





Solid drilling and bore machining

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| 7 | Circular and Thread Milling |
| 8 | Thread turning |

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| 11 | Grooving Tools |
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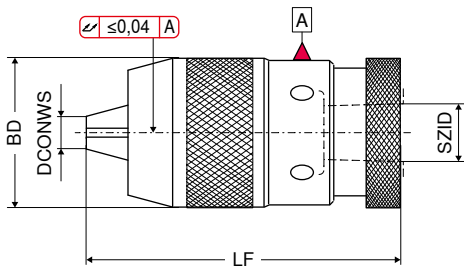
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Drill chuck

- ▲ for manual and key clamping
- ▲ through-hardened and ground

Scope of supply:

Holder with clamping key



SZ/D	DCONWS	LF	BD	Y8	
				Article no. 83 636 ...	
	mm	mm	mm	EUR	
B12	0 - 8	73	35	88,19	012
B12	0 - 10	92	43	104,00	112
B16	1 - 13	106	50	124,80	016
B16	3 - 16	110	57	104,90	116
B18	3 - 16	110	57	133,20	018

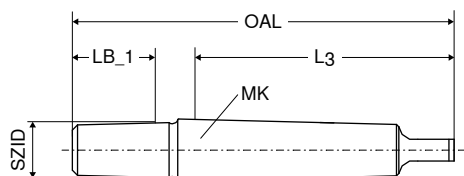
Spare parts
DCONWS

	Y8	
		
	NC clamping key	
	Article no. 83 302 ...	
	EUR	
0 - 10	8,60	010
0 - 8	8,26	008
1 - 13	8,26	013
3 - 16	9,91	016

i Suitable adapters can be found in → Chapter 16 Adapters, Page 43+79.

Drill chuck adapter DIN 238

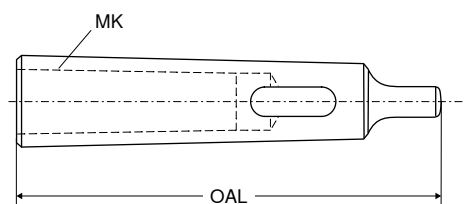
▲ through-hardened and ground



Adapter	SZID	L ₃ mm	LB_1 mm	OAL mm	Y8	
					Article no. 83 642 ...	
					EUR	
MK1	B12	62,0	18,5	89,0	4,54	120
MK1	B16	62,0	24,0	97,0	4,03	160
MK1	B18	62,0	32,0	106,0	4,82	180
MK2	B12	75,0	18,5	106,5	4,54	121
MK2	B16	75,0	24,0	110,5	4,54	161
MK2	B18	75,0	32,0	117,5	4,86	181
MK3	B12	94,0	18,5	125,0	6,29	122
MK3	B16	94,0	24,0	134,0	6,10	162
MK3	B18	94,0	32,0	141,0	6,52	182
MK4	B16	117,5	24,0	159,0	13,74	163
MK4	B18	117,5	32,0	168,0	13,94	183
MK5	B16	149,5	24,0	196,0	30,30	164
MK5	B18	149,5	32,0	204,5	31,46	184

Reduction sleeve DIN 2185

▲ through-hardened, ground internally and externally



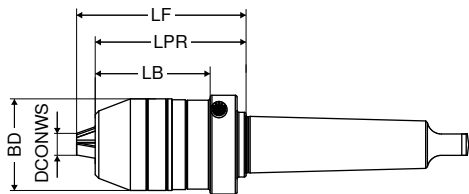
for size	OAL mm	Y8	
		Article no. 83 644 ...	
		EUR	
MK1 - MK0	80	9,81	010
MK2 - MK1	92	10,14	020
MK3 - MK1	99	12,06	130
MK3 - MK2	112	11,11	030
MK4 - MK1	124	18,35	240
MK4 - MK2	124	17,41	140
MK4 - MK3	140	17,09	040
MK5 - MK2	156	37,01	250
MK5 - MK3	156	38,17	150
MK5 - MK4	171	36,39	050

Short drill chuck

- ▲ bidirectional
- ▲ torque moment = 12 Nm
- ▲ with Morse taper

Scope of supply:
Holder with clamping key

NC
2010



A

Y8

Adapter	DCONWS	BD	LB	LPR	LF	Article no.	
	mm	mm	mm	mm	mm	84 314 ...	
MK3	0,5 - 13	48,5	64	84	93,0	EUR 225,50	313
MK3	2,5 - 16	51,0	64	84	94,5	EUR 225,50	316
MK4	2,5 - 16	51,0	64	84	94,5	EUR 248,50	416

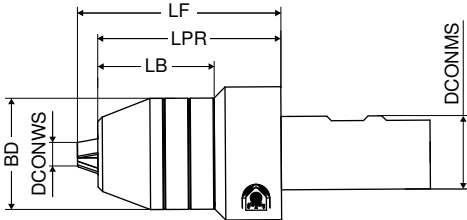
Short drill chuck

- ▲ bidirectional
- ▲ torque moment = 12 Nm
- ▲ with cylindrical shank

Scope of supply:

Holder with clamping key

NC
2010



A
G 6,3 n_{max} 10000

Y8

Article no.
84 311 ...

EUR

248,50 213

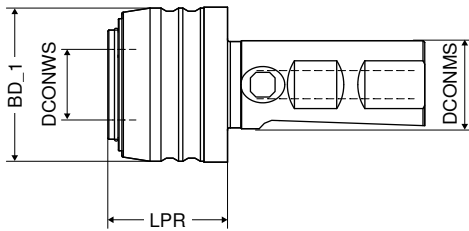
270,50 313

293,60 316

DCONMS	DCONWS	BD	LB	LPR	LF
mm	mm	mm	mm	mm	mm
25	0,5 - 13	48,5	50,9	80	89,0
32	0,5 - 13	48,5	50,9	80	89,0
32	2,5 - 16	51,0	50,9	80	90,5

Synchro quick change tapping chuck with minimum length compensation

- ▲ for collets according to DIN 6499
- ▲ with length compensation under tension and under compression (LZD)
- ▲ $p_{max} = 50$ bar
- ▲ SZID = for tool size



AD

Y8

Article no.
83 641 ...

EUR

133,20 012
153,10 020

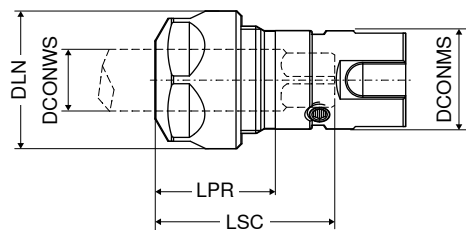
DCONWS	cutting range	SZID	LPR	BD_1	DCONMS	LZD±
mm			mm	mm	mm	mm
20	M3 - M12	1	35	43,5	25	1,0 / 0,2
32	M6 - M20	2	56	60,0	25	1,0 / 0,2

Insert for synchro quick change tapping chuck with minimum length compensation

Scope of supply:

Includes lock nut

- ▲ SZID = for tool size



AD

Y8

Article no.
83 608 ...

EUR

110,10 012
127,90 020

SZID	DCONWS	cutting range	LPR	DLN	LSC	for collet	DCONMS
	mm		mm	mm	mm		mm
1	2 - 10	M3 - M12	24	28	42	426E (ER16)	20
2	2 - 16	M6 - M20	28	42	59	430E (ER25)	32

W7



Lock nut

W7



Lock nut

Y8



Lock nut IK

Y8



Y clamping key

Spare parts

for Article no.

Article no.	EUR		Article no.	EUR		Article no.	EUR		Article no.	EUR	
83 608 012	17,82	044	M22x1,5 - SW25	17,82	044	M22x1,5	30,62	054	16,04	116	
83 608 020			M32x1,5	19,92	055	M32x1,5	34,72	055	17,72	125	

Accessories

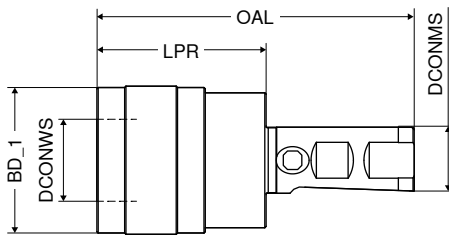


ER collet

→ 16|212, 214–215

Quick change tap chuck with length compensation

- ▲ with cylindrical shank
- ▲ with length compensation under tension and compression (LZD)
- ▲ Quick change adapters
- ▲ SZID = for tool size



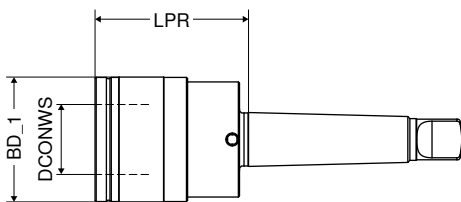
A

Y8

DCONMS	cutting range	SZID	LPR	BD_1	DCONWS	OAL	LZD±	Article no.
mm			mm	mm	mm	mm	mm	83 648 ...
20	M3 - M12	01	41	38	19	91	9	EUR 194,00 112
20	M6 - M20	02	63	55	31	138	15	262,20 120
25	M3 - M12	01	41	38	19	97	9	194,00 212
25	M6 - M20	02	63	55	31	119	15	238,00 220
32	M3 - M12	01	41	38	19	102	9	197,20 312
32	M6 - M20	02	63	55	31	124	15	245,40 320

DIN 228B – Quick change tap chuck with length compensation

- ▲ with Morse taper shank
- ▲ with length compensation under tension and compression (LZD)
- ▲ SZID = for tool size



A

Y8

Adapter	cutting range	SZID	LPR	BD_1	DCONWS	LZD±	Article no.
			mm	mm	mm	mm	83 646 ...
MK 2	M3 - M12	01	46	38	19	9	EUR 167,70 212
MK 3	M3 - M12	01	46	38	19	9	163,60 312
MK 3	M6 - M20	02	69	55	31	15	205,50 320
MK 4	M6 - M20	02	70	55	31	15	205,50 420

Accessories

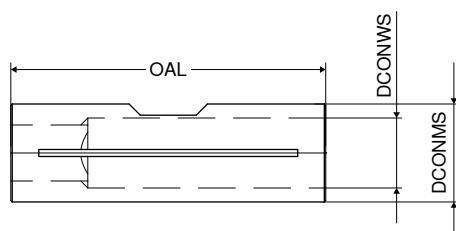


Collet

→ 16|219, 221-223

Clamping sleeve for taps in Weldon chucks

- ▲ for machines with rigid tapping
- ▲ for safe clamping of taps

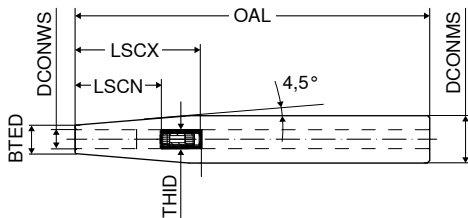


DCONWS _{H7}	DCONMS _{H6}	OAL	Y7	
			Article no.	
mm	mm	mm	80 696 ...	
3,5	6	26	EUR 34,08	035
4,0	8	26	33,56	040
4,5	8	26	33,03	045
6,0	10	30	31,35	060
7,0	10	31	31,35	070
8,0	12	38	31,35	080
9,0	12	38	31,35	090
10,0	14	42	31,35	100
11,0	14	42	31,35	110
12,0	16	44	31,35	120
14,0	18	45	32,51	140
16,0	20	46	33,45	160

Shrink fit extension

- ▲ For solid carbide and HSS shanks with h6 tolerance or better
- ▲ DRVS = Key size of the adjustment screw

TG

AD
Y8

DCONWS _{h6}	DCONWS	BTED	OAL	LSCX	LSCN	THID	DRVS	Article no.	EUR
mm	mm	mm	mm	mm	mm		mm	84 310 ...	
12	3	8	150					113,30	003
12	4	8	150					113,30	004
12	5	10	150					113,30	005
12	6	10	150	36	26	M5	2,5	113,30	006
16	3	10	150					113,30	103
16	4	10	150					113,30	104
16	5	10	150					113,30	105
16	6	10	150	36	26	M5	2,5	113,30	106
16	8	12	150	36	26	M6	3,0	113,30	108
20	3	10	150					113,30	203
20	4	10	150					113,30	204
20	5	10	150					113,30	205
20	6	10	150	36	26	M5	2,5	113,30	206
20	8	12	150	36	26	M6	3,0	113,30	208
20	10	14	150	42	32	M8x1	3,0	113,30	210
20	12	16	150	47	37	M10x1	5,0	113,30	212
25	3	10	150					113,30	303
25	4	10	150					113,30	304
25	5	15	150					113,30	305
25	6	20	150	36	26	M5	2,5	113,30	306
25	8	20	150	36	26	M6	3,0	113,30	308
25	10	20	150	42	32	M8x1	3,0	113,30	310
25	12	20	150	47	37	M10x1	5,0	113,30	312
25	14	20	150	47	37	M10x1	5,0	113,30	314
25	16	22	150	50	40	M10x1	5,0	113,30	316
32	6	20	150	36	26	M5	2,5	113,30	406
32	8	20	150	36	26	M6	3,0	113,30	408
32	10	24	150	42	32	M8x1	3,0	113,30	410
32	12	24	150	47	37	M10x1	5,0	113,30	412
32	14	27	150	47	37	M10x1	5,0	113,30	414
32	16	27	150	50	40	M10x1	5,0	113,30	416
32	18	27	150	50	40	M10x1	5,0	113,30	418
32	20	27	150	52	42	M10x1	5,0	113,30	420

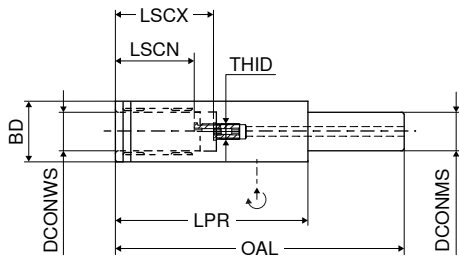
i Note the minimum clamping depth in → Chapter 16 Adapters, Page 233.

Hydraulic expansion extension especially for Hydraulic Chucks

▲ For solid carbide and HSS shanks with h6 tolerance or better

Scope of supply:

Base body with backstop screw and pressure screw



AD
G 2,5 n_{max} 25000
Y8

DCONWS	DCONMS	BD	LPR	OAL	LSCX	LSCN	THID
mm	mm	mm	mm	mm	mm	mm	
12	20	25,0	100	150	46	36	M6
20	20	31,5	100	150	51	41	M10x1
20	32	31,5	90	150	51	41	M10x1
20	32	31,5	90	200	51	41	M10x1

Article no.	
84 313 ...	
EUR	
282,10	112
282,10	120
282,10	132
290,50	232

i Note the minimum clamping depth in → Chapter 16 Adapters, Page 233.

Y7



Stop screw IK

Spare parts

for Article no.

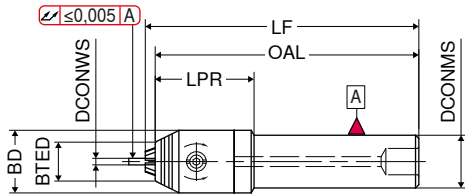
for Article no.		Article no.	
84 313 112	M6x12,5 - SW3	83 950 ...	
84 313 120	M10x1x13,5 - SW5	EUR	
84 313 132	M10x1x13,5 - SW5	8,11	419
84 313 232	M10x1x13,5 - SW5	8,11	421
		8,11	421
		8,11	421

Micro-precision collet chuck

- ▲ bidirectional
- ▲ for speeds up to 60,000 1/min.

Scope of supply:

Holder including clamping wrench SW 2 x 60 mm



AD
G 2,5 n_{max} 18000
Y7

DCONMS	DCONWS	LPR	OAL	LF	BD	BTED	TQX
mm	mm	mm	mm	mm	mm	mm	Nm
16	0,2 - 3,4	30	80	83	19	12	2
16	0,2 - 3,4	30	100	103	19	12	2
16	0,2 - 3,4	30	160	163	19	12	2
20	0,2 - 3,4	28	80	83	19	12	2
20	0,2 - 3,4	28	100	103	19	12	2
20	0,2 - 3,4	28	160	163	19	12	2

Article no.
84 315 ...

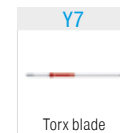
EUR
391,10 161
411,10 162
450,90 163

391,10 201
411,10 202
450,90 203

Spare parts

for Article no.

Article no.	EUR	152	1,8 Nm	Article no.	EUR	018
84 315 161	5,60	152	1,8 Nm	80 950 ...	97,04	018
84 315 162	5,60	152	1,8 Nm	80 021 ...	97,04	018
84 315 163	5,60	152	1,8 Nm		97,04	018
84 315 201	5,60	152	1,8 Nm		97,04	018
84 315 202	5,60	152	1,8 Nm		97,04	018
84 315 203	5,60	152	1,8 Nm		97,04	018



Torx blade

Article no.
80 950 ...

EUR



Torque
screwdriver

Article no.
80 021 ...

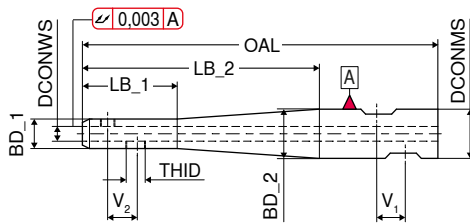
EUR

Micro-extension

- ▲ for shanks with lateral clamping flat to DIN 6535 HB / 1835 B
- ▲ with option for Synchro-Plus tapping (available on request)

Scope of supply:

Holder with shank clamping screw



AD

Y7

DCONWS	BD_1	LB_1	LB_2	OAL	DCONMS	BD_2	V ₁	V ₂	THID	TQX	Article no. 80 641 ...
mm	mm	mm	mm	mm	mm	mm	mm	mm		Nm	EUR
6	12	40	40	85	12	12	10	10	M6 x 0,5	7	109,10 006
6	12	40	100	150	20	20	10	10	M6 x 0,5	7	132,10 106
8	15	40	40	88	16	15	10	10	M8 x 0,75	8	106,90 008
8	15	40	100	150	20	20	10	10	M8 x 0,75	8	128,90 108
10	18	40	40	90	20	18	10	10	M10 x 1	12	106,90 010
10	18	40	100	150	20	20	10	10	M10 x 1	12	128,90 110
12	21	40	40	90	20	21	10	10	M12 x 1	15	106,90 012
12	21	40	100	150	20	21	10	10	M12 x 1	15	128,90 112
14	23	40	40	90	20	23	10	10	M12 x 1	15	110,10 014
14	23	40	100	150	20	23	10	10	M12 x 1	15	132,10 114
16	26	40	50	106	25	26	10	12	M14 x 1	18	123,70 016 ¹⁾
16	26	40	100	156	25	26	10	12	M14 x 1	18	152,10 116 ¹⁾
18	28	40	50	106	25	28	10	12	M14 x 1	18	128,90 018 ¹⁾
18	28	40	100	156	25	28	10	12	M14 x 1	18	155,20 118 ¹⁾
20	31	40	50	110	32	31	10	14	M16 x 1	20	127,90 020 ¹⁾
20	31	40	100	160	32	31	10	14	M16 x 1	20	153,10 120 ¹⁾

1) only pre-balanced design

Y7



Clamping screw

Spare parts DCONWS

DCONWS	Article no. 80 950 ...
	EUR
6	M6x0,5 TX10 7,97 206
8	M8x0,75 TX10 7,97 208
10	M10x1 SW-5 7,97 210
12 - 14	M12x1 SW-5 8,09 212
16 - 18	M14x1 SW-5 8,41 214
20	M16x1 SW-5 8,64 216

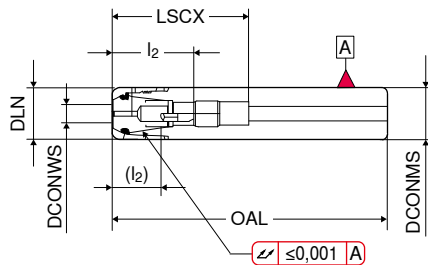
Mini ER precision collet chuck

- ▲ maximum clamping range covered according to ISO tolerance field H10
- ▲ roll key required for clamping

Scope of supply:

Holder without nut, without backstop

Centro-P



AD

Y8

Article no.

84 456 ...

EUR

DCONMS	DCONWS	DLN	OAL	LSCX	l_2 (l_2)	for collet		
mm	mm	mm	mm	mm	mm			
10	1 - 5	10	150	16		4004E (ER08)	136,80	005
10	1 - 5	10	200	16		4004E (ER08)	187,10	006
16	1 - 7	16	150	68	18 - 36 (12 - 26)	4008E (ER11)	121,60	007
16	1 - 7	16	200	68	18 - 36 (12 - 26)	4008E (ER11)	151,90	008
16	1 - 10	22	150	68	28 - 48 (16 - 35)	426E (ER16)	121,60	010
20	1 - 10	22	150	68	28 - 48 (16 - 35)	426E (ER16)	127,70	102
20	1 - 10	22	200	68	28 - 48 (16 - 35)	426E (ER16)	151,90	104

- i** LSCX = clamping depth without back stop screw for shanks
 l_2 = with back stop screw 1, dimension in brackets () = with back stop screw 2
 dimension OAL when using tightening nuts with seals 4 mm longer

Spare parts

for collet

	Article no.	EUR		Article no.	EUR		Article no.	EUR		Article no.	EUR
4004E (ER08)	84 950 ...			84 950 ...			83 950 ...			83 950 ...	
4008E (ER11)		38,19	040		33,15	041	M8x1 - SW4	13,53	340	M8x1 - SW4	9,93
426E (ER16)	41,22	035		33,15	034		M11x1 - SW6	14,08	341	M11x1 - SW6	9,93

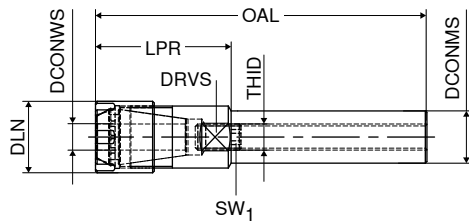
Accessories

ER collet	Device	roll key	roll key device
→ 16 208-213	→ 35	→ 36	→ 36

- i** The transferable torques can be found in → **Chapter 16 Adapters, Page 233.**

ER collet chuck with mini clamping nut

▲ with cylindrical shank



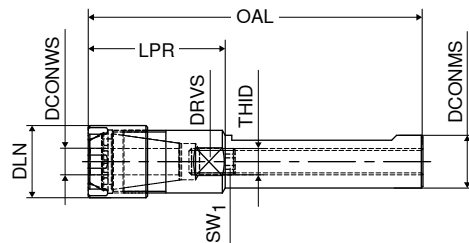
AD

Y8

DCONMS _{h6}	DCONWS	OAL	LPR	DLN	THID	DRVS	SW ₁	for collet	Article no.	EUR	
mm	mm	mm	mm	mm		mm	mm		83 453 ...		
8	1 - 5	79	24	12		9		4004E (ER08)	78,21		081
12	1 - 5	155	18	12	M5	10	2,5	4004E (ER08)	107,20		122
16	1 - 7	182	22	16	M7,5x0,5	14	4,0	4008E (ER11)	114,90		163
16	1 - 10	117	37	22	M11x1	17	4,0	426E (ER16)	81,08		164
16	1 - 10	197	37	22	M11x1	17	4,0	426E (ER16)	114,90		165
20	1 - 10	166	25	22	M11x1	17	5,0	426E (ER16)	111,40		204
25	1 - 13	166	37	28	M14x1	22	5,0	428E (ER20)	128,20		254
25	1 - 16	190	40	35	M18x1	27		430E (ER25)	161,00		256

ER collet chuck with mini clamping nut

▲ with cylindrical shank and clamping flat



AD

Y8

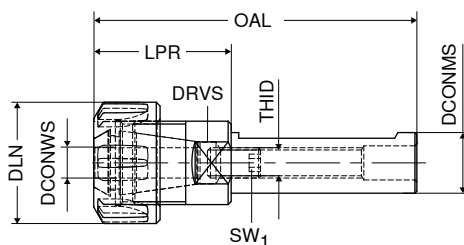
DCONMS _{h6}	DCONWS	OAL	LPR	DLN	THID	DRVS	SW ₁	for collet	Article no.	EUR	
mm	mm	mm	mm	mm		mm	mm		83 454 ...		
20	1 - 10	166	25	22	M11x1	17	5	426E (ER16)	111,40		204
20	1 - 13	137	37	28	M11x1	22	5	428E (ER20)	83,71		206
20	1 - 16	146	46	35	M11x1	27	5	430E (ER25)	97,24		208
25	1 - 13	166	28	28	M14x1	22	5	428E (ER20)	128,20		254
25	1 - 16	190	40	35	M18x1	27		430E (ER25)	161,00		256

Spare parts for ER collet chuck with mini lock nut

Spare parts for collet	Y8		W7		Y8	
						
	Article no. 83 950 ...		Article no. 62 950 ...		Article no. 83 950 ...	
	EUR		EUR		EUR	
4004E (ER08)	13,94	099	M10x0,75	25,06 067	M5x0,8	1,49 003
4008E (ER11)	15,21	100	M13x0,75	24,43 065	M7,5x0,5	1,73 004
426E (ER16)	16,15	101	M19x1	23,90 066	M11x1	2,00 006
426E (ER16)	16,15	101	M19x1	23,90 066	M8x1,25	1,86 005
428E (ER20)	18,24	102	M24x1	26,95 068	M14x1	2,15 007
430E (ER25)	20,45	103	M30x1	29,46 069	M18x1	2,33 008

ER Collet Chuck

▲ with cylindrical shank and clamping flat



DCONMS _{h6}	DCONWS	OAL	LPR	DLN	THID	DRVS	SW ₁	for collet	AD
mm	mm	mm	mm	mm		mm	mm		Y8
40	2 - 20	100		50	M22x1,5	36		470E (ER32)	Article no. 83 455 ...
40	2 - 20	160		50	M22x1,5	36		470E (ER32)	EUR 99,41 401
40	3 - 30	139	59	63	M28x1,5	40	6	472E (ER40)	EUR 122,10 402
									EUR 113,70 405

Spare parts for collet	W7		Y8		Y8		Y8	
								
	Article no. 62 950 ...		Article no. 83 357 ...		Article no. 83 950 ...		Article no. 83 950 ...	
	EUR		EUR		EUR		EUR	
470E (ER32)	18,56	056	M40x1,5	24,12 132			M22x1,5x20	2,90 095
472E (ER40)	18,04	057	M50x1,5	26,53 140	M28x1,5x25	3,82 096		

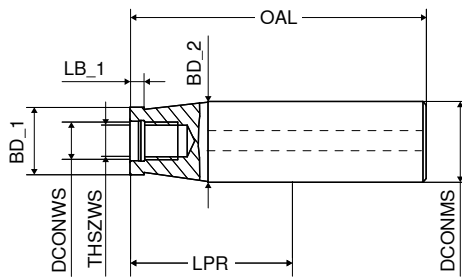
Accessories



ER collet

→ 16|206, 211–215

Cylindrical milling bar for cutters with threaded end



AD

WA

DCONWS _{h6}	THSZWS	DCONWS	LPR	BD_1	LB_1	BD_2	OAL
mm		mm	mm	mm	mm	mm	mm
12	M5	5,5	20	9,5	7,8	11,5	65
12	M6	6,5	20	11,5	7,8	11,5	65
12	M6	6,5	40	11,5	7,8	11,5	85
16	M8	8,5	20	13,8	7,8	15,8	68
16	M8	8,5	40	13,8	7,8	15,8	88
20	M10	10,5	25	18,0	7,8	19,8	75
20	M10	10,5	45	18,0	7,8	19,8	95
25	M12	12,5	50	21,0	7,8	24,8	106
32	M16	17,0	50	29,0	12,0	31,8	110

Article no.
56 727 ...

EUR

72,67 052

74,24 060

80,11 062

75,18 081

80,95 082

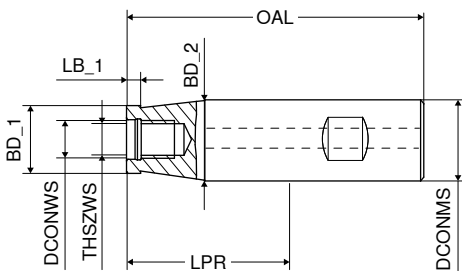
78,43 101

84,73 102

88,71 122

95,52 162

Milling bar for cutters with threaded end (Weldon)



AD

WA

DCONWS _{h6}	THSZWS	DCONWS	LPR	BD_1	LB_1	BD_2	OAL
mm		mm	mm	mm	mm	mm	mm
12	M6	6,5	20	11,5	7,8	11,5	65
12	M6	6,5	40	11,5	7,8	11,5	85
16	M8	8,5	20	13,8	12,0	15,8	68
16	M8	8,5	40	13,8	8,0	15,8	88
20	M10	10,5	25	18,0	8,0	19,8	75
20	M10	10,5	45	18,0	12,0	19,8	95
25	M12	12,5	30	21,0	12,0	24,9	86
25	M12	12,5	50	21,0	8,0	24,9	106
32	M16	17,0	50	29,0	12,0	31,8	110

Article no.
56 729 ...

EUR

74,24 060

80,11 062

75,18 081

80,95 082

78,43 101

84,73 102

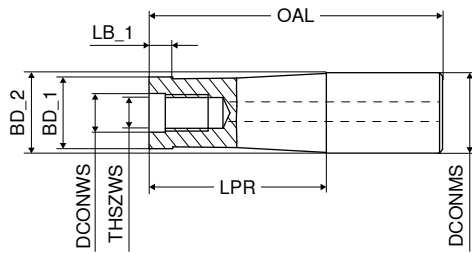
81,58 121

88,71 122

95,52 162

Screw-in adapter with cylindrical shank

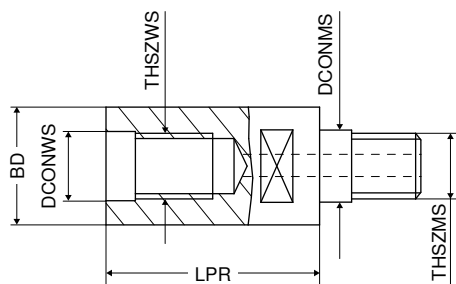
▲ vibration-damped



													
								AD		AD		A	
								VHM		Densimet		Densimet	
								WC		WC		WC	
DCONMS _{h6}	THSZWS	DCONWS	LPR	BD_1	LB_1	BD_2	OAL	Article no. 56 743 ... EUR		Article no. 56 744 ... EUR		Article no. 56 721 ... EUR	
12	M5	5,5	40	9,5	9	11,3	85			222,30	052	189,80	052
12	M5	5,5	60	9,5	9	11,3	105			240,20	053	203,40	053
12	M5	5,5	80	9,5	9	11,3	125			267,40	054	218,20	054
12	M6	6,5	20	11,5		11,5	65	281,00	060				
12	M6	6,5	40	11,5		11,5	85	299,90	062				
12	M6	6,5	60	11,5		11,5	105	332,40	063				
12	M6	6,5	80	11,5		11,5	125	363,90	064				
12	M6	6,5	100	11,5		11,5	145	395,30	065				
16	M8	8,5	40	14,2	9	15,3	88	288,30	082	273,70	082	229,70	082
16	M8	8,5	60	14,2	9	15,3	108	317,80	083	295,70	083	242,20	083
16	M8	8,5	80	14,2	9	15,3	128	342,90	084	323,00	084	255,80	084
16	M8	8,5	100	14,2	9	15,3	148	373,30	085	355,40	085	281,00	085
16	M8	8,5	120	14,2	9	15,3	168	398,40	086	392,20	086	303,00	086
16	M8	8,5	150	14,2	9	15,3	198			493,90	087	381,70	087
20	M10	10,5	60	18,5	9	19,3	110	365,90	103	345,00	103	267,40	103
20	M10	10,5	80	18,5	9	19,3	130	412,10	104	383,80	104	293,60	104
20	M10	10,5	100	18,5	9	19,3	150	448,80	105	428,90	105	324,00	105
20	M10	10,5	120	18,5	9	19,3	170	509,60	106	476,00	106	359,60	106
20	M10	10,5	140	18,5	9	19,3	190	568,30	107	554,70	107	423,60	107
25	M12	12,5	75	23,0	9	24,3	131			518,00	124	397,40	124
25	M12	12,5	80	23,0	9	24,3	136	440,40	124				
25	M12	12,5	100	23,0	9	24,3	156	512,80	125	572,50	125	427,90	125
25	M12	12,5	120	23,0	9	24,3	176	637,60	126				
25	M12	12,5	125	23,0	9	24,3	181			627,10	126	456,20	126
25	M12	12,5	140	23,0	9	24,3	196	736,00	127				
25	M12	12,5	150	23,0	9	24,3	206			704,70	127	507,50	127
25	M12	12,5	160	23,0	9	24,3	216	834,60	128				
25	M12	12,5	175	23,0	9	24,3	231			798,00	128	574,60	128
32	M16	17,0	100	29,0	9	31,5	160	937,40	165 ¹⁾				
32	M16	17,0	150	29,0	9	31,5	210	1.138,00	166 ¹⁾				
32	M16	17,0	200	29,0	9	31,5	260	1.372,00	167 ¹⁾				
32	M16	17,0	250	29,0	9	31,5	310	1.647,00	168 ¹⁾				
32	M16	17,0	300	29,0	9	31,5	360	1.884,00	169 ¹⁾				
36	M16	17,0	100	31,5	9	34,3	160					823,10	165 ¹⁾
36	M16	17,0	150	31,5	9	34,3	210					1.253,00	166 ¹⁾
36	M16	17,0	200	31,5	9	34,3	260					1.285,00	167 ¹⁾

1) On request

Extensions for milling cutters with threaded end



AD

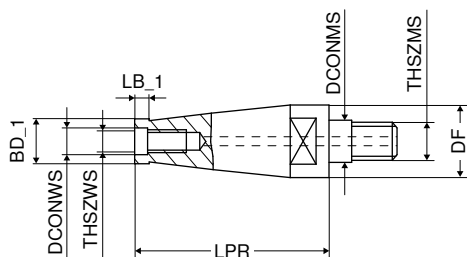
WA

THSZWS	THSZMS	DCONWS	DCONMS	LPR	BD		
		mm	mm	mm	mm		
M8	M8	8,5	8,5	40	13,8	85,66	081
M8	M8	8,5	8,5	60	13,8	105,90	082
M10	M10	10,5	10,5	40	18,0	88,92	101
M10	M10	10,5	10,5	60	18,0	109,10	102
M12	M12	12,5	12,5	40	21,0	92,27	121
M12	M12	12,5	12,5	60	21,0	112,20	122
M16	M16	17,0	17,0	40	29,0	95,52	161
M16	M16	17,0	17,0	60	29,0	115,40	162

Article no.
56 733 ...

EUR

Reductions for milling cutters with threaded end



AD

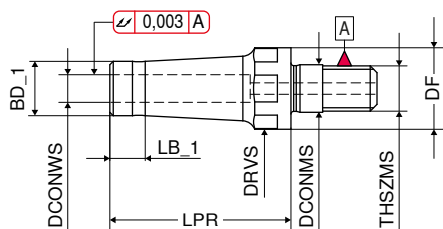
WA

THSZWS	THSZMS	DCONMS	DCONWS	LPR	BD_1	DF	LB_1		
		mm	mm	mm	mm	mm	mm		
M6	M8	8,5	6,5	20	9,5	13,8	7,8	79,48	060
M8	M10	10,5	8,5	40	13,8	18,0	7,8	88,92	081
M8	M12	12,5	8,5	60	13,8	21,0	7,8	95,52	082
M10	M12	12,5	10,5	40	18,0	21,0	7,8	92,27	101
M10	M16	17,0	10,5	60	18,0	29,0	7,8	112,20	102
M12	M16	17,0	12,5	40	21,0	29,0	7,8	92,27	121

Article no.
56 735 ...

EUR

Threaded shrink adapter

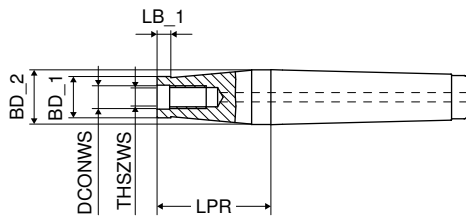


AD
WA

THSZMS	DCONWS	BD_1	LPR	LB_1	DF	DCONMS	TQX	DRVS	Article no.
	mm	mm	mm	mm	mm	mm	Nm	mm	56 708 ...
M10	6	12	40	7,8	18	10,5	30	17	EUR 106,90 061
M12	6	12	40	7,8	21	12,5	50	19	EUR 106,90 062
M16	6	12	40	7,8	29	17,0	100	27	EUR 106,90 063
M10	8	16	40	7,8	18	10,5	30	17	EUR 106,90 081
M12	8	16	40	7,8	21	12,5	50	19	EUR 106,90 082
M16	8	16	40	7,8	29	17,0	100	27	EUR 106,90 083
M10	10	18	60		18	10,5	30	17	EUR 106,90 101
M12	10	20	60	7,8	21	12,5	50	19	EUR 106,90 102
M16	10	20	60	7,8	29	17,0	100	27	EUR 106,90 103
M12	12	21	60		21	12,5	50	19	EUR 106,90 122
M16	12	24	60	7,8	29	17,0	100	27	EUR 106,90 123

i Note the minimum clamping depth in → Chapter 16 Adapters, Page 233.

Morse taper milling bar for cutters with threaded end



AD

WA

Adapter	THSZWS	DCONWS	BD_1	LB_1	BD_2	LPR	Article no.	
		mm	mm	mm	mm	mm	56 731 ...	
							EUR	
MK2	M8	8,5	13,8	8,5	18,0	20	55,05	081
MK2	M8	8,5	13,8	8,5	18,0	40	58,51	082
MK2	M8	8,5	13,8	8,5	18,0	60	60,08	083
MK3	M8	8,5	13,8	8,5	24,1	80	64,69	084
MK3	M8	8,5	13,8	8,5	24,1	100	68,68	085
MK2	M10	10,5	18,0		18,0	20	55,05	101
MK2	M10	10,5	18,0		18,0	40	58,51	102
MK2	M10	10,5	18,0		18,0	60	60,08	103
MK3	M10	10,5	18,0	8,5	24,1	80	64,69	104
MK3	M10	10,5	18,0	8,5	24,1	100	68,68	105
MK3	M12	12,5	21,0	8,5	24,0	10	53,68	121
MK3	M12	12,5	21,0	8,5	24,1	30	55,05	122
MK3	M12	12,5	21,0	8,5	24,1	45	57,78	123
MK3	M12	12,5	21,0	8,5	24,1	60	60,61	124
MK3	M12	12,5	21,0	8,5	24,1	75	64,69	125
MK3	M12	12,5	21,0	8,5	24,1	85	70,88	126
MK3	M12	12,5	21,0	8,5	24,1	95	74,87	127
MK4	M12	12,5	21,0	8,5	31,6	120	106,90	129
MK4	M16	17,0	29,0	12,0	31,6	10	58,51	161
MK4	M16	17,0	29,0	12,0	31,6	35	59,87	162
MK4	M16	17,0	29,0	12,0	31,6	50	65,32	163
MK4	M16	17,0	29,0	9,0	31,6	65	70,15	164
MK4	M16	17,0	29,0	12,0	31,6	80	76,33	165
MK4	M16	17,0	29,0	12,0	31,6	95	84,61	166
MK5	M16	17,0	29,0	9,0	44,7	150	120,60	168
MK5	M16	17,0	29,0	9,0	44,7	180	127,90	169

MultiChange Programme Overview

The highly stable "MultiChange" exchangeable head system enables an extremely fast tool change. Designed to be durable and for a very high radial run-out accuracy, this exchangeable head system is probably the most stable and precise exchangeable head system on the market. The following chapters contain suitable exchangeable heads for almost every application.

Solid carbide drilling

▲ Solid Carbide NC Spot Drill

∠ 90°, 120°, 142° / Ø 8, 10, 12, 16, 20 mm / ZEFP* 2

→ **Chapter 2, Solid carbide drilling**



*ZEFP = Number of teeth

Reaming and Countersinking

▲ Through hole reamers

Ø 8–30.2 mm incl. special diameters / ZEFP 4-6

▲ Blind hole reamers

Ø 12.2–30.2 mm incl. special diameters / ZEFP 6

→ **Chapter 4, Reaming and countersinking**



*ZEFP = Number of teeth

Solid Carbide milling cutters

▲ PCD shoulder mills

Ø 8, 10, 12, 16, 20 mm / ZEFP* 2

▲ Solid carbide shoulder mills

Type N, PCR-UNI, PCR-ALU / Ø 8, 10, 12, 16, 20 mm / ZEFP 3+4

▲ Solid carbide rough and finish milling cutters

Ø 8, 10, 12, 16, 20 mm / ZEFP* 4-6

▲ Solid carbide finish milling cutters

Ø 8, 10, 12, 16, 20 mm / ZEFP* 6

▲ Solid carbide high-feed cutters

Ø 8, 10, 12, 16, 20 mm / ZEFP* 6

→ **Chapter 14, Solid carbide milling cutters**

▲ Solid carbide ball-nosed end mills

Ø 10, 12, 16, 20 mm / ZEFP* 4

▲ Solid carbide torus bull nose milling cutters

Ø 8, 10, 12, 16, 20 mm / ZEFP* 3+4

▲ Solid carbide quarter round cutter

Ø 8, 10, 12, 16, 20 mm

▲ Solid carbide deburring cutters

Ø 10, 12, 16, 20 mm / ZEFP* 4+6



*ZEFP = Number of teeth

Tool holder



▲ Steel Holder Extra Short

Cylindrical / Tapered 87°

Length 60–90 mm

for KLG 8, 10, 12, 16, 20 mm

23+24



▲ Short Holder Steel/Solid Carbide

cylindrical

Length 85–120 mm

for KLG 8, 10, 12, 16, 20 mm

24+25



▲ Holder Steel /Solid Carbide, Short

87° taper

Length 85–120 mm

for KLG 8, 10, 12, 16, 20 mm

23



▲ Solid Carbide Holder Medium

Cylindrical / Tapered 87°

Length 110–150 mm

for KLG 8, 10, 12, 16, 20 mm

23+25



▲ Holder Steel/Solid Carbide, Long

cylindrical

Length 150–200 mm

for KLG 8, 10, 12, 16, 20 mm

24+25



▲ Holder Steel/Solid Carbide, Long

87° taper

Length 150–200 mm

for KLG 8, 10, 12, 16, 20 mm

23



▲ Steel/Solid Carbide Holder Extra Long

cylindrical

Length 200–250 mm

For Ø 16 and 20 mm

24+25

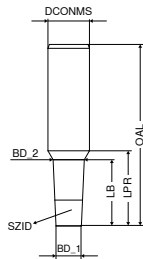
MultiChange – Holders

▲ tapered 87°

▲ SZID = Coupling Size

Scope of supply:

Holder without mounting key



Steel



Steel



Solid carbide



Solid carbide



Solid carbide



SZID	BD_1	BD_2	DCONMS	OAL	LB	LPR	Steel A	Steel A	Solid carbide HA	Solid carbide HA	Solid carbide HA
	mm	mm	mm	mm	mm	mm	Y8 Article no. 84 001 ... EUR	Y8 Article no. 84 004 ... EUR	Y8 Article no. 84 005 ... EUR	Y8 Article no. 84 007 ... EUR	Y8 Article no. 84 010 ... EUR
06	7,8	9,4	10	60	18	19	93,64	080			
06	7,8	9,4	10	85	43	44		111,10	080	187,70	
06	7,8	9,4	10	110	68	69				207,70	080
06	7,8	9,4	10	150	108	109					239,00
08	9,8	12,0	16	70	25	29	95,10	100			
08	9,8	13,0	16	90	38	41		113,30	100	204,50	
08	9,8	14,9	16	110	60	61				228,50	100
08	9,8	15,4	16	150	100	101					266,30
10	11,8	14,2	16	70	27	29	105,90	120			
10	11,8	15,2	16	90	40	41		115,40	120	204,50	
10	11,8	16,6	20	110	56	59				292,50	120
10	11,8	19,5	20	150	98	99					316,60
12	15,8	18,2	20	80	27	29	113,30	160			
12	15,8	19,5	20	105	53	54		140,60	160	287,30	
12	15,8	19,5	20	130	78	79				342,90	160
12	15,8	19,5	20	150	98	99					353,40
16	19,8	23,2	25	90	39	41	132,10	200			
16	19,8	24,5	25	120	60	61		162,60	200	353,40	
16	19,8	24,5	25	150	90	91				397,40	200
16	19,8	24,5	25	200	140	141					446,70

i Assembly instructions can be found on → **Page 38**

Accessories



insertion key

→ 38



adjustable wrench

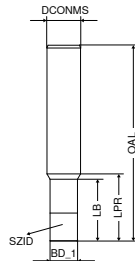
→ 38

MultiChange – Holders

- ▲ cylindrical
- ▲ only suitable for milling
- ▲ SZID = Coupling Size

Scope of supply:

Holder without mounting key



Steel	Steel	Steel	Steel
A	A	A	A
Y8	Y8	Y8	Y8
Article no. 84 000 ...	Article no. 84 002 ...	Article no. 84 008 ...	Article no. 84 011 ...
EUR	EUR	EUR	EUR
84,93	99,72	140,60	318,80
080	080	080	160
100	102,20	143,70	
120	104,30	146,80	
160	124,80	176,20	
200	146,80	206,50	355,40

SZID	BD_1	DCONMS	OAL	LB	LPR
	mm	mm	mm	mm	mm
06	7,8	10	60	17	19
06	7,8	10	85	42	44
06	7,8	10	150	107	109
08	9,8	12	70	22	24
08	9,8	12	90	42	44
08	9,8	12	150	102	104
10	11,8	16	70	17	21
10	11,8	16	90	37	41
10	11,8	16	150	97	101
12	15,8	16	80	30	31
12	15,8	16	105	55	56
12	15,8	16	150	100	101
12	15,8	16	200	150	151
16	19,8	25	90	26	31
16	19,8	25	120	56	61
16	19,8	25	200	136	141
16	19,8	25	250	186	191

i Assembly instructions can be found on → **Page 38**

Accessories



insertion key



adjustable wrench

→ 38

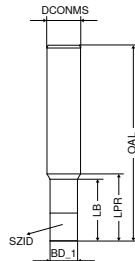
→ 38

MultiChange – Holders

- ▲ cylindrical
- ▲ only suitable for milling
- ▲ SZID = Coupling Size

Scope of supply:

Holder without mounting key



Solid carbide



HA

Y8

Article no.

84 003 ...

EUR

187,70

080



Solid carbide



HA

Y8

Article no.

84 006 ...

EUR

207,70

080



Solid carbide



HA

Y8

Article no.

84 009 ...

EUR

239,00

080



Solid carbide



HA

Y8

Article no.

84 012 ...

EUR

455,10

160

SZID	BD_1	DCONMS	OAL	LB	LPR				
	mm	mm	mm	mm	mm				
06	7,8	10	85	42	44				
06	7,8	10	110	67	69				
06	7,8	10	150	107	109				
08	9,8	12	90	42	44	198,20	100		
08	9,8	12	110	62	64				
08	9,8	12	150	102	104				
10	11,8	16	90	37	41	204,50	120		
10	11,8	16	110	57	61				
10	11,8	16	150	97	101				
12	15,8	16	105	55	56	222,30	160		
12	15,8	16	130	80	81				
12	15,8	16	150	100	101				
12	15,8	16	200	150	151				
16	19,8	25	120	56	61	353,40	200		
16	19,8	25	150	86	91				
16	19,8	25	200	136	141				
16	19,8	25	250	186	191				

i Assembly instructions can be found on → **Page 38**

Accessories



insertion key

→ 38



adjustable wrench

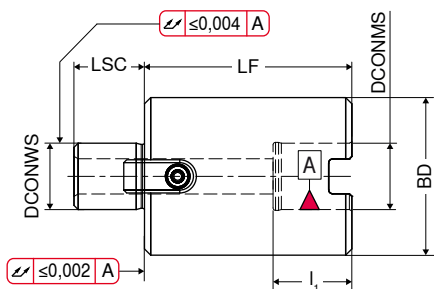
→ 38

Extension for Shell mill arbors

▲ variable applications through usage of one or two extensions (max. 2 x 50 mm possible)

Scope of supply:

Holder without clamping screw

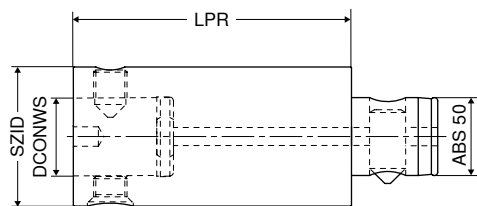


						Y8	
						Article no. 82 648 ...	
						EUR	
DCONWS _{h5}	DCONMS _{h5}	LF	BD	LSC	I ₁		
mm	mm	mm	mm	mm	mm		
16	16	75	38	17	19	76,86	075
16	16	50	38	17	19	76,33	050
22	22	50	48	19	21	78,22	150
22	22	75	48	19	21	78,96	175
27	27	75	58	21	23	83,36	275
27	27	50	58	21	23	81,89	250
32	32	75	78	24	26	91,96	375
32	32	50	78	24	26	88,81	350
40	40	50	88	27	29	110,10	450
40	40	75	88	27	29	114,30	475

		Y8		Y8		Y8		Y8	
		Screw for drivers		Driver		Retaining screw		Retaining screw	
Spare parts		Article no. 83 950 ...		Article no. 83 950 ...		Article no. 82 649 ...		Article no. 82 649 ...	
for Article no.		EUR		EUR		EUR		EUR	
82 648 075	M3x8	0,38	296	8x9x17,5	7,23 120			M8x100	3,69 075
82 648 050	M3x8	0,38	296	8x9x17,5	7,23 120	M8x125	4,33 001	M8x80	2,67 050
82 648 150	M4x12	0,48	297	10x11x20,5	7,49 121	M10x125	6,40 100	M10x80	4,22 150
82 648 175	M4x12	0,48	297	10x11x20,5	7,49 121			M10x100	5,57 175
82 648 275	M5x12	0,57	136	12x13x24,3	8,48 122			M12x100	8,33 275
82 648 250	M5x12	0,57	136	12x13x24,3	8,48 122	M12x125	9,79 200	M12x80	6,17 250
82 648 375	M5x20	0,64	137	14x21x21,2	8,74 123			M16x100	12,69 375
82 648 350	M5x20	0,64	137	14x21x21,2	8,74 123	M16x125	14,36 300	M16x80	9,06 350
82 648 450	M6x16	0,75	138	15,9x16,3x19,5	11,22 295				
82 648 475	M6x16	0,75	138	15,9x16,3x19,5	11,22 295				

i When using two extension pieces (max. 2x50 mm) please use a tightening bolt with a length of 125 mm.

Extension with ABS Connection



AD

NEW	3E
Article no. 84 209 ...	
EUR	
292,20	05097
292,20	06597
292,20	10097
292,20	15097

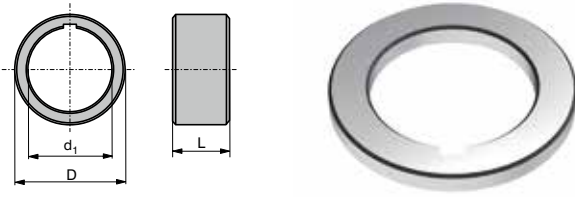
Adapter	KOMET no.	SZID	DCONWS	LPR
			mm	mm
ABS 50	A2000550	ABS 50	28	50
ABS 50	A2000050	ABS 50	28	65
ABS 50	A2000250	ABS 50	28	100
ABS 50	A2000150	ABS 50	28	150

Spare parts

Adapter	EUR	EUR	EUR	EUR	EUR	EUR	EUR
ABS 50	12,64 20300	58,24 99900	28,81 99800	14,92 20200	36,04 20000	7,33 20100	16,22 20400

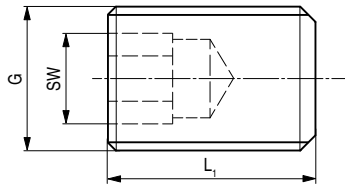
XX	XX	XX	XX	XX	XX	XX
Clamping screw	Set	Set	Positioning pin	Pendulum bolt	Coolant pipe	Taper screw
Article no. 84 950 ...	Article no. 84 950 ...	Article no. 84 950 ...	Article no. 84 950 ...	Article no. 84 950 ...	Article no. 84 950 ...	Article no. 84 950 ...
EUR	EUR	EUR	EUR	EUR	EUR	EUR
20300	99900	99800	20200	20000	20100	20400

Milling Adapter Rings DIN 2084 Form B



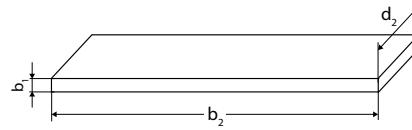
d ₁ mm	D mm	L mm	Y8	
			Article no. 83 385 ...	EUR
13	22	2	5,92	013
	22	3	5,97	113
	22	4	6,24	213
	22	5	6,41	313
	22	6	6,73	413
	22	10	7,53	513
16	26	2	5,25	016
	26	3	5,26	116
	26	4	5,33	216
	26	5	5,54	316
	26	6	5,69	416
	26	10	8,14	516
	26	20	10,35	616
	26	30	12,89	716
22	34	2	5,44	022
	34	3	5,54	122
	34	4	5,60	222
	34	5	6,13	322
	34	6	6,94	422
	34	10	9,54	522
	34	20	11,96	622
	34	30	15,84	722
27	41	2	5,97	027
	41	3	6,11	127
	41	4	6,74	227
	41	5	6,98	327
	41	6	7,85	427
	41	10	9,74	527
	41	20	13,21	627
	41	30	17,51	727
32	47	2	6,67	032
	47	3	7,07	132
	47	4	7,71	232
	47	5	8,33	332
	47	6	8,83	432
	47	10	10,80	532
	47	20	16,25	632
	47	30	19,72	732
40	55	2	7,75	040
	55	3	8,61	140
	55	4	9,50	240
	55	5	10,35	340
	55	6	11,22	440
	55	10	15,10	540
	55	20	20,55	640
	55	30	25,48	740

Screw for cylindrical adapters E2



Levelling plates

- ▲ for axial and radial tool holders
- ▲ without mounting thread



G	L ₁ mm	SW mm	Y8	
			Article no. 83 950 ...	EUR
M6	12	3	2,06 461	
M6	16	3	2,06 462	
M6	25	3	2,06 463	
M8	10	4	2,06 464	
M8	12	4	2,06 465	
M8	16	4	2,06 466	
M8	20	4	2,06 467	
M8	25	4	2,06 468	
M8	30	4	2,06 469	
M10	16	5	2,06 470	
M10	20	5	2,06 471	
M10	25	5	2,44 472	
M10	30	5	2,24 473	
M12	12	6	2,44 474	
M12	16	6	2,44 475	
M12	20	6	2,44 476	
M12	25	6	2,44 477	

b ₁ mm	b ₂ mm	d ₂ mm	Y8	
			Article no. 83 950 ...	EUR
4	38	14	11,01 210	
4	48	14	11,01 211	
4	54	14	11,01 212	
4	55	12	11,01 213	
4	69	16	11,01 214	
4	73	14	11,01 215	
4	75	12	11,01 216	
4	99	16	11,01 217	
5	84	20	11,01 218	
5	117	20	11,01 219	
7	99	25	11,01 220	
7	120	25	12,69 221	
7	129	25	11,01 222	
7	143	25	11,01 223	

Clamping screw for cylindrical adapters E1



Thread	Y8	
	Article no. 83 950 ...	EUR
M10x1x10	4,90 180	
M12x1x12	4,90 181	
M16x1x13	6,02 182	

Lock nut with external thread form ER for sealing rings with internal cooling



for size	Thread	SW mm	Y8	
			Article no. 83 950 ...	EUR
ER 16	M24x1	19	49,96	328
ER 20	M28x1,5	22	52,51	329
ER 25	M32x1,5	24	54,45	330
ER 32	M40x1,5	32	58,27	335

Zeta® – Clamping adapter



for size

for size	Y7	
	Article no. 83 950 ...	EUR
ER 16	28,45	495
ER 20	14,99	496
ER 25	16,47	497
ER 32	26,95	498
ER 40	19,48	499

Zeta® – Nut



for size	Thread	M _{max.} Nm	Y7	
			Article no. 83 950 ...	EUR
ER 16	M24x1	60	35,94	480
ER 20	M28x1,5	75	37,44	481
ER 25	M32x1,5	100	38,93	482
ER 32	M40x1,5	130	43,43	483
ER 40	M50x1,5	150	49,42	484

Zeta® – Torque Socket



for size

for size		Y7	
		Article no. 83 950 ...	EUR
ER 16	3/8"	34,44	500
ER 20	3/8"	35,94	501
ER 25	1/2"	37,44	502
ER 32	1/2"	41,94	503
ER 40	1/2"	47,94	504

Zeta® – Torque Wrench Adapter

▲ Warning: interface of torque adapter is a 16 mm diameter round shank adapter



for size	Y7	
	Article no. 83 950 ...	EUR
ER 16	50,91	505
ER 20	52,41	506
ER 25	53,92	507
ER 32	53,92	508
ER 40	58,40	509

Zeta® – Clamping key



for size

for size	Y7	
	Article no. 83 950 ...	EUR
ER 16	50,91	490
ER 20	52,41	491
ER 25	53,92	492
ER 32	53,92	493
ER 40	58,40	494

Pipe joints

▲ steel pipe



Thread	Pipe Ø mm	form	Article no. 83 950 ...	
			EUR	
M8x1	5	A	6,85	372
M10x1	6	A	15,10	373
M10x1	8	A	8,58	374
M8x1	5	B	6,85	375
M10x1	6	B	15,10	376
M10x1	8	B	15,10	377

Ball-shaped spray nozzle



	Y8	
	Article no.	
	83 950 ...	
	EUR	
Ø 8 - M 5	2,76	200
Ø 10 - M 6	3,49	201
Ø 14 - M 8	3,49	202

Coolant pipe with ball pin

▲ $p_{\max} = 80 \text{ bar}$



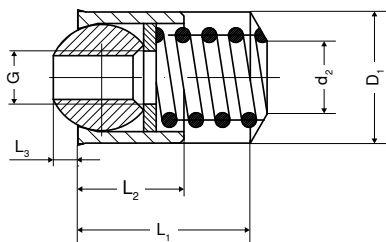
	Y7	
	Article no.	
	83 950 ...	
	EUR	
Ø 9	32,95	441
Ø 11	22,46	442

O-Ring



	Y8	
	Article no.	
	83 950 ...	
	EUR	
for	Ø	
VDI 16	15 x 1,5	0,86 205
VDI 20	18,77 x 1,78	0,86 206
VDI 30	28,3 x 1,78	0,86 207
VDI 40	37,77 x 2,62	0,86 208
VDI 50	47,29 x 2,62	0,86 209

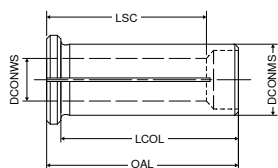
Spray nozzle element



						Y8	
						Article no.	
						83 950 ...	
D ₁ mm	G	L ₁ mm	L ₂ mm	L ₃ mm	d ₂ mm	EUR	
9,88	M4	13	8	2,2	5,5	9,97	247
11,88	M6	15	10	3,0	6,8	9,97	248
13,88	M6	17	12	4,0	6,8	9,97	249

Reducing sleeves for hydraulic and high pressure chucks

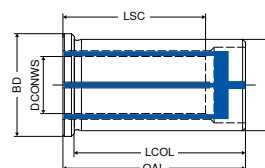
▲ thro' coolant to 80 bar



Y8					
DCONMS	DCONWS	OAL	LCOL	LSC	Article no. 83 609 ...
mm	mm	mm	mm	mm	EUR
12	3	40	36	29	106,90 103
12	4	40	36	29	106,90 104
12	5	40	36	29	106,90 105
12	6	40	36	36	106,90 106
12	8	40	36	37	106,90 108
20	3	54	50	28	99,72 203
20	4	54	50	28	99,72 204
20	5	54	50	28	99,72 205
20	6	54	50	36	77,80 206
20	8	54	50	37	77,80 208
20	10	54	50	40	77,80 210
20	12	54	50	45	77,80 212
20	14	54	50	45	77,80 214
20	16	54	50	48	77,80 216
25	6	60	56	37	85,77 256
25	8	60	56	37	85,77 258
25	10	60	56	40	85,77 260
25	12	60	56	46	85,77 262
25	14	60	56	47	85,77 264
25	16	60	56	48	85,77 266
25	18	60	56	48	85,77 268
25	20	60	56	50	85,77 270
32	6	64	60	36	99,72 306
32	8	64	60	36	99,72 308
32	10	64	60	40	99,72 310
32	12	64	60	45	99,72 312
32	14	64	60	46	99,72 314
32	16	64	60	48	99,72 316
32	18	64	60	49	99,72 318
32	20	64	60	50	99,72 320
32	25	64	60	56	99,72 325

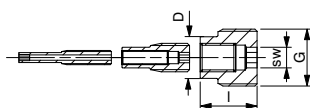
Reduction sleeves with coolant hole for hydraulic and high pressure chucks

▲ with coolant holes, for flexible diameter application



NEW Y8					
DCONMS	DCONWS	BD	OAL	LCOL	LSC
mm	mm	mm	mm	mm	mm
12	3	16	44	40	29
12	4	16	44	40	29
12	5	16	44	40	29
12	6	16	44	40	36
12	8	16	44	40	37
20	3	25	54	50	28
20	4	25	54	50	28
20	5	25	54	50	28
20	6	25	54	50	36
20	8	25	54	50	37
20	10	25	54	50	40
20	12	25	54	50	45
20	14	25	54	50	45
20	16	25	54	50	48
32	6	36	64	60	36
32	8	36	64	60	36
32	10	36	64	60	40
32	12	36	64	60	45
32	14	36	64	60	46
32	16	36	64	60	48
32	18	36	64	60	49
32	20	36	64	60	50
32	25	36	64	60	56

Stop screw for use with reducing sleeves in hydraulic chuck



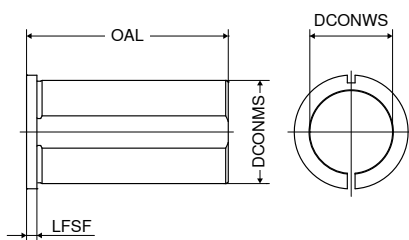
Y7		
G	D mm	Article no. 83 950 ...
		EUR
M4x0,5x26 - SW2	2,8	8,27 425
M8x1x19 - SW2,5	5,8	8,27 428
M10x1x16 - SW3	5,8	8,27 426
M16x1x16 - SW5	11,7	8,27 427

Adaptation for the use of stop screws for reducing sleeves

DCONMS in mm			
12		83 950 425	83 950 426
20	83 950 425	83 950 428	83 950 427
25	83 950 425	83 950 428	83 950 427
32		83 950 428	83 950 427

Slotted reduction sleeves

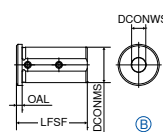
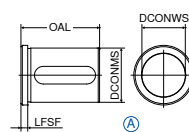
- ▲ for cylindrical and other tool holders
- ▲ for tools with cylindrical shank



Y8				
DCONMS	DCONWS	OAL	LFSF	Article no. 83 271 ...
mm	mm	mm	mm	EUR
20	6	30	4	56,63 206
20	8	30	4	44,35 208
20	10	30	4	44,35 210
20	12	30	4	44,35 212
20	15	30	4	44,35 215
20	16	30	4	44,35 216
25	6	40	4	61,03 256
25	8	40	4	47,50 258
25	10	40	4	47,50 260
25	12	40	4	47,50 262
25	15	40	4	62,18 265
25	16	40	4	47,50 266
25	20	40	4	47,50 270
32	6	50	4	62,49 326
32	8	50	4	47,50 328
32	10	50	4	47,50 330
32	12	50	4	47,50 332
32	15	50	4	47,50 335
32	16	50	4	47,50 336
32	20	50	4	47,50 340
40	10	78	4	57,36 410
40	12	78	4	57,36 412
40	15	78	4	57,36 415
40	16	78	4	57,36 416
40	20	78	4	57,36 420
40	25	78	4	57,36 425
40	32	78	4	57,36 432
50	20	88	4	76,96 520
50	25	88	4	76,96 525
50	32	88	4	76,96 532
50	40	88	4	76,96 540

Reduction sleeves for direct clamping

- ▲ for tools with cylindrical shank

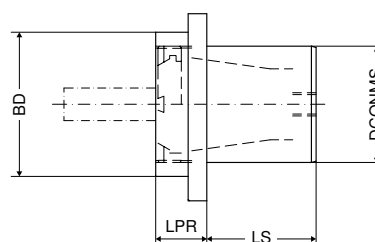


Y8					
DCONMS	DCONWS	OAL	LFSF	Fig.	Article no. 83 272 ...
mm	mm	mm	mm		EUR
25	6	50	4	B	63,86 256
25	8	50	4	B	49,49 258
25	10	50	4	B	49,49 260
25	12	50	4	B	49,49 262
25	14	50	4	A	63,86 264
25	16	50	4	A	49,49 266
25	20	50	4	A	49,49 270
32	6	58	5	B	65,96 326
32	8	58	5	B	65,96 328
32	10	58	5	B	51,07 330
32	12	58	5	B	51,07 332
32	16	58	5	A	51,07 336
32	20	58	5	A	51,07 340
32	25	58	5	A	51,07 345
40	8	58	5	B	80,11 408
40	10	58	5	B	65,96 410
40	12	58	5	B	71,30 412
40	16	58	5	A	71,30 416
40	20	58	5	A	71,30 420
40	25	58	5	A	71,30 425
40	32	58	5	A	71,30 432
50	12	75	5	B	74,24 512
50	16	75	5	A	74,24 516
50	20	75	5	A	74,24 520
50	25	75	5	A	74,24 525
50	32	75	5	A	74,24 532
50	40	75	5	A	74,24 540

Collet chuck for boring bar holder

Scope of supply:

Collet adapter with lock nut



Y7				
DCONMS	for collet	BD	LS	LPR
mm		mm	mm	mm
25	428E (ER20)	35	29	18
32	430E (ER25)	40	32	20
40	470E (ER32)	50	38	20

Article no. 83 950 ...	
EUR	
316,00	390
347,40	391 ¹⁾
322,00	392 ¹⁾

1) Not ex-stock

Taper wiper

▲ version made from hard wood with suede inserts



Adapter	Y8	
	Article no.	
	83 715 ...	
	EUR	
MK 1	5,89	001
MK 2	6,10	002
MK 3	8,14	003
MK 4	8,97	004
MK 5	13,21	005
HSK 32	43,20	320
HSK 40	45,82	400
HSK 50	46,55	500
HSK 63	54,42	630
HSK 80	70,25	800
HSK 100	82,53	100
SK 30	9,83	130
SK 40	10,80	140
SK 50	12,89	150

Assembly device for ISO adapters

▲ aluminium



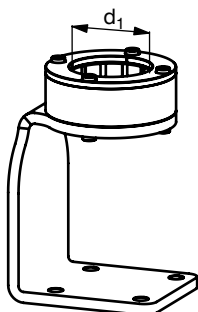
Adapter	Y7	
	Article no.	
	80 720 ...	
	EUR	
SK 30	100,50	030
SK 40	100,50	040
SK 50	167,70	050

Assembly fixture for tool holders

▲ gripping by roller

▲ secure clamping

▲ quick assembly, no additional clamping necessary

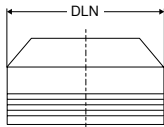


Adapter	d ₁ mm	Y7	
		Article no.	
		80 722 ...	
		EUR	
HSK 32, PSC 32	32,0	155,90	032
HSK 40, PSC 40	40,0	155,90	040
MAS-BT 30	46,0	128,80	046
DIN 69871 / DIN 2080 - SK 30, HSK 50, PSC 50	50,0	128,80	050
DIN 69871 / DIN 2080 - SK 40, HSK 63, PSC 63, MAS-BT 40, ANSI-CAT 40	63,0	133,80	063
DIN 69871 - SK 50	97,5	249,30	097
HSK 100, MAS-BT 50, ANSI-CAT 50	100,0	249,30	100

i Safety Note: The clamping devices must be free of oil and grease to avoid slipping!

ER Standard lock nut for precision collet chuck

Centro-P

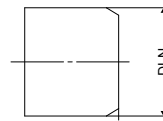


for seals

for collet	clamping range mm	DLN mm	TQX Nm	Y8		Y8	
				Article no. 84 950 ...	EUR	Article no. 84 950 ...	EUR
426E (ER16)	1 - 10	30	50	28,15	001	35,19	011
428E (ER20)	1 - 13	32	70	31,16	002	38,22	012
430E (ER25)	2 - 16	40	85	31,16	003	38,22	013
470E (ER32)	2 - 20	50	135	33,15	005	40,23	015
472E (ER40)	3 - 26	63	190	45,25	007	54,30	017

Mini lock nut for precision collet chuck

Centro-P



for seals

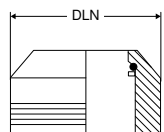
for collet	clamping range mm	DLN mm	TQX Nm	Y8		Y8	
				Article no. 84 950 ...	EUR	Article no. 84 950 ...	EUR
4004E (ER08)	1 - 5	10	5 - 8	38,19	040		
4008E (ER11)	1 - 7	16	10	33,15	041		
4008E (ER11)	Ø 3,0	16	10	63,35	042 ¹⁾		
4008E (ER11)	Ø 4,0	16	10	63,35	043 ¹⁾		
4008E (ER11)	Ø 5,0	16	10	63,35	044 ¹⁾		
4008E (ER11)	Ø 6,0	16	10	63,35	045 ¹⁾		
4008E (ER11)	Ø 7,0	16	10	63,35	046 ¹⁾		
426E (ER16)	1 - 10	22	28	33,15	034	41,22	035

1) directly sealed

OZ Standard lock nut for precision collet chuck

▲ can be used without sealing ring

Centro-P



for seals

for collet	clamping range mm	DLN mm	TQX Nm	Y8		Y8	
				Article no. 84 950 ...	EUR	Article no. 84 950 ...	EUR
462E (OZ)	2 - 25	50	140	35,19	009	42,22	020

Collet removal aid for Mini lock nut for precision collet chuck

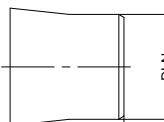
Centro-P



for collet	Y8	
	Article no. 84 950 ...	EUR
4004E / ER 08	19,75	070
4008E / ER 11	27,65	072

Tapered lock nut for precision collet chuck

Centro-P



for seals

for collet	clamping range mm	DLN mm	TQX Nm	Y8		Y8	
				Article no. 84 950 ...	EUR	Article no. 84 950 ...	EUR
426E (ER16)	1 - 10	24	50	33,15	031		
426E (ER16)	1 - 10	24	25			41,23	033

Roll key

- ▲ version CP = for Centro-P lock nuts
▲ version STD = for standard lock nuts



for size	d ₁ mm	Y8	
		Article no. 84 950 ...	
		EUR	
4004E / ER08 CP mini	10	85,46	050
4008E / ER 11 CP mini / mini	16	60,32	080 ¹⁾
426E / ER 16 CP / ER 16 mini	22	60,16	026
426E / ER 16 CP konisch / CP mini	24	60,32	082 ²⁾
426E / ER 16 CP	30	60,16	027
426E / ER 16 STD	32	60,16	028
428E / ER 20 STD	35	60,16	029
430E / ER 25 CP	40	60,32	054
430E / ER 25 STD	42	60,32	055
470E / ER 32 CP + STD / OZ462E CP	50	60,32	056
472E / ER 40 CP + STD	63	66,36	057

1) Special key for mini lock nuts

2) Key for tapered lock nuts / Special key for mini lock nuts

Additional roll key device for torque key

- ▲ version CP = for Centro-P lock nuts
▲ version STD = for standard lock nuts



for size	d ₁ mm	M _{max.} Nm	Square mm	Y8	
				Article no. 84 950 ...	
				EUR	
4008E / ER 11 CP	16	20 - 100	9 x 12	60,32	060 ¹⁾
426E / ER 16 CP / ER 16 mini	22	20 - 100	9 x 12	60,16	170
426E / ER 16 CP	24	20 - 100	9 x 12	60,32	061 ¹⁾
426E / ER 16 CP	30	20 - 100	14 x 18	60,16	171
426E / ER 16 STD	32	20 - 100	14 x 18	60,16	172
426E / ER 20 STD	35	20 - 100	14 x 18	60,16	173
430E / ER 25 CP	40	40 - 200	14 x 18	60,32	065
430E / ER 25 STD	42	40 - 200	14 x 18	60,32	066
470E / ER 32 CP + STD / OZ 462E CP	50	40 - 200	14 x 18	60,32	067
472E / ER 40 CP + STD	63	40 - 200	14 x 18	66,36	068

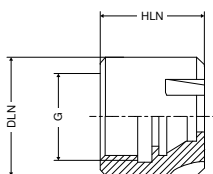
1) for mini and tapered lock nuts

Torque key



M _{max.} Nm	Square mm	Y8	
		Article no. 84 435 ...	
		EUR	
5-30	9 x 12	145,90	030
10-80	9 x 12	171,50	080
20 - 200	14 x 18	174,50	200

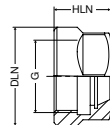
Mini ER lock nut



for collet	G	DLN	HLN	TQX	W7 Article no. 62 950 ... EUR
		mm	mm	Nm	
4004E (ER08)	M10x0,75	12	11,0	8	25,06 067
4008E (ER11)	M13x0,75	16	12,0	18	24,43 065
426E (ER16)	M19x1	22	18,0	28	23,90 066
428E (ER20)	M24x1	28	19,5	35	26,95 068
430E (ER25)	M30x1	35	21,0	40	29,46 069



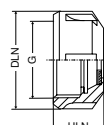
ER Lock nut



for seals

for collet	G	DLN	HLN	W7 Article no. 62 950 ... EUR	Y8 Article no. 83 950 ... EUR
		mm	mm		
426E (ER16)	M22x1,5 - SW25	28	18,0	17,82 044	
428E (ER20)	M25x1,5 - SW30	34	19,5	18,87 045	
428E (ER20)	M25x1,5 - SW30	34	22,5		32,71 053

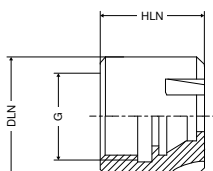
ER Lock nut



for seals

for collet	G	DLN	HLN	W7 Article no. 62 950 ... EUR	Y8 Article no. 83 950 ... EUR
		mm	mm		
426E (ER16)	M22x1,5	32	17,0	17,82 054	
426E (ER16)	M22x1,5	32	22,0		30,62 054
430E (ER25)	M32x1,5	42	20,0	19,92 055	
430E (ER25)	M32x1,5	42	24,7		34,72 055
470E (ER32)	M40x1,5	50	22,3	18,56 056	
470E (ER32)	M40x1,5	50	27,0		36,95 056
472E (ER40)	M50x1,5	63	25,3	18,04 057	
472E (ER40)	M50x1,5	63	30,7		43,57 057

Mini ER lock nut for sealing rings



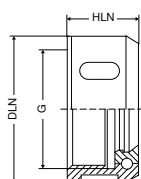
for collet	G	DLN	HLN	TQX	Y8 Article no. 83 950 ... EUR
		mm	mm	Nm	
426E (ER16-DS)	M19x1	22	22,0	28	36,45 058
428E (ER20-DS)	M24x1	28	23,2	35	38,87 059
430E (ER25-DS)	M30x1	35	24,7	40	40,56 060



for seals

OZ lock nut Form B + C

▲ with ball bearings



for collet	G	DLN	HLN	TQX	W7 Article no. 62 950 ... EUR
		mm	mm	Nm	
415E / 421E (OZ)	M33x1,5	43	24,0	85	31,56 050
459E / 462E (OZ)	M48x2	60	30,0	140	34,71 051
460E / 467E (OZ)	M60x2,5	72	33,5	170	43,41 052

MultiChange – Spanner



		Y8	
		Article no.	
		84 357 ...	
SW mm	M _{max.} Nm	EUR	
6	5	6,90	006
8	12,5	7,08	008
10	15	7,96	010
13	20	8,61	013
16	25	11,54	016
19	25	15,10	019 ¹⁾
21	25	16,57	021 ¹⁾
24	25	17,41	024 ¹⁾

1) only for MultiChange reamers

MultiChange – Spanner Head



		Y8	
		Article no.	
		84 358 ...	
SW mm	M _{max.} Nm	Square mm	EUR
6	5	9 x 12	49,70
8	12,5	9 x 12	49,70
10	15	9 x 12	49,70
13	20	9 x 12	49,70
16	25	9 x 12	49,70
19	25	9 x 12	103,80
21	25	9 x 12	145,70
24	25	9 x 12	145,70
19	25	14 x 18	88,29
21	25	14 x 18	108,10
24	25	14 x 18	108,10

1) only for MultiChange reamers

i Suitable torque keys can be found on → **Page 36.**

Assembly instructions for MultiChange head

- ▲ Cleaning of cone, thread and face of the milling head
- ▲ Cleaning of cone and thread face of the holder
- ▲ Cleaning of cone, thread and face of the holders
- ▲ Cutter head screwed clockwise by hand into the holder (be careful if using gloves)
- ▲ Clamp the exchange milling head with the torque wrench and the correct spanner to the specified tightening torque (according to table).
- ▲ The gap between the head and holder must be closed (force and positive connection)



Torque wrench must be horizontally aligned to key area, take care not to tilt in the key area



Important for the sensitive tuning is an additional placing of the hand on the exchange milling head. This means the torque can be better maintained.

TORX® Screwdriver



	Y7	
Article no.	80 950 ...	
EUR		
T06 - 60 mm	6,36	100
T07 - 60 mm	6,36	101
T08 - 60 mm	6,36	102
T09 - 60 mm	6,87	103
T10 - 80 mm	7,05	104
T15 - 80 mm	7,05	105
T20 - 100 mm	7,52	106
T25 - 100 mm	7,93	107
T30 115	8,80	092

TORX® MagicSpring®



	Y7	
Article no.	80 950 ...	
EUR		
MS T06 - 60 mm	8,44	108
MS T07 - 60 mm	7,80	109
MS T08 - 60 mm	7,80	110
MS T09 - 60 mm	8,88	111
MS T10 - 80 mm	9,14	112
MS T15 - 80 mm	9,28	113
MS T20 - 100 mm	9,95	114
MS T25 - 100 mm	10,22	115
MS T30 - 100 mm	12,10	131

TORX PLUS® MagicSpring®



	Y7	
Article no.	80 950 ...	
EUR		
MS T06 - IP - 60 mm	10,39	123
MS T07 - IP - 60 mm	10,22	124
MS T08 - IP - 60 mm	10,20	125
MS T09 - IP - 60 mm	11,24	126
MS T10 - IP - 80 mm	11,56	127
MS T15 - IP - 80 mm	11,89	128
MS T20 - IP - 100 mm	12,54	129
MS T25 - IP - 100 mm	14,50	130



A stainless steel spring holds MagicSpring® Torx and Torx Plus screws in place.



TORX PLUS® Screwdriver



	Y7	
Article no.	80 950 ...	
EUR		
T06 - IP - 60 mm	8,11	116
T07 - IP - 60 mm	7,95	117
T08 - IP - 60 mm	6,28	039
T09 - IP - 60 mm	8,63	118
T10 - IP - 80 mm	8,91	119
T15 - IP - 80 mm	9,15	120
T20 - IP - 100 mm	9,80	121
T25 - IP - 100 mm	10,27	122

TorqueFix® Handle

- ▲ with fixed torque moment
- ▲ Standard: EN ISO 6798, BS EN 26789, ASME B107.14M
- ▲ Accuracy: $\pm 6\%$, based on national standards
- ▲ Bits to be clamped in the universal holder only



	Y7	
Article no.	80 021 ...	
EUR		
M _{max.}		
Nm		
0,6	97,92	006
0,7	85,92	007
0,8	87,99	008
1,0	87,99	010
1,2	97,04	012
1,6	97,04	016
1,8	97,04	018
2,0	97,04	020
2,2	97,04	022
3,0	102,50	030
3,2	102,50	032
4,0	102,50	040
5,0	102,50	050
5,5	114,50	055
6,0	114,50	060

TorqueVario®-S

- ▲ Patented handle

Scope of supply:

incl. Torque-Setter setting tool



	Y7	
Article no.	80 950 ...	
EUR		
M _{max.}		
Nm		
0,4 - 1,0	127,50	046
0,5 - 2,0	118,90	191
0,8 - 5,0	128,60	192
2,0 - 7,0	131,90	193

Torque-Fix-Tplus T-handle torque wrench

- ▲ with fixed torque
- ▲ Standards: EN ISO 6798, BS EN 26789, ASME B107.14M
- ▲ Accuracy: $\pm 6\%$, based on national standards
- ▲ for holding Tplus interchangeable torque blades

Scope of supply:

incl. Plastic box and inspection report



M _{max.} Nm	SW mm	Y7	
		Article no. 80 950 ...	EUR
8	6	176,70	183
12	6	179,90	140

Interchangeable blade for Hex drive for Micro Precision Chucks

- ▲ 175 mm long



for size	M _{max.} Nm	Y7	
		Article no. 80 950 ...	EUR
SW1,5	0,9	5,60	151
SW2	1,8	5,60	152
SW2,5	3,8	5,60	153
SW3	5,5	5,60	154
SW4	8,0	5,60	155

Replaceable Blade for TORX®

- ▲ 175 mm long



for size	M _{max.} Nm	Y7	
		Article no. 80 950 ...	EUR
T5 -SW4	0,4	5,89	048
T6 -SW4	0,6	4,76	031
T7 -SW4	0,9	4,76	032
T8 -SW4	1,3	4,76	033
T9 -SW4	2,5	4,76	034
T10 -SW4	3,8	4,76	035
T15 -SW4	5,5	4,76	036
T20 -SW4	8,0	4,76	037
T25 -SW4	8,0	4,76	038

Torque Vario-STplus torque tool handle

- ▲ with variable torque adjustment
- ▲ Norm: EN ISO 6798, BS EN 26789, ASME B107.14M
- ▲ Accuracy: $\pm 6\%$, traceable to national standards
- ▲ for holding Torque Tplus interchangeable blades

Scope of supply:

incl. Plastic box and inspection report



M _{max.} Nm	SW mm	Y7	
		Article no. 80 950 ...	EUR
5 - 14	6	198,50	182

Replaceable Blade for TORX PLUS®

- ▲ 175 mm long



for size	M _{max.} Nm	Y7	
		Article no. 80 950 ...	EUR
T05IP -SW4	0,5	5,26	049
T06IP -SW4	0,8	5,26	050
T07 - IP -SW4	1,3	5,26	051
T08 - IP -SW4	2,0	4,76	043
T09IP -SW4	3,0	5,26	052
T10IP -SW4	4,5	5,26	053
T15 - IP -SW4	6,6	5,26	054
T20 - IP -SW4	8,0	5,26	055
T25IP -SW4	8,0	5,26	056

Tplus interchangeable torque blade

- ▲ for T-handle torque tools



M _{max.} Nm	SW mm	Y7	
		Article no. 80 950 ...	EUR
12	(6) 4	8,51	144

Universal holder for Bits

▲ 162 mm long



Y7		
Article no.	80 950 ...	
EUR	7,58	014
DIN3126-C/E 6,3-1/4"		

Quick change holder for Torque Tplus Bits

▲ for T handle torque tool



Y7		
Article no.	80 950 ...	
EUR	58,55	172
DIN3126-C/E 6,3-1/4"		

TORX® Bits short (25 mm)

▲ DIN3126-C 6,3-1/4"



Y7		
for size	M _{max.} Nm	Article no. 80 950 ...
		EUR
T06	0,9	0,91 015
T07	1,7	0,91 016
T08	2,6	0,91 017
T09	3,4	0,91 018
T10	4,5	0,91 019
T15	7,7	0,91 020
T20	12,7	0,91 021
T25	19,0	0,91 022
T30	37,4	0,96 093

TORX® Bits long (50 mm)

▲ DIN3126-E 6,3-1/4"



Y7		
for size	M _{max.} Nm	Article no. 80 950 ...
		EUR
T06	0,9	3,34 023
T07	1,7	3,34 024
T08	2,6	3,34 025
T09	3,4	3,34 026
T10	4,5	3,34 027
T15	7,7	3,34 028
T20	12,7	3,34 029
T25	19,0	3,34 030
T30	37,4	4,49 094

TORX® Bits long (70 mm)

▲ DIN3126-E 6,3-1/4"



Y7		
for size	M _{max.} Nm	Article no. 80 950 ...
		EUR
T06	0,9	5,03 173
T07	1,7	5,03 174
T08	2,6	5,03 175
T09	3,4	5,03 176
T10	4,5	5,03 177
T15	7,7	5,03 178
T20	12,7	5,03 179
T25	19,0	5,03 180
T30	37,4	5,03 181

TORX PLUS® Bits short (25 mm)

▲ DIN3126-C 6,3-1/4"



Y7		
for size	M _{max.} Nm	Article no. 80 950 ...
		EUR
T05 - IP	0,5	2,70 065
T06 - IP	0,9	2,70 066
T07 - IP	1,7	2,70 067
T08 - IP	2,6	2,70 068
T09 - IP	3,4	2,70 069
T10 - IP	4,5	2,70 070
T15 - IP	7,7	2,70 071
T20 - IP	12,7	2,70 072
T25 - IP	19,0	2,70 073

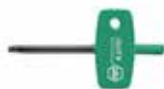
TORX PLUS® Bits long (50 mm)

▲ DIN3126-E 6,3-1/4"



Y7		
for size	M _{max.} Nm	Article no. 80 950 ...
		EUR
T05 - IP	0,5	5,46 074
T06 - IP	0,9	5,26 075
T07 - IP	1,7	5,26 076
T08 - IP	2,6	4,92 040
T09 - IP	3,4	5,26 077
T10 - IP	4,5	5,26 078
T15 - IP	7,7	5,26 079
T20 - IP	12,7	5,26 080
T25 - IP	19,0	5,26 081

TORX® Screwdriver



for size	M _{max.} Nm	Y7	
		Article no. 80 950 ...	
		EUR	
T05x35	0,5	3,86	082
T06x35	0,9	3,81	083
T07x35	1,7	3,81	084
T08x40	2,6	3,81	085
T09x40	3,4	4,15	086
T10x40	4,5	4,15	087
T15x45	7,7	4,46	088
T20x45	12,7	4,86	089

Clamping key



Size	M _{max.} Nm	Y7	
		Article no. 80 397 ...	
		EUR	
SW 2	1,9	3,91	020
SW 2,5	3,8	3,97	025
SW 3	6,6	3,85	030
SW 4	16	3,91	040
SW 5	30	4,24	050
SW 6	52	4,92	060
SW 8	120	6,03	080
SW 10	220	10,06	100

TORX® Screwdriver sets



	Y7	
	Article no. 80 950 ...	
	EUR	
T06, T07, T08, T09, T10, T15, T20	37,84	090

TORX PLUS® Screwdriver



for size	M _{max.} Nm	Y7	
		Article no. 80 950 ...	
		EUR	
T05 - IP x35	0,5	6,06	057
T06 - IP x35	0,9	6,06	058
T07 - IP x35	1,7	6,00	059
T08 - IP x40	2,6	5,90	060
T09 - IP x40	3,4	6,35	061
T10 - IP x40	4,5	6,35	062
T15 - IP x45	7,7	6,76	063
T20 - IP x45	12,7	7,49	064

TORX PLUS® Screwdriver sets



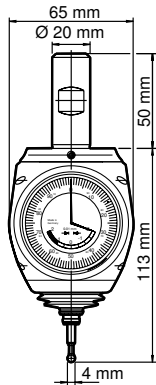
	Y7	
	Article no. 80 950 ...	
	EUR	
IP06, IP07, IP08, IP09, IP10, IP15, IP20	54,41	091

Universal 3D-Tester

- ▲ quick and accurate positioning
- ▲ for locating and/or setting the zero point of the workpiece
- ▲ with adjustable concentricity
- ▲ usable in all 3 axes (x, y, z)
- ▲ for all CNC and erosion machines (insulation between stylus and case)
- ▲ reading of actual dimensions is independent of direction
- ▲ reading precision 0.01 mm

Scope of supply:

3D tester including tracer insert, Allen key and pin key for the replacement of the tracer insert



XX
Article no.
85 290 ...
EUR
324,10
100

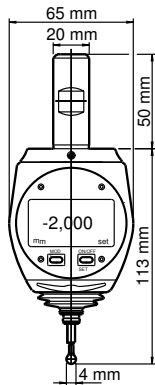
Universal 3D-Tester

Digital 3D-Tester

- ▲ quick and accurate positioning
- ▲ for locating and/or setting the zero point of the workpiece
- ▲ with adjustable concentricity
- ▲ usable in all 3 axes (x, y, z)
- ▲ for all CNC and erosion machines (insulation between stylus and case)
- ▲ reading of actual dimensions is independent of direction
- ▲ reading precision 0.001 mm

Scope of supply:

3D tester including tracer insert, Allen key and pin key for the replacement of the tracer insert



XX
Article no.
85 291 ...
EUR
631,50
100

Digital 3D-Tester

Zero height setting gauge

- ▲ to determine the point of reference and/or for adjusting tools "to zero"
- ▲ plate Ø 10 mm
- ▲ plate is hardened, non magnetic



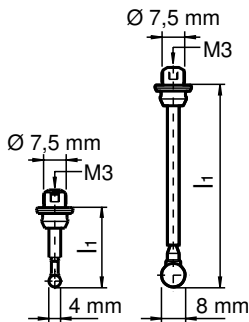
Y7
Article no.
85 900 ...
EUR
131,10
018

Zero height setting gauge

h
mm
100

Stylus for 3D-Tester

- ▲ with movement of 2 mm beyond the zero point a break-off ceramic insert prevents damage to the unit
- ▲ if the stylus is broken remove and insert a new stylus
- ▲ check concentricity and adjust if necessary



XX
Article no.
85 290 ...
EUR
24,83
102

l₁
mm

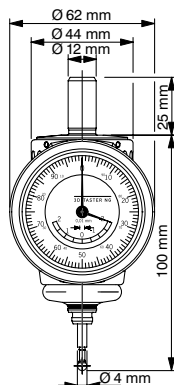
25	41,38	104
65		

Universal 3D-Tester HQ

- ▲ fast and accurate positioning at reference edges
- ▲ development of the existing universal 3D-Testers
- ▲ improved mechanics
- ▲ compact size
- ▲ characterised by over travel safety
- ▲ functionality as with 85 290 100
- ▲ accuracy 0,01 mm

Scope of supply:

3D tester including tracer insert, Allen key and pin key for the replacement of the tracer insert



XX
Article no.
85 292 ...
EUR
324,10 100

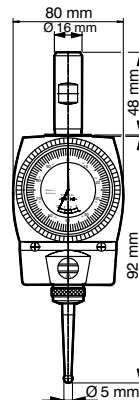
Universal 3D-Tester HQ

Centre finder

- ▲ centralise holes and features quickly and accurately
- ▲ simple operation
- ▲ dial gauge remains in the operators vision during process
- ▲ centring accuracy 0,003 mm

Scope of supply:

3D-Tester incl. straight stylus and telescopic stop



XX
Article no.
85 299 ...
EUR
430,30 100

Centre finder

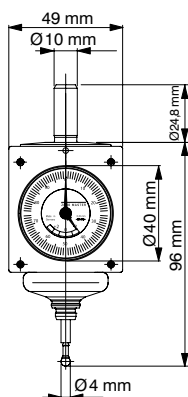
- i** Range with probe tip Ø 5 mm holes
Ø 6–125 mm, shaft Ø 0–125 mm

Universal 3D-Tester Mini

- ▲ fast and accurate positioning at reference edges
- ▲ very small universal 3D-Tester
- ▲ particularly suitable for machines with small spindle taper e.g. SK 30 or HSK 32
- ▲ low overhang length thanks to short housing
- ▲ characterised by over travel safety
- ▲ functionality as with 85 290 100
- ▲ accuracy 0,01 mm

Scope of supply:

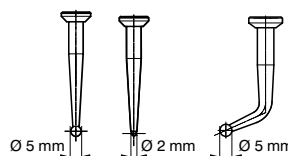
3D tester including tracer insert, Allen key and pin key for the replacement of the tracer insert



XX
Article no.
85 295 ...
EUR
324,10 100

Universal 3D-Tester Mini

Stylii for Centre Finder



XX
Article no.
85 299 ...
EUR

Straight stylus / Ball-Ø 2 mm

32,47 102

Straight stylus / Ball-Ø 5 mm

29,92 104

Curved stylus / Ball Ø 5 mm

38,83 106

Telescopic rod for Centre Finder



D mm	L ₁ mm
6	478

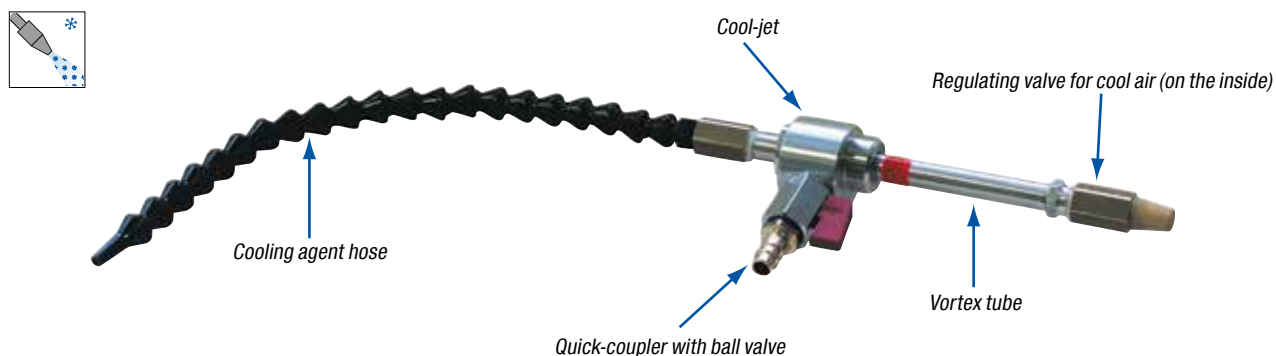
XX
Article no.
85 299 ...
EUR
11,14 111

Advantages with the use of the cool air nozzle

The main advantages are that cooling agent disposal is not required and tool life increases up to 100% when dry machining

In order to improve the service life when dry machining, we recommend the use of our cooling nozzle, which is applicable with a normal compressed air connection from a pressure of 6 bar.

Not only for **cooling the tool and workpiece** it is primarily **for chip removal** to prevent chip **jamming**.



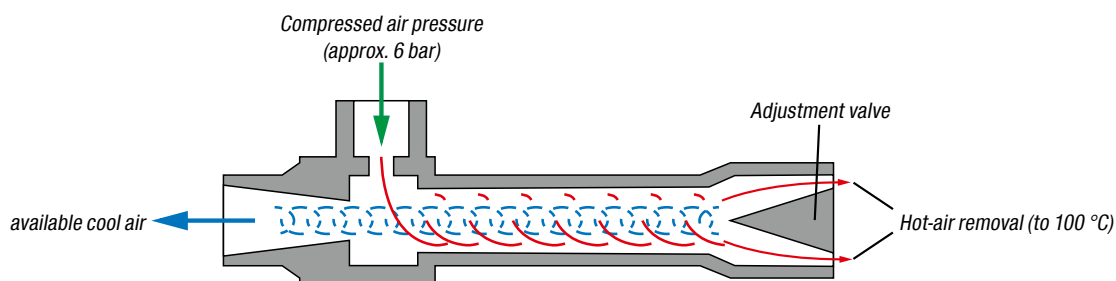
Cool-jet		Accessories	
3-7 bar air pressure, at -46 °C			
	Article no. 81 900 ...		Article no. 81 900 ...
	EUR 584,10		EUR
	100		
		Magnetic plate Ø 80 mm without clamping arm	
			31,03 101
		Spare tube, length 300 mm	
			31,03 104
		Jet silencer (air filter)	
			6,04 105
		Clamping arm, length 75 mm	
			91,75 106
		Complete set (with magnetic set and clamping arm), weight 0,4 kg	
			119,60 107

Technical description – operating instruction

The principle of the cold-air nozzle is based on the use of vortex tubes. Ordinary air is divided into cold and hot air streams.

Without additional power supply or moving parts the cool air nozzle can produce **cooling performance of up to 733 W** or **Temperatures of approx. -42 °C** are produced and requires only operating pressure air of approx. 6 bar.

A water trap or service unit should be mounted. A regulating valve in the hot-air outlet regulates the temperatures and currents



i Utilizable air temperature measured at the effective discharge of the vortex tube (not the nozzle end)

i Air consumption at an inlet temperature of + 21 °C and an inlet pressure of 6.9 bar: 7,08 l / sec. (25.5 m³ / h)

Entrance pressure	3 bar	-31 °C	up to	-6 °C
	4 bar	-35 °C	up to	-8 °C
	5 bar	-39 °C	up to	-10 °C
	6 bar	-42 °C	up to	-11 °C
	7 bar	-46 °C	up to	-13 °C

i In order to operate the regulating valve, the silencer must be unscrewed - there is a burn danger! The valve of the hot air side can reach up to 100 °C: Before contact, allow cooling!