

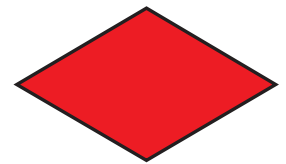
Werkzeughalter für CNC-Drehmaschinen DIN 69880 / DIN ISO 10889

Toolholders for CNC machines
DIN 69880 / DIN ISO 10889



Katalog Nr. 165
Catalogue No. 165





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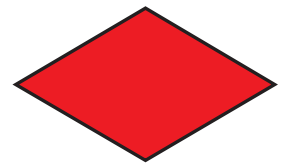
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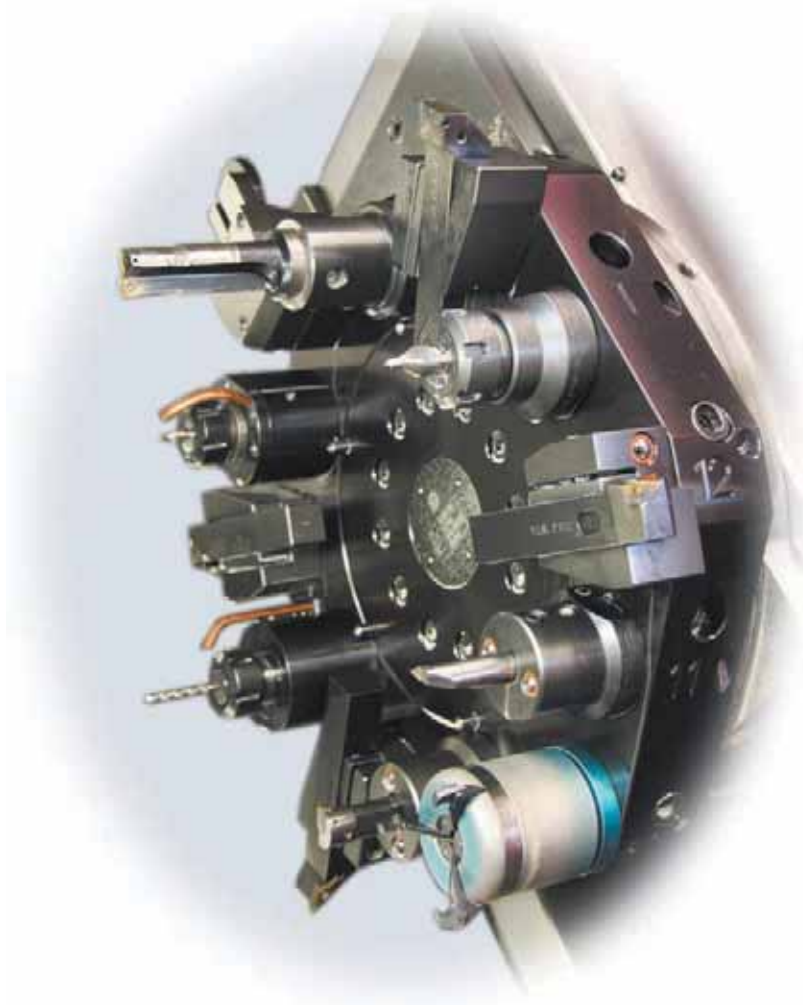
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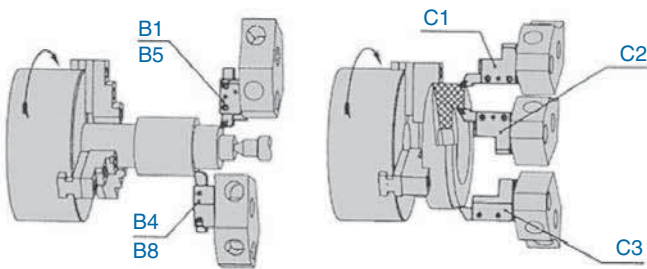
Produktgruppen Product groups	Seite Page
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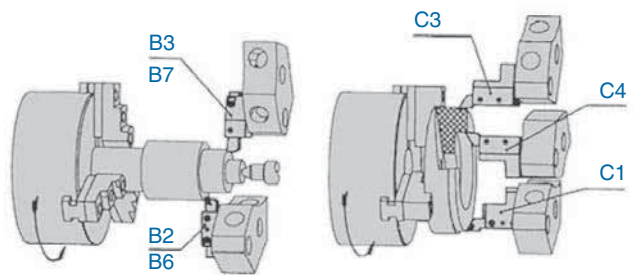
Scheibenrevolver
 Disk-turret



Werkzeugzuordnung für Scheibenrevolver
 Tool assignment for disk-turret



Einsatz von Werkzeughaltern bei **linker** Spindeldrehrichtung
 Application of toolholders with **anti-clockwise** spindle rotation



Einsatz von Werkzeughaltern bei **rechter** Spindeldrehrichtung
 Application of toolholders with **clockwise** spindle rotation

Werkstoff: Legierter Einsatzstahl mit einer Zugfestigkeit im Kern von min. 800 N/mm²

Material: Case hardened steel, tensile strength in the core min. 800 N/mm²

Ausführung: Einsatzgehärtet HRc 60 - 2 (HV 700 ± 50)
 Härtetiefe 0,8 mm - 0,2
 Brüniert und Präzisionsgeschliffen

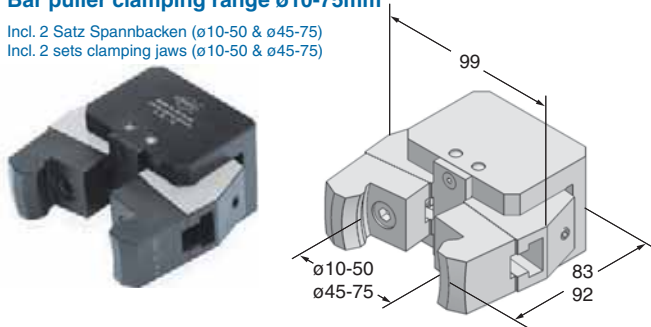
Execution: Case hardened HRc 60 - 2 (HV 700 ± 50)
 Depth of case 0,8 mm - 0,2
 Brown-finish end precision ground

Technische Änderungen vorbehalten

We reserve the right to make technical changes

Stangengreifer Spannereich $\varnothing 10-75\text{mm}$ Bar puller clamping range $\varnothing 10-75\text{mm}$

Incl. 2 Satz Spannbacken ($\varnothing 10-50$ & $\varnothing 45-75$)
Incl. 2 sets clamping jaws ($\varnothing 10-50$ & $\varnothing 45-75$)



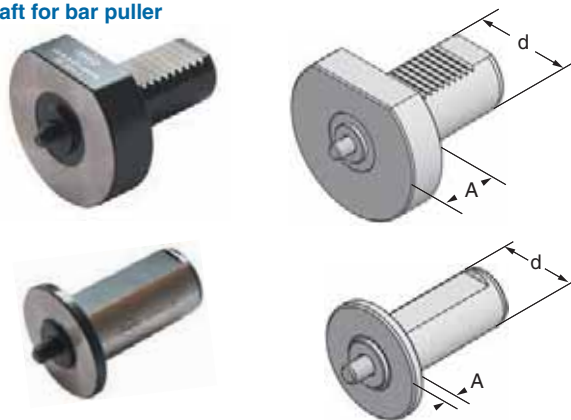
Art.-Nr.

30.0924 **excl. Schaft / excl. shank**

**Der Schaft muss separat bestellt werden!
The shank has to be ordered separately!**



Schaft für Stangengreifer Shaft for bar puller



Art.-Nr.

Art.-Nr.	d	A
30.0924-2	VDI 20	15
30.0924-3	VDI 30	20
30.0924-4	VDI 40	20
30.0924-5	VDI 50	20

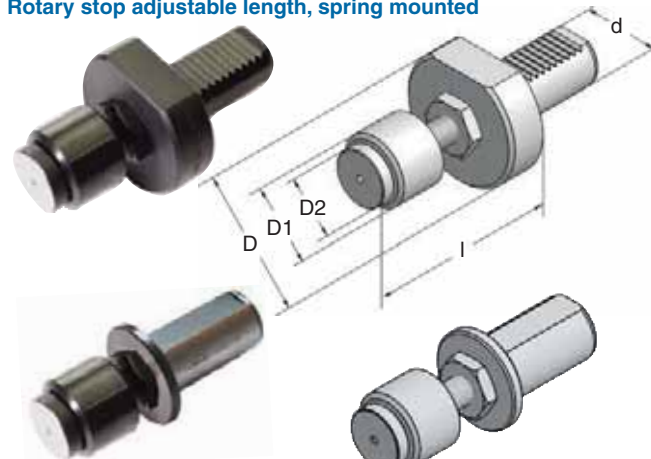
Zylinderschaft

Art.-Nr.	d	A
30.0924-25	zyl.25	5
30.0924-30	zyl.30	5
30.0924-32	zyl.32	5
30.0924-40	zyl.40	5
30.0924-50	zyl.50	0

INCH

30.0924-38,1	zyl.1 1/2"	5
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Mitlaufender Anschlag längeneinstellbar, gefedert Rotary stop adjustable length, spring mounted



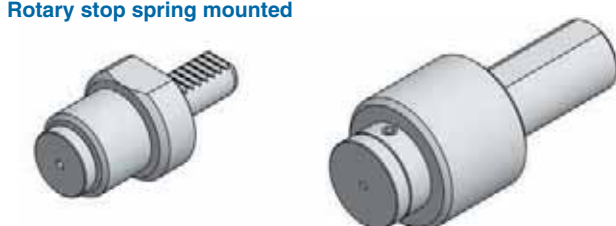
Art.-Nr.

Art.-Nr.	Typ	d	D	D1	D2	l
25.30.355	VDI 25	25	58	38	25	65-100
30.38.355	VDI 30	30	68	38	25	65-100
40.60.355	VDI 40	40	83	60	40	80-150
50.60.355	VDI 50	50	98	60	40	80-150

Zylinderschaft

Art.-Nr.	Typ	d	D	D1	D2	l
32.38.355	zyl. 32	32	44	38	25	50-85

Mitlaufender Anschlag gefedert Rotary stop spring mounted



Art.-Nr.

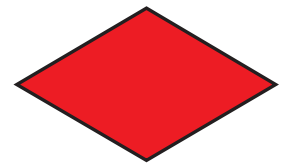
20.30.355	VDI 20	20	50	38	25	55
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Zylinderschaft

Art.-Nr.	Typ	d	D	D1	D2	l
32.60.355	zyl. 32	32	-	60	40	69

Werkzeughalter für CNC-Drehmaschinen DIN 69880 / DIN ISO 10889

Toolholders for CNC machines DIN 69880 / DIN ISO 10889



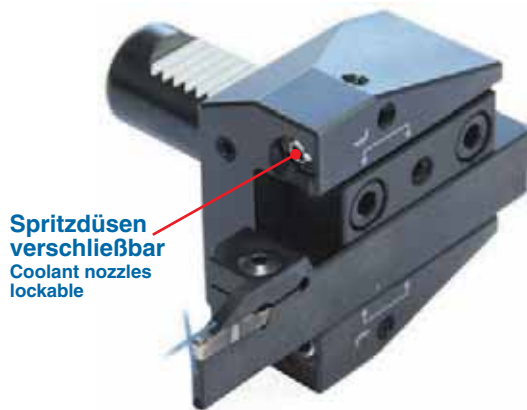
Radial-Werkzeughalter Form B1-B4 mit Innenkühlung

- für Klemmhalter mit Kühlmittelzufuhr **direkt zur Schneide**
- für ISO-Klemmhalter **mit Pratzenklemmung zur optimalen Kühlung der Schneide**
- mit Doppelverzahnung / Kühlmitteldruck bis 100 bar

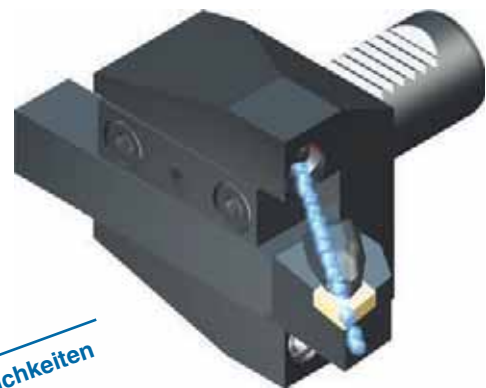
Radial toolholders form B1-B4 with internal coolant

- for clamping holders with coolant channels **directly to the cutting edge**
- for ISO-clamping holders **with claw clamping for best possible coolant supply**
- with double toothing / coolant pressure up to 100 bar

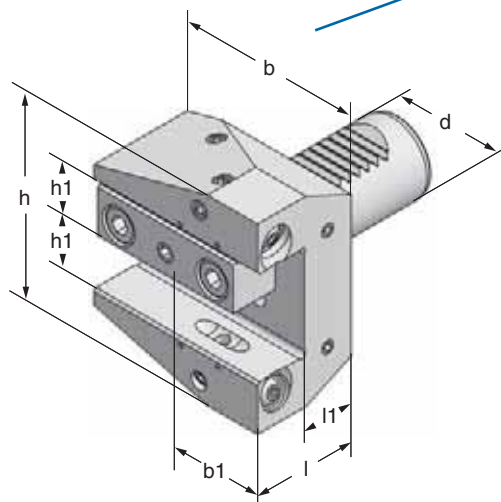
Lieferumfang ohne Werkzeug
Delivery without tool



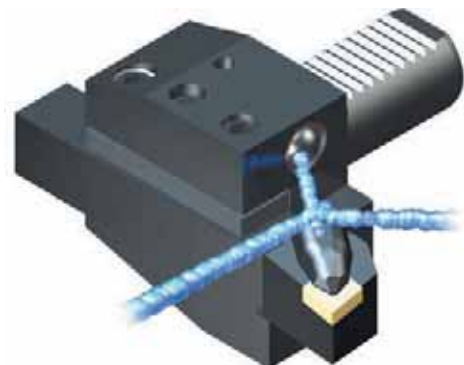
Spritzdüsen
verschließbar
Coolant nozzles
lockable



Ein Drehhalter - vier Einsatzmöglichkeiten
Form B1, B2, B3, B4
links - rechts - vorkopf - überkopf
One turning-toolholder - four possibilities
Form B1, B2, B3, B4
left - right - forehead - overhead



Ehemaliger Standard DIN ISO:



keine direkte Kühlung
der Schneide möglich

Art.-Nr.	Typ	d	b	b1	h	h1	l	l1
30.20.063	B1-B4-30Dx20x40	30	70	35,0	78	20	40	20
40.25.063	B1-B4-40Dx25x47	40	85	42,5	94	25	47	22
50.25.063	B1-B4-50Dx25x55	50	98	49,0	120	25	55	30

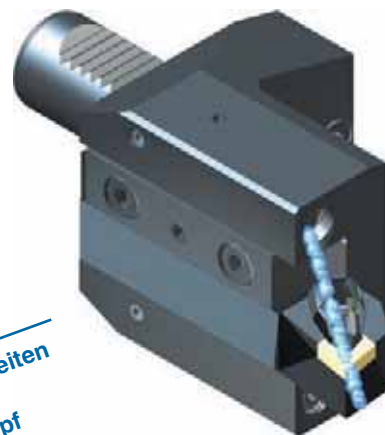
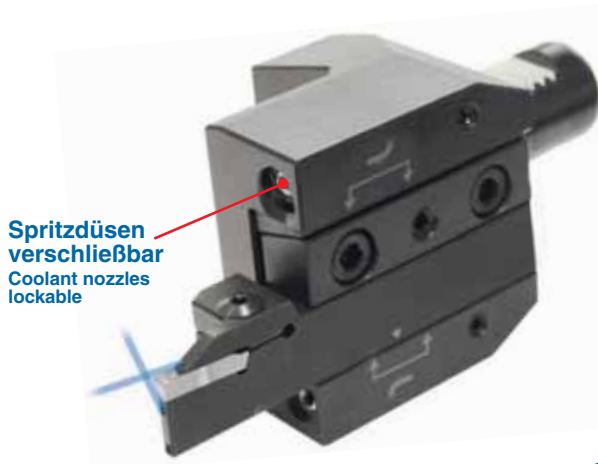
Axial-Werkzeughalter Form C1-C4 mit Innenkühlung

- für Klemmhalter mit Kühlmittelzufuhr **direkt zur Schneide**
- für ISO-Klemmhalter **mit Pratzenklemmung zur optimalen Kühlung der Schneide**
- mit Doppelverzahnung / Kühlmitteldruck bis 100 bar

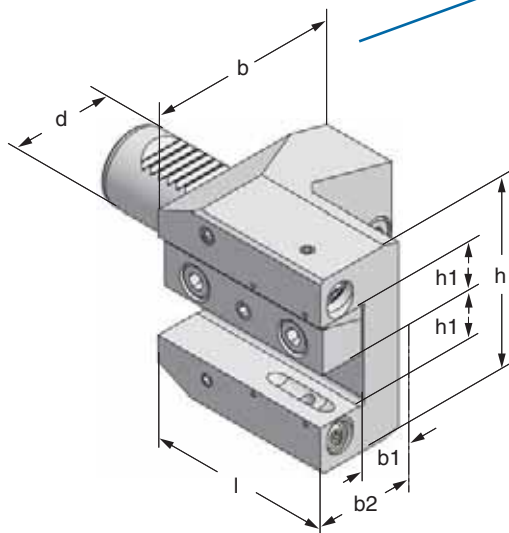
Axial toolholders form C1-C4 with internal coolant

- for clamping holders with coolant channels **directly to the cutting edge**
- for ISO-clamping holders **with claw clamping for best possible coolant supply**
- with double toothing / coolant pressure up to 100 bar

Lieferumfang ohne Werkzeug
Delivery without tool



Ein Drehhalter - vier Einsatzmöglichkeiten
Form C1, C2, C3, C4
links - rechts - vorkopf - überkopf
One turning-toolholder - four possibilities
Form C1, C2, C3, C4
left - right - forehead - overhead



Ehemaliger Standard DIN ISO:



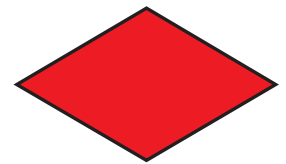
keine direkte Kühlung der Schneide möglich


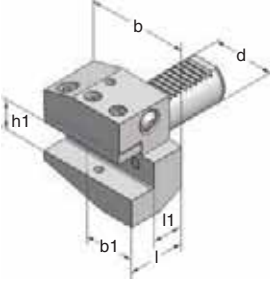

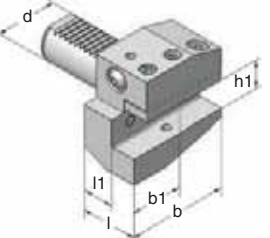

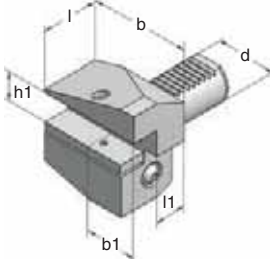

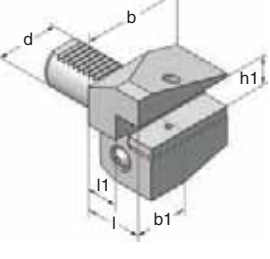
Art.-Nr.	Typ	d	b	b1	b2	h	h1	l
30.20.043	C1-C4-30Dx20x 75	30	78	23,0	43,0	78	20	75
40.25.043	C1-C4-40Dx25x 90	40	94	27,5	52,5	94	25	90
50.25.043	C1-C4-50Dx25x100	50	105	38,0	63,0	100	25	100


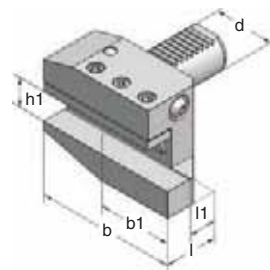

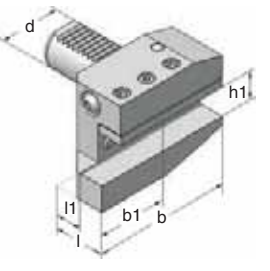

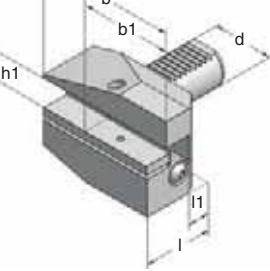

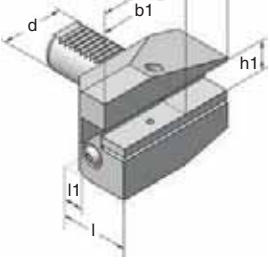
Werkzeughalter für CNC-Drehmaschinen

DIN 69880 / DIN ISO 10889

Toolholders for CNC machines DIN 69880 / DIN ISO 10889



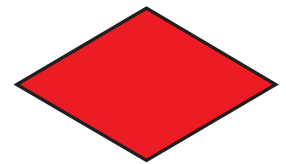
Radial-Werkzeughalter Form B1 kurz Radial toolholders form B1 short		Art.-Nr.	Typ	d	b	b1	h1	l	l1	
  <p>Kühlmittelzufuhr extern Coolant supply external</p>		16.12.060	B1-16x12x24	16	42	23	12	24	13	
		20.16.060	B1-20x16x30	20	55	30	16	30	16	
		25.16.060	B1-25x16x30	25	55	30	16	30	16	
		30.20.060	B1-30x20x40	30	70	35	20	40	22	
		30.25.060	B1-30x25x44	30	70	35	25	44	22	
		40.25.060	B1-40x25x44	40	85	42,5	25	44	22	
		50.32.060	B1-50x32x55	50	100	50	32	55	30	
		60.32.060	B1-60x32x60	60	125	62,5	32	60	30	
					INCH					
			307206	B1-30x3/4"x40	30	70	35	3/4"	40	22
		343206	B1-30x1" x44	30	70	35	1"	44	22	
		407206	B1-40x1" x44	40	85	42,5	1"	44	22	
		507206	B1-50x1 1/4"x55	50	100	50	1 1/4"	55	30	
Radial-Werkzeughalter Form B2 kurz Radial toolholders form B2 short		Art.-Nr.	Typ	d	b	b1	h1	l	l1	
  <p>Kühlmittelzufuhr extern Coolant supply external</p>		16.12.090	B2-16x12x24	16	42	23	12	24	13	
		20.16.090	B2-20x16x30	20	55	30	16	30	16	
		25.16.090	B2-25x16x30	25	55	30	16	30	16	
		30.20.090	B2-30x20x40	30	70	35	20	40	22	
		30.25.090	B2-30x25x44	30	70	35	25	44	22	
		40.25.090	B2-40x25x44	40	85	42,5	25	44	22	
		50.32.090	B2-50x32x55	50	100	50	32	55	30	
		60.32.090	B2-60x32x60	60	125	62,5	32	60	30	
					INCH					
			308206	B2-30x3/4"x40	30	70	35	3/4"	40	22
		344206	B2-30x1" x44	30	70	35	1"	44	22	
		408206	B2-40x1" x44	40	85	42,5	1"	44	22	
		508206	B2-50x1 1/4"x55	50	100	50	1 1/4"	55	30	
Radial-Werkzeughalter Form B3 kurz Radial toolholders form B3 short		Art.-Nr.	Typ	d	b	b1	h1	l	l1	
  <p>Kühlmittelzufuhr extern Coolant supply external</p>		16.12.070	B3-16x12x24	16	42	23	12	24	13	
		20.16.070	B3-20x16x30	20	55	30	16	30	16	
		25.16.070	B3-25x16x30	25	55	30	16	30	16	
		30.20.070	B3-30x20x40	30	70	35	20	40	22	
		30.25.070	B3-30x25x44	30	70	35	25	44	22	
		40.25.070	B3-40x25x44	40	85	42,5	25	44	22	
		50.32.070	B3-50x32x55	50	100	50	32	55	30	
		60.32.070	B3-60x32x60	60	125	62,5	32	60	30	
					INCH					
			309206	B3-30x3/4"x40	30	70	35	3/4"	40	22
		345206	B3-30x1" x44	30	70	35	1"	44	22	
		409206	B3-40x1" x44	40	85	42,5	1"	44	22	
		509206	B3-50x1 1/4"x55	50	100	50	1 1/4"	55	30	
Radial-Werkzeughalter Form B4 kurz Radial toolholders form B4 short		Art.-Nr.	Typ	d	b	b1	h1	l	l1	
  <p>Kühlmittelzufuhr extern Coolant supply external</p>		16.12.080	B4-16x12x24	16	42	23	12	24	13	
		20.16.080	B4-20x16x30	20	55	30	16	30	16	
		25.16.080	B4-25x16x30	25	55	30	16	30	16	
		30.20.080	B4-30x20x40	30	70	35	20	40	22	
		40.25.080	B4-40x25x44	40	85	42,5	25	44	22	
		50.32.080	B4-50x32x55	50	100	50	32	55	30	
		60.32.080	B4-60x32x60	60	125	62,5	32	60	30	
					INCH					
			310206	B4-30x3/4"x40	30	70	35	3/4"	40	22
			410206	B4-40x1" x44	40	85	42,5	1"	44	22
		510206	B4-50x1 1/4"x55	50	100	50	1 1/4"	55	30	


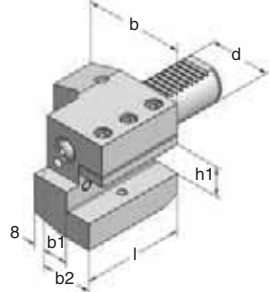

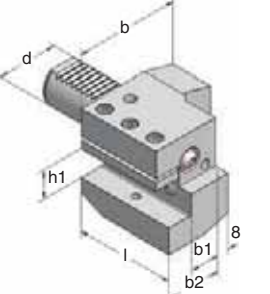

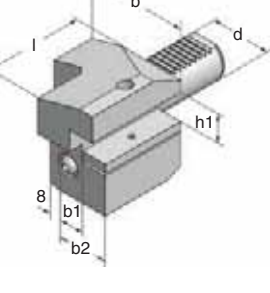

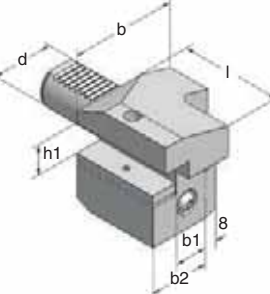
Radial-Werkzeughalter Form B5 lang Radial toolholders form B5 long		Art.-Nr.	Typ	d	b	b1	h1	l	l1	
Kühlmittelzufuhr extern Coolant supply external			16.12.100	B5-16x12x24	16	58	39	12	24	13
			20.16.100	B5-20x16x30	20	75	50	16	30	16
			30.20.100	B5-30x20x40	30	97	63	20	40	22
			30.20.100-60	B5-30x20x60	30	97	63	20	60	42
			30.25.100	B5-30x25x44	30	97	63	25	44	22
			40.25.100	B5-40x25x44	40	107	66	25	44	22
			50.32.100	B5-50x32x55	50	130	80	32	55	30
			60.32.100	B5-60x32x60	60	145	82	32	60	30
			INCH							
			411206	B5-40x1" x44	40	107	66	1"	44	22
			511206	B5-50x1 1/4"x55	50	130	80	1 1/4"	55	30
Radial-Werkzeughalter Form B6 lang Radial toolholders form B6 long		Art.-Nr.	Typ	d	b	b1	h1	l	l1	
Kühlmittelzufuhr extern Coolant supply external			16.12.130	B6-16x12x24	16	58	39	12	24	13
			20.16.130	B6-20x16x30	20	75	50	16	30	16
			30.20.130	B6-30x20x40	30	100	65	20	40	22
			40.25.130	B6-40x25x44	40	107	66	25	44	22
			50.32.130	B6-50x32x55	50	130	80	32	55	30
			60.32.130	B6-60x32x60	60	145	82	32	60	30
			INCH							
			412206	B6-40x1" x44	40	107	66	1"	44	22
			512206	B6-50x1 1/4"x55	50	130	80	1 1/4"	55	30
Radial-Werkzeughalter Form B7 lang Radial toolholders form B7 long		Art.-Nr.	Typ	d	b	b1	h1	l	l1	
Kühlmittelzufuhr extern Coolant supply external			16.12.110	B7-16x12x24	16	58	39	12	24	13
			20.16.110	B7-20x16x30	20	75	50	16	30	16
			30.20.110	B7-30x20x40	30	100	65	20	40	22
			40.25.110	B7-40x25x44	40	107	66	25	44	22
			50.32.110	B7-50x32x55	50	130	80	32	55	30
			60.32.110	B7-60x32x60	60	145	82	32	60	30
			INCH							
			413206	B7-40x1" x44	40	107	66	1"	44	22
			513206	B7-50x1 1/4"x55	50	130	80	1 1/4"	55	30
Radial-Werkzeughalter Form B8 lang Radial toolholders form B8 long		Art.-Nr.	Typ	d	b	b1	h1	l	l1	
Kühlmittelzufuhr extern Coolant supply external			16.12.120	B8-16x12x24	16	58	39	12	24	13
			20.16.120	B8-20x16x30	20	75	50	16	30	16
			30.20.120	B8-30x20x40	30	100	65	20	40	22
			40.25.120	B8-40x25x44	40	107	66	25	44	22
			50.32.120	B8-50x32x55	50	130	80	32	55	30
			60.32.120	B8-60x32x60	60	145	82	32	60	30
			INCH							
			414206	B8-40x1" x44	40	107	66	1"	44	22
			514206	B8-50x1 1/4"x55	50	130	80	1 1/4"	55	30

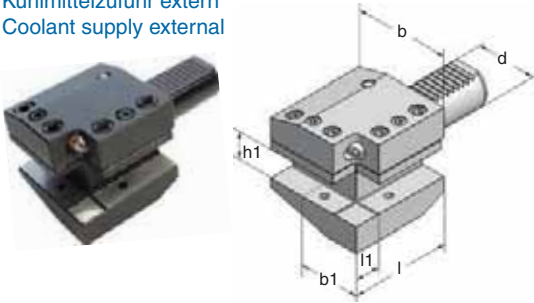
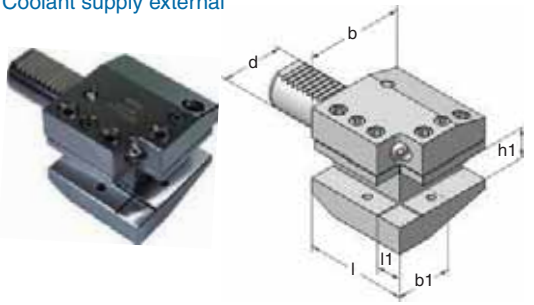
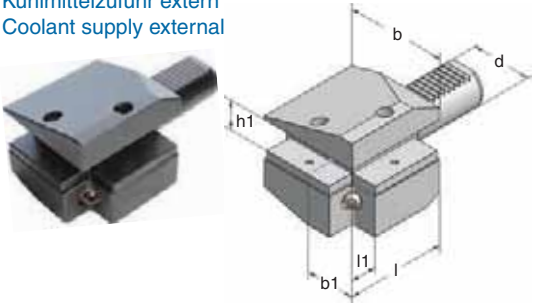
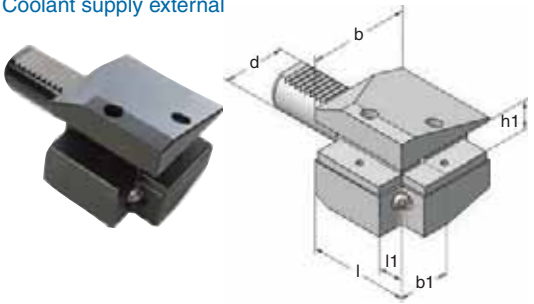
Werkzeughalter für CNC-Drehmaschinen

DIN 69880 / DIN ISO 10889

Toolholders for CNC machines DIN 69880 / DIN ISO 10889



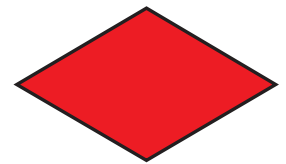
Axial-Werkzeughalter Form C1 Axial toolholders form C1 Kühlmittelzufuhr extern Coolant supply external		Art.-Nr.	Typ	d	b	b1	b2	h1	l	
 	16.12.020	C1-16x12x 44	16	43	13,0	25	12	44		
	20.16.020	C1-20x16x 50	20	65	25,5	40	16	50		
	25.20.020	C1-25x20x 55	25	58	15,0	33	20	55		
	25.25.020	C1-25x25x 75	25	65	18,5	40	25	75		
	30.20.020	C1-30x20x 70	30	70	17,0	35	20	70		
	30.25.021	C1/C4-30x25x70*	30	77	21,0	43	25	70		
	40.25.020	C1-40x25x 85	40	85	20,5	42,5	25	85		
	50.32.020	C1-50x32x100	50	100	25,5	50	32	100		
	60.32.020	C1-60x32x125	60	125	32,5	62,5	32	125		
	* Doppelverzahnung / Double toothing									
	INCH									
	303206	C1-30x3/4"x 70	30	70	17,0	35	3/4"	70		
	403206	C1-40x1" x 85	40	85	20,5	42,5	1"	85		
	Axial-Werkzeughalter Form C2 Axial toolholders form C2 Kühlmittelzufuhr extern Coolant supply external		Art.-Nr.	Typ	d	b	b1	b2	h1	l
	 	16.12.050	C2-16x12x 44	16	43	13,0	25	12	44	
		20.16.050	C2-20x16x 50	20	65	25,5	40	16	50	
		25.20.050	C2-25x20x 55	25	58	19,0	37	20	55	
		25.25.050	C2-25x25x 75	25	65	18,5	40	25	75	
		30.20.050	C2-30x20x 70	30	73	21,0	39	20	70	
		30.25.051	C2/C3-30x25x70*	30	77	21,0	43	25	70	
40.25.050		C2-40x25x 85	40	88	25,5	47,5	25	85		
50.32.050		C2-50x32x100	50	105	30,0	55	32	100		
60.32.050		C2-60x32x125	60	125	32,5	62,5	32	125		
* Doppelverzahnung / Double toothing										
INCH										
304206		C2-30x3/4"x 70	30	73	21,0	39	3/4"	70		
404206		C2-40x1" x 85	40	88	25,5	47,5	1"	85		
Axial-Werkzeughalter Form C3 Axial toolholders form C3 Kühlmittelzufuhr extern Coolant supply external		Art.-Nr.	Typ	d	b	b1	b2	h1	l	
 		16.12.030	C3-16x12x 44	16	43	13,0	25	12	44	
		20.16.030	C3-20x16x 50	20	65	25,5	40	16	50	
		25.20.030	C3-25x20x 55	25	58	15,0	33	20	55	
		25.25.030	C3-25x25x 75	25	65	18,5	40	25	75	
		30.20.030	C3-30x20x 70	30	70	17,0	35	20	70	
		30.25.051	C2/C3-30x25x70*	30	77	21,0	43	25	70	
	40.25.030	C3-40x25x 85	40	85	20,5	42,5	25	85		
	50.32.030	C3-50x32x100	50	100	25,5	50	32	100		
	60.32.030	C3-60x32x125	60	125	32,5	62,5	32	125		
	* Doppelverzahnung / Double toothing									
	INCH									
	305206	C3-30x3/4"x 70	30	70	20,5	35	3/4"	70		
	405206	C3-40x1" x 85	40	85	25,5	42,5	1"	85		
	Axial-Werkzeughalter Form C4 Axial toolholders form C4 Kühlmittelzufuhr extern Coolant supply external		Art.-Nr.	Typ	d	b	b1	b2	h1	l
	 	16.12.040	C4-16x12x 44	16	43	13,0	25	12	44	
		20.16.040	C4-20x16x 50	20	65	25,5	40	16	50	
		25.20.040	C4-25x20x 55	25	62	19,0	37	20	55	
		25.25.040	C4-25x25x 75	25	65	18,5	40	25	75	
		30.20.040	C4-30x20x 70	30	73	23,0	41	20	70	
		30.25.021	C1/C4-30x25x70*	30	77	21,0	43	25	70	
40.25.040		C4-40x25x 85	40	88	25,5	47,5	25	85		
50.32.040		C4-50x32x100	50	105	30,0	55	32	100		
60.32.040		C4-60x32x125	60	125	32,5	62,5	32	125		
* Doppelverzahnung / Double toothing										
INCH										
306206		C4-30x3/4"x 70	30	73	23,0	41	3/4"	70		
406206		C4-40x1" x 85	40	88	25,5	47,5	1"	85		

<p>Radial-Axial-Werkzeughalter Form B1/C1 Radial-axial toolholders form B1/C1</p> <p>Kühlmittelzufuhr extern Coolant supply external</p> 	<table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d</th> <th>b</th> <th>b1</th> <th>h1</th> <th>l</th> <th>l1</th> </tr> </thead> <tbody> <tr> <td>20.16.150</td> <td>B1/C1-20x16x</td> <td>50</td> <td>20</td> <td>65</td> <td>40,0</td> <td>16</td> <td>50</td> <td>14</td> </tr> <tr> <td>30.20.150</td> <td>B1/C1-30x20x</td> <td>70</td> <td>30</td> <td>70</td> <td>35,0</td> <td>20</td> <td>70</td> <td>18</td> </tr> <tr> <td>50.32.150</td> <td>B1/C1-50x32x120</td> <td>50</td> <td>100</td> <td>50,0</td> <td>32</td> <td>120</td> <td>25</td> </tr> <tr> <td>60.32.150</td> <td>B1/C1-60x32x135</td> <td>60</td> <td>125</td> <td>62,5</td> <td>32</td> <td>135</td> <td>30</td> </tr> </tbody> </table> <p>40.25.150/180B1/C1+B4/C4-40x25x100*</p> <p>* Doppelverzahnung / Double toothing</p>	Art.-Nr.	Typ	d	b	b1	h1	l	l1	20.16.150	B1/C1-20x16x	50	20	65	40,0	16	50	14	30.20.150	B1/C1-30x20x	70	30	70	35,0	20	70	18	50.32.150	B1/C1-50x32x120	50	100	50,0	32	120	25	60.32.150	B1/C1-60x32x135	60	125	62,5	32	135	30
Art.-Nr.	Typ	d	b	b1	h1	l	l1																																				
20.16.150	B1/C1-20x16x	50	20	65	40,0	16	50	14																																			
30.20.150	B1/C1-30x20x	70	30	70	35,0	20	70	18																																			
50.32.150	B1/C1-50x32x120	50	100	50,0	32	120	25																																				
60.32.150	B1/C1-60x32x135	60	125	62,5	32	135	30																																				
<p>Radial-Axial-Werkzeughalter Form B2/C2 Radial-axial toolholders form B2/C2</p> <p>Kühlmittelzufuhr extern Coolant supply external</p> 	<table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d</th> <th>b</th> <th>b1</th> <th>h1</th> <th>l</th> <th>l1</th> </tr> </thead> <tbody> <tr> <td>20.16.160</td> <td>B2/C2-20x16x</td> <td>50</td> <td>20</td> <td>65</td> <td>40,0</td> <td>16</td> <td>50</td> <td>14</td> </tr> <tr> <td>30.20.160</td> <td>B2/C2-30x20x</td> <td>70</td> <td>30</td> <td>72</td> <td>39,0</td> <td>20</td> <td>70</td> <td>18</td> </tr> <tr> <td>50.32.160</td> <td>B2/C2-50x32x120</td> <td>50</td> <td>105</td> <td>55,0</td> <td>32</td> <td>120</td> <td>25</td> </tr> <tr> <td>60.32.160</td> <td>B2/C2-60x32x135</td> <td>60</td> <td>125</td> <td>62,5</td> <td>32</td> <td>135</td> <td>30</td> </tr> </tbody> </table> <p>40.25.160/170B2/C2+B3/C3-40x25x100*</p> <p>* Doppelverzahnung / Double toothing</p>	Art.-Nr.	Typ	d	b	b1	h1	l	l1	20.16.160	B2/C2-20x16x	50	20	65	40,0	16	50	14	30.20.160	B2/C2-30x20x	70	30	72	39,0	20	70	18	50.32.160	B2/C2-50x32x120	50	105	55,0	32	120	25	60.32.160	B2/C2-60x32x135	60	125	62,5	32	135	30
Art.-Nr.	Typ	d	b	b1	h1	l	l1																																				
20.16.160	B2/C2-20x16x	50	20	65	40,0	16	50	14																																			
30.20.160	B2/C2-30x20x	70	30	72	39,0	20	70	18																																			
50.32.160	B2/C2-50x32x120	50	105	55,0	32	120	25																																				
60.32.160	B2/C2-60x32x135	60	125	62,5	32	135	30																																				
<p>Radial-Axial-Werkzeughalter Form B3/C3 Radial-axial toolholders form B3/C3</p> <p>Kühlmittelzufuhr extern Coolant supply external</p> 	<table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d</th> <th>b</th> <th>b1</th> <th>h1</th> <th>l</th> <th>l1</th> </tr> </thead> <tbody> <tr> <td>30.20.170</td> <td>B3/C3-30x20x</td> <td>70</td> <td>30</td> <td>70</td> <td>35,0</td> <td>20</td> <td>70</td> <td>18</td> </tr> <tr> <td>50.32.170</td> <td>B3/C3-50x32x120</td> <td>50</td> <td>100</td> <td>50,0</td> <td>32</td> <td>120</td> <td>25</td> </tr> <tr> <td>60.32.170</td> <td>B3/C3-60x32x135</td> <td>60</td> <td>125</td> <td>62,5</td> <td>32</td> <td>135</td> <td>30</td> </tr> </tbody> </table> <p>40.25.160/170B2/C2+B3/C3-40x25x100*</p> <p>* Doppelverzahnung / Double toothing</p>	Art.-Nr.	Typ	d	b	b1	h1	l	l1	30.20.170	B3/C3-30x20x	70	30	70	35,0	20	70	18	50.32.170	B3/C3-50x32x120	50	100	50,0	32	120	25	60.32.170	B3/C3-60x32x135	60	125	62,5	32	135	30									
Art.-Nr.	Typ	d	b	b1	h1	l	l1																																				
30.20.170	B3/C3-30x20x	70	30	70	35,0	20	70	18																																			
50.32.170	B3/C3-50x32x120	50	100	50,0	32	120	25																																				
60.32.170	B3/C3-60x32x135	60	125	62,5	32	135	30																																				
<p>Radial-Axial-Werkzeughalter Form B4/C4 Radial-axial toolholders form B4/C4</p> <p>Kühlmittelzufuhr extern Coolant supply external</p> 	<table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d</th> <th>b</th> <th>b1</th> <th>h1</th> <th>l</th> <th>l1</th> </tr> </thead> <tbody> <tr> <td>30.20.180</td> <td>B4/C4-30x20x</td> <td>70</td> <td>30</td> <td>74</td> <td>39,0</td> <td>20</td> <td>70</td> <td>18</td> </tr> <tr> <td>50.32.180</td> <td>B4/C4-50x32x120</td> <td>50</td> <td>105</td> <td>55,0</td> <td>32</td> <td>120</td> <td>25</td> </tr> <tr> <td>60.32.180</td> <td>B4/C4-60x32x135</td> <td>60</td> <td>125</td> <td>62,5</td> <td>32</td> <td>135</td> <td>30</td> </tr> </tbody> </table> <p>40.25.150/180B1/C1+B4/C4-40x25x100*</p> <p>* Doppelverzahnung / Double toothing</p>	Art.-Nr.	Typ	d	b	b1	h1	l	l1	30.20.180	B4/C4-30x20x	70	30	74	39,0	20	70	18	50.32.180	B4/C4-50x32x120	50	105	55,0	32	120	25	60.32.180	B4/C4-60x32x135	60	125	62,5	32	135	30									
Art.-Nr.	Typ	d	b	b1	h1	l	l1																																				
30.20.180	B4/C4-30x20x	70	30	74	39,0	20	70	18																																			
50.32.180	B4/C4-50x32x120	50	105	55,0	32	120	25																																				
60.32.180	B4/C4-60x32x135	60	125	62,5	32	135	30																																				

Werkzeughalter für CNC-Drehmaschinen

DIN 69880 / DIN ISO 10889

Toolholders for CNC machines DIN 69880 / DIN ISO 10889



Mehrfachaufnahmen Form D1/D2

Multiple toolholders form D1/D2

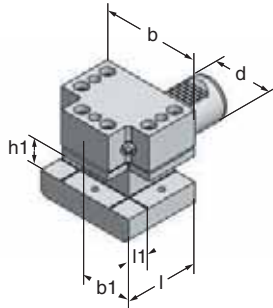
Doppelverzahnung / Double toothing

Kühlmittelzufuhr extern

Coolant supply external



Lage D1



Lage D2

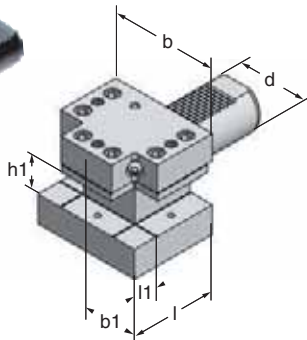
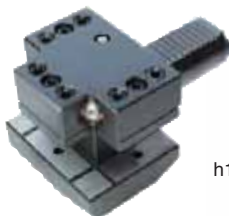
Art.-Nr.	Typ	d	b	b1	h1	l	l1
25.16.151/171	D1/D2-25Dx16	25	66	33,0	16	48	14
30.20.151/171	D1/D2-30Dx20	30	78	39,0	20	60	18
40.25.151/171	D1/D2-40Dx25	40	95	47,5	25	72	22

Mehrfachaufnahmen Form D1

Multiple toolholders form D1

Kühlmittelzufuhr extern

Coolant supply external



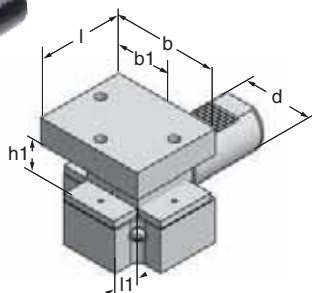
Art.-Nr.	Typ	d	b	b1	h1	l	l1
50.32.151	D1-50x32x 85	50	105	52,5	32	85	25
60.32.151	D1-60x32x110	60	115	57,5	32	110	25

Mehrfachaufnahmen Form D2

Multiple toolholders form D2

Kühlmittelzufuhr extern

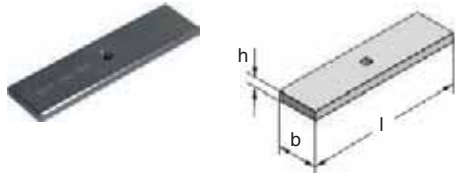
Coolant supply external



Art.-Nr.	Typ	d	b	b1	h1	l	l1
50.32.171	D2-50x32x 85	50	105	52,5	32	85	25
60.32.171	D2-60x32x110	60	115	57,5	32	110	25

Unterlegplatten

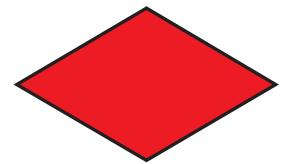
Shims



Art.-Nr.	für Typ	l	bxh
314101	20.16.020 .030 .040 .050	54	14x4
315101	20.16.060 .070 .080 .090	49	14x4
303101	20.16.100 .110 .120 .130	74	14x4
324101	20.16.150 .160 (2 Stück)	49/64	14x4
304101	30.20.020 .030 .040 .050 .060 .070 .080 .090	69	18x4
309101	30.20.100 .110 .120 .130	97	18x4
304101	30.20.150 .160 .170 .180	69	18x4
310101	40.25.020 .030 .040 .050 .060 .070 .080 .090	84	22x5
311101	40.25.100 .110 .120 .130	106	22x5
326101	40.25.150/180 40.25.160/170 (2 Stück)	86/99	22x5
387101	40.25.151/171		
306101	50.32.020 .030	99	24x7
301101	50.32.040 .050 .060 .070 .080 .090	98	25x7
305101	50.32.100 .110 .102 .130	128	25x7
331101	50.32.150 .170 (2 Stück)	99/119	24x7
327101	50.32.160 .180 (2 Stück)	104/119	25x7
388101	50.32.151 .171	84	25x7
312101	60.32.020 .030 .040 .050 .060 .070 .080 .090	124	30x7
313101	60.32.100 .110 .120 .130	144	30x7
312101	60.32.150 .160 .170 .180	124	30x7
389101	60.32.151 .171	109	25x7

Werkzeughalter für CNC-Drehmaschinen DIN 69880 / DIN ISO 10889

Toolholders for CNC machines DIN 69880 / DIN ISO 10889



Spannzangenhalter Form E4 für Spannzangen ER DIN 6499 / ISO 15488

Collet chucks form E4
for collets ER DIN 6499 / ISO 15488

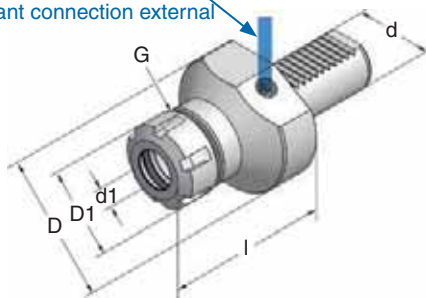
Kühlmittelzufuhr intern
Coolant supply internal



ER 16

Alternative Spannmuttern siehe Seiten 53+54
Alternative nuts see pages 53+54

VDI 30, 40, 50, 60
Kühlmittelanschluß extern
Coolant connection external



Spannzangen siehe Seiten 56+57
Collets see pages 56+57

Art.-Nr.	Typ	d	d1	D	D1	I	G
16.10.330	E4-16xER16x50	16	1-10	40	28	50	M22x1,50
16.16.330	E4-16xER25x50	16	1-16	40	42	50	M32x1,50
20.10.330	E4-20xER16x55	20	1-10	50	28	55	M22x1,50
20.16.330	E4-20xER25x55	20	1-16	50	42	55	M32x1,50
20.20.330	E4-20xER32x55	20	2-20	50	50	55	M40x1,50
25.16.330	E4-25xER25x55	25	1-16	58	42	55	M32x1,50
25.20.330	E4-25xER32x55	25	2-20	58	50	55	M40x1,50
30.16.330	E4-30xER25x75	30	1-16	68	42	75	M32x1,50
30.16.331	E4-30xER25x55	30	1-16	68	42	55	M32x1,50
30.20.330	E4-30xER32x75	30	2-20	68	50	75	M40x1,50
30.20.331	E4-30xER32x55	30	2-20	68	50	55	M40x1,50
30.26.330	E4-30xER40x75	30	3-30	68	63	75	M50x1,50
40.13.330	E4-40xER20x75	40	1-13	83	34	75	M25x1,50
40.16.330	E4-40xER25x75	40	1-16	83	42	75	M32x1,50
40.20.330	E4-40xER32x75	40	2-20	83	50	75	M40x1,50
40.26.330	E4-40xER40x75	40	3-30	83	63	75	M50x1,50
50.20.330	E4-50xER32x90	50	2-20	98	50	90	M40x1,50
50.26.330	E4-50xER40x90	50	3-30	98	63	90	M50x1,50
50.34.330	E4-50xER50x90	50	6-34	98	78	90	M64x2,00
60.26.330	E4-60xER40x90	60	3-30	123	63	90	M50x1,50
60.34.330	E4-60xER50x99	60	6-34	123	78	99	M64x2,00

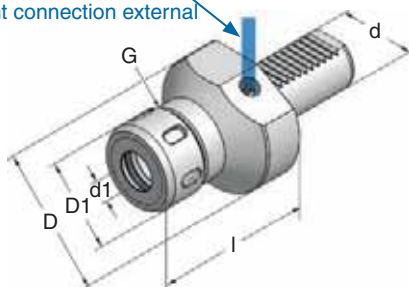
Spannzangenhalter Form E3 für Spannzangen DIN 6388 / ISO 10897

Collet chucks form E3 for collets DIN 6388 / ISO 10897

Kühlmittelzufuhr intern
Coolant supply internal



VDI 30, 40, 50, 60
Kühlmittelanschluß extern
Coolant connection external



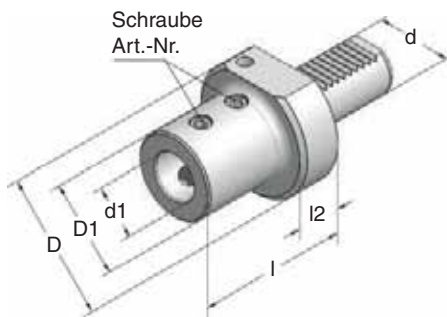
Spannzangen auf Anfrage
Collets on inquiry

Art.-Nr.	Typ	d	d1	D	D1	I	G
20.16.320	E3-20x1-16x55	20	2-16	50	40	55	M33x1,50
30.25.320	E3-30x2-25x75	30	2-25	68	60	75	M48x2,00
40.25.320	E3-40x2-25x75	40	2-25	83	60	75	M48x2,00
40.32.320	E3-40x4-32x90	40	4-32	83	72	90	M60x2,50
50.32.320	E3-50x4-32x90	50	4-32	98	72	90	M60x2,50
60.32.320	E3-60x4-32x90	60	4-32	123	72	90	M60x2,50

**Bohrerhalter für Wendeplattenbohrer
Form E1**

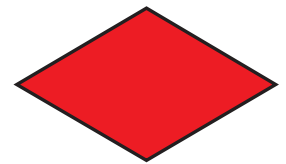
Holders for insert drills form E1

Kühlmittelezufuhr intern
Coolant supply internal



Art.-Nr.	Typ	d	d1	D	D1	l	l1	l2	Schraube
20.16.220	E1-20x16x 60	20	16	50	34	60	54	18	114100
20.20.220	E1-20x20x 67	20	20	50	40	67	54	18	114100
20.25.220	E1-20x25x 71	20	25	50	45	71	59	18	122100
25.16.220	E1-25x16x 60	25	16	58	34	60	54	18	114100
25.20.220	E1-25x20x 67	25	20	58	40	67	54	18	114100
25.25.220	E1-25x25x 71	25	25	58	45	71	59	18	122100
25.32.220	E1-25x32x 71	25	32	58	52	71	63	18	122100
30.16.220	E1-30x16x 66	30	16	68	34	66	54	22	114100
30.20.220	E1-30x20x 67	30	20	68	40	67	54	22	114100
30.25.220	E1-30x25x 71	30	25	68	45	71	59	22	122100
30.32.220	E1-30x32x 75	30	32	68	52	75	63	22	122100
30.40.220	E1-30x40x 80	30	40	68	60	80	73	22	144100
40.16.220	E1-40x16x 66	40	16	83	34	66	54	22	114100
40.20.220	E1-40x20x 67	40	20	83	40	67	54	22	114100
40.25.220	E1-40x25x 75	40	25	83	45	75	59	22	122100
40.32.220	E1-40x32x 75	40	32	83	52	75	63	22	122100
40.40.220	E1-40x40x 90	40	40	83	60	90	73	22	144100
40.50.220	E1-40x50x 95	40	50	83	70	95	83	22	144100
50.20.220	E1-50x20x 67	50	20	98	40	67	54	30	114100
50.25.220	E1-50x25x 80	50	25	98	45	80	59	30	122100
50.32.220	E1-50x32x 80	50	32	98	52	80	63	30	122100
50.40.220	E1-50x40x 90	50	40	98	60	90	73	30	144100
50.50.220	E1-50x50x100	50	50	98	70	100	83	30	144100
60.20.220	E1-60x20x 80	60	20	123	40	80	54	30	114100
60.25.220	E1-60x25x 80	60	25	123	45	80	59	30	122100
60.32.220	E1-60x32x 80	60	32	123	52	80	63	30	122100
60.40.220	E1-60x40x 90	60	40	123	60	90	73	30	144100
60.50.220	E1-60x50x100	60	50	123	70	100	83	30	144100
INCH									
324206	E1-30x1" x71	30	1"	68	45	71	59	22	122100
325206	E1-30x1¼"x75	30	1¼"	68	52	75	63	22	122100
326206	E1-30x1½"x80	30	1½"	50	45	80	59	18	144100
424206	E1-40x1" x71	40	1"	83	45	71	59	22	122100
425206	E1-40x1¼"x75	40	1¼"	83	52	75	63	22	122100
426206	E1-40x1½"x90	40	1½"	83	60	90	73	22	144100
524206	E1-50x1" x71	50	1"	98	45	71	59	30	122100
525206	E1-50x1¼"x75	50	1¼"	98	52	75	63	30	122100
526206	E1-50x1½"x85	50	1½"	98	60	85	73	30	144100

l1 = Bohrungstiefe l1 = drill depth

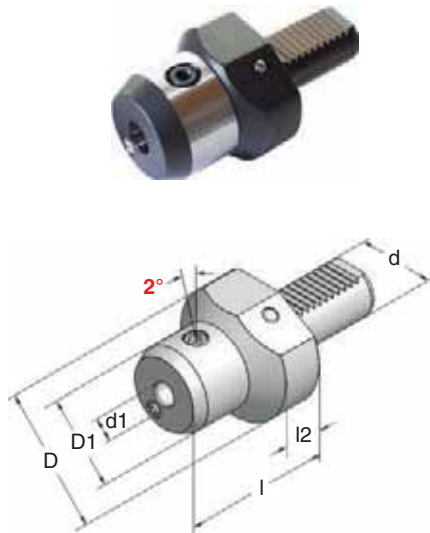


Bohrerhalter Whistle-Notch E1

Drill holders Whistle-Notch E1

Kühlmittelzufuhr intern + extern
Coolant supply internal + external

DIN 1835 Form E



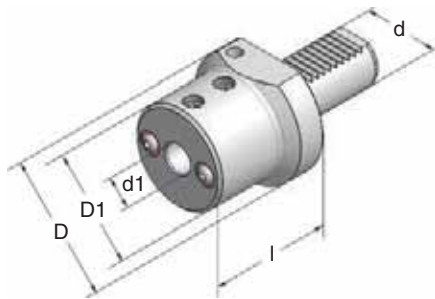
Art.-Nr.	Typ	d	d1	D	D1	l	l1	l2
20.06.221	E1-20x06Ex60	20	6	50	35	60	36	18
20.08.221	E1-20x08Ex60	20	8	50	35	60	36	18
20.10.221	E1-20x10Ex60	20	10	50	35	60	40	18
20.12.221	E1-20x12Ex60	20	12	50	44	60	45	18
20.14.221	E1-20x14Ex60	20	14	50	44	60	45	18
20.16.221	E1-20x16Ex60	20	16	50	50	60	48	-
20.18.221	E1-20x18Ex60	20	18	50	50	60	48	-
20.20.221	E1-20x20Ex60	20	20	50	50	60	50	-
30.06.221	E1-30x06Ex67	30	6	68	35	67	36	22
30.08.221	E1-30x08Ex67	30	8	68	35	67	36	22
30.10.221	E1-30x10Ex67	30	10	68	35	67	40	22
30.12.221	E1-30x12Ex67	30	12	68	44	67	45	22
30.14.221	E1-30x14Ex67	30	14	68	44	67	45	22
30.16.221	E1-30x16Ex67	30	16	68	52	67	48	22
30.18.221	E1-30x18Ex67	30	18	68	52	67	48	22
30.20.221	E1-30x20Ex67	30	20	68	52	67	50	22
40.06.221	E1-40x06Ex67	40	6	83	35	67	36	22
40.08.221	E1-40x08Ex67	40	8	83	35	67	36	22
40.10.221	E1-40x10Ex67	40	10	83	35	67	40	22
40.12.221	E1-40x12Ex67	40	12	83	44	67	45	22
40.14.221	E1-40x14Ex67	40	14	83	44	67	45	22
40.16.221	E1-40x16Ex67	40	16	83	52	67	48	22
40.18.221	E1-40x18Ex67	40	18	83	52	67	48	22
40.20.221	E1-40x20Ex67	40	20	83	52	67	50	22

l1 = Bohrungstiefe l1 = drill depth

Bohrstangenhalter Form E2

Boring bar holders form E2

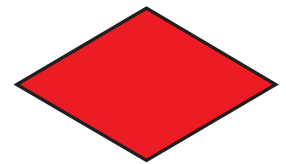
Kühlmittelzufuhr intern + extern
Coolant supply internal + external



Reduzierbuchsen siehe Seite 21
Reducing bushes see page 21

Art.-Nr.	Typ	d	d1	D	D1	l	I1
16.06.290	E2-16x06x44	16	6	40	40	44	39
16.08.290	E2-16x08x44	16	8	40	40	44	39
16.10.290	E2-16x10x44	16	10	40	40	44	39
16.12.290	E2-16x12x44	16	12	40	40	44	39
16.16.290	E2-16x16x44	16	16	40	40	44	39
20.06.290	E2-20x06x50	20	6	50	40	50	84
20.08.290	E2-20x08x50	20	8	50	40	50	84
20.10.290	E2-20x10x50	20	10	50	40	50	45
20.12.290	E2-20x12x50	20	12	50	40	50	45
20.16.290	E2-20x16x50	20	16	50	44	50	45
20.20.290	E2-20x20x50	20	20	50	49	50	45
20.25.290	E2-20x25x50	20	25	54	54	50	45
25.06.290	E2-25x06x50	25	6	58	40	50	84
25.08.290	E2-25x08x50	25	8	58	40	50	84
25.10.290	E2-25x10x50	25	10	58	40	50	84
25.12.290	E2-25x12x50	25	12	58	40	50	45
25.16.290	E2-25x16x50	25	16	58	40	50	45
25.20.290	E2-25x20x50	25	20	58	58	50	45
25.25.290	E2-25x25x50	25	25	58	58	50	45
30.06.290	E2-30x06x60	30	6	68	50	60	106
30.08.290	E2-30x08x60	30	8	68	50	60	106
30.10.290	E2-30x10x60	30	10	68	50	60	106
30.12.290	E2-30x12x60	30	12	68	50	60	106
30.16.290	E2-30x16x60	30	16	68	55	60	106
30.20.290	E2-30x20x60	30	20	68	55	60	55
30.25.290	E2-30x25x60	30	25	68	55	60	55
30.30.290	E2-30x30x65	30	30	68	68	65	57
30.32.290	E2-30x32x65	30	32	68	68	65	57
30.40.290	E2-30x40x75	30	40	74	74	75	66
40.08.290	E2-40x08x75	40	8	83	50	75	130
40.10.290	E2-40x10x75	40	10	83	50	75	130
40.12.290	E2-40x12x75	40	12	83	50	75	130
40.16.290	E2-40x16x75	40	16	83	55	75	130
40.20.290	E2-40x20x75	40	20	83	55	75	130
40.25.290	E2-40x25x75	40	25	83	60	75	66
40.30.290	E2-40x30x75	40	30	83	72	75	66
40.32.290	E2-40x32x75	40	32	83	72	75	66
40.40.290	E2-40x40x85	40	40	83	83	85	73
50.12.290	E2-50x12x90	50	12	98	56	90	156
50.16.290	E2-50x16x90	50	16	98	56	90	156
50.20.290	E2-50x20x90	50	20	98	56	90	156
50.25.290	E2-50x25x90	50	25	98	65	90	156
50.30.290	E2-50x30x90	50	30	98	68	90	110
50.32.290	E2-50x32x90	50	32	98	68	90	110
50.40.290	E2-50x40x90	50	40	98	80	90	81
50.50.290	E2-50x50x95	50	50	98	90	95	83

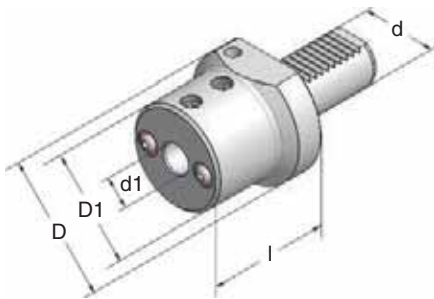
I1 = Bohrungstiefe I1 = drill depth



Bohrstangenhalter Form E2

Boring bar holders form E2

Kühlmittelezufuhr intern + extern
Coolant supply internal + external



Reduzierbuchsen siehe Seite 21
Reducing bushes see page 21

Art.-Nr.	Typ	d	d1	D	D1	I	I1
60.12.290	E2-60x12x 90	60	12	123	52	90	174
60.16.290	E2-60x16x 90	60	16	123	60	90	174
60.20.290	E2-60x20x 90	60	20	123	60	90	174
60.25.290	E2-60x25x 90	60	25	123	65	90	174
60.30.290	E2-60x30x 90	60	30	123	70	90	172
60.32.290	E2-60x32x 90	60	32	123	70	90	172
60.40.290	E2-60x40x 90	60	40	123	80	90	110
60.50.290	E2-60x50x100	60	50	123	90	100	88
60.60.290	E2-60x60x100	60	60	123	100	100	88
INCH							
329206	E2-30x3/8"x60	30	3/8"	68	50	60	106
330206	E2-30x1/2"x60	30	1/2"	68	50	60	106
331206	E2-30x5/8"x60	30	5/8"	68	55	60	106
332206	E2-30x3/4"x60	30	3/4"	68	55	60	55
333206	E2-30x1" x60	30	1"	68	55	60	55
334206	E2-30x1 1/4"x65	30	1 1/4"	68	68	65	57
335206	E2-30x1 1/2"x75	30	1 1/2"	74	74	75	65
429206	E2-40x3/8"x75	40	3/8"	83	50	75	130
430206	E2-40x1/2"x75	40	1/2"	83	50	75	130
431206	E2-40x5/8"x75	40	5/8"	83	55	75	130
432206	E2-40x3/4"x75	40	3/4"	83	55	75	130
433206	E2-40x1" x75	40	1"	83	60	75	66
434206	E2-40x1 1/4"x75	40	1 1/4"	83	72	75	66
435206	E2-40x1 1/2"x85	40	1 1/2"	83	72	85	73
436206	E2-40x1 3/4"x85	40	1 3/4"	83	83	85	73
530206	E2-50x1/2"x90	50	1/2"	98	56	90	156
531206	E2-50x5/8"x90	50	5/8"	98	56	90	156
532206	E2-50x3/4"x90	50	3/4"	98	56	90	156
533206	E2-50x1" x90	50	1"	98	65	90	156
534206	E2-50x1 1/4"x90	50	1 1/4"	98	68	90	110
535206	E2-50x1 1/2"x90	50	1 1/2"	98	68	90	110
536206	E2-50x1 3/4"x90	50	1 3/4"	98	80	90	81
537206	E2-50x2" x95	50	2"	98	90	95	83

I1 = Bohrungstiefe I1 = drill depth

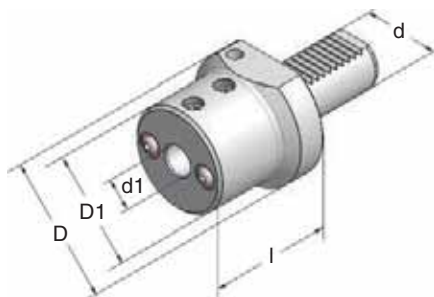
Bohrstangenhalter Form E2

Boring bar holders form E2

Kühlmittelzufuhr intern + extern
Coolant supply internal + external



Spannmöglichkeit beidseitig
Clamping possible on both sides



Art.-Nr.	Typ	d	d1	D	D1	l	l1
30.10.290-2	E2-30x10x60	30	10	68	50	60	106
30.12.290-2	E2-30x12x60	30	12	68	50	60	106
30.16.290-2	E2-30x16x60	30	16	68	55	60	106
30.20.290-2	E2-30x20x60	30	20	68	55	60	55
30.25.290-2	E2-30x25x60	30	25	68	55	60	55
30.32.290-2	E2-30x32x65	30	32	68	68	65	57
40.08.290-2	E2-40x08x75	40	08	83	50	75	130
40.10.290-2	E2-40x10x75	40	10	83	50	75	130
40.12.290-2	E2-40x12x75	40	12	83	50	75	130
40.16.290-2	E2-40x16x75	40	16	83	55	75	130
40.20.290-2	E2-40x20x75	40	20	83	55	75	130
40.25.290-2	E2-40x25x75	40	25	83	60	75	66
40.32.290-2	E2-40x32x75	40	32	83	72	75	66
40.40.290-2	E2-40x40x85	40	40	83	83	85	73

l1 = Bohrungstiefe l1 = drill depth



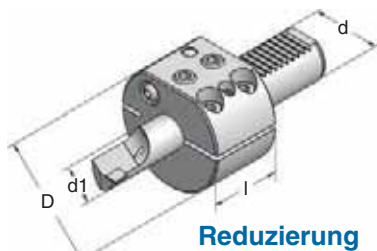
Reduzierbuchsen siehe Seite 21
Reducing bushes see page 21

Bohrstangenhalter geschlitzt

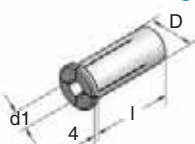
Boring bar holders slotted

Kühlmittelzufuhr intern + extern
Coolant supply internal + external

Lieferumfang ohne Werkzeug
Delivery without tool

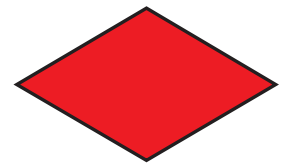


Reduzierung



Art.-Nr.	Typ	d	d1	D	l	l1
30.16.230	E2-30x16x42	30	16	68	42	88
30.20.230	E2-30x20x42	30	20	68	42	88
40.16.230	E2-40x16x46	40	16	83	46	100
40.20.230	E2-40x20x46	40	20	83	46	100
40.25.230	E2-40x25x46	40	25	83	46	100
40.32.230	E2-40x32x90	40	32	83	90	83
50.16.230	E2-50x16x55	50	16	98	55	125
50.20.230	E2-50x20x55	50	20	98	55	125
50.25.230	E2-50x25x55	50	25	98	55	125
50.32.230	E2-50x32x55	50	32	98	55	125
60.25.230	E2-60x25x60	60	25	123	60	145
60.32.230	E2-60x32x60	60	32	123	60	145
60.40.230	E2-60x40x60	60	40	123	60	145
203201	Reduzierung		8	20	51	
203202	Reduzierung		10	20	51	
203203	Reduzierung		12	20	51	
203205	Reduzierung		16	20	51	

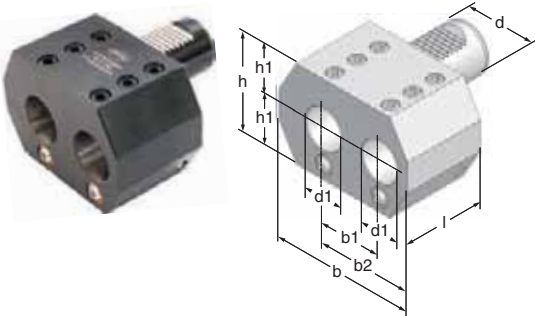
l1 = Bohrungstiefe l1 = drill depth



Bohrstangenhalter Form E7/E8
Boring bar holders form E7/E8

Doppelverzahnung / Double toothting

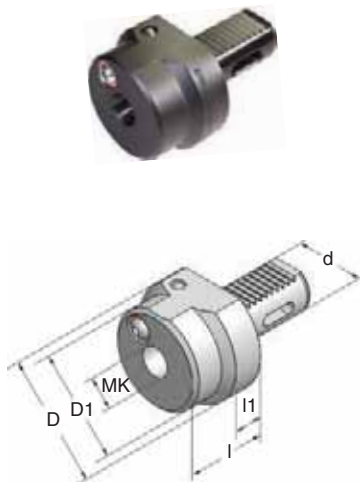
Kühlmittelzufuhr intern + extern
 Coolant supply internal + external



Art.-Nr.	Typ	d	d1	b	b1	b2	h	l
30.25.2903	E7+E8-30Dx25x56	30	25	95	45	65	64	56
40.32.2903	E7+E8-40Dx32x66	40	32	115	50	75	78	66
50.50.2903	E7+E8-50Dx50x90	50	50	154	70	105	98	90

Bohrerhalter Form F1
für MK-Werkzeuge ISO 296
Holder form F1 for M.T. shanks ISO 296

Kühlmittelzufuhr intern + extern
 Coolant supply internal + external



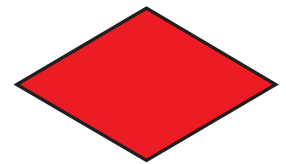
Art.-Nr.	Typ	d	MK	D	D1	l	l1
20.01.200	F1-20xMK1x22	20	1	50	-	22	-
30.01.200	F1-30xMK1x25	30	1	68	52	25	25
30.02.200	F1-30xMK2x42	30	2	68	58	42	25
30.03.200	F1-30xMK3x66	30	3	68	68	66	-
40.01.200	F1-40xMK1x25	40	1	83	-	25	-
40.02.200	F1-40xMK2x34	40	2	83	58	34	25
40.03.200	F1-40xMK3x58	40	3	83	64	58	25
40.04.200	F1-40xMK4x86	40	4	83	72	86	25
50.02.200	F1-50xMK2x25	50	2	98	-	25	-
50.03.200	F1-50xMK3x42	50	3	98	64	42	25
50.04.200	F1-50xMK4x71	50	4	98	72	71	25
60.02.200	F1-60xMK2x27	60	2	123	-	27	-
60.03.200	F1-60xMK3x27	60	3	123	-	27	-
60.04.200	F1-60xMK4x55	60	4	123	72	55	25
60.05.200	F1-60xMK5x94	60	5	123	90	94	30

Reduzierbuchsen für Bohrstangenhalter
Reduction bushes for boring bar holders



Art.-Nr.	für Typ	d	d1	l
20.06.295		20	6	48
20.08.295		20	8	48
20.10.295		20	10	48
20.12.295		20	12	48
20.16.295		20	16	48
25.06.2950	30.25.290 / -2	25	6	50
25.08.2950	30.25.290 / -2	25	8	50
25.10.295	30.25.290 / -2	25	10	50
25.12.295	30.25.290 / -2	25	12	50
25.14.295	30.25.290 / -2	25	14	50
25.16.295	30.25.290 / -2	25	16	50
25.18.295	30.25.290 / -2	25	18	50
25.20.295	30.25.290 / -2	25	20	50
32.06.2950	40.32.290 / -2	32	6	60
32.08.2950	40.32.290 / -2	32	8	60
32.10.2950	40.32.290 / -2	32	10	60
32.12.295	40.32.290 / -2	32	12	60
32.14.295	40.32.290 / -2	32	14	60
32.16.295	40.32.290 / -2	32	16	60
32.18.295	40.32.290 / -2	32	18	60
32.20.295	40.32.290 / -2	32	20	60
32.25.295	40.32.290 / -2	32	25	60
40.06.2950	50.40.290	40	6	72
40.08.2950	50.40.290	40	8	72
40.10.2950	50.40.290	40	10	72
40.12.2950	50.40.290	40	12	72
40.14.295	50.40.290	40	14	72
40.16.295	50.40.290	40	16	72
40.18.295	50.40.290	40	18	72
40.20.295	50.40.290	40	20	72
40.25.295	50.40.290	40	25	72
40.32.295	50.40.290	40	32	72
50.10.2950	60.50.290	50	10	80
50.12.2950	60.50.290	50	12	80
50.16.2950	60.50.290	50	16	80
50.20.295	60.50.290	50	20	80
50.25.295	60.50.290	50	25	80
50.32.295	60.50.290	50	32	80
50.40.295	60.50.290	50	40	80

INCH-Größen auf Anfrage / INCH-sizes on inquiry



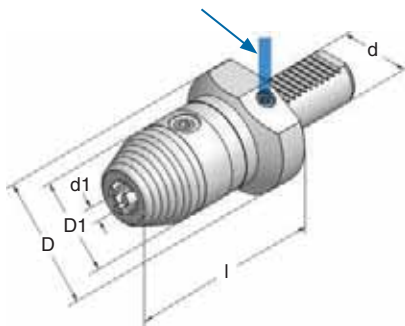
Schnellspan-Bohrfutter für Links- und Rechtslauf

Quick locking drill chucks for left and right rotation

Kühlmittelzufuhr intern
Coolant supply internal



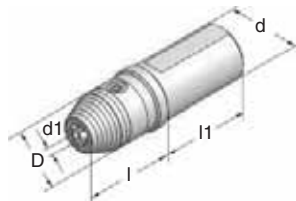
Typ .13 + Typ .16
Kühlmittelanschluß extern
Coolant connection external



Art.-Nr.	Typ	d	d1	D	D1	l
16.06.08	VDI16x1- 8x68	16	1- 8	44	36	68
20.06.08	VDI20x1- 8x68	20	1- 8	50	36	68
20.06.13	VDI20x1-13x96	20	1-13	68	50	96
25.06.08	VDI25x1- 8x68	25	1- 8	58	36	68
30.06.13	VDI30x1-13x96	30	1-13	68	50	96
40.06.13	VDI40x1-13x96	40	1-13	83	50	96
40.06.16	VDI40x3-16x96	40	3-16	83	57	96
50.06.16	VDI50x3-16x96	50	3-16	98	57	96
60.06.16	VDI60x3-16x96	60	3-16	123	57	96

Schnellspan-Bohrfutter mit Zylinderschaft

Quick locking drill chucks cylindrical shank



Art.-Nr.	Typ	d	d1	D1	l	l1
25.08.13	zyl.25x1-13x74	25	1-13	50	74	55
30.08.13	zyl.30x1-13x74	30	1-13	50	74	55
32.08.13	zyl.32x1-13x74	32	1-13	50	74	55
40.08.13	zyl.40x1-13x74	40	1-13	50	74	68
40.08.16	zyl.40x3-16x74	40	3-16	57	74	68
50.08.13	zyl.50x1-13x74	50	1-13	50	74	88
50.08.16	zyl.50x3-16x74	50	3-16	57	74	88

Gewindeschneidfutter VDI
mit elastischem Längenausgleich auf Zug
Auto tappers VDI - flexible differential position

Kühlmittelzufuhr intern
 Coolant supply internal

Lieferumfang ohne Werkzeug und Spannzange
 Delivery without tool and collet



Spannzangen siehe Seiten 56+57
 Collets see pages 56+57

Art.-Nr.	Typ	d	d1	l	Zug	D	D1
16.12.370	VDI16xER16x60	16	1-10/M3-M12	60	12	40	28
20.12.370	VDI20xER16x60	20	1-10/M3-M12	60	12	50	28
20.20.370	VDI20xER25x85	20	2-16/M4-M20	85	15	50	42
25.12.370	VDI25xER16x60	25	1-10/M3-M12	60	12	58	28
25.20.370	VDI25xER25x79	25	2-16/M4-M20	79	15	58	42
30.20.370	VDI30xER25x75	30	2-16/M4-M20	75	15	68	42
30.20.370ER32	VDI30xER32x92	30	3-20/M4-M24	92	15	68	50
40.20.370	VDI40xER25x75	40	2-16/M4-M20	75	15	83	42
40.20.370ER32	VDI40xER32x92	40	3-20/M4-M24	92	15	83	50
40.33.370	VDI40xER40x98	40	4-30/M8-M33	98	20	83	63
50.20.370	VDI50xER25x75	50	2-16/M4-M20	75	15	98	42
50.33.370	VDI50xER40x98	50	4-30/M8-M33	98	20	98	63
60.33.370	VDI60xER40x75	60	4-30/M8-M33	75	20	125	63

Gewindeschneidfutter zylindrisch
mit elastischem Längenausgleich auf Zug
Auto tappers cylindric - flexible differential position

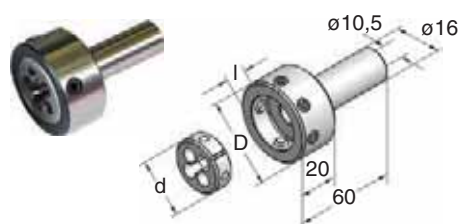


Spannzangen siehe Seiten 56+57
 Collets see pages 56+57

Art.-Nr.	Typ	d	d1	l	Zug	D	l1
16.12.372	zyl.16xER16x60	16	1-10/M3-M12	60	12	32	40
20.12.372	zyl.20xER16x60	20	1-10/M3-M12	60	12	32	48
20.20.372	zyl.20xER25x75	20	2-16/M4-M20	75	15	45	48
25.20.372	zyl.25xER25x75	25	2-16/M4-M20	75	15	45	48
30.20.372	zyl.30xER25x75	30	2-16/M4-M20	75	15	45	55
32.20.372	zyl.32xER25x75	32	2-16/M4-M20	75	15	49	58
40.20.372	zyl.40xER25x60	40	2-16/M4-M20	60	15	49	68
50.33.372	zyl.50xER40x60	50	4-30/M8-M33		15	58	120
25.20.375	zyl.25xER25x75	25	2-16/M4-M20	75	15	53	54
32.20.375	zyl.32xER25x75	32	2-16/M4-M20	75	15	53	54
Typ .375 mit innerer Kühlmittelzufuhr / Typ .375 with internal coolant							
INCH							
1".20.372	1"xER25x75	25,4	2-16/M4-M20	75	15	45	48

Einsätze für Schneideisen
Die housing inserts

Lieferumfang ohne Schneideisen
 Delivery without tool

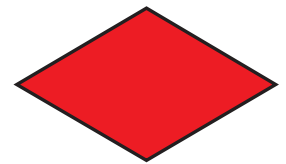


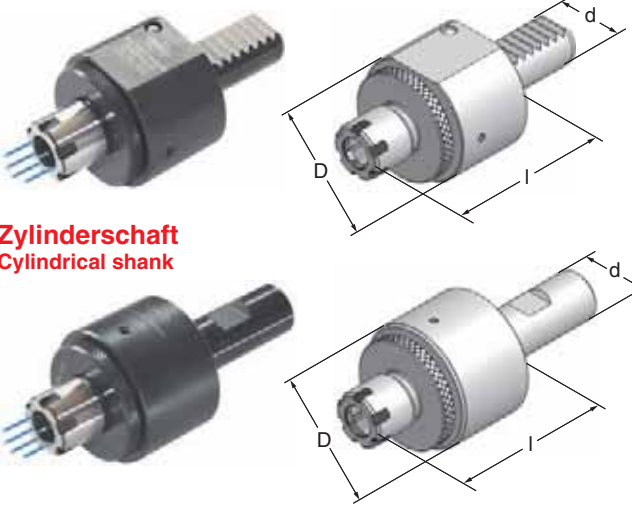
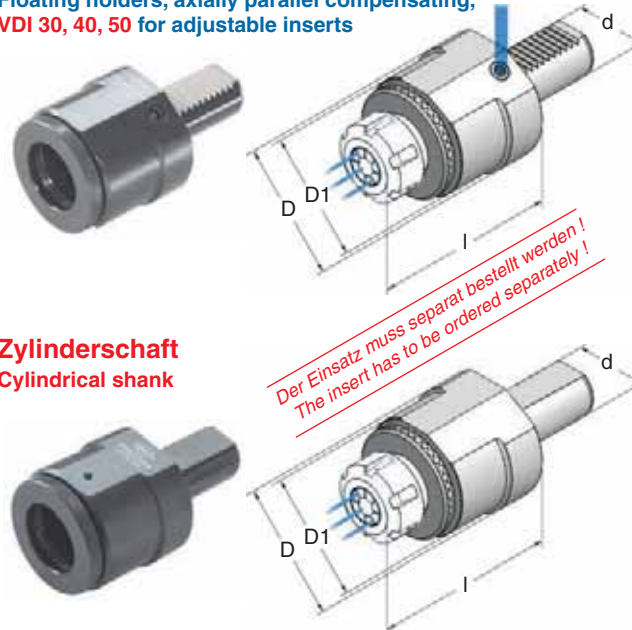

Art.-Nr.	Typ	d	D	l
153101	ø16x16	16	28	6,0
154101	ø16x20	20	32	7,5
155101	ø16x25	25	37	9,5
156101	ø16x30	30	42	11,0

Werkzeughalter für CNC-Drehmaschinen

DIN 69880 / DIN ISO 10889

Toolholders for CNC machines DIN 69880 / DIN ISO 10889



<p>Pendelhalter, achsparallel ausgleichend einstellbar VDI 16, 20, 25 für Spannzangen ER16/426E ϕ1-10 Floating holders, axially parallel compensating, adjustable VDI 16, 20, 25 for collets ER16/426E ϕ1-10</p>  <p>Zylinderschaft Cylindrical shank</p>	<table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d</th> <th>D</th> <th>l</th> </tr> </thead> <tbody> <tr> <td>16.70.350</td> <td>VDI16xER16x67</td> <td>16</td> <td>50</td> <td>67</td> </tr> <tr> <td>20.70.350</td> <td>VDI20xER16x63</td> <td>20</td> <td>50</td> <td>63</td> </tr> <tr> <td>25.70.350</td> <td>VDI25xER16x65</td> <td>25</td> <td>58</td> <td>65</td> </tr> </tbody> </table> <p>Kühlmittelzufuhr intern Lieferumfang inclusive Einsatz + Spannmutter Coolant supply internal Delivery including insert + clamping nut</p> <p style="text-align: center;">Zylinderschaft</p> <table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d</th> <th>D</th> <th>l</th> </tr> </thead> <tbody> <tr> <td>20.70.351</td> <td>zyl.20xER16mx63</td> <td>20</td> <td>50</td> <td>63</td> </tr> <tr> <td colspan="5" style="text-align: center;">INCH</td> </tr> <tr> <td>3/4.70.351</td> <td>zyl.3/4"xER16mx63</td> <td>19,05</td> <td>50</td> <td>63</td> </tr> </tbody> </table> <p>Kühlmittelzufuhr intern Lieferumfang inclusive Einsatz + Spannmutter Coolant supply internal Delivery including insert + clamping nut</p>	Art.-Nr.	Typ	d	D	l	16.70.350	VDI16xER16x67	16	50	67	20.70.350	VDI20xER16x63	20	50	63	25.70.350	VDI25xER16x65	25	58	65	Art.-Nr.	Typ	d	D	l	20.70.351	zyl.20xER16mx63	20	50	63	INCH					3/4.70.351	zyl.3/4"xER16mx63	19,05	50	63				
Art.-Nr.	Typ	d	D	l																																									
16.70.350	VDI16xER16x67	16	50	67																																									
20.70.350	VDI20xER16x63	20	50	63																																									
25.70.350	VDI25xER16x65	25	58	65																																									
Art.-Nr.	Typ	d	D	l																																									
20.70.351	zyl.20xER16mx63	20	50	63																																									
INCH																																													
3/4.70.351	zyl.3/4"xER16mx63	19,05	50	63																																									
<p>Pendelhalter, achsparallel ausgleichend einstellbar VDI 30, 40, 50 für auswechselbare Einsätze Floating holders, axially parallel compensating, VDI 30, 40, 50 for adjustable inserts</p>  <p>Zylinderschaft Cylindrical shank</p> <p style="color: red; transform: rotate(-15deg);">Der Einsatz muss separat bestellt werden! The insert has to be ordered separately!</p>	<table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d</th> <th>D</th> <th>D1</th> </tr> </thead> <tbody> <tr> <td>30.70.350</td> <td>VDI 30</td> <td>30</td> <td>68</td> <td>64</td> </tr> <tr> <td>40.70.350</td> <td>VDI 40</td> <td>40</td> <td>83</td> <td>64</td> </tr> <tr> <td>50.70.350</td> <td>VDI 50</td> <td>50</td> <td>98</td> <td>64</td> </tr> </tbody> </table> <p>Kühlmittelzufuhr intern / Kühlmittelanschluß extern Lieferumfang exclusive Einsatz + Spannmutter Coolant supply internal / coolant connection external Delivery excluding insert + clamping nut</p> <p style="text-align: center;">Zylinderschaft</p> <table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d</th> <th>D</th> <th>D1</th> </tr> </thead> <tbody> <tr> <td>32.70.351</td> <td>Zylinderschaft</td> <td>32</td> <td>68</td> <td>64</td> </tr> </tbody> </table> <p>Kühlmittelzufuhr intern Lieferumfang exclusive Einsatz + Spannmutter Coolant supply internal Delivery excluding insert + clamping nut</p>	Art.-Nr.	Typ	d	D	D1	30.70.350	VDI 30	30	68	64	40.70.350	VDI 40	40	83	64	50.70.350	VDI 50	50	98	64	Art.-Nr.	Typ	d	D	D1	32.70.351	Zylinderschaft	32	68	64														
Art.-Nr.	Typ	d	D	D1																																									
30.70.350	VDI 30	30	68	64																																									
40.70.350	VDI 40	40	83	64																																									
50.70.350	VDI 50	50	98	64																																									
Art.-Nr.	Typ	d	D	D1																																									
32.70.351	Zylinderschaft	32	68	64																																									
<p>Einsätze für Pendelhalter Inserts for floating holder</p> <p>Art.- Nr. 101101</p> <p>Art.- Nr. 103101 - 108101</p> <p>Art.- Nr. 109101</p> 	<p style="text-align: center;">Einsatz</p> <table border="1"> <thead> <tr> <th>Art.-Nr.</th> <th>Typ</th> <th>d1</th> <th>l</th> </tr> </thead> <tbody> <tr> <td>101101</td> <td>Einsatz ER25</td> <td>1-16</td> <td>90</td> </tr> <tr> <td>102101</td> <td>Einsatz DA180</td> <td>2-20</td> <td>95</td> </tr> <tr> <td colspan="4" style="color: red;">Art.-Nr. 101101 + 102101 incl. Spannmutter / incl. clamping nut</td> </tr> <tr> <td>103101</td> <td>Einsatz B-12</td> <td>12</td> <td>76</td> </tr> <tr> <td>104101</td> <td>Einsatz B-15</td> <td>15</td> <td>76</td> </tr> <tr> <td>105101</td> <td>Einsatz B-16</td> <td>16</td> <td>81</td> </tr> <tr> <td>106101</td> <td>Einsatz B-18</td> <td>18</td> <td>81</td> </tr> <tr> <td>107101</td> <td>Einsatz B-20</td> <td>20</td> <td>81</td> </tr> <tr> <td>108101</td> <td>Einsatz B-25</td> <td>25</td> <td>90</td> </tr> <tr> <td>109101</td> <td>Einsatz MK2</td> <td>MK2</td> <td>76</td> </tr> </tbody> </table>	Art.-Nr.	Typ	d1	l	101101	Einsatz ER25	1-16	90	102101	Einsatz DA180	2-20	95	Art.-Nr. 101101 + 102101 incl. Spannmutter / incl. clamping nut				103101	Einsatz B-12	12	76	104101	Einsatz B-15	15	76	105101	Einsatz B-16	16	81	106101	Einsatz B-18	18	81	107101	Einsatz B-20	20	81	108101	Einsatz B-25	25	90	109101	Einsatz MK2	MK2	76
Art.-Nr.	Typ	d1	l																																										
101101	Einsatz ER25	1-16	90																																										
102101	Einsatz DA180	2-20	95																																										
Art.-Nr. 101101 + 102101 incl. Spannmutter / incl. clamping nut																																													
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108101	Einsatz B-25	25	90																																										
109101	Einsatz MK2	MK2	76																																										

Werkzeughalter für CNC-Drehmaschinen DIN 69880 / DIN ISO 10889

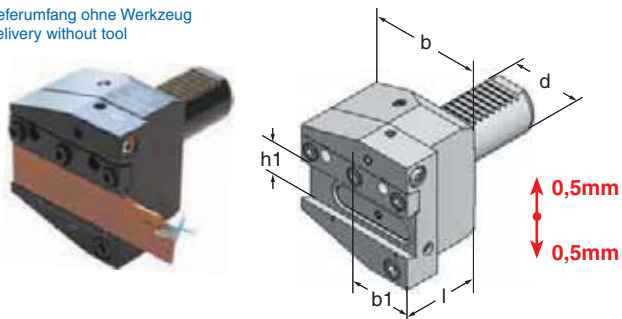
Toolholders for CNC machines DIN 69880 / DIN ISO 10889



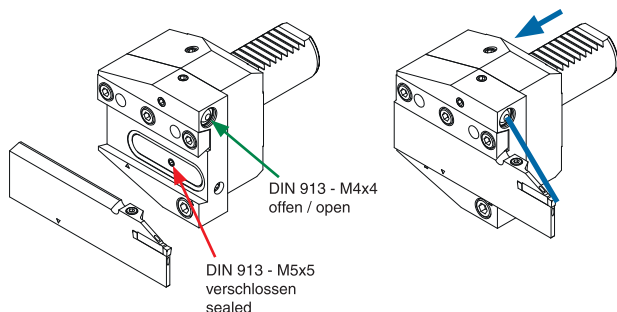
Abstechmeisselhalter, höhenverstellbar ±0,5mm rechts

Toolholders for cut off tools adjustable in height ±0,5mm right

Lieferumfang ohne Werkzeug
Delivery without tool

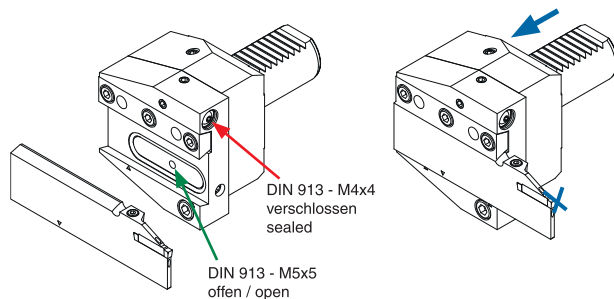


Version 1 Kühlmittelzufuhr mittels schwenkbarer Spritzdüse
Coolant supply with swivelling coolant nozzle



Art.-Nr.	Typ	d	b	b1	l	h1
30.26.480	VDI30x26x50-r	30	65	35	50	26
30.32.480	VDI30x32x50-r	30	65	35	50	32
40.26.480	VDI40x26x50-r	40	85	42,5	50	26
40.32.480	VDI40x32x50-r	40	85	42,5	50	32
50.26.480	VDI50x26x50-r	50	100	50	50	26
50.32.480	VDI50x32x50-r	50	100	50	50	32
60.32.480	VDI60x32x60-r	60	100	62,5	60	32

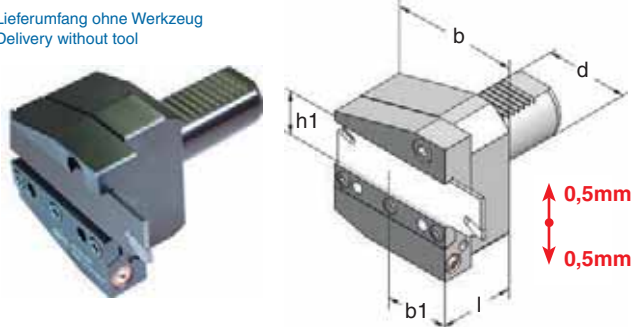
Version 2 Kühlmittelzufuhr intern durch das Abstechschwert
Coolant supply internal through the infeed toolholder



Abstechmeisselhalter, höhenverstellbar ±0,5mm Überkopf rechts

Toolholders for cut off tools adjustable in height ±0,5mm overhead right

Lieferumfang ohne Werkzeug
Delivery without tool

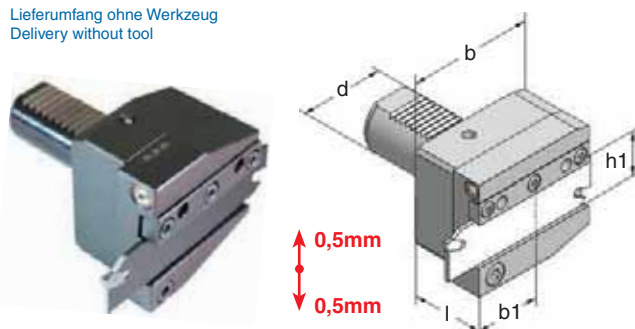


Art.-Nr.	Typ	d	b	b1	l	h1
30.26.481	VDI30x26x50-rük	30	65	35	50	26
30.32.481	VDI30x32x50-rük	30	65	35	50	32
40.32.481	VDI40x32x50-rük	40	85	42,5	50	32
50.32.481	VDI50x32x50-rük	50	100	50	50	32

Abstechmeisselhalter, höhenverstellbar ±0,5mm links

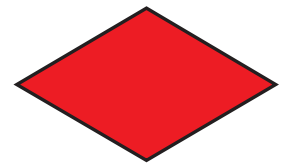
Toolholders for cut off tools adjustable in height ±0,5mm left

Lieferumfang ohne Werkzeug
Delivery without tool

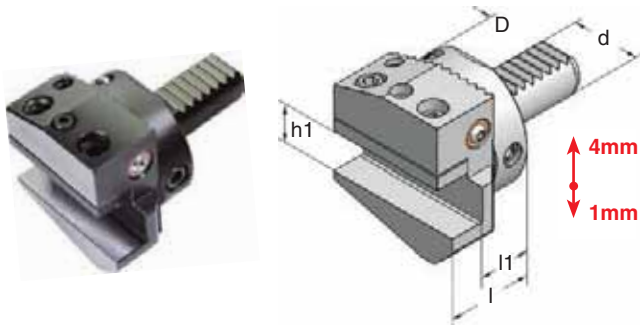


Art.-Nr.	Typ	d	b	b1	l	h1
30.26.482	VDI30x26x50-l	30	65	35	50	26
30.32.482	VDI30x32x50-l	30	65	35	50	32
40.26.482	VDI40x26x50-l	40	85	42,5	50	26
40.32.482	VDI40x32x50-l	40	85	42,5	50	32
50.32.482	VDI50x32x50-l	50	100	50	50	32



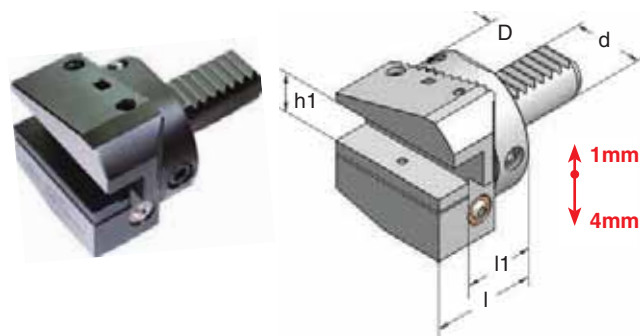


Radial-Werkzeughalter Form B1 höhenverstellbar Radial toolholders Form B1 adjustable in height



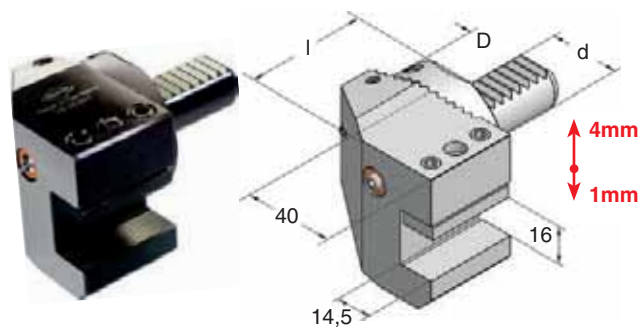
Art.-Nr.	Typ	d	D	h1	l	l1
16.12.061	B1-16x12x34	16	36	12	34	23
20.16.061	B1-20x16x40	20	50	16	40	27
25.16.061	B1-25x16x45	25	58	16	45	32
30.16.061	B1-30x16x45	30	68	16	45	32

Radial-Werkzeughalter Form B3 höhenverstellbar Radial toolholders Form B3 adjustable in height



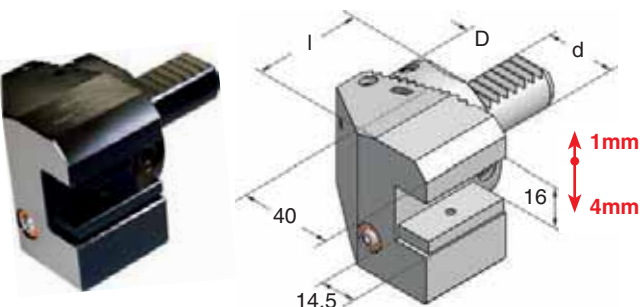
Art.-Nr.	Typ	d	D	h1	l	l1
16.12.071	B3-16x12x34	16	36	12	34	23
20.16.071	B3-20x16x40	20	50	16	40	27
25.16.071	B3-25x16x45	25	58	16	45	32
30.16.071	B3-30x16x45	30	68	16	45	32

Axial-Werkzeughalter Form C1 höhenverstellbar Axial toolholders Form C1 adjustable in height



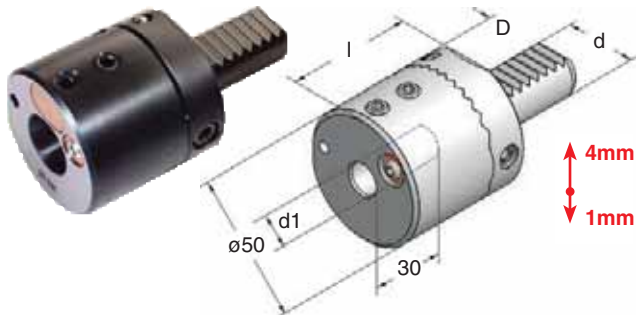
Art.-Nr.	Typ	d	D	l
20.16.021	C1-20x16x50	20	50	50
25.16.021	C1-25x16x55	25	58	55
30.16.021	C1-30x16x55	30	68	55

Axial-Werkzeughalter Form C3 höhenverstellbar Axial toolholders Form C3 adjustable in height



Art.-Nr.	Typ	d	D	l
20.16.031	C3-20x16x50	20	50	50
25.16.031	C3-25x16x55	25	58	55
30.16.031	C3-30x16x55	30	68	55

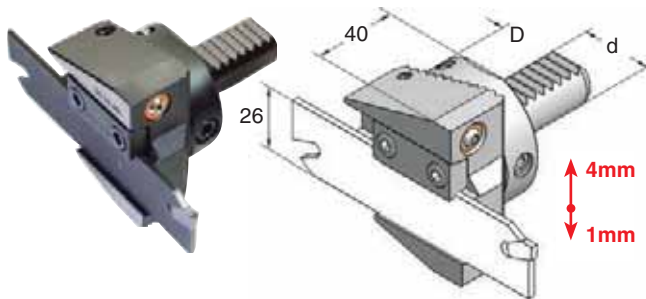
Bohrstangenhalter Form E2 höhenverstellbar
Boring bar holders Form E2 adjustable in height



Art.-Nr.	Typ	d	d1	D	l
20.08.291	E2-20x08x50	20	8	50	50
20.10.291	E2-20x10x50	20	10	50	50
20.12.291	E2-20x12x50	20	12	50	50
20.16.291	E2-20x16x50	20	16	50	50
20.20.291	E2-20x20x50	20	20	50	50
25.08.291	E2-25x08x50	25	8	58	55
25.10.291	E2-25x10x50	25	10	58	55
25.12.291	E2-25x12x50	25	12	58	55
25.16.291	E2-25x16x50	25	16	58	55
25.20.291	E2-25x20x50	25	20	58	55
30.08.291	E2-30x08x50	30	8	68	55
30.10.291	E2-30x10x50	30	10	68	55
30.12.291	E2-30x12x50	30	12	68	55
30.16.291	E2-30x16x50	30	16	68	55
30.20.291	E2-30x20x50	30	20	68	55

Abstechmeißelhalter höhenverstellbar rechts
Toolholders for cut off tools adjustable height right

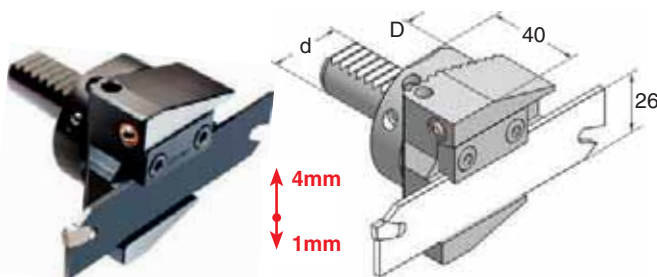
Lieferumfang ohne Werkzeug
Delivery without tool



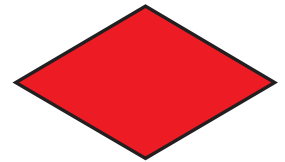
Art.-Nr.	Typ	d	D
20.26.481	VDI20x26x40-r	20	50
25.26.481	VDI25x26x40-r	25	58

Abstechmeißelhalter höhenverstellbar links
Toolholders for cut off tools adjustable height left

Lieferumfang ohne Werkzeug
Delivery without tool

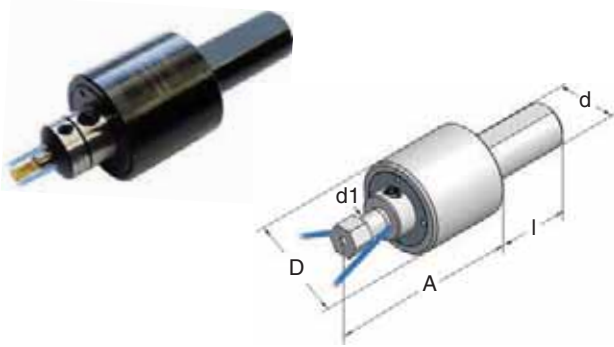


Art.-Nr.	Typ	d	D
20.26.482	VDI20x26x40-l	20	50
25.26.482	VDI25x26x40-l	25	58



Räumwerkzeughalter mit Zylinderschaft Broaching toolholders with cylindrical shank

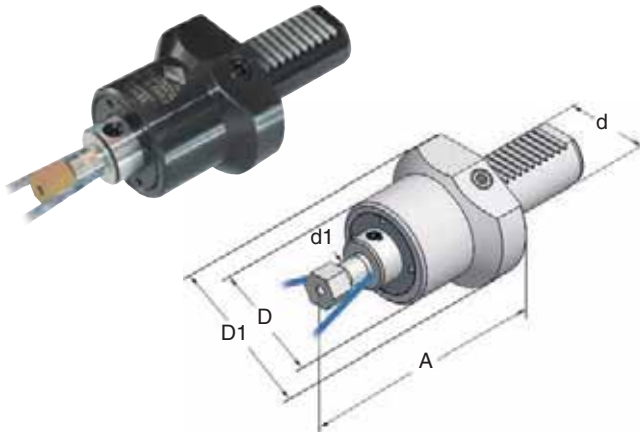
Lieferumfang ohne Räumstempel
Delivery without broaching cutter



Art.-Nr.	Typ	d	d1	l	D	A
16.08.5010	zyl. 16	16	8	38	40	65
20.08.5010	zyl. 20	20	8	38	40	65
22.08.5010	zyl. 22	22	8	48	40	65
25.08.5010	zyl. 25	25	8	48	40	65
INCH						
1587.08.5010	zyl. 5/8"	15,875	8	38	40	65
1905.08.5010	zyl. 3/4"	19,05	8	38	40	65
2540.08.5010	zyl. 1"	25,4	8	48	40	65
Schwere Ausführung Heavy execution						
2540.12.5010	zyl. 1"	25,4	12	48	50	88
3175.12.5010	zyl. 1 1/4"	31,75	12	48	50	88
Schwere Ausführung Heavy execution						
40.12.5015	zyl. 40	40	12	100	70	121
50.12.5015	zyl. 50	50	12	100	70	121

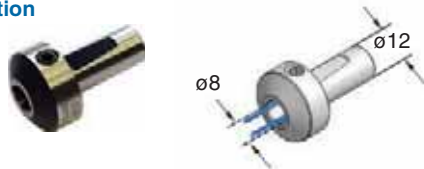
Räumwerkzeughalter DIN 69880 Broaching toolholders DIN 69880

Lieferumfang ohne Räumstempel
Delivery without broaching cutter



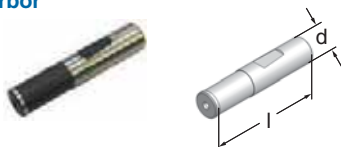
Art.-Nr.	Typ	d	d1	D	D1	A
16.08.5000	VDI 16	16	8	40	44	70
20.08.5000	VDI 20	20	8	40	50	70
25.08.5000	VDI 25	25	8	40	58	70
Schwere Ausführung Heavy execution						
25.12.5000	VDI 25	25	12	50	58	96
30.12.5000	VDI 30	30	12	50	68	96
40.12.5000	VDI 40	40	12	50	83	96
Schwere Ausführung Heavy execution						
40.12.5005	VDI 40	40	12	70	83	121

Reduzierung Reduction


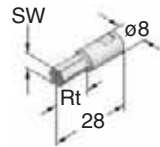

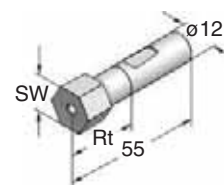

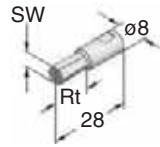

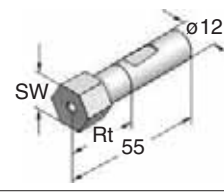

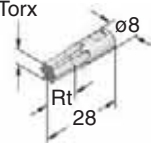

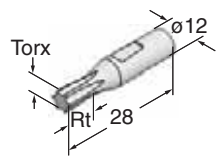


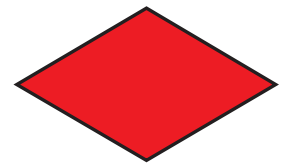
Art.-Nr.	Typ
1208.5000	Reduzierung / Reduction ø12/ø8

Kontrolldorn Control arbor

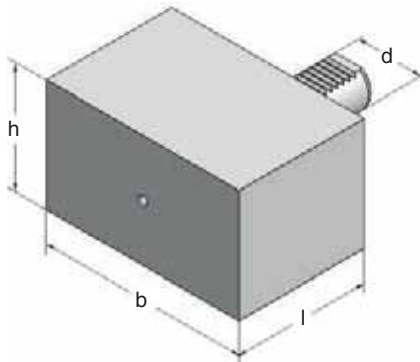


Art.-Nr.	d	l
08.5000	8	28
12.5000	12	55

Räumstempel SW Hexagon-broaching cutters		Art.-Nr.	SW	ø	Rt = Räumtiefe		
TiN beschichtet TiN coated		08.015	1,5	8	3		
		08.020	2	8	4		
		08.025	2,5	8	4		
		08.030	3	8	5		
		08.040	4	8	7		
		08.050	5	8	9		
		08.060	6	8	11		
		08.070	7	8	11		
		08.080	8	8	11		
		08.100	10	8	14		
		12.040	4	12	7		
		12.050	5	12	9		
		12.060	6	12	11		
		12.070	7	12	13		
		12.080	8	12	15		
		12.090	9	12	16		
		12.100	10	12	19		
		12.110	11	12	19		
		12.120	12	12	19		
		12.130	13	12	19		
		12.140	14	12	24		
		12.150	15	12	24		
12.160	16	12	24				
12.170	17	12	24				
12.190	19	12	24				
12.220	22	12	24				
Räumstempel SW INCH Hexagon-broaching cutters INCH		Art.-Nr.	SW INCH	ø	Rt = Räumtiefe		
TiN beschichtet TiN coated		08.3/32	3/32"	8	4		
		08.7/64	7/64"	8	4		
		08.1/8	1/8"	8	5		
		08.3/16	3/16"	8	9		
		08.7/32	7/32"	8	9		
		08.1/4	1/4"	8	11		
		08.5/16	5/16"	8	11		
		08.3/8	3/8"	8	11		
		12.1/4	1/4"	12	11		
		12.3/8	3/8"	12	19		
		12.7/16	7/16"	12	19		
		12.1/2	1/2"	12	19		
		Räumstempel TORX EN ISO 10664 Broaching cutters TORX EN ISO 10664		Art.-Nr.	TORX	ø	Rt = Räumtiefe
		TiN beschichtet TiN coated		08.T05	5	8	3
				08.T06	6	8	3
				08.T07	7	8	3
08.T08	8			8	3		
08.T09	9			8	3		
08.T10	10			8	3		
08.T15	15			8	3		
08.T20	20			8	4		
08.T25	25			8	4		
08.T27	27			8	4		
08.T30	30			8	4		
08.T40	40			8	5		
08.T45	45			8	5		
12.T50	50			12	7		
12.T55	55			12	10		



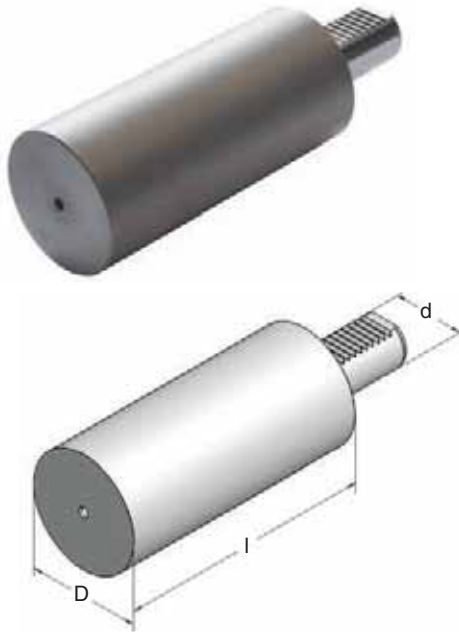
Werkzeughalter-Rohlinge Form A1
Toolholder blanks form A1



Art.-Nr.	Typ	d	b	h	l
20.050.001	A1-20x 60	20	68	60	60
25.075.001	A1-25x 75	25	100	60	75
30.085.001	A1-30x 85	30	130	76	85
40.100.001	A1-40x100	40	156	96	100
50.125.001	A1-50x125	50	160	120	125
60.160.001	A1-60x160	60	165	125	160

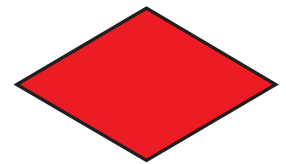
Sondergrößen auf Anfrage !
Special sizes on inquiry !

Werkzeughalter-Rohlinge Form A2
 Toolholder blanks form A2



Art.-Nr.	Typ	d	D	l
20.070.010	A2-20x 49x 70	20	49	70
25.080.010	A2-25x 58x 80	25	58	80
30.150.010	A2-30x 68x150	30	68	150
40.180.010	A2-40x 83x180	40	83	180
40.400.010	A2-40x 83x400	40	83	400
50.210.010	A2-50x 98x210	50	98	210
60.240.010	A2-60x123x240	60	123	240

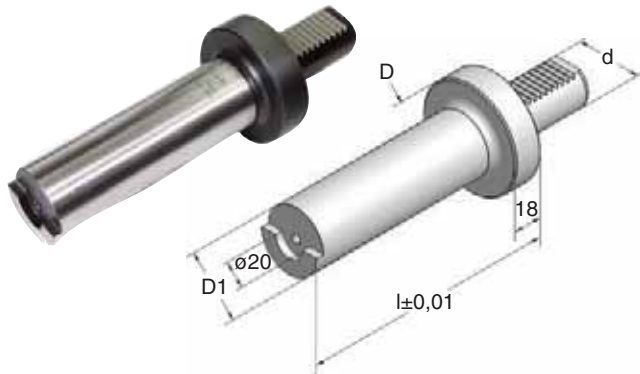
*Sondergrößen auf Anfrage !
 Special sizes on inquiry !*



Kontrolldorne in Holzetui

Test arbors in wooden case

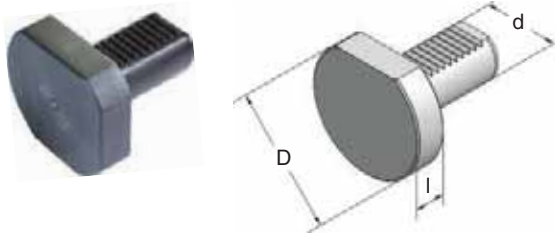
inkl. Prüfprotokoll
incl. Certificate



Art.-Nr.	Typ	d	D	D1	l
16.100.01	VDI16x40x100	16	40	40	100
20.100.01	VDI20x40x100	20	50	40	100
25.125.01	VDI25x40x125	25	58	40	125
30.150.01	VDI30x40x150	30	68	40	150
40.150.01	VDI40x40x150	40	83	40	150
50.200.01	VDI50x50x200	50	98	50	200
60.200.01	VDI60x50x200	60	125	50	200

Schutzstopfen Form Z2

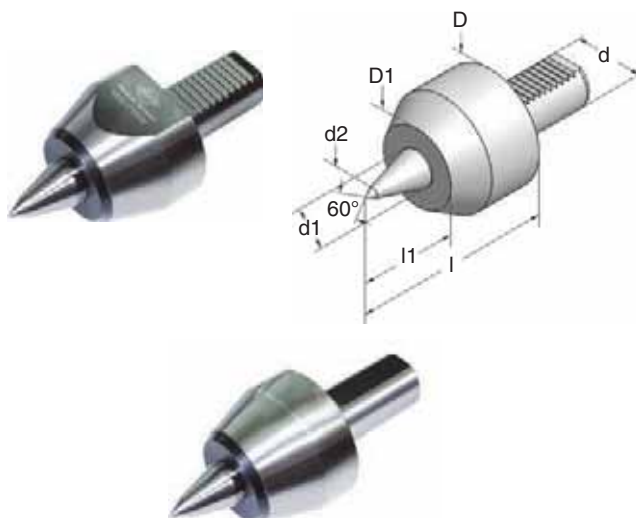
Blind toolings bore form Z2



Art.-Nr.	Typ	d	D	l
16.00.500	Z2-16 Kunststoff	16	40	16
20.00.500	Z2-20 Kunststoff	20	50	16
25.00.500	Z2-25 Kunststoff	25	58	16
30.00.500	Z2-30 Kunststoff	30	68	20
40.00.500	Z2-40 Kunststoff	40	83	20
50.00.500	Z2-50 Kunststoff	50	98	20
60.00.500	Z2-60 Kunststoff	60	123	20
20.00.500-S	Z2-20 Stahl / Steel	20	50	16
30.00.500-S	Z2-30 Stahl / Steel	30	68	20
40.00.500-S	Z2-40 Stahl / Steel	40	83	20
50.00.500-S	Z2-50 Stahl / Steel	50	98	20
60.00.500-S	Z2-60 Stahl / Steel	60	123	20

Mitlaufende Zentrierspitzen, gefedert

Driver centering point, spring mounted



Art.-Nr.	Typ	d	d1	d2	D	D1	l	l1
4720020	VDI20x60°x 73	20	18	6	50	41	73	42
4720030	VDI30x60°x 88	30	22	11	68	47	88	51
4720040	VDI40x60°x111	40	32	16	83	56	111	63

Zylinderschaft

Art.-Nr.	Typ	d	d1	d2	D	D1	l	l1	
25.10.6000	zyl.25x60°x	86	25	22	11	54	44	86	36

Sternrevolver
Star-turret



Werkstoff: Legierter Einsatzstahl mit einer Zugfestigkeit im Kern von min. 800 N/mm²

Material: Case hardened steel, tensile strength in the core min. 800 N/mm²

Ausführung: Einsatzgehärtet HRc 60 - 2 (HV 700 ± 50)
Härtetiefe 0,8 mm - 0,2
Brüniert und Präzisionsgeschliffen

Execution: Case hardened HRc 60 - 2 (HV 700 ± 50)
Depth of case 0,8 mm - 0,2
Brown-finish end precision ground

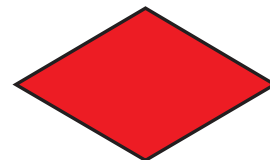
Technische Änderungen vorbehalten

We reserve the right to make technical changes

VDI 30 mit HSK-T40 Spanneinheit

VDI 30 with HSK-T40 clamping unit

Schnellwechselbar und voreinstellbar
Quick-change and pre-setting function

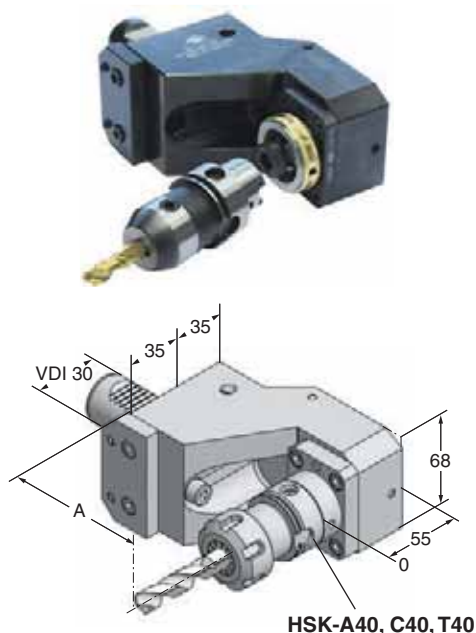


Werkzeughalter VDI 30 mit HSK-T40 Spanneinheit

Toolholder VDI 30 with HSK-T40 clamping unit

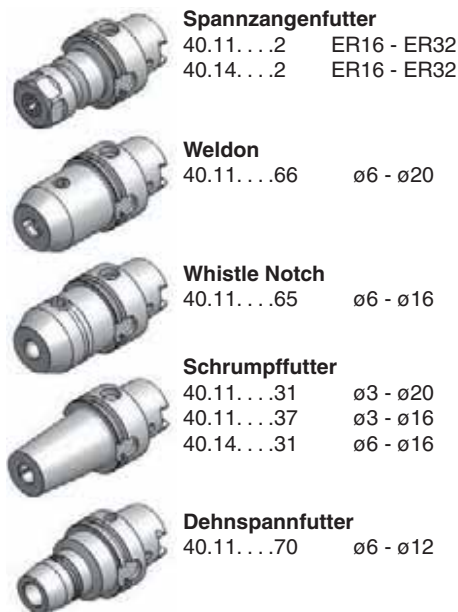
Doppelverzahnung / Double toothing

Lieferumfang ohne HSK-Werkzeughalter
Delivery without HSK-toolholder



Art.-Nr.	Typ	A
30.T40.100	VDI30DxHSK40x100	100

HSK-Werkzeughalter finden Sie im Katalog Nr. 167
HSK-toolholders you can find in our Catalogue No. 167

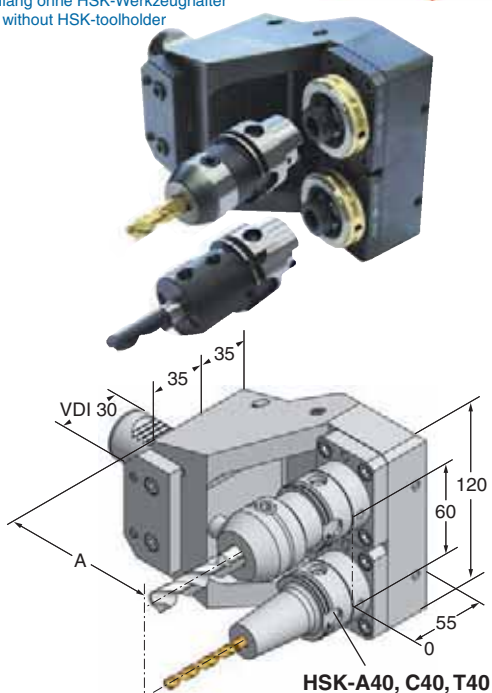


Doppel-Werkzeughalter VDI 30 mit HSK-T40 Spanneinheit

Double-toolholder VDI 30 with HSK-T40 clamping unit

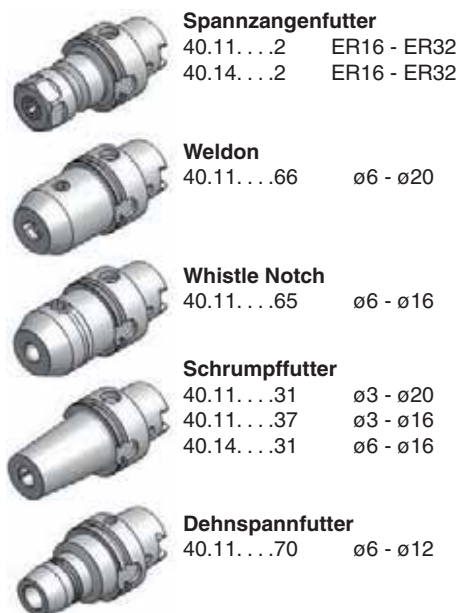
Doppelverzahnung / Double toothing

Lieferumfang ohne HSK-Werkzeughalter
Delivery without HSK-toolholder



Art.-Nr.	Typ	A
30.T40.100-2	VDI30DxHSK40x100	100
30.T40.115-2	VDI30DxHSK40x115	115
30.T40.120-2	VDI30DxHSK40x120	120

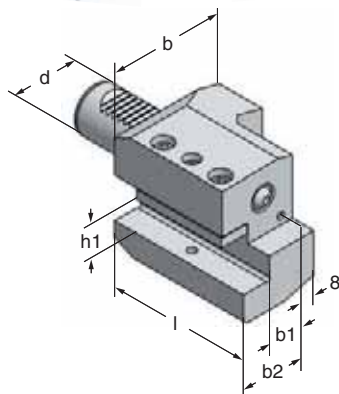
HSK-Werkzeughalter finden Sie im Katalog Nr. 167
HSK-toolholders you can find in our Catalogue No. 167



Drehhalter Form C2 / C3
Turning toolholders form C2 / C3

Doppelverzahnung / Double toothing

Lieferumfang ohne Werkzeug
 Delivery without tool



Art.-Nr.	Typ	d	b	b1	b2	h1	l
25.20.031	VDI25D-C2/C3	25	62	19	37	20	55
30.20.031	VDI30D-C2/C3	30	78	26	44	20	90
40.25.031	VDI40D-C2/C3	40	90	25,5	47,5	25	85

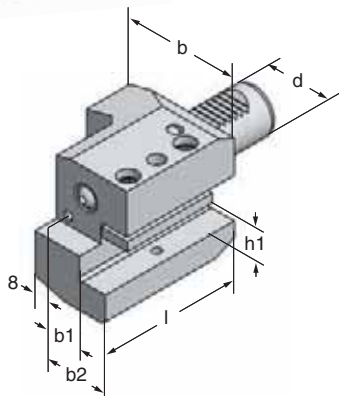


siehe Seite 7
see page 7

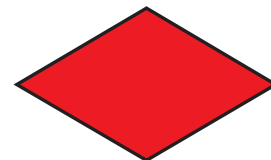
Drehhalter Form C1 / C4
Turning toolholders form C1 / C4

Doppelverzahnung / Double toothing

Lieferumfang ohne Werkzeug
 Delivery without tool



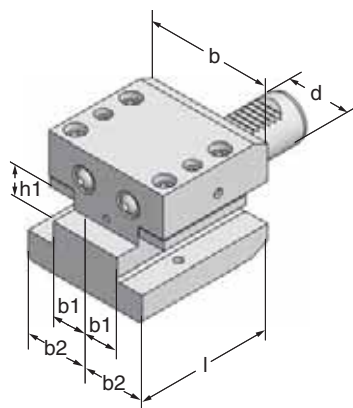
Art.-Nr.	Typ	d	b	b1	b2	h1	l
25.20.041	VDI25D-C1/C4	25	62	19	37	20	55
30.20.041	VDI30D-C1/C4	30	78	26	44	20	90
30.25.041	VDI30D-C1/C4	30	73	19	41	25	90
40.25.041	VDI40D-C1/C4	40	90	25,5	47,5	25	85
INCH							
310208	VDI30D-C1/C4	30	79	23	45	1"	90



Doppel-Drehhalter Form C1-C4
Double turning toolholders form C1-C4

Doppelverzahnung / Double toothing

Lieferumfang ohne Werkzeuge
 Delivery without tools



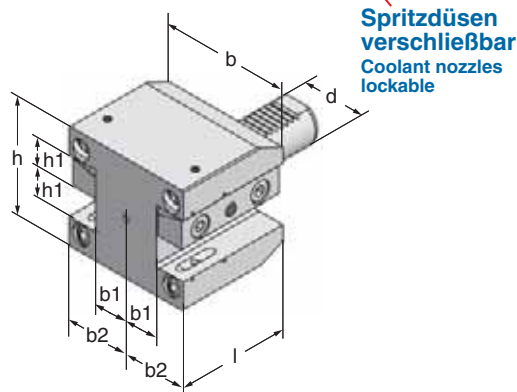
Art.-Nr.	Typ	d	b	b1	b2	h1	l
30.20.042	VDI30D	30	88	26	44	20	90
40.25.042	VDI40D	40	95	25,5	47,5	25	90
INCH							
311208	VDI30D	30	90	23	45	1"	90
411208	VDI40D	40	95	25,5	47,5	1"	90

Ein Drehhalter - vier Einsatzmöglichkeiten:
links - rechts - vorkopf - überkopf
One turning-toolholder - four possibilities:
left - right - forehead - overhead

Multi-Doppel-Drehhalter Form C1-C4 mit iK

- für Klemmhalter mit Kühlmittelzufuhr **direkt zur Schneide**
- für ISO-Klemmhalter mit Pratzenklemmung zur optimalen Kühlung der Schneide
- Multi-double-turning-toolholder form C1-C4 with internal coolant**
- for clamping holders with coolant channels **directly to the cutting edge**
- for ISO-clamping holders **with claw clamping for best possible coolant supply**

Lieferumfang ohne Werkzeuge
 Delivery without tools



Art.-Nr.	d	b	b1	b2	h	h1	l
30.20.044	30	86	23	43	78	20	75
40.25.044	40	130	40	65	96	25	90

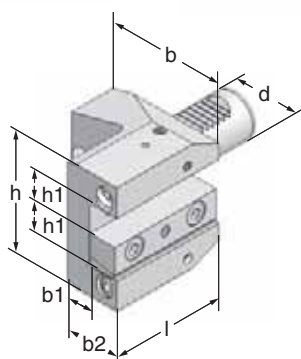
NEWS

Ein Drehhalter - vier Einsatzmöglichkeiten:
links - rechts - vorkopf - überkopf
One turning-toolholder - four possibilities:
left - right - forehead - overhead

Multi-Drehhalter Form C1-C4
Multi-turning-toolholder form C1-C4

Doppelverzahnung / Double toothing

Lieferumfang ohne Werkzeug
 Delivery without tool

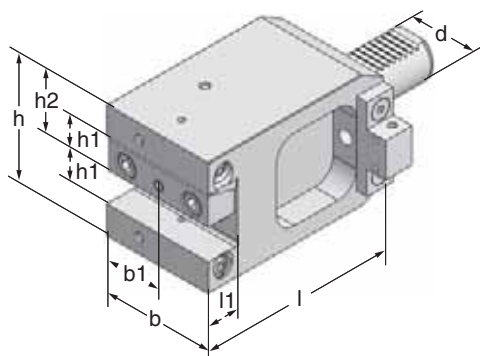


Art.-Nr.	d	b	b1	b2	h	h1	l
30.20.043E	30	89	16	54	78	20	85

Ein Drehhalter - vier Einsatzmöglichkeiten:
links - rechts - vorkopf - überkopf
One turning-toolholder - four possibilities:
left - right - forehead - overhead

Multi-Drehhalter Form B1-B4
Multi-turning-toolholders form B1-B4

Lieferumfang ohne Werkzeug
 Delivery without tool



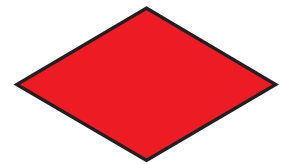
Art.-Nr.	d	b	b1	h	h1	h2	l	l1
30.20.063E	30	70	35	78	20	39	120	20
40.25.063E	40	96	48	94	25	47	125	25

Anschlag links und rechts montierbar
 Stop left and right mountable

Ein Drehhalter - vier Einsatzmöglichkeiten:
links - rechts - vorkopf - überkopf
One turning-toolholder - four possibilities:
left - right - forehead - overhead

Werkzeughalter für Sternrevolver DIN 69880 / DIN ISO 10889

Toolholders for star-turret DIN 69880 / DIN ISO 10889

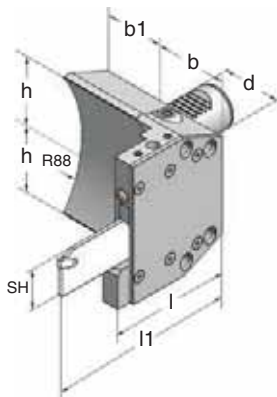


Abstechhalter rechts

Infeed toolholders right

Doppelverzahnung / Double toothing

Lieferumfang ohne Werkzeug
Delivery without tool



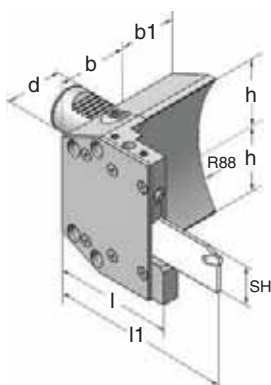
Art.-Nr.	Typ	d	SH	b	b1	h	l	l1
25.26.485	VDI25Dx26R+LÜK	25	26	43	29	40	85	112
25.32.485	VDI25Dx32R+LÜK	25	32	43	29	40	85	112
30.26.485	VDI30Dx26R+LÜK	30	26	60	35	50	85	112
30.32.485	VDI30Dx32R+LÜK	30	32	60	35	50	85	112
40.32.485	VDI40Dx32R+LÜK	40	32	60	35	50	88,5	115

Abstechhalter links

Infeed toolholders left

Doppelverzahnung / Double toothing

Lieferumfang ohne Werkzeug
Delivery without tool

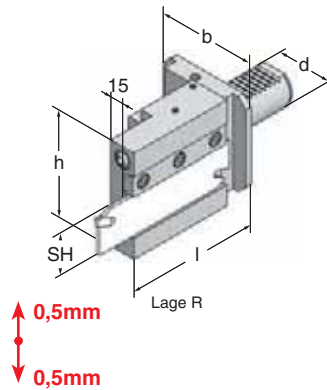


Art.-Nr.	Typ	d	SH	b	b1	h	l	l1
25.26.486	VDI25Dx26L+RÜK	25	26	43	29	40	85	112
25.32.486	VDI25Dx32L+RÜK	25	32	43	29	40	85	112
30.26.486	VDI30Dx26L+RÜK	30	26	60	35	50	85	112
30.32.486	VDI30Dx32L+RÜK	30	32	60	35	50	85	112
40.32.486	VDI40Dx32L+RÜK	40	32	60	35	50	88,5	115

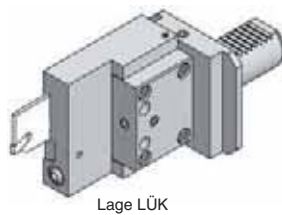
Abstechhalter rechts
Infeed toolholders right

Höhenverstellbar $\pm 0,5\text{mm}$
 Adjustable in height $\pm 0,5\text{mm}$

Lieferumfang ohne Werkzeug
 Delivery without tool



Der Halter kann auch **links** montiert werden:
 The toolholder can also be mounted **left**:

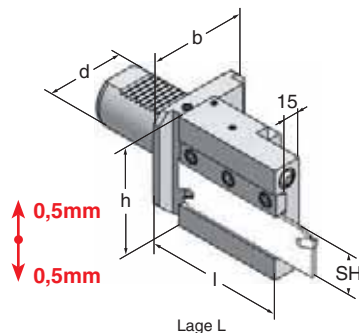


Art.-Nr.	Typ	d	SH	b	h	l
30.26.487	VDI30x26R+LÜK	30	26	70	78	95
30.32.487	VDI30x32R+LÜK	30	32	70	78	95
40.32.487	VDI40x32R+LÜK	40	32	70	78	95

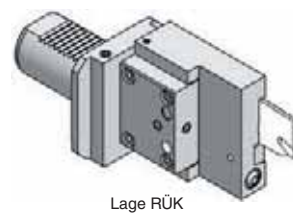
Abstechhalter links
Infeed toolholders left

Höhenverstellbar $\pm 0,5\text{mm}$
 Adjustable in height $\pm 0,5\text{mm}$

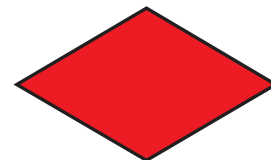
Lieferumfang ohne Werkzeug
 Delivery without tool



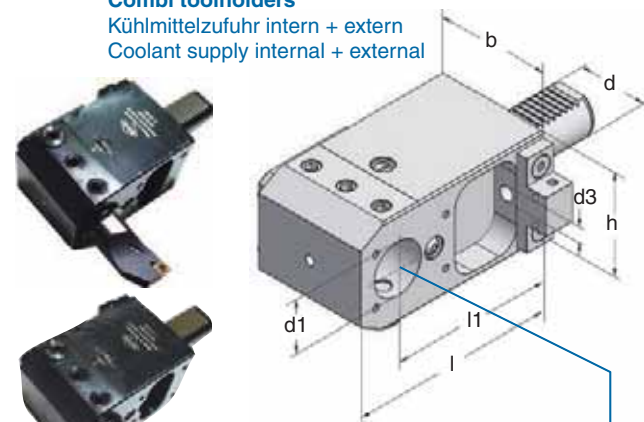
Der Halter kann auch **rechts** montiert werden:
 The toolholder can also be mounted **right**:



Art.-Nr.	Typ	d	SH	b	h	l
30.26.488	VDI30x26L+RÜK	30	26	70	78	95
30.32.488	VDI30x32L+RÜK	30	32	70	78	95
40.32.488	VDI40x32L+RÜK	40	32	70	78	95



VDI 25 Kombiwerkzeughalter
Combi toolholders
 Kühlmittelzufuhr intern + extern
 Coolant supply internal + external



Reduzierbuchsen
Reduction bushes



Spannzangenfutter DIN 6499
Collet chucks DIN 6499



Art.-Nr.	Typ	d	d1	b	h	l	l1	d3
25.25.0075	VDI25x25x75	25	25	60	54	98	75	7
25.32.0075	VDI25x32x75	25	32	60	54	98	75	7

Anschlag links und rechts montierbar
 Stop left and right mountable

Lieferumfang ohne Werkzeug
 Delivery without tool

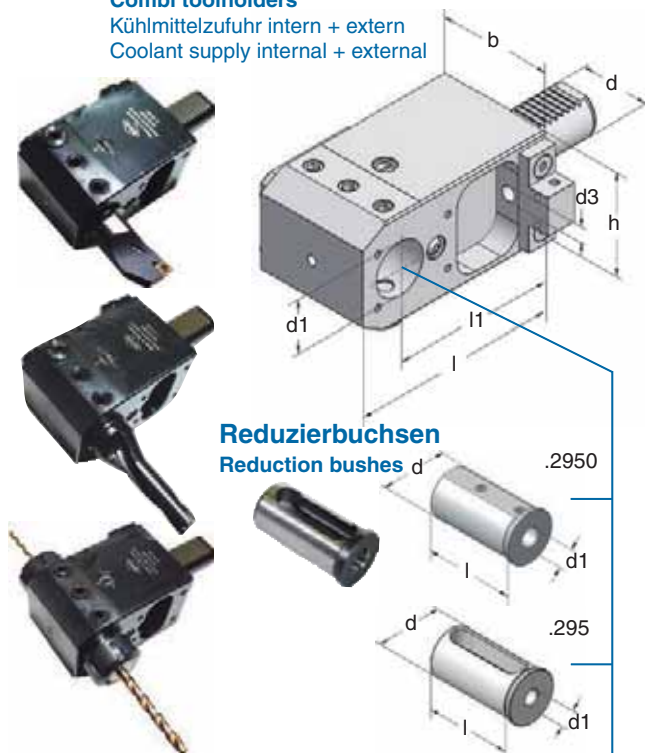
Art.-Nr.	d	d1	l
25.06.2950	25	6	50
25.08.2950	25	8	50
25.10.295	25	10	50
25.12.295	25	12	50
25.14.295	25	14	50
25.16.295	25	16	50
25.18.295	25	18	50
25.20.295	25	20	50
32.06.2950	32	6	60
32.08.2950	32	8	60
32.10.2950	32	10	60
32.12.295	32	12	60
32.14.295	32	14	60
32.16.295	32	16	60
32.18.295	32	18	60
32.20.295	32	20	60
32.25.295	32	25	60

Art.-Nr.	Typ	d	d1	D	l	l1
845101	ER 25	25	2-16 430E	42	58	21-25
846101	ER 25	32	2-16 430E	42	58	21-25

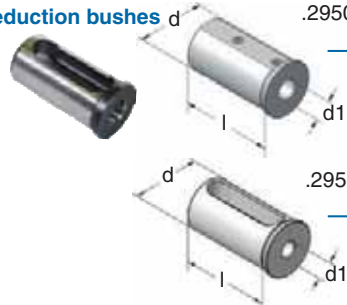
Art.-Nr.	Typ	d	d1	D	l	l1
822101	ER 25	32	2-16 430E	42	60	21-25

841101	Verschlussmutter ER25 / Sealing nut ER25					
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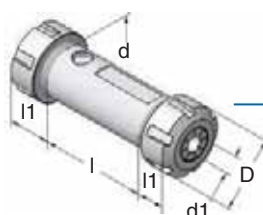
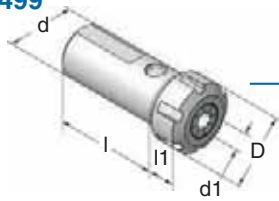
VDI 30 Kombiwerkzeughalter
Combi toolholders
 Kühlmittelzufuhr intern + extern
 Coolant supply internal + external



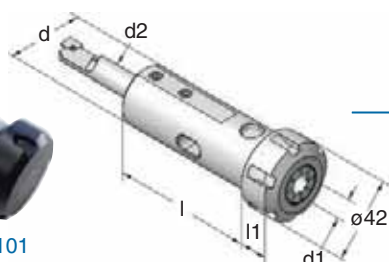
Reduzierbuchsen
Reduction bushes



Spannzangenfutter DIN 6499
Collet chucks DIN 6499



Spannzangenfutter DIN 6499/430E
mit zyl. Aufnahme für Bohrstangen ø6-16mm
Collet chucks DIN 6499/430E with cyl. adaptor
for boring bars ø6-16mm



Verschlussmutter 841101
 Sealing nut 841101

Art.-Nr.	Typ	d	d1	b	h	l	l1	d3
30.32.0085	VDI30x32x 85	30	32	70	64	110	85	9
30.32.0100	VDI30x32x100	30	32	70	64	125	100	9
30.32.0120	VDI30x32x120	30	32	70	64	145	120	9

HARDINGE

30.32.0070	VDI30x32x70	30	32	70	64	101	70	
30.40.0070	VDI30x40x70	30	40	70	72	105	70	

INCH-Größen auf Anfrage / INCH-sizes on inquiry

Anschlag links und rechts montierbar
 Stop left and right mountable

Lieferumfang ohne Werkzeug
 Delivery without tool

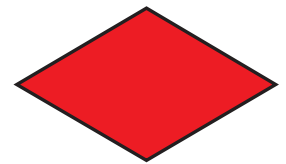
Art.-Nr.	d	d1	l
32.06.2950	32	6	60
32.08.2950	32	8	60
32.10.2950	32	10	60
32.12.295	32	12	60
32.14.295	32	14	60
32.16.295	32	16	60
32.18.295	32	18	60
32.20.295	32	20	60
32.25.295	32	25	60

Art.-Nr.	Typ	d	d1	D	l	l1
820101	ER 25	32	2-16 430E	42	58	21-25
836101	ER 32	32	2-20 470E	50	58	31-35

Art.-Nr.	Typ	d	d1	D	l	l1
821101	ER 25	32	2-16 430E	42	70	21-25

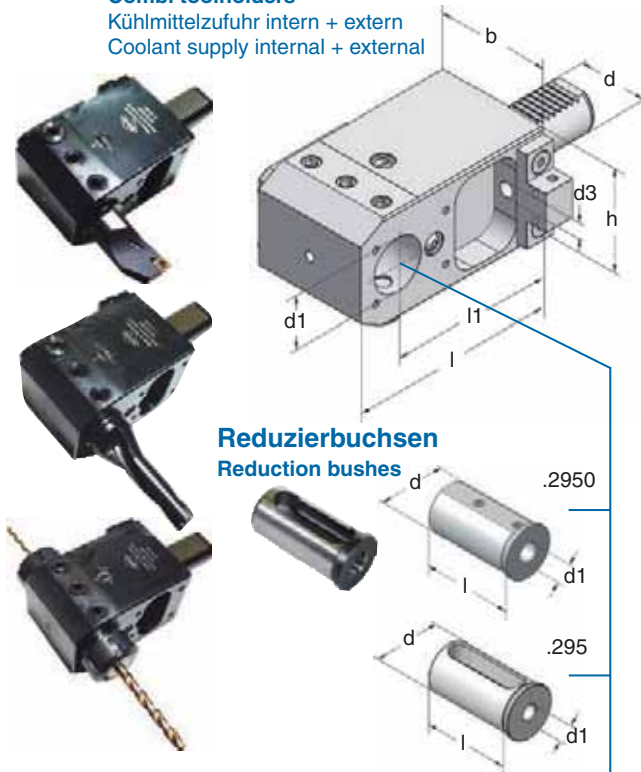
Art.-Nr.	Typ	d	d1	d2	l	l1
830101	ER 25	32	2-16 430E	6	85	21-25
831101	ER 25	32	2-16 430E	8	85	21-25
832101	ER 25	32	2-16 430E	10	85	21-25
833101	ER 25	32	2-16 430E	12	85	21-25
834101	ER 25	32	2-16 430E	14	85	21-25
835101	ER 25	32	2-16 430E	16	85	21-25

841101 Verschlussmutter ER25 / Sealing nut ER25

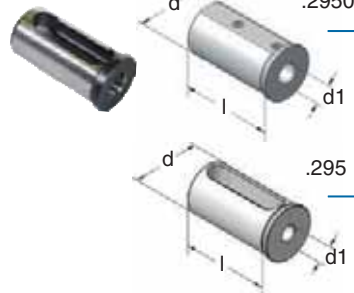


VDI 40 Kombiwerkzeughalter Combi toolholders

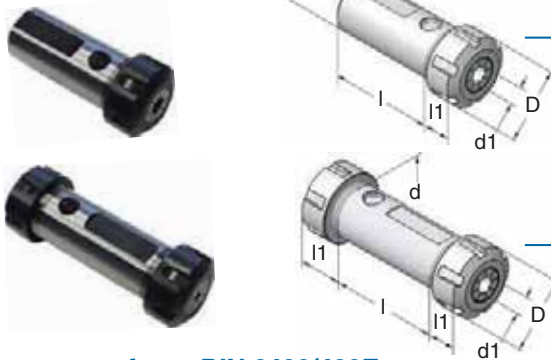
Kühlmittelzufuhr intern + extern
Coolant supply internal + external



Reduzierbuchsen Reduction bushes



Spannzangenfutter DIN 6499 Collet chucks DIN 6499



Spannzangenfutter DIN 6499/430E mit zyl. Aufnahme für Bohrstangen ø6-16mm Collet chucks DIN 6499/430E with cyl. adaptor for boring bars ø6-16mm



Verschlussmutter 841101
Sealing nut 841101

Art.-Nr.	Typ	d	d1	b	h	l	l1	d3
40.25.0100	VDI40x25x100	40	25	85	76	122	100	11
40.32.0100	VDI40x32x100	40	32	85	76	125	100	11
40.40.0100	VDI40x40x100	40	40	85	76	129	100	11
40.25.0120	VDI40x25x120	40	25	85	76	142	120	11
40.32.0120	VDI40x32x120	40	32	85	76	145	120	11
40.40.0120	VDI40x40x120	40	40	85	76	149	120	11

INCH-Größen auf Anfrage / INCH-sizes on inquiry

Anschlag links und rechts montierbar
Stop left and right mountable

Lieferumfang ohne Werkzeug
Delivery without tool

Art.-Nr.	d	d1	l
32.06.2950	32	6	60
32.08.2950	32	8	60
32.10.2950	32	10	60
32.12.295	32	12	60
32.14.295	32	14	60
32.16.295	32	16	60
32.18.295	32	18	60
32.20.295	32	20	60
32.25.295	32	25	60

40.06.2950	40	6	72
40.08.2950	40	8	72
40.10.2950	40	10	72
40.12.2950	40	12	72
40.14.295	40	14	72
40.16.295	40	16	72
40.18.295	40	18	72
40.20.295	40	20	72
40.25.295	40	25	72
40.32.295	40	32	72

Art.-Nr.	Typ	d	d1	D	l	l1
820101	ER 25	32	2-16 430E	42	58	21-25
836101	ER 32	32	2-20 470E	50	58	31-35
117102	ER 32	40	2-20 470E	50	64	24-29

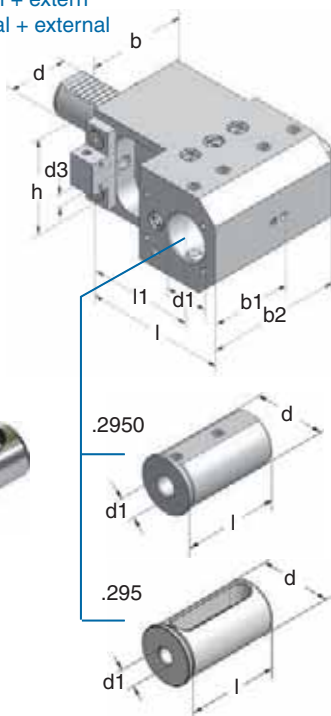
Art.-Nr.	Typ	d	d1	D	l	l1
823101	ER 25	32	2-16 430E	42	85	21-25
824101	ER 32	40	2-20 470E	50	85	24-29

Art.-Nr.	Typ	d	d1	d2	l	l1
830101	ER 25	32	2-16 430E	6	85	21-25
831101	ER 25	32	2-16 430E	8	85	21-25
832101	ER 25	32	2-16 430E	10	85	21-25
833101	ER 25	32	2-16 430E	12	85	21-25
834101	ER 25	32	2-16 430E	14	85	21-25
835101	ER 25	32	2-16 430E	16	85	21-25

841101 Verschlussmutter ER25 / Sealing nut ER25

VDI 30 Kombiwerkzeughalter
VDI 40 Combi toolholders
 Kühlmittelzufuhr intern + extern
 Coolant supply internal + external

Reduzierbuchsen
 Reduction bushes



Art.-Nr.	Typ	d	d1	b	b1	b2	h	l	l1	d3
30.32.00853	VDI30x32x 85	30	32	70	57,5	98	68	110	85	9
30.32.0103	VDI30x32x100	30	32	70	57,5	98	68	125	100	9
30.32.0123	VDI30x32x120	30	32	70	57,5	98	68	145	120	9

40.32.0103	VDI40Dx32x100*	40	32	85	77,5	120	76	129	100	11
40.32.0123	VDI40Dx32x120*	40	32	85	77,5	120	76	149	120	11

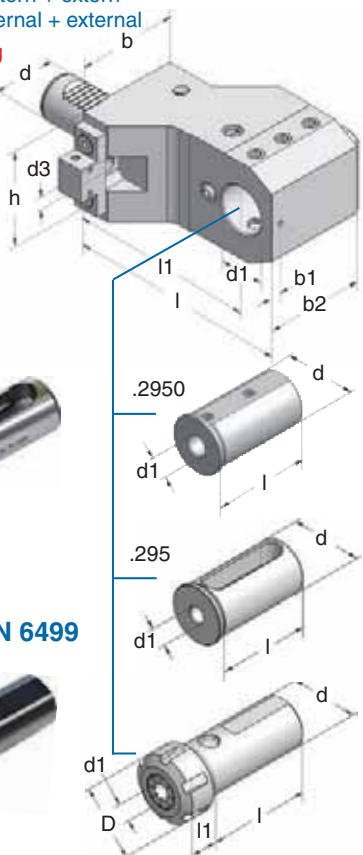
* **Doppelverzahnung / Double toothing**
 Anschlag links und rechts montierbar
 Stop left and right mountable

Art.-Nr.	d	d1	l
32.06.2950	32	6	60
32.08.2950	32	8	60
32.10.2950	32	10	60
32.12.295	32	12	60
32.14.295	32	14	60
32.16.295	32	16	60
32.18.295	32	18	60
32.20.295	32	20	60
32.25.295	32	25	60

VDI 30 Kombiwerkzeughalter zurückgesetzt
VDI 40 Combi toolholders set back
 Kühlmittelzufuhr intern + extern
 Coolant supply internal + external

Reduzierbuchsen
 Reduction bushes

Spannzangenfutter DIN 6499
 Collet chucks DIN 6499



Art.-Nr.	Typ	d	d1	b	b1	b2	h	l	l1	d3
30.32.00085	VDI30Dx32x 85	30	32	70	7	69	68	110	85	9
30.30.00100	VDI30Dx30x100	30	30	70	7	69	68	125	100	9
30.32.00100	VDI30Dx32x100	30	32	70	7	69	68	125	100	9
30.40.00100	VDI30Dx40x100	30	40	70	7	69	68	129	100	9

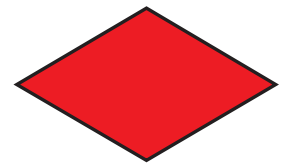
40.40.00100	VDI40Dx40x100	40	40	85	7	75	76	129	100	11
40.40.00120	VDI40Dx40x120	40	40	85	7	75	76	149	120	11

Anschlag links und rechts montierbar
 Stop left and right mountable

Lieferumfang ohne Werkzeug
 Delivery without tool

Reduzierbuchsen siehe Seite 42
 Reduction bushes see page 42

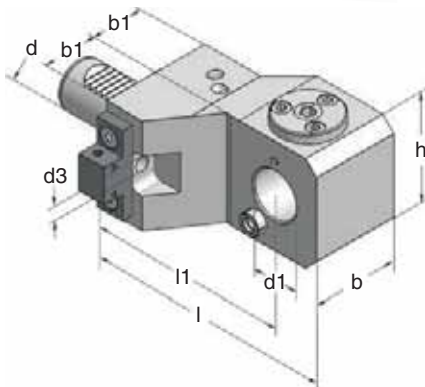
Art.-Nr.	Typ	d	d1	D	l	l1	
820101	ER 25	32	2-16	430E	42	58	21-25
836101	ER 32	32	2-20	470E	50	58	31-35
117102	ER 32	40	2-20	470E	50	64	24-29



Ausgleichhalter VDI 30 + VDI 40

Adaptors for VDI 30 + VDI 40

Doppelverzahnung
 Double toothing



Art.-Nr.	Typ	d	d1	b	b1	h	l	l1	d3
30.30.070	VDI30Dx30x 70	30	30	55	35	68	100	70	9
30.30.085	VDI30Dx30x 85	30	30	55	35	68	115	85	9
30.30.100	VDI30Dx30x100	30	30	55	35	68	130	100	9
40.40.100	VDI40Dx40x100	40	40	63	42,5	85	135	100	11
40.40.120	VDI40Dx40x120	40	40	63	42,5	85	155	120	11

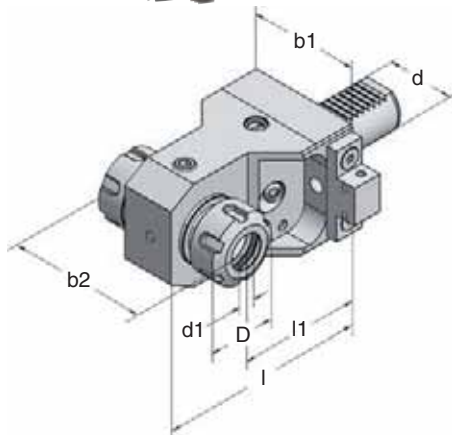
Anschlag links und rechts montierbar
 Stop left and right mountable

Doppel-Spannzangenhalter VDI 30 + VDI 40

Double-collet chucks toolholder VDI 30 + VDI 40

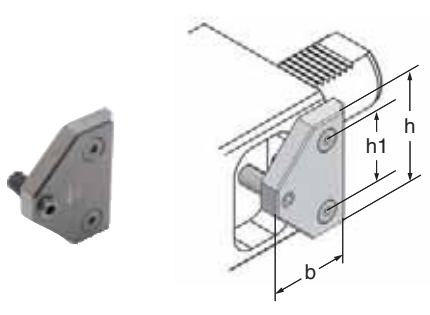
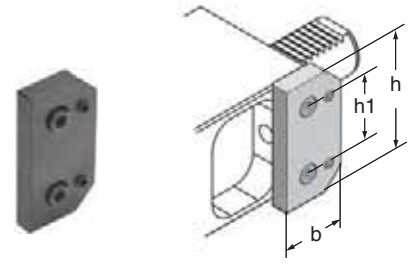
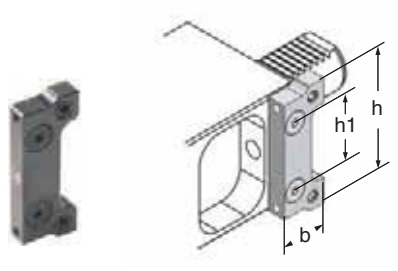
Kühlmittelzufuhr intern + extern
 Coolant supply internal + external

Lieferumfang ohne Spannzange
 Delivery without collet



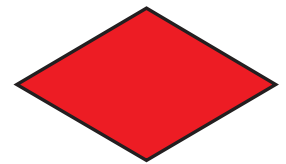
Art.-Nr.	Typ	d	d1	D	b1	b2	l	l1
30.085.16	VDI30xER25x 85	30	1-16	42	70	88	110	85
40.100.20	VDI40xER32x100	40	2-20	50	85	104	129	100
841101	Verschlussmutter ER25 / Sealing nut							
842101	Verschlussmutter ER32 / Sealing nut							

Anschlag links und rechts montierbar
 Stop left and right mountable

<p>Ausrichtplatten für Kombiwerkzeughalter Adjust plates for combi toolholder</p> 	Art.-Nr.	Typ	b	h	h1
	579101	VDI 25	40	54	38
	576101	VDI 30	50	68	38
	523101	VDI 40	50	66	42
<p>Ausrichtplatten für Kombiwerkzeughalter Adjust plates for combi toolholder</p> 	Art.-Nr.	Typ	b	h	h1
	503101	VDI 30	35	68	38
<p>Ausrichtplatten für Kombiwerkzeughalter Adjust plates for combi toolholder</p> 	Art.-Nr.	Typ	b	h	h1
	865101	Traub TNX 65	25	70	38

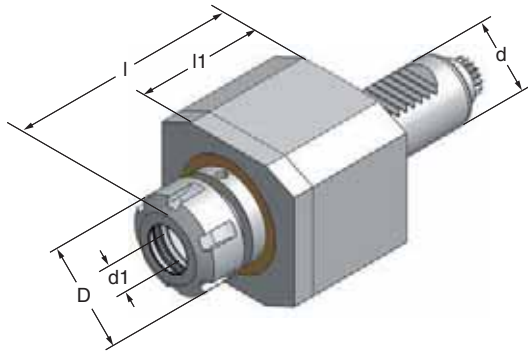
Angetriebene Werkzeuge DIN 69880 / DIN ISO 10889

Driven tools DIN 69880 / DIN ISO 10889



Axial Bohr- und Fräskopf Axial drilling and milling head

Lieferumfang ohne Werkzeug und Spannzange
Delivery without tool and collet



Sauter-Revolver DIN 5480 CTX



Sauter-Revolver DIN 5482 5482



Diplomatic DIN 1809 1809



Barrufaldi TOEM TOEM



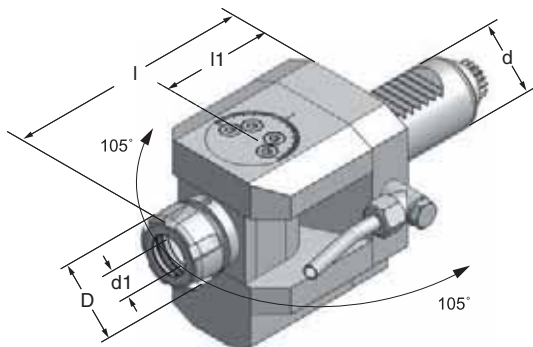
Bitte geben Sie bei Ihrer Anfrage den **Maschinentyp** an
In case of inquiry please indicate details of **type** of machine as shown

Art.-Nr.	Typ	d	d1	D	l	l1
4.2016CTX	VDI20xER16	20	1-10	28	76	49
4.2020CTX	VDI20xER20	20	1-13	34	76	49
4.20161809	VDI20xER16	20	1-10	28	76	40
4.2525K5480	VDI25xER25	25	1-16	42	86	58
4.2520G200	VDI25xER20	25	1-13	34	66	55
4.3025CTX	VDI30xER25	30	1-16	42	88	58
4.3025CTXk	VDI30xER25	30	1-16	42	88	58
4.3032CTX	VDI30xER32	30	2-20	50	88	58
4.30255482	VDI30xER25	30	1-16	42	88	58
4.30255482k	VDI30xER25	30	1-16	42	88	58
4.30251809	VDI30xER25	30	1-16	42	88	58
4.30251809k	VDI30xER25	30	1-16	42	88	58
4.3025TOEM	VDI30xER25	30	1-16	42	88	58
4.3025TOEMk	VDI30xER25	30	1-16	42	88	58
4.3025LT10	VDI30xER25	30	1-16	42	88	58
4.3025LT10k	VDI30xER25	30	1-16	42	88	58
4.3025GU600	VDI30xER25	30	1-16	42	88	58
4.4032CTX	VDI40xER32	40	2-20	50	110	76
4.4032CTXk	VDI40xER32	40	2-20	50	110	76
4.40325482	VDI40xER32	40	2-20	50	110	76
4.40325482k	VDI40xER32	40	2-20	50	110	76
4.40321809	VDI40xER32	40	2-20	50	110	76
4.40321809k	VDI40xER32	40	2-20	50	110	76
4.4032TOEM	VDI40xER32	40	2-20	50	110	76
4.4032TOEMk	VDI40xER32	40	2-20	50	110	76
4.4032LT15	VDI40xER32	40	2-20	50	110	76
4.4032LT15k	VDI40xER32	40	2-20	50	110	76
4.4032HAASL20	VDI40xER32	40	2-20	50	110	76
4.4032GU800	VDI40xER32	40	2-20	50	110	58
4.4032GU800k	VDI40xER32	40	2-20	50	110	58
4.4032TMM250	VDI40xER32	40	2-20	50	110	58
4.50405480	VDI50xER40	50	3-30	63	120	80
4.50405480k	VDI50xER40	50	3-30	63	120	80
4.50405482	VDI50xER40	50	3-30	63	120	80
4.50405482k	VDI50xER40	50	3-30	63	120	80
4.50401809	VDI50xER40	50	3-30	63	120	80
4.50401809k	VDI50xER40	50	3-30	63	120	80

Ausführung k mit innerer Kühlmittelzufuhr
Type k with internal cooling supply

Schwenkopf
Swivel head

Lieferumfang ohne Werkzeug und Spannzange
 Delivery without tool and collet



Sauter-Revolver DIN 5480 **CTX**



Sauter-Revolver DIN 5482 **5482**



Diplomatic DIN 1809 **1809**

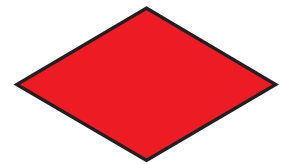


Barrufaldi TOEM **TOEM**



Bitte geben Sie bei Ihrer Anfrage den **Maschinentyp** an
 In case of inquiry please indicate details of **type** of machine as shown

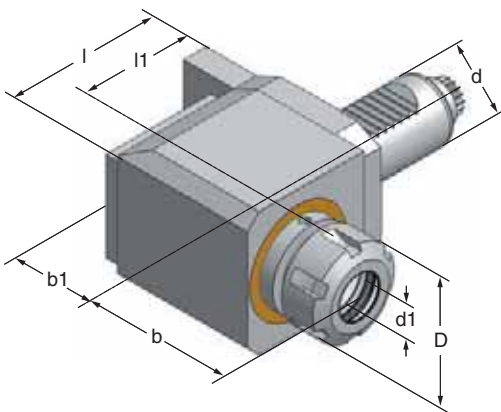
Art.-Nr.	Typ	d	d1	D	l	l1
5.20165480	VDI20xER16	20	1-10	28	118	64
5.20161809	VDI20xER16	20	1-10	28	118	64
5.2016TOEM	VDI20xER16	20	1-10	28	118	64
5.25205480	VDI25xER20	25	1-13	34	115	58
5.3020CTX	VDI30xER20	30	1-13	34	102	53
5.30205482	VDI30xER20	30	1-13	34	102	53
5.30201809	VDI30xER20	30	1-13	34	102	53
5.3020TOEM	VDI30xER20	30	1-13	34	102	53
5.4025CTX	VDI40xER25	40	1-16	42	129	66
5.4025LCTX	VDI40xER25	40	1-16	42	150	87
5.40255482	VDI40xER25	40	1-16	42	120	57
5.40251809	VDI40xER25	40	1-16	42	120	57
5.4025TOEM	VDI40xER25	40	1-16	42	120	57
5.50325480	VDI50xER32	50	3-20	50	150	87



Radial Bohr- und Fräskopf
Radial drilling and milling head



Abb. zeigt Ausführung R / Picture shows Type R



Art.-Nr.	Typ	d	d1	l	l1	b	b1
6.2016CTX R	VDI20xER16	20	1-10	68	45	57	32
6.2016CTX L	VDI20xER16	20	1-10	68	45	57	32
6.2016LCTX R	VDI20xER16	20	1-10	101	75	62	48
6.2016LCTX L	VDI20xER16	20	1-10	101	75	62	48
6.2020CTX R	VDI20xER20	20	1-13	68	45	57	32
6.2020CTX L	VDI20xER20	20	1-13	68	45	57	32
6.20161809 R	VDI20xER16	20	1-10	68	48	58	25
6.20161809 L	VDI20xER16	20	1-10	68	48	58	25
6.2525CTXL R	VDI25xER25	25	1-16	101	75	63	40
6.2525CTXL L	VDI25xER25	25	1-16	101	75	63	40
6.3025CTX R	VDI30xER25	30	1-16	81	55	63	48
6.3025CTX L	VDI30xER25	30	1-16	81	55	63	48
6.3025CTX Rk	VDI30xER25	30	1-16	81	55	63	48
6.3025CTX Lk	VDI30xER25	30	1-16	81	55	63	48
6.3025LCTX RL	VDI30xER25	30	1-16	126	100	63	48
6.3025LCTX RLk	VDI30xER25	30	1-16	126	100	63	48
6.30255482 R	VDI30xER25	30	1-16	81	55	63	48
6.30255482 L	VDI30xER25	30	1-16	81	55	63	48
6.30255482 Rk	VDI30xER25	30	1-16	81	55	63	48
6.30255482 Lk	VDI30xER25	30	1-16	81	55	63	48
6.30251809 R	VDI30xER25	30	1-16	81	55	63	48
6.30251809 L	VDI30xER25	30	1-16	81	55	63	48
6.30251809 Rk	VDI30xER25	30	1-16	81	55	63	48
6.30251809 Lk	VDI30xER25	30	1-16	81	55	63	48
6.3025LT10 R	VDI30xER25	30	1-16	81	55	63	48
6.3025LT10 L	VDI30xER25	30	1-16	81	55	63	48
6.3025LT10 Rk	VDI30xER25	30	1-16	81	55	63	48
6.3025LT10 Lk	VDI30xER25	30	1-16	81	55	63	48

Ausführung R wie abgebildet / **Type R** right hand design as shown
Ausführung L spiegelbildlich / **Type L** left hand design reversed
Ausführung RL mit doppelverzahntem VDI-Schaft
Type RL with doubletoothed VDI-shaft

Ausführung k mit innerer Kühlmittelzufuhr
Type k with internal cooling supply

Sauter-Revolver DIN 5480 **CTX**



Sauter-Revolver DIN 5482 **5482**



Diplomatic DIN 1809 **1809**



Barrufaldi TOEM **TOEM**

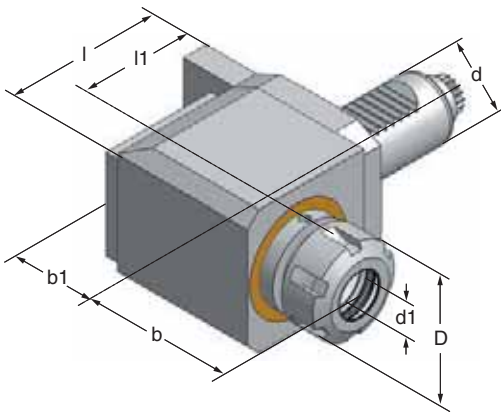


Bitte geben Sie bei Ihrer Anfrage den **Maschinentyp** an
 In case of inquiry please indicate details of **type** of machine as shown

Radial Bohr- und Fräskopf
 Radial drilling and milling head



Abb. zeigt Ausführung R / Picture shows Type R



Sauter-Revolver DIN 5480 CTX



Sauter-Revolver DIN 5482 5482



Diplomatic DIN 1809 1809



Barrufaldi TOEM TOEM



Bitte geben Sie bei Ihrer Anfrage den **Maschinentyp** an
 In case of inquiry please indicate details of **type** of machine as shown

Art.-Nr.	Typ	d	d1	l	l1	b	b1
6.4032CTX R	VDI40xER32	40	2-20	103	65	82	72
6.4032CTX L	VDI40xER32	40	2-20	103	65	82	72
6.4032CTX Rk	VDI40xER32	40	2-20	103	65	82	72
6.4032CTX Lk	VDI40xER32	40	2-20	103	65	82	72
6.4032CTX RL	VDI40xER32	40	2-20	138	100	85	53
6.4032CTX RLk	VDI40xER32	40	2-20	138	100	85	53
6.4032LCTX RL	VDI40xER32	40	2-20	158	120	85	53
6.4032LCTX RLk	VDI40xER32	40	2-20	158	120	85	53
6.40325482 R	VDI40xER32	40	2-20	103	65	82	72
6.40325482 L	VDI40xER32	40	2-20	103	65	82	72
6.40325482 Rk	VDI40xER32	40	2-20	103	65	82	72
6.40325482 Lk	VDI40xER32	40	2-20	103	65	82	72
6.40321809 R	VDI40xER32	40	2-20	103	65	82	72
6.40321809 L	VDI40xER32	40	2-20	103	65	82	72
6.40321809 Rk	VDI40xER32	40	2-20	103	65	82	72
6.40321809 Lk	VDI40xER32	40	2-20	103	65	82	72
6.4032TOEM R	VDI40xER32	40	2-20	103	65	82	72
6.4032TOEM L	VDI40xER32	40	2-20	103	65	82	72
6.4032LT15 RL	VDI40xER32	40	2-20	103	65	82	72
6.4032LT15 RLk	VDI40xER32	40	2-20	103	65	82	72
6.4032TMM250	VDI40xER32	40	2-20	128	90	82	72
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6.50405480 R	VDI50xER40	50	3-30	119	75	96	84
6.50405480 L	VDI50xER40	50	3-30	119	75	96	84
6.50401809 R	VDI50xER40	50	3-30	119	75	96	84
6.50401809 L	VDI50xER40	50	3-30	119	75	96	84
6.50401809 Rk	VDI50xER40	50	3-30	119	75	96	84
6.50401809 Lk	VDI50xER40	50	3-30	119	75	96	84

Ausführung R wie abgebildet / **Type R** right hand design as shown

Ausführung L spiegelbildlich / **Type L** left hand design reversed

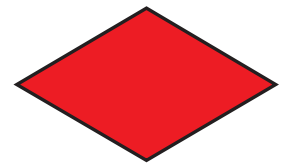
Ausführung RL mit doppelverzahntem VDI-Schaft

Type RL with doubletoothed VDI-shaft

Ausführung k mit innerer Kühlmittelzufuhr

Type k with internal cooling supply

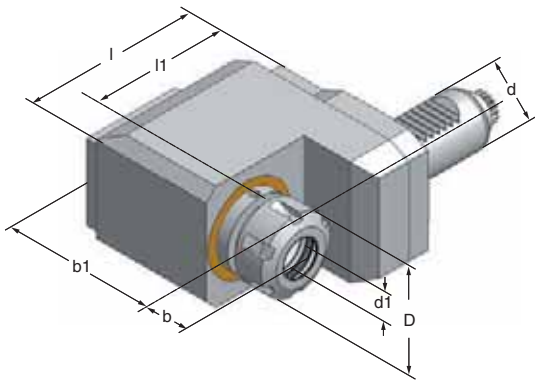




Radial Bohr- und Fräskopf zurückgesetzt
Radial drilling and milling head set back



Abb. zeigt Ausführung R / Picture shows Type R



Sauter-Revolver DIN 5480 **CTX**



Sauter-Revolver DIN 5482 **5482**



Diplomatic DIN 1809 **1809**



Barrufaldi TOEM **TOEM**



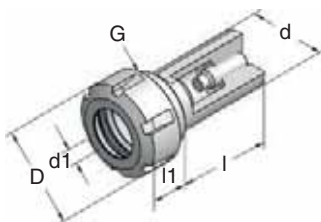
Bitte geben Sie bei Ihrer Anfrage den **Maschinentyp** an
 In case of inquiry please indicate details of **type** of machine as shown

Art.-Nr.	Typ	d	d1	l	l1	b	b1
8.16125480ZR	VDI16xER11	16	1- 7	61	45	15	53
8.20165480 R	VDI20xER16	20	1-10	77	54	22	81
8.20165480 L	VDI20xER16	20	1-10	77	54	22	81
8.20161809 R	VDI20xER16	20	1-10	77	54	22	81
8.20161809 L	VDI20xER16	20	1-10	77	54	22	81
8.2016TOEM R	VDI20xER16	20	1-10	78	58	22	80
8.2016TOEM L	VDI20xER16	20	1-10	78	58	22	80
8.2525L5480 R	VDI25xER25	25	1-16	104	75	42	70
8.2525L5480 L	VDI25xER25	25	1-16	104	75	42	70
8.3025CTX R	VDI30xER25	30	1-16	115	70	21	83
8.3025CTX L	VDI30xER25	30	1-16	115	70	21	83
8.3025LCTX RL	VDI30xER25	30	1-16	126	100	42	69
8.3025LCTX RLk	VDI30xER25	30	1-16	126	100	42	69
8.30255482 R	VDI30xER25	30	1-16	115	70	21	83
8.30255482 L	VDI30xER25	30	1-16	115	70	21	83
8.30251809 R	VDI30xER25	30	1-16	115	70	21	83
8.30251809 L	VDI30xER25	30	1-16	115	70	21	83
8.3025TOEM R	VDI30xER25	30	1-16	115	70	21	83
8.3025TOEM L	VDI30xER25	30	1-16	115	70	21	83
8.3025TOEM Rk	VDI30xER25	30	1-16	115	70	21	83
8.3025TOEM Lk	VDI30xER25	30	1-16	115	70	21	83
8.4032CTX R	VDI40xER32	40	2-20	128	90	32	100
8.4032CTX L	VDI40xER32	40	2-20	128	90	32	100
8.4032CTX Rk	VDI40xER32	40	2-20	128	90	32	100
8.4032CTX Lk	VDI40xER32	40	2-20	128	90	32	100
8.4032CTX RL	VDI40xER32	40	2-20	138	100	31	100
8.4032CTX RLk	VDI40xER32	40	2-20	138	100	31	100
8.4032LCTX RL	VDI40xER32	40	2-20	158	120	31	100
8.40325482 R	VDI40xER32	40	2-20	128	90	32	100
8.40325482 L	VDI40xER32	40	2-20	128	90	32	100
8.40321809 R	VDI40xER32	40	2-20	128	90	32	100
8.40321809 L	VDI40xER32	40	2-20	128	90	32	100
8.40321809 Rk	VDI40xER32	40	2-20	128	90	32	100
8.40321809 Lk	VDI40xER32	40	2-20	128	90	32	100
8.4032TOEM R	VDI40xER32	40	2-20	128	90	32	100
8.4032TOEM L	VDI40xER32	40	2-20	128	90	32	100
8.4032TMM250	VDI40xER32	40	2-20	128	90	32	100
8.50405480 R	VDI50xER40	50	3-30	156	112	30	126
8.50405480 L	VDI50xER40	50	3-30	156	112	30	126
8.50405480 Rk	VDI50xER40	50	3-30	156	112	30	126
8.50405480 Lk	VDI50xER40	50	3-30	156	112	30	126

Ausführung R wie abgebildet / **Type R** right hand design as shown
Ausführung L spiegelbildlich / **Type L** left hand design reversed
Ausführung RL mit doppelverzahntem VDI-Schaft
Type RL with doubletoothed VDI-shaft

Ausführung k mit innerer Kühlmittelzufuhr
Type k with internal cooling supply

**Spannzangenfutter zylindrisch
für Spannzangen ER/DIN 6499**
Collet chucks cylindrical for collets ER/DIN 6499

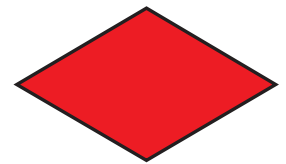


Art.-Nr.	Typ	d	d1	D	l	l1	G
132102	ø08x80xER 8M	8	0,5-5	12	80	26	M10x0,75
100102	ø08x56xER11M	8	1- 7	16	56	26	M13x0,75
101102	ø12x80xER16M	12	1-10	22	80	38	M19x1,00
102102	ø16x137xER16M	16	1-10	22	137	36	M19x1,00
103102	ø19,05x50xER25	19,05	2-16	42	50	46	M32x1,50
104102	ø20x50xER25	20	2-16	42	50	46	M32x1,50
105102	ø20x100xER25	20	2-16	42	100	46	M32x1,50
106102	ø25x50xER25	25	2-16	42	50	40	M32x1,50
107102	ø25x150xER25	25	2-16	42	150	40	M32x1,50
128102	ø25x50xER32	25	3-20	50	50	54	M40x1,50
108102	ø25,4x50xER25	25,40	2-16	42	50	40	M32x1,50
109102	ø25,4x50xER32	25,40	3-20	50	50	51	M40x1,50
110102	ø31,75x50xER25	31,75	2-16	42	50	30	M32x1,50
111102	ø31,75x50xER32	31,75	3-20	50	50	35	M40x1,50
112102	ø32x56xER25	32	2-16	42	56	30	M32x1,50
113102	ø32x56xER32	32	3-20	50	58	35	M40x1,50
114102	ø32x150xER25	32	2-16	50	150	30	M32x1,50
115102	ø32x150xER32	32	3-20	50	150	35	M40x1,50
116102	ø32x56xER40	32	3-30	63	56	60	M50x1,50
117102	ø40x64xER32	40	3-20	50	64	34	M40x1,50
118102	ø40x66xER40	40	3-30	63	66	55	M50x1,50

**Spannzangenfutter zylindrisch
für Spannzangen ER/DIN 6499**
Verlängerungen
Collet chucks cylindrical for collets ER/DIN 6499
Extensions

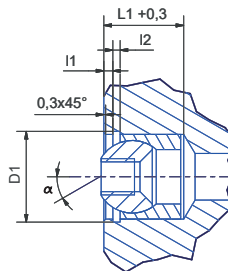
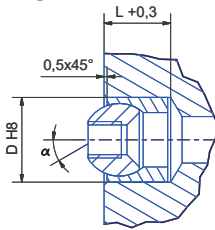
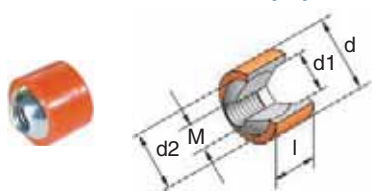


Art.-Nr.	Typ	d	d1	d2	D	l	l1	G
126102	ø14x202xER8M	14	0,5-5	-	12	202	18	M10x0,75
125102	ø16x282xER11M	16	1- 7	5	16	282	19	M13x0,75
131102	ø20x254xER16M	20	1-10	5	22	254	26	M19x1,00
124102	ø50x180xER40	50	3-30	27	63	180	35	M50x1,50



Spritzdüsen-Elemente zum Einpressen

Coolant nozzles for assembly by force fitting



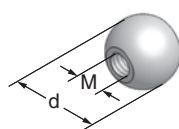
Gewindestift
Threaded pin

Düse
Nozzle

Art.-Nr.	d	d1	d2	M	l	l1	l2	D	D1	L	L1	α	Art.-Nr.	Art.-Nr.
1005	6	4,0	4	ø2,5	4,5	-	-	6	-	5,0	-	30°		
1007-5	8	5,5	6	ø2	6,0	1,5	0,8	8	8,8	6,5	8,5	30°		
1007	8	5,5	6	3,5	6,0	1,5	0,8	8	8,8	6,5	8,5	30°	1021 M3,5x4	
1008	10	5,5	7	4	7,0	1,5	0,8	10	10,8	8,0	9,5	30°	1024 M4 x4	
1008-T10	10	5,5	7	TORX 10	7,0	1,5	0,8	10	10,8	8,0	9,5	40°		
1010	12	7,5	9	5	8,0	1,5	1,0	12	13,0	9,0	10,5	30°	1025 M5 x5	1035 M5x5
1010-4	12	7,5	9	6	8,0	1,5	1,0	12	13,0	9,0	10,5	30°	1026 M6 x6	1036 M6x6
1010-T10	12	7,5	9	TORX 10	8,0	1,5	1,0	12	13,0	9,0	10,5	40°		
1012	14	9,0	11	6	10,0	1,5	1,0	14	15,0	11,0	12,5	40°	1026 M6 x6	1036 M6x6
1012-4	14	9,0	11	6x0,75	10,0	1,5	1,0	14	15,0	11,0	12,5	40°		
1012-5	14	9,0	11	7	10,0	1,5	1,0	14	15,0	11,0	12,5	30°	1027 M7 x7	1037 M7x7
1014	16	10,0	13	7	11,0	2,0	1,6	16	17,6	12,0	14,6	40°	1027 M7 x7	1037 M7x7
1014-3	15	10,0	13	7	11,0	2,0	1,6	15	16,6	12,0	14,6	40°	1027 M7 x7	1037 M7x7

Spritzkugeln

Injection balls

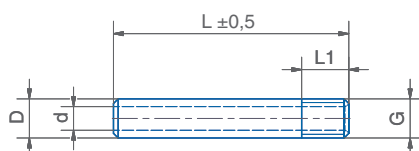


Art.-Nr.	d	M
05.920	5	ø2,5
07.920	7	M3,5
08.920	8	M4
10.920	10	M5
10.920-4	10	M6
12.920	12	M6
12.920-5	12	M7
14.920	14	M7
10.921	10	TORX 10

Spritzrohre Cu

Injection tubes Cu

Lieferumfang ohne Spritzdüse
Delivery without coolant nozzle



Art.-Nr.	(für Typ Nr.)	G	D	d	L	L1
10086	(1008)	M4	4	2,5	50	5
10106	(1010)	M5	5	3,0	50	6
10126	(1012/1010-4)	M6	6	4,0	50	6
10146	(1014/1012-5)	M7	7	4,5	50	6

Spannmuttern DIN 6499

Clamping nuts DIN 6499



Art.-Nr. 711120 - SW17
Art.-Nr. 716120 - SW25
Spannschlüssel Typ EP

Art.-Nr. 720120 - 750120
Spannschlüssel Typ E

Spannmuttern DIN 6499 gleitgelagert

Clamping nuts DIN 6499 friction bearing



Spannschlüssel Typ E

Spannschlüssel

Key

Typ EP



Typ E



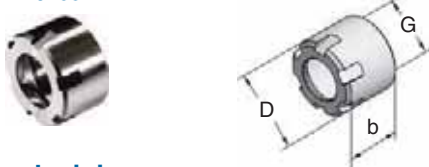
Art.-Nr.	Typ	D	b	G	Nm max.
711120	UMQ / ER11	19	11	M14x0,75	30
716120	UMQ / ER16	28	17	M22x1,50	70
720120	UMQ / ER20	34	19	M25x1,50	100
725120	UMQ / ER25	42	20	M32x1,50	130
732120	UMQ / ER32	50	22	M40x1,50	170
740120	UMQ / ER40	63	25	M50x1,50	220
750120	UMQ / ER50	78	35	M64x2,00	300

Art.-Nr.	Typ	D	b	G	Nm max.
716123	GMG / ER16	28	18	M22x1,50	70
720123	GMG / ER20	35	20	M25x1,50	100
725123	GMG / ER25	42	20	M32x1,50	130
732123	GMG / ER32	50	23	M40x1,50	170
740123	GMG / ER40	63	26	M50x1,50	220

Art.-Nr.	Typ	für Spannmutter	SW
911180	E 11 P	711120	17
916180	E 16 P	716120	25
920180	E 20 P		30
916181	E 16	716123, 716124, 716130	
920181	E 20	720120, 720123, 720124, 720130	
925180	E 25	725120, 725123, 725124, 725130	
932180	E 32	732120, 732123, 732124, 732130	
940180	E 40	740120, 740123, 740124, 740130	
950180	E 50	750120	

Spannmuttern DIN 6499 mini

Clamping nuts DIN 6499 mini



Spannschlüssel mini

Key mini



Art.-Nr.	Typ	D	b	G	Nm max.
908100	ER 8M	12	11	M10x0,75	6
911100	ER11M	16	11	M13x0,75	20
916100	ER16M	22	17	M19x1,00	30
920100	ER20M	28	19	M24x1,00	35
925100	ER25M	35	20	M30x1,00	40

Art.-Nr.	Typ	für Spannmutter
908160	E 8 mini	908100
911160	E 11 mini	911100
916160	E 16 mini	916100
920160	E 20 mini	920100
925160	E 25 mini	925100

Spannmuttern DIN 6499 mini

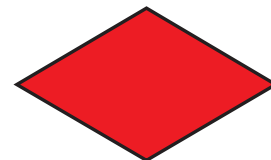
Clamping nuts DIN 6499 mini

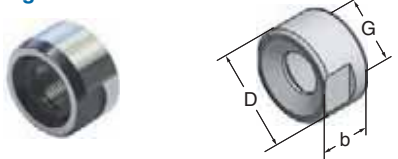

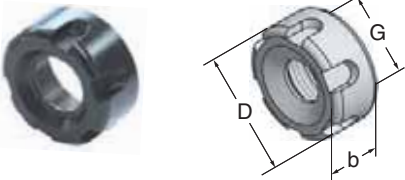


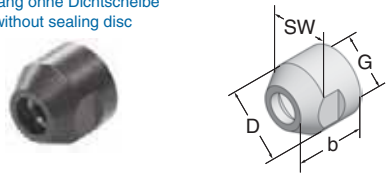

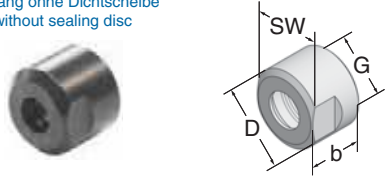


Art.-Nr.	Typ	D	b	G	SW	Nm max.
716120-2	ER16	25	17,5	M20x1,00	22	30



916162	Spannschlüssel ER16				22	
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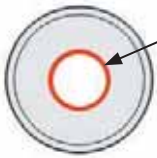


Spannmuttern ETS Clamping nuts ETS 	Art.-Nr. Typ D b G Spannschlüssel Nm max. 709130 ETS 9 13,5 8 M10x0,75 762101 10 712130 ETS12 19 12 M14x0,75 912163 10 716120-2ETS ETS16 27 15 M20x1,00 916163 30
	 Art.-Nr. Typ für Spannmutter 762101 Spannschlüssel ETS 9 709130 912163 Spannschlüssel ETS12 712130 916163 Spannschlüssel ETS16 716120-2ETS
	Art.-Nr. Typ D b G Spannschlüssel Nm max. 716130 ETS16 32 15 M22x1,50 916181 30 720130 ETS20 35 16,5 M25x1,50 920181 30 725130 ETS25 42 18,5 M32x1,50 925180 120 732130 ETS32 50 22 M40x1,50 932180 150 740130 ETS40 63 25 M50x1,50 940180 200 Spannschlüssel Typ E siehe Seite 53 Key Type E see page 53
	Art.-Nr. Typ D b G Nm max. Dichtscheibe 716124 GMGC / ER16 28 23 M22x1,5 70 excl. DS / ER16 720124 GMGC / ER20 34 25 M25x1,5 100 excl. DS / ER20 725124 GMGC / ER25 42 26 M32x1,5 130 excl. DS / ER25 732124 GMGC / ER32 50 28 M40x1,5 170 excl. DS / ER32 740124 GMGC / ER40 63 31 M50x1,5 220 excl. DS / ER40 Spannschlüssel Typ E siehe Seite 53 Key Type E see page 53
Spannmuttern DIN 6499 gleitgelagert für Dichtscheiben Clamping nuts DIN 6499 friction bearing for sealing discs Lieferumfang ohne Dichtscheibe Delivery without sealing disc 	Art.-Nr. Typ D b G Nm max. Dichtscheibe 716124-2 ER16C mini 25 22 M20x1,0 22 30 excl. Dichtscheibe/Sealing disc DS / ER16  916162 Spannschlüssel ER16 22
Spannmuttern DIN 6499 mini für Dichtscheiben Clamping nuts DIN 6499 for sealing discs Lieferumfang ohne Dichtscheibe Delivery without sealing disc 	Art.-Nr. Typ D b G SW Nm max. 716124-2ETS ETS16C 27 22,5 M20x1,00 24 30 excl. Dichtscheibe/Sealing disc DS / ER16  916163 Spannschlüssel ETS16 24
Spannmuttern ETS mini für Dichtscheiben Clamping nuts ETS mini for sealing discs Lieferumfang ohne Dichtscheibe Delivery without sealing disc 	

**Dichtscheiben für Spannmuttern DIN 6499, DIN 6388 & ETS
für Werkzeuge mit interner Kühlmittelzufuhr**

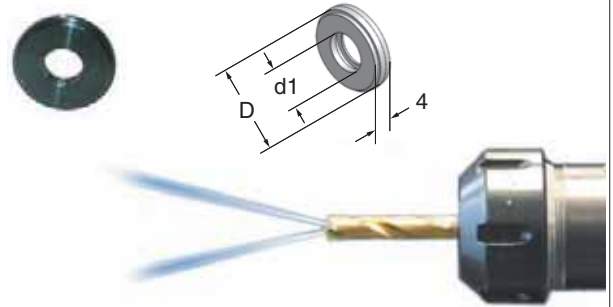
Sealing discs for clamping nuts DIN 6499, DIN 6388 & ETS
for tools with internal coolant supply

Kühlmitteldruck / Coolant pressure min. 5 bar - max. 100 bar



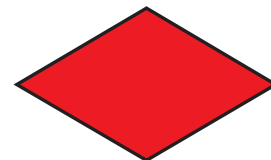
Der eingelegte O-Ring gewährleistet interne Kühlmittelzufuhr durch das gespannte Werkzeug direkt zur Werkzeugschneide

The inserted O-ring seal ensures a coolant supply internally through the clamped tool directly to the cutting edge



Art.-Nr.	Typ	D	d1	Art.-Nr.	Typ	D	d1	Art.-Nr.	Typ	D	d1
316040	DS/ER16	13	ø4 - 3	332040	DS/ER32	27	ø4 - 3	350050	DS/OZ25	31	ø5 - 4
316050	DS/ER16	13	ø5 - 4	332050	DS/ER32	27	ø5 - 4	350060	DS/OZ25	31	ø6 - 5
316060	DS/ER16	13	ø6 - 5	332060	DS/ER32	27	ø6 - 5	350070	DS/OZ25	31	ø7 - 6
316070	DS/ER16	13	ø7 - 6	332070	DS/ER32	27	ø7 - 6	350080	DS/OZ25	31	ø8 - 7
316080	DS/ER16	13	ø8 - 7	332080	DS/ER32	27	ø8 - 7	350090	DS/OZ25	31	ø9 - 8
316090	DS/ER16	13	ø9 - 8	332090	DS/ER32	27	ø9 - 8	350100	DS/OZ25	31	ø10 - 9
316100	DS/ER16	13	ø10 - 9	332100	DS/ER32	27	ø10 - 9	350110	DS/OZ25	31	ø11 - 10
				332110	DS/ER32	27	ø11-10	350120	DS/OZ25	31	ø12-11
320040	DS/ER20	16	ø4 - 3	332120	DS/ER32	27	ø12-11	350130	DS/OZ25	31	ø13-12
320050	DS/ER20	16	ø5 - 4	332130	DS/ER32	27	ø13-12	350140	DS/OZ25	31	ø14-13
320060	DS/ER20	16	ø6 - 5	332140	DS/ER32	27	ø14-13	350150	DS/OZ25	31	ø15-14
320070	DS/ER20	16	ø7 - 6	332150	DS/ER32	27	ø15-14	350160	DS/OZ25	31	ø16-15
320080	DS/ER20	16	ø8 - 7	332160	DS/ER32	27	ø16-15	350170	DS/OZ25	31	ø17-16
320090	DS/ER20	16	ø9 - 8	332170	DS/ER32	27	ø17-16	350180	DS/OZ25	31	ø18-17
320100	DS/ER20	16	ø10 - 9	332180	DS/ER32	27	ø18-17	350190	DS/OZ25	31	ø19-18
320110	DS/ER20	16	ø11-10	332190	DS/ER32	27	ø19-18	350200	DS/OZ25	31	ø20-19
320120	DS/ER20	16	ø12-11	332200	DS/ER32	27	ø20-19	350210	DS/OZ25	31	ø21-20
320130	DS/ER20	16	ø13-12					350220	DS/OZ25	31	ø22-21
				340050	DS/ER40	33,5	ø5 - 4	350230	DS/OZ25	31	ø23-22
325040	DS/ER25	21	ø4 - 3	340060	DS/ER40	33,5	ø6 - 5	350240	DS/OZ25	31	ø24-23
325050	DS/ER25	21	ø5 - 4	340070	DS/ER40	33,5	ø7 - 6	350250	DS/OZ25	31	ø25-24
325060	DS/ER25	21	ø6 - 5	340080	DS/ER40	33,5	ø8 - 7				
325070	DS/ER25	21	ø7 - 6	340090	DS/ER40	33,5	ø9 - 8				
325080	DS/ER25	21	ø8 - 7	340100	DS/ER40	33,5	ø10 - 9				
325090	DS/ER25	21	ø9 - 8	340110	DS/ER40	33,5	ø11-10				
325100	DS/ER25	21	ø10 - 9	340120	DS/ER40	33,5	ø12-11				
325110	DS/ER25	21	ø11-10	340130	DS/ER40	33,5	ø13-12				
325120	DS/ER25	21	ø12-11	340140	DS/ER40	33,5	ø14-13				
325130	DS/ER25	21	ø13-12	340150	DS/ER40	33,5	ø15-14				
325140	DS/ER25	21	ø14-13	340160	DS/ER40	33,5	ø16-15				
325150	DS/ER25	21	ø15-14	340170	DS/ER40	33,5	ø17-16				
325160	DS/ER25	21	ø16-15	340180	DS/ER40	33,5	ø18-17				
				340190	DS/ER40	33,5	ø19-18				
				340200	DS/ER40	33,5	ø20-19				
				340210	DS/ER40	33,5	ø21-20				
				340220	DS/ER40	33,5	ø22-21				
				340230	DS/ER40	33,5	ø23-22				
				340240	DS/ER40	33,5	ø24-23				
				340250	DS/ER40	33,5	ø25-24				
				340260	DS/ER40	33,5	ø26-25				

**Dichtscheiben für Spannmuttern
Ortlieb DIN 6388
für Werkzeuge mit interner
Kühlmittelzufuhr**
Sealing discs for clamping nuts
Ortlieb DIN 6388
for tools with internal coolant supply



Spannzangen ER/ESX DIN 6499-B rego-fix

Collets type ER/ESX DIN 6499-B rego-fix

Sätze / Sets 111002, 116002, 120002, 125002, 132002, 140002
nicht Original rego-fix / not original rego-fix



ER 8		ER 11/424 E		ER 16/426 E		ER 20/428 E	
Art.-Nr.	Spannbereich	Art.-Nr.	Spannbereich	Art.-Nr.	Spannbereich	Art.-Nr.	Spannbereich
108001	Satz / Set	111001	Satz / Set	116001	Satz / Set	120001	Satz / Set
		111002	Satz / Set	116002	Satz / Set	120002	Satz / Set
9 Stück/pcs. ø1-ø5		13 Stück/pcs. ø1-ø7		10 Stück/pcs. ø1-ø10		12 Stück/pcs. ø2-ø13	
108010	ø1,0 - 0,5	111010	ø1,0 - 0,5	116010	ø1,0 - 0,5	120010	ø1,0 - 0,5
108015	ø1,5 - 1,0	111015	ø1,5 - 1,0	116020	ø2,0 - 1,0	120020	ø2,0 - 1,0
108020	ø2,0 - 1,5	111020	ø2,0 - 1,5	116030	ø3,0 - 2,0	120030	ø3,0 - 2,0
108025	ø2,5 - 2,0	111025	ø2,5 - 2,0	116040	ø4,0 - 3,0	120040	ø4,0 - 3,0
108030	ø3,0 - 2,5	111030	ø3,0 - 2,5	116050	ø5,0 - 4,0	120050	ø5,0 - 4,0
108035	ø3,5 - 3,0	111035	ø3,5 - 3,0	116060	ø6,0 - 5,0	120060	ø6,0 - 5,0
108040	ø4,0 - 3,5	111040	ø4,0 - 3,5	116070	ø7,0 - 6,0	120070	ø7,0 - 6,0
108045	ø4,5 - 4,0	111045	ø4,5 - 4,0	116080	ø8,0 - 7,0	120080	ø8,0 - 7,0
108050	ø5,0 - 4,5	111050	ø5,0 - 4,5	116090	ø9,0 - 8,0	120090	ø9,0 - 8,0
		111055	ø5,5 - 5,0	116100	ø10,0 - 9,0	120100	ø10,0 - 9,0
		111060	ø6,0 - 5,5	ER 40/472 E		120110	ø11,0 - 10,0
		111065	ø6,5 - 6,0	140001	Satz / Set	120120	ø12,0 - 11,0
		111070	ø7,0 - 6,5	140002	Satz / Set	120130	ø13,0 - 12,0
ER 25/430 E		ER 32/470 E		23 Stück/pcs. ø3-ø26		ER 50/474 E	
125001	Satz / Set	132001	Satz / Set	140030	ø3,0 - 2,0	150001	Satz / Set
125002	Satz / Set	132002	Satz / Set	140040	ø4,0 - 3,0	12 Stück/pcs. ø10-ø34	
15 Stück/pcs. ø2-ø16		18 Stück/pcs. ø2-ø20		140050	ø6,0 - 5,0	150060	ø6,0 - 5,0
125010	ø1,0 - 0,5			140060	ø6,0 - 5,0	150080	ø8,0 - 6,0
125020	ø2,0 - 1,0	132020	ø2,0 - 1,0	140070	ø7,0 - 6,0	150100S	ø10,0 - 8,0
125030	ø3,0 - 2,0	132030	ø3,0 - 2,0	140080	ø8,0 - 7,0	150120	ø12,0 - 10,0
125040	ø4,0 - 3,0	132040	ø4,0 - 3,0	140090	ø9,0 - 8,0	150140	ø14,0 - 12,0
125050	ø5,0 - 4,0	132050	ø5,0 - 4,0	140100	ø10,0 - 9,0	150160	ø16,0 - 14,0
125060	ø6,0 - 5,0	132060	ø6,0 - 5,0	140110	ø11,0 - 10,0	150180	ø18,0 - 16,0
125070	ø7,0 - 6,0	132070	ø7,0 - 6,0	140120	ø12,0 - 11,0	150200	ø20,0 - 18,0
125080	ø8,0 - 7,0	132080	ø8,0 - 7,0	140130	ø13,0 - 12,0	150220	ø22,0 - 20,0
125090	ø9,0 - 8,0	132090	ø9,0 - 8,0	140140	ø14,0 - 13,0	150240	ø24,0 - 22,0
125100	ø10,0 - 9,0	132100	ø10,0 - 9,0	140150	ø15,0 - 14,0	150250	ø25,0 - 23,0
125110	ø11,0 - 10,0	132110	ø11,0 - 10,0	140160	ø16,0 - 15,0	150260	ø26,0 - 24,0
125120	ø12,0 - 11,0	132120	ø12,0 - 11,0	140170	ø17,0 - 16,0	150280	ø28,0 - 26,0
125130	ø13,0 - 12,0	132130	ø13,0 - 12,0	140180	ø18,0 - 17,0	150300	ø30,0 - 28,0
125140	ø14,0 - 13,0	132140	ø14,0 - 13,0	140190	ø19,0 - 18,0	150320	ø32,0 - 30,0
125150	ø15,0 - 14,0	132150	ø15,0 - 14,0	140200	ø20,0 - 19,0	150340	ø34,0 - 32,0
125160	ø16,0 - 15,0	132160	ø16,0 - 15,0	140210	ø21,0 - 20,0		
		132170	ø17,0 - 16,0	140220	ø22,0 - 21,0		
		132180	ø18,0 - 17,0	140230	ø23,0 - 22,0		
		132190	ø19,0 - 18,0	140240	ø24,0 - 23,0		
		132200	ø20,0 - 19,0	140250	ø25,0 - 24,0		
				140260	ø26,0 - 25,0		
				140270	ø27,0 - 26,0		
				140280	ø28,0 - 27,0		
				140290	ø29,0 - 28,0		
				140300	ø30,0 - 29,0		

Spannzangen DIN 6499 abgedichtet
für Werkzeuge mit Innenkühlung

Nur Nennmaßspannung

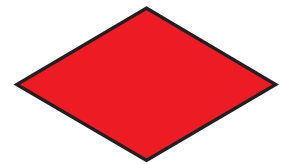
Collets DIN 6499 sealed
for tools with inner cooling systems

Only for nominal diameter

Lieferumfang ohne Werkzeug
Delivery without tool



ER 16 C		ER 20 C		ER 25 C		ER 32 C	
Art.-Nr.	Spannbereich	Art.-Nr.	Spannbereich	Art.-Nr.	Spannbereich	Art.-Nr.	Spannbereich
116001C	Satz / Set	120001C	Satz / Set	125001C	Satz / Set	132001C	Satz / Set
8 Stück/pcs. ø3-ø10		10 Stück/pcs. ø4-ø13		13 Stück/pcs. ø4-ø16		17 Stück/pcs. ø4-ø20	
116030C	ø3,0	120030C	ø3,0	125030C	ø3,0	132030C	ø3,0
116040C	ø4,0	120040C	ø4,0	125040C	ø4,0	132040C	ø4,0
116050C	ø5,0	120050C	ø5,0	125050C	ø5,0	132050C	ø5,0
116060C	ø6,0	120060C	ø6,0	125060C	ø6,0	132060C	ø6,0
116070C	ø7,0	120070C	ø7,0	125070C	ø7,0	132070C	ø7,0
116080C	ø8,0	120080C	ø8,0	125080C	ø8,0	132080C	ø8,0
116090C	ø9,0	120090C	ø9,0	125090C	ø9,0	132090C	ø9,0
116100C	ø10,0	120100C	ø10,0	125100C	ø10,0	132100C	ø10,0
		120110C	ø11,0	125110C	ø11,0	132110C	ø11,0
		120120C	ø12,0	125120C	ø12,0	132120C	ø12,0
		120130C	ø13,0	125130C	ø13,0	132130C	ø13,0
ER 40 C		ER 50 C		125140C	ø14,0	132140C	ø14,0
140001C	Satz / Set	150001C	Satz / Set	125150C	ø15,0	132150C	ø15,0
23 Stück/pcs. ø4-ø26		7 Stück/pcs. ø8-ø32*		125160C	ø16,0	132160C	ø16,0
140040C	ø4,0	150120C	ø12,0			132170C	ø17,0
140050C	ø5,0	150130C	ø13,0			132180C	ø18,0
140060C	ø6,0	150140C	ø14,0			132190C	ø19,0
140070C	ø7,0	150150C	ø15,0			132200C	ø20,0
140080C	ø8,0	150160C	ø16,0				
140090C	ø9,0	150170C	ø17,0				
140100C	ø10,0	150180C	ø18,0				
140110C	ø11,0	150190C	ø19,0				
140120C	ø12,0	150200C	ø20,0				
140130C	ø13,0	150210C	ø21,0				
140140C	ø14,0	150220C	ø22,0				
140150C	ø15,0	150230C	ø23,0				
140160C	ø16,0	150240C	ø24,0				
140170C	ø17,0	150250C	ø25,0				
140180C	ø18,0	150260C	ø26,0				
140190C	ø19,0	150270C	ø27,0				
140200C	ø20,0	150280C	ø28,0				
140210C	ø21,0	150290C	ø29,0				
140220C	ø22,0	150300C	ø30,0				
140230C	ø23,0	150310C	ø31,0				
140240C	ø24,0	150320C	ø32,0				
140250C	ø25,0	150330C	ø33,0				
140260C	ø26,0	150340C	ø34,0				
		* ø8, 10, 12, 16, 20, 25, 32					



Gewindebohrzangen rego-fix

Tapping collets rego-fix

Lieferumfang ohne Werkzeug
Delivery without tool



ER 16-GB		ER 25-GB		ER 32-GB		ER 40-GB	
Art.-Nr.	Schaft $\varnothing \times \circ$	Art.-Nr.	Schaft $\varnothing \times \circ$	Art.-Nr.	Schaft $\varnothing \times \circ$	Art.-Nr.	Schaft $\varnothing \times \circ$
GB116045	$\varnothing 4,5 \times 3,4$	GB125045	$\varnothing 4,5 \times 3,4$	GB132045	$\varnothing 4,5 \times 3,4$	GB140070	$\varnothing 7,0 \times 5,5$
GB116055	$\varnothing 5,5 \times 4,3$	GB125055	$\varnothing 5,5 \times 4,3$	GB132055	$\varnothing 5,5 \times 4,3$	GB140080	$\varnothing 8,0 \times 6,2$
GB116060	$\varnothing 6,0 \times 4,9$	GB125060	$\varnothing 6,0 \times 4,9$	GB132060	$\varnothing 6,0 \times 4,9$	GB140090	$\varnothing 9,0 \times 7,0$
GB116070	$\varnothing 7,0 \times 5,5$	GB125070	$\varnothing 7,0 \times 5,5$	GB132070	$\varnothing 7,0 \times 5,5$	GB140100	$\varnothing 10,0 \times 8,0$
	ER 20-GB	GB125080	$\varnothing 8,0 \times 6,2$	GB132080	$\varnothing 8,0 \times 6,2$	GB140110	$\varnothing 11,0 \times 9,0$
GB120045	$\varnothing 4,5 \times 3,4$	GB125090	$\varnothing 9,0 \times 7,0$	GB132090	$\varnothing 9,0 \times 7,0$	GB140120	$\varnothing 12,0 \times 9,0$
GB120055	$\varnothing 5,5 \times 4,3$	GB125100	$\varnothing 10,0 \times 8,0$	GB132100	$\varnothing 10,0 \times 8,0$	GB140140	$\varnothing 14,0 \times 11,0$
GB120060	$\varnothing 6,0 \times 4,9$	GB125110	$\varnothing 11,0 \times 9,0$	GB132110	$\varnothing 11,0 \times 9,0$	GB140160	$\varnothing 16,0 \times 12,0$
GB120070	$\varnothing 7,0 \times 5,5$	GB125120	$\varnothing 12,0 \times 9,0$	GB132120	$\varnothing 12,0 \times 9,0$	GB140180	$\varnothing 18,0 \times 14,5$
GB120080	$\varnothing 8,0 \times 6,2$			GB132140	$\varnothing 14,0 \times 11,0$	GB140200	$\varnothing 20,0 \times 16,0$
GB120090	$\varnothing 9,0 \times 7,0$			GB132160	$\varnothing 16,0 \times 12,0$	GB140220	$\varnothing 22,0 \times 18,0$
GB120100	$\varnothing 10,0 \times 8,0$						

Gewindebohrzangen


PCM ET1 mit Längenausgleich

Tapping collets PCM ET1 with compensation

Lieferumfang ohne Werkzeug
Delivery without tool



ET1-16		ET1-20		ET1-25		ET1-32		ET1-40	
Art.-Nr.	Schaft	Art.-Nr.	Schaft	Art.-Nr.	Schaft	Art.-Nr.	Schaft	Art.-Nr.	Schaft
ET1-16280	$\varnothing 2,8$	ET1-20280	$\varnothing 2,8$	ET1-25280	$\varnothing 2,8$	ET1-32450	$\varnothing 4,5$	ET1-40600	$\varnothing 6,0$
ET1-16300	$\varnothing 3,0$	ET1-20300	$\varnothing 3,0$	ET1-25300	$\varnothing 3,0$	ET1-32500	$\varnothing 5,0$	ET1-40700	$\varnothing 7,0$
ET1-16350	$\varnothing 3,5$	ET1-20350	$\varnothing 3,5$	ET1-25350	$\varnothing 3,5$	ET1-32550	$\varnothing 5,5$	ET1-40800	$\varnothing 8,0$
ET1-16400	$\varnothing 4,0$	ET1-20400	$\varnothing 4,0$	ET1-25400	$\varnothing 4,0$	ET1-32600	$\varnothing 6,0$	ET1-40850	$\varnothing 8,5$
ET1-16450	$\varnothing 4,5$	ET1-20450	$\varnothing 4,5$	ET1-25450	$\varnothing 4,5$	ET1-32700	$\varnothing 7,0$	ET1-40900	$\varnothing 9,0$
ET1-16500	$\varnothing 5,0$	ET1-20500	$\varnothing 5,0$	ET1-25500	$\varnothing 5,0$	ET1-32800	$\varnothing 8,0$	ET1-40100	$\varnothing 10,0$
ET1-16550	$\varnothing 5,5$	ET1-20550	$\varnothing 5,5$	ET1-25550	$\varnothing 5,5$	ET1-32850	$\varnothing 8,5$	ET1-40105	$\varnothing 10,5$
ET1-16600	$\varnothing 6,0$	ET1-20600	$\varnothing 6,0$	ET1-25600	$\varnothing 6,0$	ET1-32900	$\varnothing 9,0$	ET1-40110	$\varnothing 11,0$
		ET1-20700	$\varnothing 7,0$	ET1-25700	$\varnothing 7,0$	ET1-32100	$\varnothing 10,0$	ET1-40120	$\varnothing 12,0$
				ET1-25800	$\varnothing 8,0$	ET1-32105	$\varnothing 10,5$	ET1-40125	$\varnothing 12,5$
				ET1-25850	$\varnothing 8,5$	ET1-32110	$\varnothing 11,0$	ET1-40140	$\varnothing 14,0$
				ET1-25900	$\varnothing 9,0$	ET1-32120	$\varnothing 12,0$	ET1-40150	$\varnothing 15,0$
				ET1-25100	$\varnothing 10,0$	ET1-32125	$\varnothing 12,5$	ET1-40160	$\varnothing 16,0$
								ET1-40170	$\varnothing 17,0$

TOOLFIX Werkzeugmontagegerät TOOLFIX mounting equipment	Art.-Nr.	Typ	SK
		250410	SK 30
	251410	SK 40	40
	252410	SK 50	50
			VDI
	259410	VDI 20	20
	260410	VDI 30	30
	261410	VDI 40	40
	262410	VDI 50	50
			HSK
	253410	HSK-A40	A40
	254410	HSK-E40	E40
	255410	HSK-A50	A50
	257410	HSK-A63	A63
	258410	HSK-E63	E63
			POLYGON
	263410	C4	C4
	264410	C5	C5
	265410	C6	C6
	266410	C8	C8

TOOLFIX VARIO Adaptersystem



VARIO ist die Version mit Schnellwechselfverschluss zum Auswechseln von verschiedenen Werkzeugadaptern. Die VARIO-Version bietet Anwendern von verschiedenen Werkzeugaufnahmen die Möglichkeit verschiedene Adapterformen auf einem Basiskörper zu verwenden.

VARIO is a version with quick change lock for changing different tool adaptors. The VARIO-version makes possible to use different forms of adaptors on the same base-body for users with toolholders.

Art.-Nr.	Typ	Art.-Nr.	Typ
31000	TOOLFIX VARIO Basiskörper / Base-body		
	SK		HSK
31030	VARIO-Adapter 30	31232	VARIO-Adapter A 32
31040	VARIO-Adapter 40	31240	VARIO-Adapter A 40
31050	VARIO-Adapter 50	31250	VARIO-Adapter A 50
	VDI	31263	VARIO-Adapter A 63
31116	VARIO-Adapter 16	31280	VARIO-Adapter A 80
31120	VARIO-Adapter 20	31210	VARIO-Adapter A100
31125	VARIO-Adapter 25	31632	VARIO-Adapter E 32
31130	VARIO-Adapter 30	31640	VARIO-Adapter E 40
31140	VARIO-Adapter 40	31650	VARIO-Adapter E 50
31150	VARIO-Adapter 50	31663	VARIO-Adapter E 63
			POLYGON
		31803	VARIO-Adapter C 3
		31804	VARIO-Adapter C 4
		31805	VARIO-Adapter C 5
		31806	VARIO-Adapter C 6
		31808	VARIO-Adapter C 8





zürn

Werkzeughalter für CNC-Drehmaschinen DIN 69880 / DIN ISO 10889

Toolholders for CNC machines
DIN 69880 / DIN ISO 10889

