



TiefbohrSysteme® GmbH

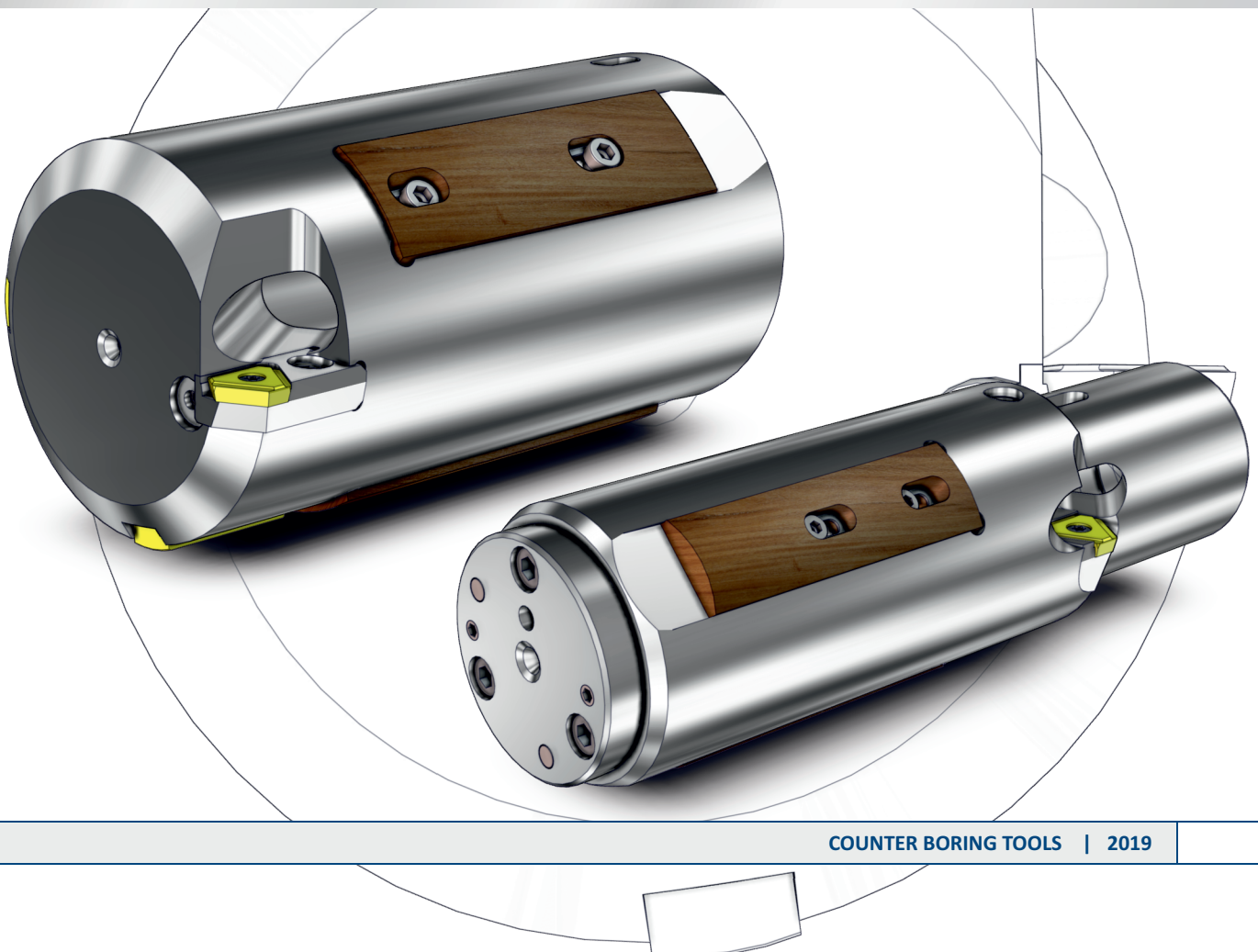
DEEP HOLE BORING TECHNOLOGY | EQUIPMENT

Counter Boring Tools

Type 1137 / 1108

DEEP HOLE DRILLING TOOLS

BORING RANGE Ø 44,00 - 233,99 mm



Deep Hole Boring - An Inaccessible World

In today's production world, precision and production strategies are a significant constituent for success. The more complex the production process, the more important are these two factors. Deep hole boring our company, **BTA-Tiefbohrsysteme GmbH**, is the essential partner for implementation even under difficult marginal conditions with high requirements. We are the only company in the world capable of offering our customers everything from inserts to complete, suitable equipment for deep hole boring machines. Our experienced experts are always at your side to ensure proper support from planning your deep hole boring project up to tool services. All this is aimed at your success.

In the company-owned application and research department we can test innovations and special designed tools, customize the tools to user-specific material and train their operators. You will receive tools customized for your application and benefit from our experience.

Our tool systems offer you the following advantages:

- Tools designed for various processes (solid boring, trepanning, counter boring and skiving) with the same effective elements, especially such as inserts and guides. This results in extremely low stocks and simple handling.
- Suitable selection possibilities for tools, corresponding to required boring quality, from simple solid boring to form boring.
- Custom layout of tools for various production requirements to straightness, surface, material and constant wall thickness.
- Equipment matched to the deep hole boring process - from workpiece clamping to vibration damping.
- Production-optimized machinery layout for reducing setup and conversion times.

Here are a few results from production boring with our tools:

- Surface $R_a < 0.1 \mu\text{m}$ e.g. by skiving and roller burnishing
- Mismatch of axes $< 0.1\text{mm/m}$ e.g. by pull counter boring
- Hole accuracy $< IT8$ e.g. by skiving

Benefit from these advantages by cooperating with a strong partner.

BTA-Tiefbohrsysteme GmbH





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Tool description

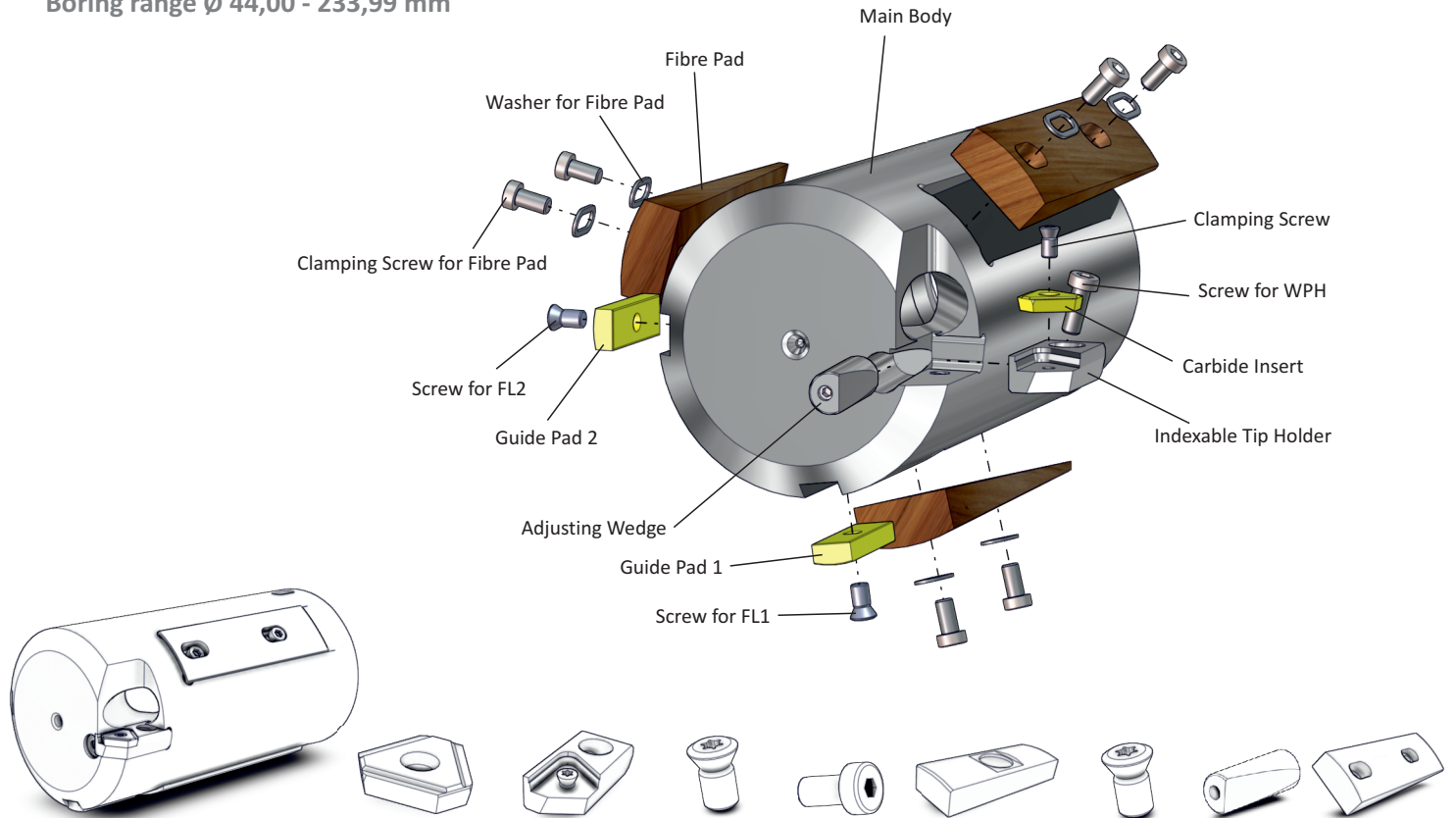
- Counter Boring Tools with fixed boring diameter
- Type 1108 especially suitable for boring which should have a low mismatch of axes
- Available as bta-tool

Tool characteristics

- drilling depth $\leq 400 \times$ tool diameter
- surface $\geq R_a 1,25 \mu\text{m}$
- mismatch of axes $\geq 0,05 \text{ mm/m}$
- drilling accuracy $\geq \text{IT8}$

Counter Boring Tools Type 1137 - „pushed“

Boring range Ø 44,00 - 233,99 mm



Boring Range	Drill Tube Connection	Carbide Insert pos.1	Indexable Tip Holder	Clamping Screw	Screw for WPH	Guide Pad FL1 and FL2	Clamping Screw	Adjustable Wedge	Fibre Pads
Ø 44,00 - Ø 46,99	36	AK 16 cutting depth: α _p 5 mm	A 14,5 016.4593.X	M4x7,5 T15	M4x10 DIN 7984	FL 10 / R 20	M4x8,2 T15	14,5 017.0569.K	RF 82
Ø 47,00 - Ø 56,99	39								
Ø 57,00 - Ø 60,99	43					FL 10 / R 28			
Ø 61,00 - Ø 67,99	47								
Ø 68,00 - Ø 74,99	51	AK 25 cutting depth: α _p 9 mm	A 21 016.4595.T	M5x10 T20	M6x16 DIN 6912	FL 14 / R 30	M6x12 T20	21 016.9260.A	RF 84
Ø 75,00 - Ø 80,99	56								
Ø 81,00 - Ø 90,99	62								
Ø 91,00 - Ø 98,99	68								
Ø 99,00 - Ø 110,99	75	AK 40 cutting depth: α _p 14 mm	A 28 016.4597.P	M6x14 T20	M8x20 DIN 6912	FL 18 / R 40	M6x16 T20	28 017.0472.B	RF 85
Ø 111,00 - Ø 122,99	82								
Ø 123,00 - Ø 134,99	94					FL 18 / R 65			
Ø 135,00 - Ø 148,99	106								
Ø 149,00 - Ø 161,99	118								
Ø 162,00 - Ø 173,99	130					FL 18 / R 90			
Ø 174,00 - Ø 185,99	142								
Ø 186,00 - Ø 197,99	154								
Ø 198,00 - Ø 209,99	166								
Ø 210,00 - Ø 221,99	178								
Ø 222,00 - Ø 233,99	190								

Additional diameters on request

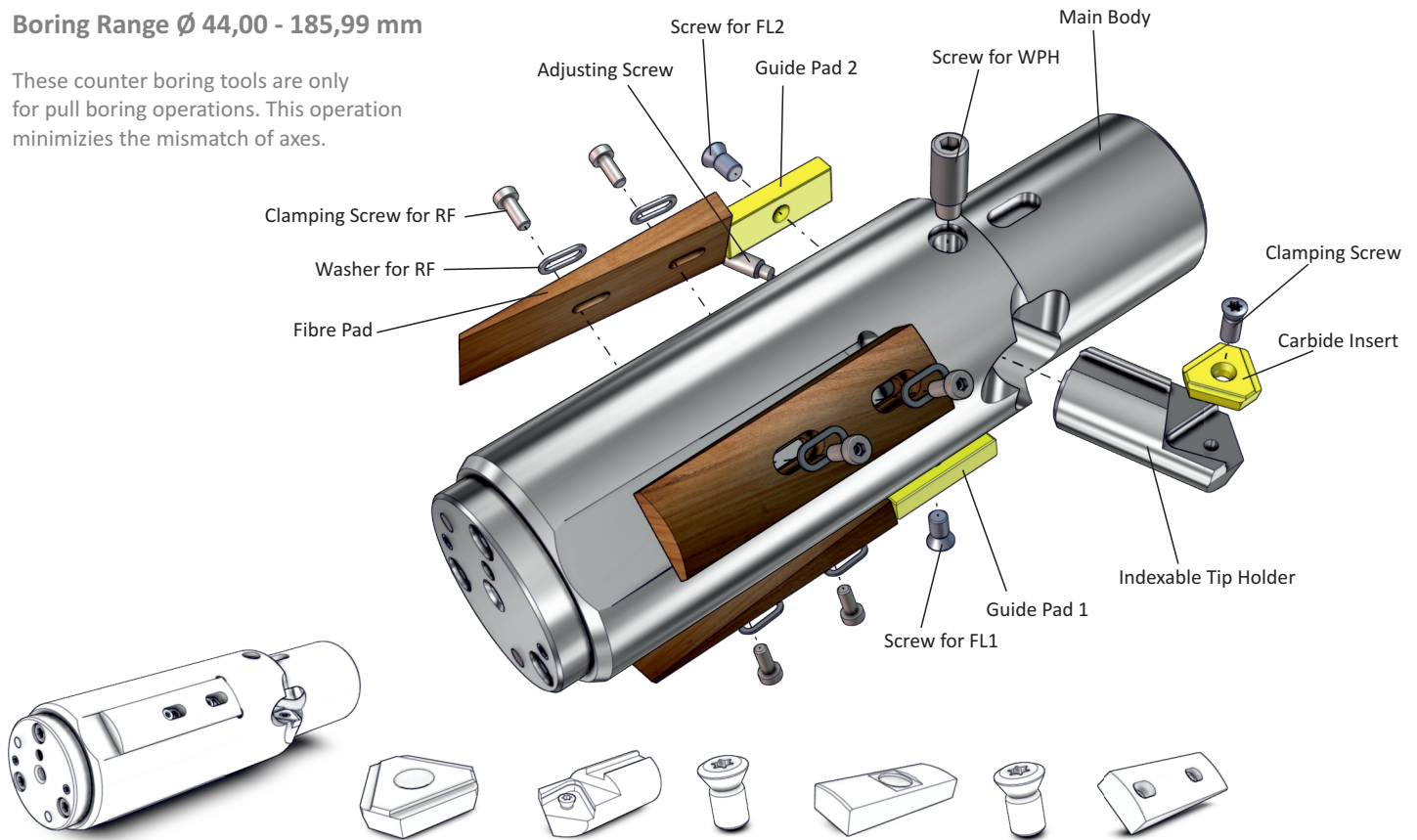
See Page 6/7 for spare and wear parts ordering data



Counter Boring Tools Type 1108 - „pulled“

Boring Range Ø 44,00 - 185,99 mm

These counter boring tools are only for pull boring operations. This operation minimizes the mismatch of axes.



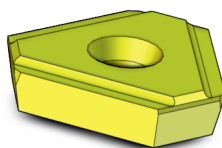
Boring Range	Drill Tube Connection	Carbide Insert pos.1	Indexable Tip Holder	Clamping Screw	Guide Pad FL1 and FL2	Clamping Screw	Fibre Pads			
Ø 44,00 - Ø 46,99	36	AKz 16 cutting depth: α _p 5 mm	AKz 16 011.3053.V	M4x7,5 T15	FL 10 / R 20	M4x8,2 T15	RF 82			
Ø 47,00 - Ø 56,99	39						RF 83			
Ø 57,00 - Ø 60,99	43				FL 10 / R 28					
Ø 61,00 - Ø 67,99	47									
Ø 68,00 - Ø 74,99	51	AKz 25 cutting depth: α _p 9 mm	AKz 25 011.3054.T	M5x10 T20	FL 14 / R 30	M6x12 T20	RF 84			
Ø 75,00 - Ø 80,99	56									
Ø 81,00 - Ø 90,99	62									
Ø 91,00 - Ø 98,99	68									
Ø 99,00 - Ø 110,99	75	AKz 40 cutting depth: α _p 14 mm	AKz 32 011.3055.R	M6x14 T20	FL 18 / R 40	M6x16 T20	RF 85			
Ø 111,00 - Ø 122,99	82									
Ø 123,00 - Ø 134,99	94									
Ø 135,00 - Ø 148,99	106									
Ø 149,00 - Ø 161,99	118							FL 18 / R 65		RF 86
Ø 162,00 - Ø 173,99	130									
Ø 174,00 - Ø 185,99	142									RF 87

Additional diameters on request

See **Page 6/7** for spare and wear parts ordering data

Spare and wear parts

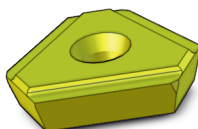
Indexable Inserts Size AK 16 - AK 40



Description	Chip Breaker	Carbide		
		P20 TiN	K10 TiN	K10
AK 16	Size 1 - 1,8x0,6	011.2840.B	018.7016.T	011.2802.K
AK 25	Size 1 - 2,1x0,6	011.2842.W	013.9684.M	011.2778.D
AK 40	Size 1 - 2,5x0,8	011.2844.S	013.9685.K	011.2779.B

Additional chip breakers and coatings on request

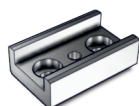
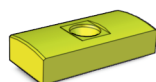
Indexable Inserts Size AKz 16 - AKz 40



Description	Chip Breaker	Carbide		
		P20 TiN	K10 TiN	K10
AKz 16	Gr.1 - 1,8x0,6	011.3663.R	018.3295.S	015.1863.S
AKz 25	Gr.1 - 2,1x0,6	011.3664.P	017.3364.N	011.3915.Q
AKz 40	Gr.1 - 2,5x0,8	011.3665.M	018.8265.U	014.2745.A

Additional chip breakers and coatings on request

Guide Pad 1 and 2

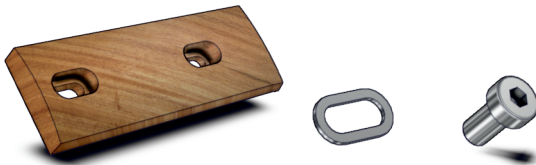


Description	Radius	Carbide		Shoes for Guide Pads	Screws for Shoes
		TiN coated	ML coated		
FL 10	20	016.9223.G	019.6679.K	-	-
	28	016.9226.A	019.6680.L		
FL 14	30	016.9229.T	019.6681.M		
FL 18	40	014.4761.R	019.6682.N	017.0631.H	008.5019.W
	65	016.9238.S	019.6683.P		



Spare and wear parts

Fibre pads RF 82 to RF 90



Description	Ident-No. Fibre	Washer	Screws for Fibre Pad
RF 82	018.4000.B	011.2044.C	M4x8 DIN7984
RF 83	018.4001.C		M4x10 DIN7984
RF 84	018.4002.D		
RF 85	018.4003.E	011.2043.E	M6x12 DIN7984
RF 86	018.4004.F		
RF 87	018.4005.G		
RF 88	018.4006.H	011.2042.G	M10x16 DIN7984
RF 89	011.9935.B		
RF 90	011.9936.Z		

Notice: The fibre pads are wear parts, and are supplied oversize. To achieve the correct diameter they will have to be turned to size once mounted in the tool.

Standard placement: 3 pieces per tool.



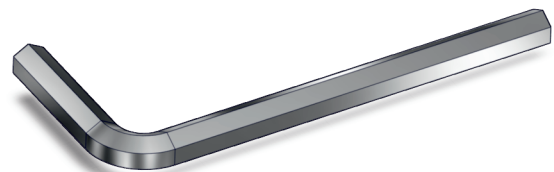
Torx-Screws

Size	Length	Ident-No. Clamping Screw	Torx Size	Ident-No. Torx-Wrench
M4	7,5	011.2416.Q	T15	008.7219.C
	8,2	008.1066.J		
M5	10	011.2061.C	T20	008.7220.T
	12	008.1068.E		
	14	016.4592.A		
	16	010.7708.F		



Socket Head Cap Screw

Size	Length	Ident-No. Clamping Screw	SW Size	Ident-No. Hexagon Wrench
M4 / DIN 7984	10	008.5000.U	SW 2,5	008.5836.M
M6 / DIN 7984	10	008.5019.W	SW 4	008.5837.K
	12	008.5020.N		
M6 / DIN 6912	16	008.5021.L	SW 5	008.6948.U
M8 / DIN 6912	20	008.5031.H	SW 6	008.5849.C
M10 / DIN 7984	16	008.5042.L	SW 7	008.5840.W





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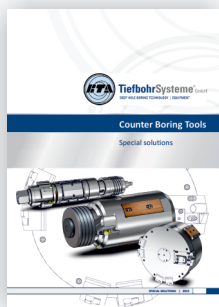
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