35,05	52
435.025.004.000	OZ 25	4	35,05	52
435.025.005.000	OZ 25	5	35,05	52
435.025.006.000	OZ 25	6	35,05	52
435.025.007.000	OZ 25	7	35,05	52
435.025.008.000	OZ 25	8	35,05	52
435.025.009.000	OZ 25	9	35,05	52
435.025.010.000	OZ 25	10	35,05	52
435.025.011.000	OZ 25	11	35,05	52
435.025.012.000	OZ 25	12	35,05	52
435.025.013.000	OZ 25	13	35,05	52
435.025.014.000	OZ 25	14	35,05	52
435.025.015.000	OZ 25	15	35,05	52
435.025.016.000	OZ 25	16	35,05	52
435.025.017.000	OZ 25	17	35,05	52
435.025.018.000	OZ 25	18	35,05	52
435.025.019.000	OZ 25	19	35,05	52
435.025.020.000	OZ 25	20	35,05	52
435.025.021.000	OZ 25	21	35,05	52
435.025.022.000	OZ 25	22	35,05	52
435.025.023.000	OZ 25	23	35,05	52
435.025.024.000	OZ 25	24	35,05	52
435.025.025.000	OZ 25	25	35,05	52

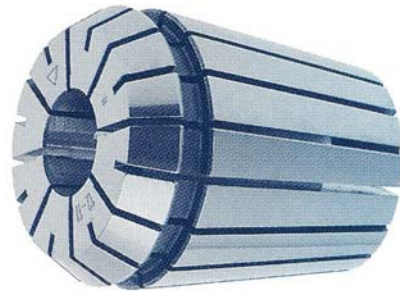
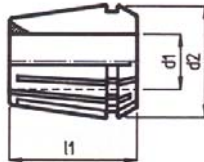
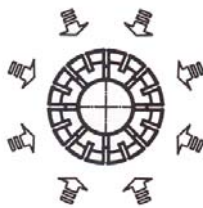
Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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OZ 32				
435.032.003.000	OZ 32	3	43,7	60
435.032.004.000	OZ 32	4	43,7	60
435.032.005.000	OZ 32	5	43,7	60
435.032.006.000	OZ 32	6	43,7	60
435.032.007.000	OZ 32	7	43,7	60
435.032.008.000	OZ 32	8	43,7	60
435.032.009.000	OZ 32	9	43,7	60
435.032.010.000	OZ 32	10	43,7	60
435.032.011.000	OZ 32	11	43,7	60
435.032.012.000	OZ 32	12	43,7	60
435.032.013.000	OZ 32	13	43,7	60
435.032.014.000	OZ 32	14	43,7	60
435.032.015.000	OZ 32	15	43,7	60
435.032.016.000	OZ 32	16	43,7	60
435.032.017.000	OZ 32	17	43,7	60
435.032.018.000	OZ 32	18	43,7	60
435.032.019.000	OZ 32	19	43,7	60
435.032.020.000	OZ 32	20	43,7	60
435.032.021.000	OZ 32	21	43,7	60
435.032.022.000	OZ 32	22	43,7	60
435.032.023.000	OZ 32	23	43,7	60
435.032.024.000	OZ 32	24	43,7	60
435.032.025.000	OZ 32	25	43,7	60
435.032.026.000	OZ 32	26	43,7	60
435.032.027.000	OZ 32	27	43,7	60
435.032.028.000	OZ 32	28	43,7	60
435.032.029.000	OZ 32	29	43,7	60
435.032.030.000	OZ 32	30	43,7	60
435.032.031.000	OZ 32	31	43,7	60
435.032.032.000	OZ 32	32	43,7	60



Spannzangen DIN 6499 B (ISO 15488 B) System ER

Collets DIN 6499 B (ISO 15488 B) ER system



Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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ER 8				
228.008.001.000	ER 8	1	8,5	13,6
228.008.001.500	ER 8	1,5	8,5	13,6
228.008.002.000	ER 8	2	8,5	13,6
228.008.002.500	ER 8	2,5	8,5	13,6
228.008.003.000	ER 8	3	8,5	13,6
228.008.003.500	ER 8	3,5	8,5	13,6
228.008.004.000	ER 8	4	8,5	13,6
228.008.004.500	ER 8	4,5	8,5	13,6
228.008.005.000	ER 8	5	8,5	13,6
ER 11				
228.011.001.000	ER 11	1	11,5	18
228.011.001.500	ER 11	1,5	11,5	18
228.011.002.000	ER 11	2	11,5	18
228.011.002.500	ER 11	2,5	11,5	18
228.011.003.000	ER 11	3	11,5	18
228.011.003.500	ER 11	3,5	11,5	18
228.011.004.000	ER 11	4	11,5	18
228.011.004.500	ER 11	4,5	11,5	18
228.011.005.000	ER 11	5	11,5	18
228.011.005.500	ER 11	5,5	11,5	18
228.011.006.000	ER 11	6	11,5	18
228.011.006.500	ER 11	6,5	11,5	18
228.011.007.000	ER 11	7	11,5	18
ER 16				
228.016.001.000	ER 16	1	17	27,5
228.016.001.500	ER 16	1,5	17	27,5
228.016.002.000	ER 16	2	17	27,5
228.016.002.500	ER 16	2,5	17	27,5
228.016.003.000	ER 16	3	17	27,5
228.016.003.500	ER 16	3,5	17	27,5
228.016.004.000	ER 16	4	17	27,5
228.016.004.500	ER 16	4,5	17	27,5
228.016.005.000	ER 16	5	17	27,5
228.016.005.500	ER 16	5,5	17	27,5
228.016.006.000	ER 16	6	17	27,5
228.016.006.500	ER 16	6,5	17	27,5
228.016.007.000	ER 16	7	17	27,5
228.016.007.500	ER 16	7,5	17	27,5
228.016.008.000	ER 16	8	17	27,5
228.016.008.500	ER 16	8,5	17	27,5
228.016.009.000	ER 16	9	17	27,5
228.016.009.500	ER 16	9,5	17	27,5
228.016.010.000	ER 16	10	17	27,5

Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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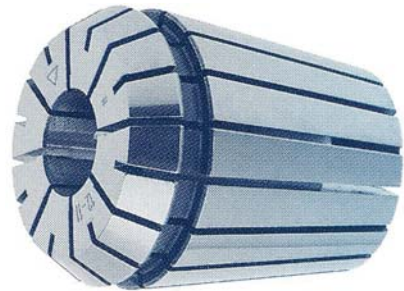
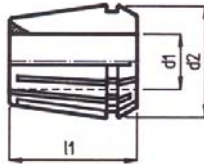
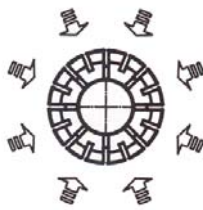
ER 20				
228.020.002.000	ER 20	2	21	31,5
228.020.002.500	ER 20	2,5	21	31,5
228.020.003.000	ER 20	3	21	31,5
228.020.003.500	ER 20	3,5	21	31,5
228.020.004.000	ER 20	4	21	31,5
228.020.004.500	ER 20	4,5	21	31,5
228.020.005.000	ER 20	5	21	31,5
228.020.005.500	ER 20	5,5	21	31,5
228.020.006.000	ER 20	6	21	31,5
228.020.006.500	ER 20	6,5	21	31,5
228.020.007.000	ER 20	7	21	31,5
228.020.007.500	ER 20	7,5	21	31,5
228.020.008.000	ER 20	8	21	31,5
228.020.008.500	ER 20	8,5	21	31,5
228.020.009.000	ER 20	9	21	31,5
228.020.009.500	ER 20	9,5	21	31,5
228.020.010.000	ER 20	10	21	31,5
228.020.010.500	ER 20	10,5	21	31,5
228.020.011.000	ER 20	11	21	31,5
228.020.011.500	ER 20	11,5	21	31,5
228.020.012.000	ER 20	12	21	31,5
228.020.012.500	ER 20	12,5	21	31,5
228.020.013.000	ER 20	13	21	31,5

Präzisionszangen ≤ 0,005
auf Anfrage lieferbar
Precision collets ≤ 0,005



Spannzangen DIN 6499 B (ISO 15488 B) System ER

Collets DIN 6499 B (ISO 15488 B) ER system



Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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ER 25				
228.025.002.000	ER 25	2	26	34
228.025.002.500	ER 25	2,5	26	34
228.025.003.000	ER 25	3	26	34
228.025.003.500	ER 25	3,5	26	34
228.025.004.000	ER 25	4	26	34
228.025.004.500	ER 25	4,5	26	34
228.025.005.000	ER 25	5	26	34
228.025.005.500	ER 25	5,5	26	34
228.025.006.000	ER 25	6	26	34
228.025.006.500	ER 25	6,5	26	34
228.025.007.000	ER 25	7	26	34
228.025.007.500	ER 25	7,5	26	34
228.025.008.000	ER 25	8	26	34
228.025.008.500	ER 25	8,5	26	34
228.025.009.000	ER 25	9	26	34
228.025.009.500	ER 25	9,5	26	34
228.025.010.000	ER 25	10	26	34
228.025.010.500	ER 25	10,5	26	34
228.025.011.000	ER 25	11	26	34
228.025.011.500	ER 25	11,5	26	34
228.025.012.000	ER 25	12	26	34
228.025.012.500	ER 25	12,5	26	34
228.025.013.000	ER 25	13	26	34
228.025.013.500	ER 25	13,5	26	34
228.025.014.000	ER 25	14	26	34
228.025.014.500	ER 25	14,5	26	34
228.025.015.000	ER 25	15	26	34
228.025.015.500	ER 25	15,5	26	34
228.025.016.000	ER 25	16	26	34

Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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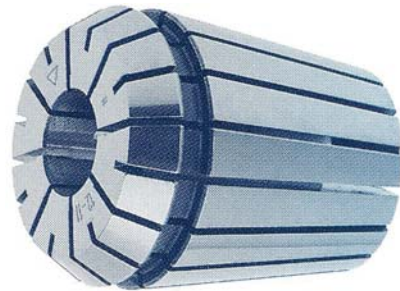
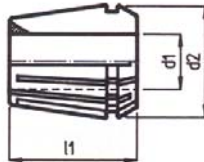
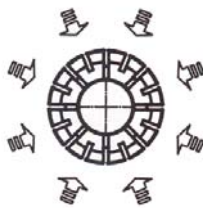
ER 32				
228.032.002.000	ER 32	2	33	40
228.032.002.500	ER 32	2,5	33	40
228.032.003.000	ER 32	3	33	40
228.032.003.500	ER 32	3,5	33	40
228.032.004.000	ER 32	4	33	40
228.032.004.500	ER 32	4,5	33	40
228.032.005.000	ER 32	5	33	40
228.032.005.500	ER 32	5,5	33	40
228.032.006.000	ER 32	6	33	40
228.032.006.500	ER 32	6,5	33	40
228.032.007.000	ER 32	7	33	40
228.032.007.500	ER 32	7,5	33	40
228.032.008.000	ER 32	8	33	40
228.032.008.500	ER 32	8,5	33	40
228.032.009.000	ER 32	9	33	40
228.032.009.500	ER 32	9,5	33	40
228.032.010.000	ER 32	10	33	40
228.032.010.500	ER 32	10,5	33	40
228.032.011.000	ER 32	11	33	40
228.032.011.500	ER 32	11,5	33	40
228.032.012.000	ER 32	12	33	40
228.032.012.500	ER 32	12,5	33	40
228.032.013.000	ER 32	13	33	40
228.032.013.500	ER 32	13,5	33	40
228.032.014.000	ER 32	14	33	40
228.032.014.500	ER 32	14,5	33	40
228.032.015.000	ER 32	15	33	40
228.032.015.500	ER 32	15,5	33	40
228.032.016.000	ER 32	16	33	40
228.032.016.500	ER 32	16,5	33	40
228.032.017.000	ER 32	17	33	40
228.032.017.500	ER 32	17,5	33	40
228.032.018.000	ER 32	18	33	40
228.032.018.500	ER 32	18,5	33	40
228.032.019.000	ER 32	19	33	40
228.032.019.500	ER 32	19,5	33	40
228.032.020.000	ER 32	20	33	40

Präzisionszangen ≤ 0,005
auf Anfrage lieferbar
Precision collets ≤ 0,005



Spannzangen DIN 6499 B (ISO 15488 B) System ER

Collets DIN 6499 B (ISO 15488 B) ER system



Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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ER 40				
228.040.003.000	ER 40	3	41	46
228.040.004.000	ER 40	4	41	46
228.040.005.000	ER 40	5	41	46
228.040.006.000	ER 40	6	41	46
228.040.007.000	ER 40	7	41	46
228.040.008.000	ER 40	8	41	46
228.040.009.000	ER 40	9	41	46
228.040.010.000	ER 40	10	41	46
228.040.011.000	ER 40	11	41	46
228.040.012.000	ER 40	12	41	46
228.040.013.000	ER 40	13	41	46
228.040.014.000	ER 40	14	41	46

Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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ER 40				
228.040.015.000	ER 40	15	41	46
228.040.016.000	ER 40	16	41	46
228.040.017.000	ER 40	17	41	46
228.040.018.000	ER 40	18	41	46
228.040.019.000	ER 40	19	41	46
228.040.020.000	ER 40	20	41	46
228.040.021.000	ER 40	21	41	46
228.040.022.000	ER 40	22	41	46
228.040.023.000	ER 40	23	41	46
228.040.024.000	ER 40	24	41	46
228.040.025.000	ER 40	25	41	46
228.040.026.000	ER 40	26	41	46

Spannzangensätze DIN 6499 B (ISO 15488 B) System ER

Collets sets DIN 6499 B (ISO 15488 B) ER system

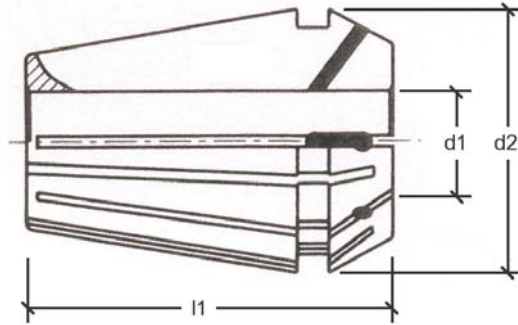


Bestell Nr. Code No.	Größe Size	Stück Qty	Abmessungen Size
228.008.001.005	ER8	9	1-1,5-2-2,5-3-3,5-4-4,5-5
228.011.001.007	ER 11	13	1-1,5-2-2,5-3-3,5-4-4,5-5-5,5-6-6,5-7
228.016.001.010	ER 16	10	1-2-3-4-5-6-7-8-9-10
228.020.002.013	ER 20	12	2-3-4-5-6-7-8-9-10-11-12-13
228.025.002.016	ER 25	15	2-3-4-5-6-7-8-9-10-11-12-13-14-15-16
228.032.003.020	ER 32	18	3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20
228.040.004.026	ER 40	23	4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26



Spannzangen mit Abdichtung für IK DIN 6499 B (ISO 15488 B) System ER

Collets sealed with seal for IC DIN 6499 B (ISO 15488 B) ER system



Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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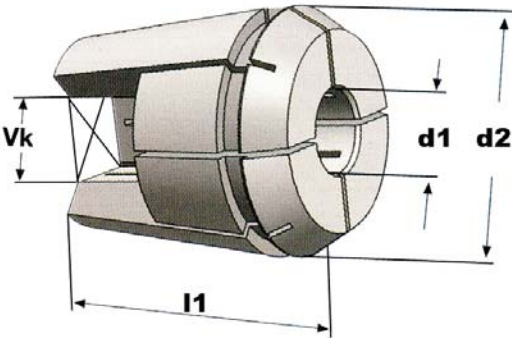
ER 16				
228.016.003.A00	ER 16	3	17	27,5
228.016.004.A00	ER 16	4	17	27,5
228.016.005.A00	ER 16	5	17	27,5
228.016.006.A00	ER 16	6	17	27,5
228.016.007.A00	ER 16	7	17	27,5
228.016.008.A00	ER 16	8	17	27,5
228.016.009.A00	ER 16	9	17	27,5
228.016.010.A00	ER 16	10	17	27,5
ER20				
228.020.003.A00	ER 20	3	21	31,5
228.020.004.A00	ER 20	4	21	31,5
228.020.005.A00	ER 20	5	21	31,5
228.020.006.A00	ER 20	6	21	31,5
228.020.007.A00	ER 20	7	21	31,5
228.020.008.A00	ER 20	8	21	31,5
228.020.009.A00	ER 20	9	21	31,5
228.020.010.A00	ER 20	10	21	31,5
228.020.011.A00	ER 20	11	21	31,5
228.020.012.A00	ER 20	12	21	31,5
228.020.013.A00	ER 20	13	21	31,5
ER 25				
228.025.003.A00	ER 25	3	26	34
228.025.004.A00	ER 25	4	26	34
228.025.005.A00	ER 25	5	26	34
228.025.006.A00	ER 25	6	26	34
228.025.007.A00	ER 25	7	26	34
228.025.008.A00	ER 25	8	26	34
228.025.009.A00	ER 25	9	26	34
228.025.010.A00	ER 25	10	26	34
228.025.011.A00	ER 25	11	26	34
228.025.012.A00	ER 25	12	26	34
228.025.013.A00	ER 25	13	26	34
228.025.014.A00	ER 25	14	26	34
228.025.015.A00	ER 25	15	26	34
228.025.016.A00	ER 25	16	26	34

Bestell Nr. Code No.	Größe Size	d1 mm	d2 mm	l1 mm
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ER 32				
228.032.003.A00	ER 32	3	33	40
228.032.004.A00	ER 32	4	33	40
228.032.005.A00	ER 32	5	33	40
228.032.006.A00	ER 32	6	33	40
228.032.007.A00	ER 32	7	33	40
228.032.008.A00	ER 32	8	33	40
228.032.009.A00	ER 32	9	33	40
228.032.010.A00	ER 32	10	33	40
228.032.011.A00	ER 32	11	33	40
228.032.012.A00	ER 32	12	33	40
228.032.013.A00	ER 32	13	33	40
228.032.014.A00	ER 32	14	33	40
228.032.015.A00	ER 32	15	33	40
228.032.016.A00	ER 32	16	33	40
228.032.017.A00	ER 32	17	33	40
228.032.018.A00	ER 32	18	33	40
228.032.019.A00	ER 32	19	33	40
228.032.020.A00	ER 32	20	33	40
ER 40				
228.040.003.A00	ER 40	3	41	46
228.040.004.A00	ER 40	4	41	46
228.040.005.A00	ER 40	5	41	46
228.040.006.A00	ER 40	6	41	46
228.040.007.A00	ER 40	7	41	46
228.040.008.A00	ER 40	8	41	46
228.040.009.A00	ER 40	9	41	46
228.040.010.A00	ER 40	10	41	46
228.040.011.A00	ER 40	11	41	46
228.040.012.A00	ER 40	12	41	46
228.040.013.A00	ER 40	13	41	46
228.040.014.A00	ER 40	14	41	46
228.040.015.A00	ER 40	15	41	46
228.040.016.A00	ER 40	16	41	46
228.040.017.A00	ER 40	17	41	46
228.040.018.A00	ER 40	18	41	46
228.040.019.A00	ER 40	19	41	46
228.040.020.A00	ER 40	20	41	46
228.040.021.A00	ER 40	21	41	46
228.040.022.A00	ER 40	22	41	46
228.040.023.A00	ER 40	23	41	46
228.040.024.A00	ER 40	24	41	46
228.040.025.A00	ER 40	25	41	46
228.040.026.A00	ER 40	26	41	46



Spannzangen mit Innenvierkant DIN 6499 A (ISO 15488 A) System ER für Gewindebohrer
Collets with square locking drive DIN 6499 A (ISO 15488 A) ER system for taps



Bestell Nr. Code No.	Größe Size	d1 mm	VK mm	d2 mm	l1 mm
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ER 16					
228.G16.035.027	ER 16	3,5	2,7	17	27,5
228.G16.040.030	ER 16	4	3	17	27,5
228.G16.045.034	ER 16	4,5	3,4	17	27,5
228.G16.050.040	ER 16	5	4	17	27,5
228.G16.055.043	ER 16	5,5	4,3	17	27,5
228.G16.060.049	ER 16	6	4,9	17	27,5
228.G16.070.055	ER 16	7	5,5	17	27,5
228.G16.090.070	ER 16	9	7	17	27,5
228.G16.100.080	ER 16	10	8	17	27,5

ER20					
228.G20.035.027	ER 20	3,5	2,7	21	31,5
228.G20.040.030	ER 20	4	3	21	31,5
228.G20.045.034	ER 20	4,5	3,4	21	31,5
228.G20.055.043	ER 20	5,5	4,3	21	31,5
228.G20.060.049	ER 20	6	4,9	21	31,5
228.G20.070.055	ER 20	7	5,5	21	31,5
228.G20.080.062	ER 20	8	6,2	21	31,5
228.G20.090.070	ER 20	9	7	21	31,5
228.G20.100.080	ER 20	11	8	21	31,5
228.G20.110.090	ER 20	11	9	21	31,5
228.G20.120.090	ER 20	12	9	21	31,5

ER 25					
228.G25.035.027	ER 25	3,5	2,7	26	34
228.G25.040.030	ER 25	4	3	26	34
228.G25.045.034	ER 25	4,5	3,4	26	34
228.G25.050.040	ER 25	5	4	26	34
228.G25.055.043	ER 25	5,5	4,3	26	34
228.G25.060.049	ER 25	6	4,9	26	34
228.G25.070.055	ER 25	7	5,5	26	34
228.G25.080.062	ER 25	8	6,2	26	34
228.G25.090.070	ER 25	9	7	26	34
228.G25.100.080	ER 25	10	8	26	34
228.G25.110.090	ER 25	11	9	26	34
228.G25.120.090	ER 25	12	9	26	34
228.G25.140.110	ER 25	14	11	26	34
228.G25.160.120	ER 25	16	12	26	34

Bestell Nr. Code No.	Größe Size	d1 mm	VK mm	d2 mm	l1 mm
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ER 32					
228.G32.040.030	ER 32	4	3	33	40
228.G32.045.034	ER 32	4,5	3,4	33	40
228.G32.050.040	ER 32	5	4	33	40
228.G32.055.043	ER 32	5,5	4,3	33	40
228.G32.060.049	ER 32	6	4,9	33	40
228.G32.070.055	ER 32	7	5,5	33	40
228.G32.080.062	ER 32	8	6,2	33	40
228.G32.090.070	ER 32	9	7	33	40
228.G32.100.080	ER 32	10	8	33	40
228.G32.110.090	ER 32	11	9	33	40
228.G32.120.090	ER 32	12	9	33	40
228.G32.140.110	ER 32	14	11	33	40
228.G32.160.125	ER 32	16	12	33	40
228.G32.180.145	ER 32	18	14,5	33	40
228.G32200.160	ER 32	20	16	33	40

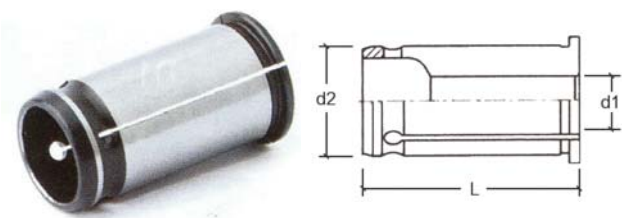
ER 40					
228.G40.060.049	ER 40	6	4,9	41	46
228.G40.070.055	ER 40	7	5,5	41	46
228.G40.080.062	ER 40	8	6,2	41	46
228.G40.090.070	ER 40	9	7	41	46
228.G40.100.080	ER 40	10	8	41	46
228.G40.110.090	ER 40	11	9	41	46
228.G40.120.090	ER 40	12	9	41	46
228.G40.140.110	ER 40	14	11	41	46
228.G40.160.125	ER 40	16	12	41	46
228.G40.180.145	ER 40	18	14,5	41	46
228.G40.200.160	ER 40	20	16	41	46
228.G40.220.180	ER 40	22	18	41	46
228.G40.250.200	ER 40	25	20	41	46



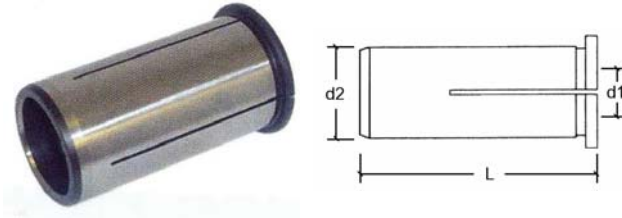
Reduzierhülsen für Zangenkraftspannfutter

Reducing arbor for Great Power Collet chucks

Typ: A



Typ: B



Typ: A

Bestell Nr. Code No.	d1 mm	d2 mm	L mm
229.A20.006.053	6	20	53
229.A20.007.053	7	20	53
229.A20.008.053	8	20	53
229.A20.010.053	10	20	53
229.A20.012.053	12	20	53
229.A20.014.053	14	20	53
229.A20.015.053	15	20	53
229.A20.016.053	16	20	53

Bestell Nr. Code No.	d1 mm	d2 mm	L mm
229.A32.006.065	6	32	65
229.A32.008.065	8	32	65
229.A32.010.065	10	32	65
229.A32.012.065	12	32	65
229.A32.014.065	14	32	65
229.A32.015.065	15	32	65
229.A32.016.065	16	32	65
229.A32.020.065	20	32	65
229.A32.025.065	25	32	65

Typ: B

hermetisch abgedichtet

hermetically sealed

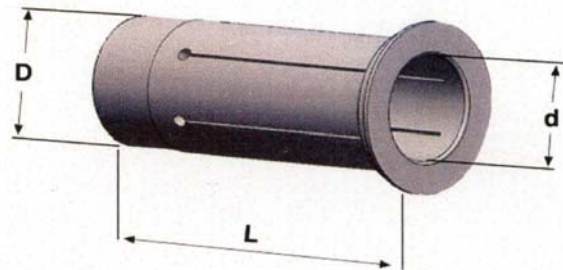
Bestell Nr. Code No.	d1 mm	d2 mm	L mm
229.B20.003.053	3	20	53
229.B20.004.053	4	20	53
229.B20.005.053	5	20	53
229.B20.006.053	6	20	53
229.B20.007.053	7	20	53
229.B20.008.053	8	20	53
229.B20.009.053	9	20	53
229.B20.010.053	10	20	53
229.B20.011.053	11	20	53
229.B20.012.053	12	20	53
229.B20.013.053	13	20	53
229.B20.014.053	14	20	53
229.B20.015.053	15	20	53
229.B20.016.053	16	20	53
229.B40.016.073	16	40	73
229.B40.020.073	20	40	73
229.B40.025.073	25	40	73
229.B40.032.073	32	40	73
229.B50.020.083	20	50	83
229.B50.025.083	25	50	83
229.B50.032.083	32	50	83
229.B50.040.083	40	50	83
229.B50.042.083	42	50	83

Bestell Nr. Code No.	d1 mm	d2 mm	L mm
229.B32.003.065	3	32	65
229.B32.004.065	4	32	65
229.B32.005.065	5	32	65
229.B32.006.065	6	32	65
229.B32.007.065	7	32	65
229.B32.008.065	8	32	65
229.B32.009.065	9	32	65
229.B32.010.065	10	32	65
229.B32.011.065	11	32	65
229.B32.012.065	12	32	65
229.B32.013.065	13	32	65
229.B32.014.065	14	32	65
229.B32.015.065	15	32	65
229.B32.016.065	16	32	65
229.B32.017.065	17	32	65
229.B32.018.065	18	32	65
229.B32.019.065	19	32	65
229.B32.020.065	20	32	65
229.B32.021.065	21	32	65
229.B32.022.065	22	32	65
229.B32.023.065	23	32	65
229.B32.024.065	24	32	65
229.B32.025.065	25	32	65
229.B32.026.065	26	32	65



Reduzierbüchsen für Hydrodehnspannfutter

Reducing arbor for hydraulic chucks



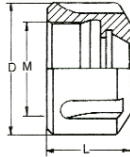
Bestell Nr. Code No.	D mm	d mm	L mm
231.012.003.046	12	3	46
231.012.004.046	12	4	46
231.012.005.046	12	5	46
231.012.006.046	12	6	46
231.012.008.046	12	8	46
231.020.003.052	20	3	52,5
231.020.004.052	20	4	52,5
231.020.005.052	20	5	52,5
231.020.006.052	20	6	52,5
231.020.008.052	20	8	52,5
231.020.010.052	20	10	52,5
231.020.012.052	20	12	52,5
231.020.014.052	20	14	52,5
231.020.016.052	20	16	52,5
231.032.006.063	32	6	63
231.032.008.063	32	8	63
231.032.010.063	32	10	63
231.032.012.063	32	12	63
231.032.014.063	32	14	63
231.032.016.063	32	16	63
231.032.020.063	32	20	63
231.032.025.063	32	25	63



Spannmutter DIN 6499 (ISO 15488) System ER

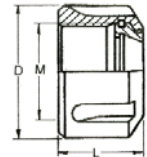
Clamping nuts DIN 6499 (ISO 15488) ER system

Standardausführung mit Exenterring, gewuchtet
standard type with eccentric ring, balanced



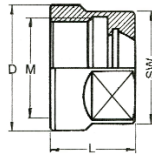
Bestell Nr. Code No.	Größe Size	D mm	L mm	SW mm	M
456.016.032.018	ER16	32	18	~	M22x1,5
456.020.035.019	ER20	35	19	~	M25x1,5
456.025.042.020	ER25	42	20	~	M32x1,5
456.032.050.022	ER32	50	22	~	M40x1,5
456.040.063.025	ER40	63	25	~	M50x1,5

gleitgelagerte Ausführung
sleeve-bearing version



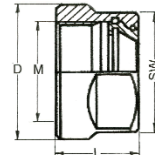
Bestell Nr. Code No.	Größe Size	D mm	L mm	SW mm	M
456.016.032.G18	ER16	32	18	~	M22x1,5
456.025.042.G20	ER25	42	20	~	M32x1,5
456.032.050.G22	ER32	50	22	~	M40x1,5
456.040.063.G25	ER40	63	25	~	M50x1,5

Standardausführung mit Exenterring, gewuchtet
standard type with eccentric ring, balanced



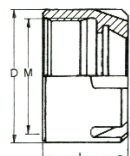
Bestell Nr. Code No.	Größe Size	D mm	L mm	SW mm	M
456.611.019.012	ER11	19	12	17	M14x,075
456.616.028.018	ER16	28	18	25	M22x1,5
456.620.034.019	ER20	42	19	30	M25x1,5

gleitgelagerte Ausführung
sleeve-bearing version



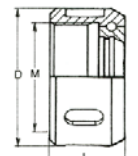
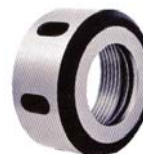
Bestell Nr. Code No.	Größe Size	D mm	L mm	SW mm	M
456.616.028.G18	ER16	30	18	27	M22x1,5

Standardausführung mit Exenterring, gewuchtet TYP MINI
standard type with eccentric ring, balanced TYP MINI



Bestell Nr. Code No.	Größe Size	D mm	L mm	SW mm	M
456.M08.012.011	ER8	12	11	~	M10x0,75
456.M11.016.012	ER11	16	12	~	M13x0,75
456.M16.022.018	ER16	22	18	~	M19x1

Spannmutter Typ: OZ DIN 6388 D
kugelgelagerte Ausführung
*Clamping nuts type: OZ DIN 6388 D
ball-bearing version*

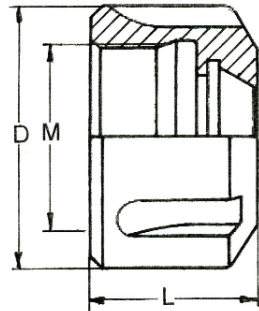
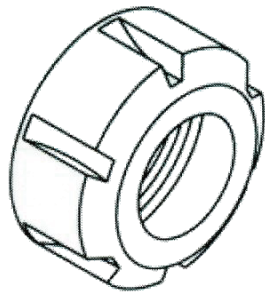


Bestell Nr. Code No.	Größe Size	D mm	L mm	SW mm	M
484.016.043.024	OZ16	43	24	~	M33x1,5
484.025.060.030	OZ25	60	30	~	M48x2
484.032.072.033	OZ32	72	33,5	~	M60x2,5



Spannmutter DIN 6499 (ISO 15488) System ER für Dichtscheiben

Clamping nuts DIN 6499 (ISO 15488) ER system for sealing discs



Bestell Nr. Code No.	Größe Size	D mm	L mm	M	Ausführung model
458.016.032.018	ER 16	32	18	M25x1,5	Standard
458.025.042.020	ER 25	42	20	M32x1,5	Standard
458.032.050.022	ER 32	50	22	M40x1,5	Standard
458.040.063.025	ER 40	63	25	M50x1,5	Standard

Dichtscheiben für ER Spannmutter

Sealing discs for ER clamping nuts



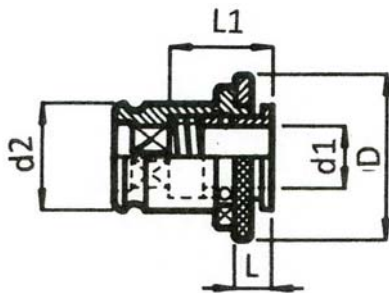
Bestell Nr. Code No.	Größe Size	d von -bis d from -to	Steigung step
457.016.XXX.XXX	ER 16	3,0-10,0mm	0,5mm
457.025.XXX.XXX	ER 25	3,0-16,0mm	0,5mm
457.032.XXX.XXX	ER 32	3,0-20,0mm	0,5mm
457.040.XXX.XXX	ER 40	3,0-26,0mm	0,5mm

Bestellbeispiel für A) ER16 4,0mm und B) ER32 11,5mm
Code für A= 457.016.004.000
Code für B= 457.032.011.500

Ordering example for A) ER16 4,0mm and B) ER32 11,5mm
Code for A= 457.016.004.000
Code for B= 457.032.011.500



Schnellwechsel-Einsätze ohne Überlastungskupplung
Quick change adaptors without safety clutch

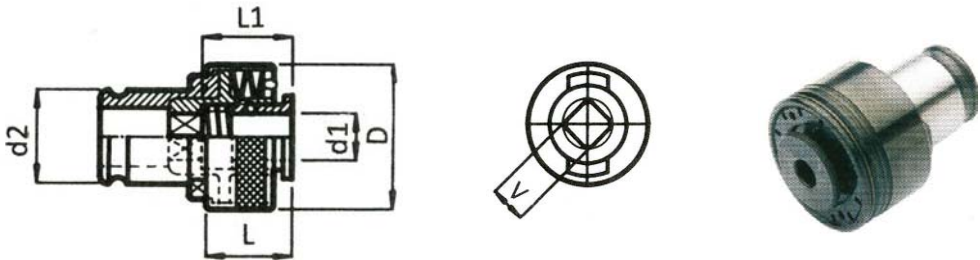


Bestell Nr. Code No.	Größe Size	D mm	d2 mm	d1 mm	V mm	L mm	L1 mm
331.019.028.021	1	30	19	2,8	2,1	7	17
331.019.035.027	1	30	19	3,5	2,7	7	17
331.019.040.030	1	30	19	4	3	7	17
331.019.045.034	1	30	19	4,5	3,4	7	17
331.019.060.049	1	30	19	6	4,9	7	17
331.019.070.055	1	30	19	7	5,5	7	17
331.019.080.062	1	30	19	8	6,2	7	17
331.019.090.070	1	30	19	9	7	7	17
331.019.100.080	1	30	19	10	8	7	17
331.019.110.090	1	30	19	11	9	7	17
331.031.060.049	2	48	31	6	4,9	11	30
331.031.070.055	2	48	31	7	5,5	11	30
331.031.080.062	2	48	31	8	6,2	11	30
331.031.090.070	2	48	31	9	7	11	30
331.031.100.080	2	48	31	10	8	11	30
331.031.110.090	2	48	31	11	9	11	30
331.031.120.090	2	48	31	12	9	11	30
331.031.140.110	2	48	31	14	11	11	30
331.031.160.120	2	48	31	16	12	11	30
331.031.180.145	2	48	31	18	14,5	11	30
331.048.110.090	3	70	48	11	9	14	44
331.048.120.090	3	70	48	12	9	14	44
331.048.140.110	3	70	48	14	11	14	44
331.048.160.120	3	70	48	16	12	14	44
331.048.180.145	3	70	48	18	14,5	14	44
331.048.200.160	3	70	48	20	16	14	44
331.048.220.180	3	70	48	22	18	14	44
331.048.250.200	3	70	48	25	20	14	44
331.048.280.220	3	70	48	28	22	14	44

für for				
DIN 371	DIN 376/374	DIN 353	DIN 2182	DIN 2183
M2-M2,5				
M3	M5		1/8"	
M3,5			5/32"	
M4	M6		7/32"	1/4"
M5-6	M8			
	M10	R 1/8"	1/4"	3/8"
M8			5/16"	7/16"
	M12		3/8"	1/2"
M10				
	M14	R 1/4"		9/16"
M5-6				
	M8			
	M10	R 1/8"		3/8"
M8				7/16"
	M12			1/2"
M10				
	M14	R 1/4"		9/16"
	M16	R 3/8"		5/8"
	M18			11/16"
	M20	R 1/2"		13/16"
	M22-24	R 5/8"		7/8"-15/16"
M14				
	M16	R 3/8"		5/8"
	M18			11/16"
	M20	R 1/2"		13/16"
	M22-24	R 5/8"		7/8"-15/16"
	M27	R 3/4"		1"
	M30	R 7/8"		1.1/8"
	M33	R 1"		1.1/4"
	M36	R 1.1/8"		1.3/8"



Schnellwechsel-Einsätze mit Überlastungskupplung
Quick change adaptors with safety clutch



Bestell Nr. Code No.	Größe Size	D mm	d2 mm	d1 mm	V mm	L mm	L1 mm
334.019.028.021	1	32	19	2,8	2,1	25	17
334.019.035.027	1	32	19	3,5	2,7	25	17
334.019.040.030	1	32	19	4	3	25	17
334.019.045.034	1	32	19	4,5	3,4	25	17
334.A19.060.049	1	32	19	4,5	3,4	25	17
334.019.060.049	1	32	19	6	4,9	25	17
334.019.070.055	1	32	19	7	5,5	25	17
334.019.080.062	1	32	19	8	6,2	25	17
334.019.090.070	1	32	19	9	7	25	17
334.019.100.080	1	32	19	10	8	25	17
334.019.110.090	1	32	19	11	9	25	17
334.A31.060.049	2	50	31	6	4,9	34	30
334.031.060.049	2	50	31	6	4,9	34	30
334.031.070.055	2	50	31	7	5,5	34	30
334.031.080.062	2	50	31	8	6,2	34	30
334.031.090.070	2	50	31	9	7	34	30
334.031.100.080	2	50	31	10	8	34	30
334.031.110.090	2	50	31	11	9	34	30
334.031.120.090	2	50	31	12	9	34	30
334.031.140.110	2	50	31	14	11	34	30
334.031.160.120	2	50	31	16	12	34	30
334.031.180.145	2	50	31	18	14,5	34	30
334.048.110.090	3	72	48	11	9	44	44
334.048.120.090	3	72	48	12	9	44	44
334.048.140.110	3	72	48	14	11	44	44
334.048.160.120	3	72	48	16	12	44	44
334.048.180.145	3	72	48	18	14,5	44	44
334.A48.180.145	3	72	48	18	14,5	44	44
334.048.200.160	3	72	48	20	16	44	44
334.048.220.180	3	72	48	22	18	44	44
334.048.250.200	3	72	48	25	20	44	44
334.048.280.220	3	72	48	28	22	44	44

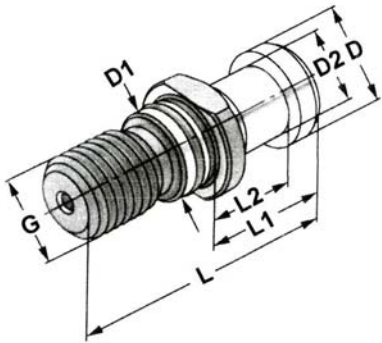
für for				
DIN 371	DIN 376/374	DIN 353	DIN 2182	DIN 2183
M2-M2,5				
M3	M5		1/8"	
M3,5			5/32"	
M4	M6		7/32"	1/4"
M5				
M6	M8			
	M10	R 1/8"	1/4"	3/8"
M8			5/16"	7/16"
	M12		3/8"	1/2"
M10				
	M14	R 1/4"		9/16"
M5				
M6	M8			
	M10	R 1/8"		3/8"
M8				7/16"
	M12			1/2"
M10				
	M14	R 1/4"		9/16"
	M16	R 3/8"		5/8"
	M18			11/16"
	M20	R 1/2"		13/16"
	M22-24	R 5/8"		7/8"-15/16"
	M14	R 1/4"		9/16"
	M16	R 3/8"		5/8"
	M18			11/16"
	M20	R 1/2"		13/16"
	M22	R 5/8"		7/8"-15/16"
	M24			
	M27	R 3/4"		1"
	M30	R 7/8"		1.1/8"
	M33	R 1"		1.1/4"
	M36	R 1.1/8"		1.3/8"



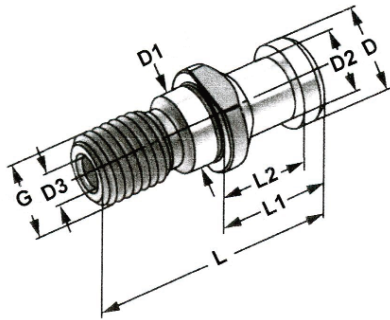
Anzugsbolzen DIN 69872 A+B

Pull studs DIN 69872 A+B

Typ B



Typ A

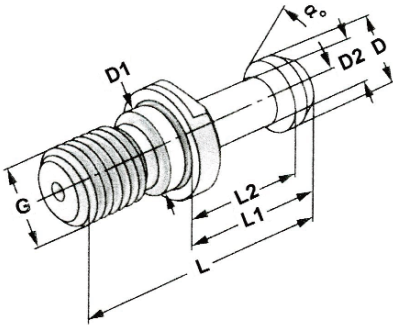


Bestell Nr. Code No.	Typ type	G	L mm	L1 mm	L2 mm	D mm	D1 mm	D2 mm	D3 mm
499.340.011.054	B	M 16	54	26	20	19	17	14	~
499.350.011.074	B	M 24	74	34	25	28	25	21	~
499.230.111.044	A	M 12	44	24	19	13	13	9	3
499.240.111.054	A	M 16	54	26	20	19	17	14	7
499.250.111.074	A	M 24	74	34	25	28	25	21	11,5

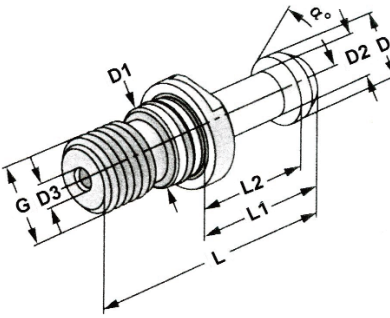
Anzugsbolzen Haas ähnlich JIS B 6399 (MAS 403 BT) um 3mm verkürzt

Pull studs Haas similar to JIS B 6399 (MAS 403 BT) shortened by 3mm

Typ B



Typ A



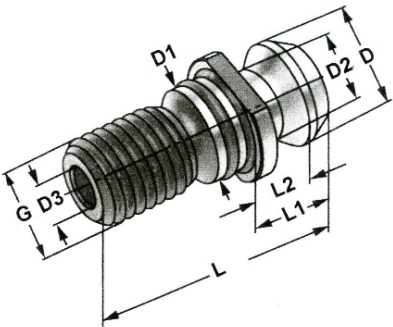
Bestell Nr. Code No.	Typ type	G α°	L mm	L1 mm	L2 mm	D mm	D1 mm	D2 mm	D3 mm
499.H45.011.057	B	M16-45°	57	32	25	15	17	10	~
499.H60.011.057	B	M16-60°	57	32	25	15	17	10	~
499.H90.011.057	B	M16-90°	57	32	25	15	17	10	~
499.H45.111.057	A	M16-45°	57	32	25	15	17	10	4
499.H60.111.057	A	M16-60°	57	32	25	15	17	10	4
499.H90.111.057	A	M16-90°	57	32	25	15	17	10	4



Anzugsbolzen ISO 7388

Pull studs ISO 7388

Typ A mit Durchgangsbohrung mit O-Ring

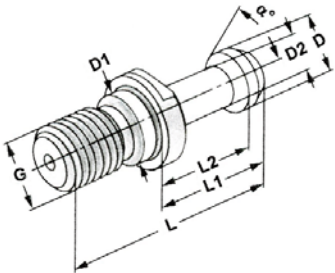


Typ B mit Durchgangsbohrung ohne O-Ring

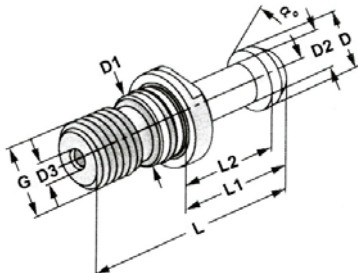
Bestell Nr. Code No.	Typ type	G	L mm	L1 mm	L2 mm	D mm	D1 mm	D2 mm	D3 mm
499.I40.011.455	B	M 16	44,5	16,4	11,15	18,95	17	12,95	~
499.I50.011.655	B	M 24	65,5	25,55	17,95	29,10	25	19,60	~
499.I40.111.445	A	M 16	44,5	16,4	11,15	18,95	17	12,95	7
499.I50.111.655	A	M 24	65,5	25,55	17,95	29,10	25	19,60	11,5

Anzugsbolzen JIS B 6399 (MAS 403 BT)

Pull studs JIS B 6399 (MAS 403 BT)



Typ B mit Durchgangsbohrung ohne O-Ring



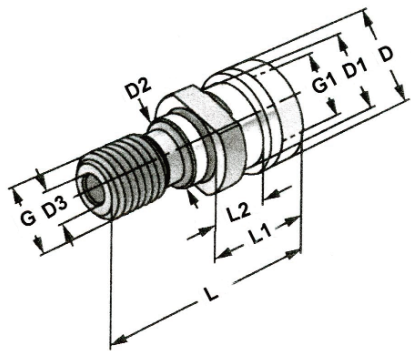
Typ A mit Durchgangsbohrung mit O-Ring

Bestell Nr. Code No.	Typ type	G α°	L mm	L1 mm	L2 mm	D mm	D1 mm	D2 mm	D3 mm
499.B45.011.043	B	M12-45°	43	23	18	11	12,5	7	~
499.B60.011.043	B	M12-60°	43	23	18	11	12,5	7	~
499.B45.011.060	B	M16-45°	60	35	28	15	17	10	~
499.B60.011.060	B	M16-60°	60	35	28	15	17	10	~
499.B90.011.060	B	M16-90°	60	35	28	15	17	10	~
499.B45.011.085	B	M24-45°	85	45	35	23	25	17	~
499.B60.011.085	B	M24-60°	85	45	35	23	25	17	~
499.B90.011.085	B	M24-90°	85	45	35	23	25	17	~
499.A45.011.043	A	M12-45°	43	23	18	11	12,5	7	2,5
499.A60.011.043	A	M12-60°	43	23	18	11	12,5	7	2,5
499.A45.011.060	A	M16-45°	60	35	28	15	17	10	4
499.A60.011.060	A	M16-60°	60	35	28	15	17	10	4
499.A90.011.060	A	M16-90°	60	35	28	15	17	10	4
499.A45.011.085	A	M24-45°	85	45	35	23	25	17	6
499.A60.011.085	A	M24-60°	85	45	35	23	25	17	6
499.A90.011.085	A	M24-90°	85	45	35	23	25	17	6



Anzugsbolzen DIN 2080 mit Ott-Ringnut

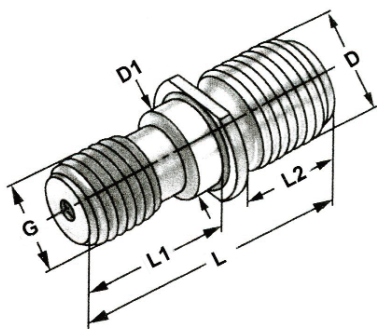
Pull studs DIN 2080 with Ott-groove



Bestell Nr. Code No.	G	G1	D mm	D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 mm
499.240.204.053	M16	M16	25	21,1	17	7	53	25,1	13,6
499.250.204.065	M24	M24	39,6	32	25	7	65,1	25,1	13,3

Anzugsbolzen S20x2

Pull studs S20x2

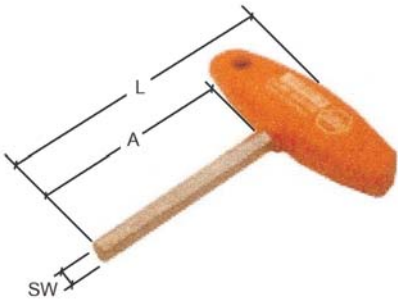


Bestell Nr. Code No.	G	L mm	L1 mm	L2 mm	D mm	D1 mm
499.S20.111.056	M16	56	28	19	S20x2	17

Inbusschlüssel

Wrench

Bestell Nr. Code No.	SW	A mm	L mm
920.000.SW4.100	4	70	100
920.000.SW5.100	5	90	100
920.000.SW6.100	6	90	100

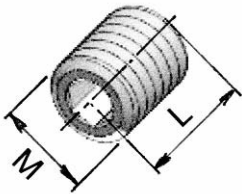




Spannschrauben für Weldon Spannfutter DIN 1835 B

Clamping screw for weldon chucks DIN 1835 B

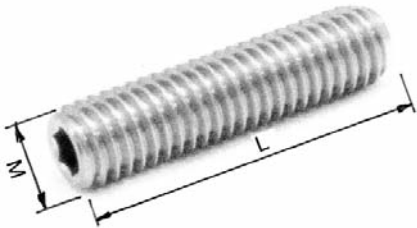
Bestell Nr. Code No.	M	L mm	für Ø for Ø
432.006.M06.010	M6x1	10	6
432.008.M08.010	M8x1,25	10	8
432.010.M10.012	M10x1,5	12	10
432.012.M12.016	M12x1,75	16	12
432.014.M12.016	M12x1,75	16	14
432.016.M14.016	M14x2	16	16
432.018.M14.016	M14x2	16	18
432.020.M16.016	M16x2	16	20
432.025.M18.020	M18x2	20	25
432.032.M20.020	M20x2	20	32
432.040.M20.020	M20x2	20	40



Anschlagschraube

Stop screw

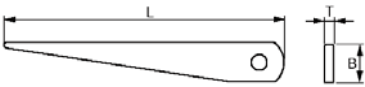
Bestell Nr. Code No.	M	L mm	für Ø for Ø
433.006.M05.016	M5	16	6
433.008.M06.016	M6	16	8
433.010.M08.020	M8	20	10
433.012.M10.025	M10	25	12
433.014.M10.025	M10	25	14
433.016.M12.025	M12	25	16
433.018.M12.025	M12	25	18
433.020.M16.025	M16	25	20
433.025.M20.030	M20	30	25
433.032.M20.030	M20	30	32
433.040.M20.030	M20	30	40



Austreiber

Drill drifts

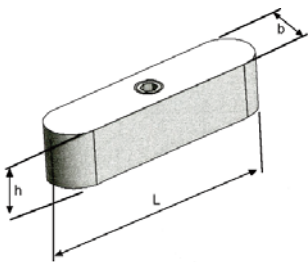
Bestell Nr. Code No.	MK	T mm	B mm	L mm
940.012.140	MK1+2	5	20	140
940.003.190	MK3	7	25	190
940.004.225	MK4	10	30	225



Paßfeder

Feather key

Bestell Nr. Code No.	M	h mm	b mm	L mm
941.016.020	M2x4	4	4	20
941.022.025	M3x5	6	6	25
941.027.025	M3x6	7	7	25
941.032.028	M3x6	8	7	28
941.040.032	M3x6	10	8	32

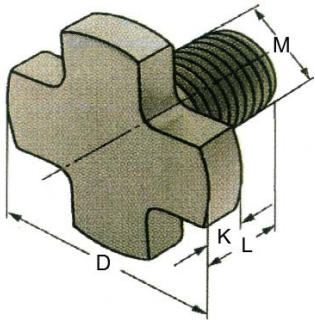




Fräseranzugsschraube DIN 6367

Drawn in bolt DIN 6367

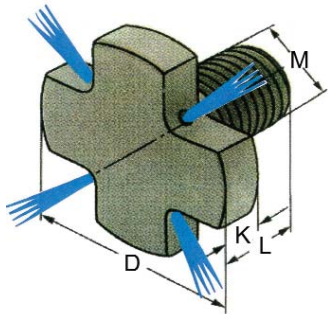
Bestell Nr. Code No.	für Ø for Ø	M	D mm	K mm	L mm
422.016.M08.016	16	M8	20	6	16
422.022.M10.018	22	M10	28	7	18
422.027.M12.022	27	M12	35	8	22
422.032.M16.026	32	M16	42	9	26
422.040.M20.030	40	M20	52	10	30
422.050.M24.036	50	M24	63	12	36
422.060.M30.045	60	M30	75	14	45



Fräseranzugsschraube DIN 6367 mit Kühlmittelzufuhr

Drawn in bolt DIN 6367 with coolant

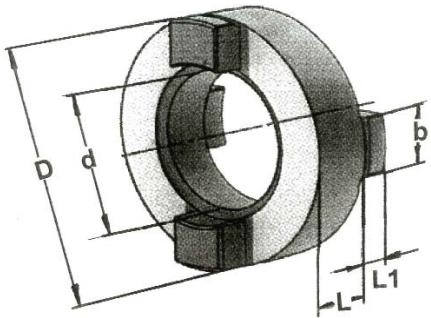
Bestell Nr. Code No.	für Ø for Ø	M	D mm	K mm	L mm
421.016.M08.016	16	M8	20	9	16
421.022.M10.018	22	M10	28	7	18
421.027.M12.022	27	M12	35	8	22
421.032.M16.026	32	M16	42	9	26
421.040.M20.030	40	M20	52	10	30
421.050.M24.036	50	M24	63	12	36
421.060.M30.045	60	M30	75	14	45



Mitnahmering DIN 6366

Clutch drive rings to DIN 6366

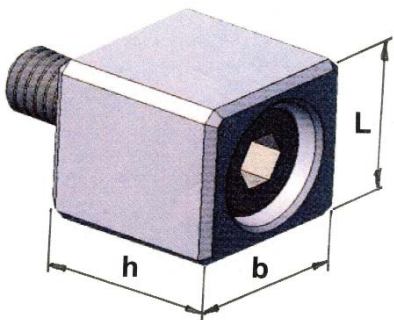
Bestell Nr. Code No.	d mm	D mm	L mm	b mm	L1 mm
424.016.032.010	16	32	10	8	5
424.022.040.012	22	40	12	10	5,6
424.027.048.012	27	48	12	12	6,3
424.032.058.014	32	58	14	14	7
424.040.070.014	40	70	14	16	8



Mitnehmersteine

Drive key

Bestell Nr. Code No.	für Ø for Ø	h mm	b mm	L mm	Schraube DIN 912
426.016.008.010	16	8	10	9,8	M3x12
426.022.010.011	22	10	11	11,2	M4x12
426.027.012.014	27	12	14	12,6	M4x16
426.032.014.022	32	14	22	14	M5x16
426.040.016.023	40	16	23	16	M5x20
426.050.018.032	50	18	32	18	M6x20
426.060.254.265	60	25,4	26,5	25	M12x25

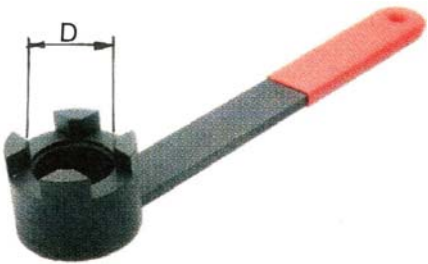




Spannschlüssel DIN 6368

Wrench DIN 6368

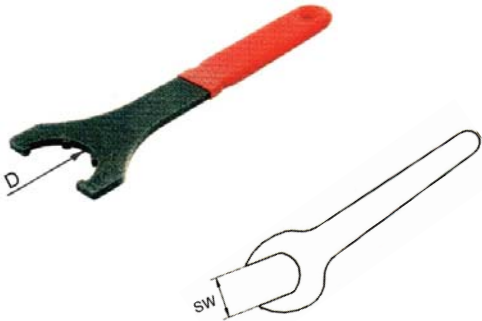
Bestell Nr. Code No.	D mm	für for
423.016.M08.000	16	M8
423.022.M10.000	22	M10
423.027.M12.000	27	M12
423.032.M16.000	32	M16
423.040.M20.000	40	M20
423.050.M24.000	50	M24
423.060.M30.000	60	M30



Spannschlüssel DIN 6368

Wrench DIN 6368

Bestell Nr. Code No.	Abmessung Size	D mm	SW mm
939.000.011.000	1-7 (ER11)	19	17
939.000.016.0SW	1-10 (ER16)	28	25
939.000.016.000	1-10 (ER16)	32	~
939.000.020.000	2-13 (ER20)	35	~
939.000.020.0SW	2-13 (ER20)	34	30
939.000.025.000	2-16 (ER25)	42	~
939.000.032.000	2-20 (ER32)	50	~
939.000.040.000	2-26 (ER40)	63	~



Spannschlüssel DIN 6368

Wrench DIN 6368

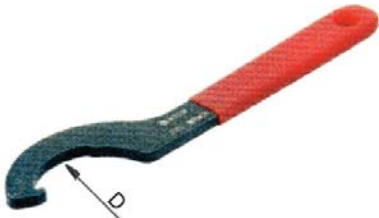
Bestell Nr. Code No.	Abmessung Size	D mm
938.000.008.000	1-5 (ER8)	12
938.000.011.000	1-7 (ER11)	16
938.000.016.000	1-10 (ER16)	22



Spannschlüssel DIN 6368

Wrench DIN 6368

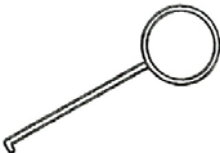
Bestell Nr. Code No.	Abmessung Size	D mm
925.000.040.042	2-16 (OZ16)	40-42
925.000.058.062	2-25 (OZ25)	58-62
925.000.068.075	3-32 (OZ32)	68-75



Spannschlüssel DIN 6368

Wrench DIN 6368

Bestell Nr. Code No.
943.499.040.206



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