



**TiefbohrSysteme<sup>®</sup>** GmbH

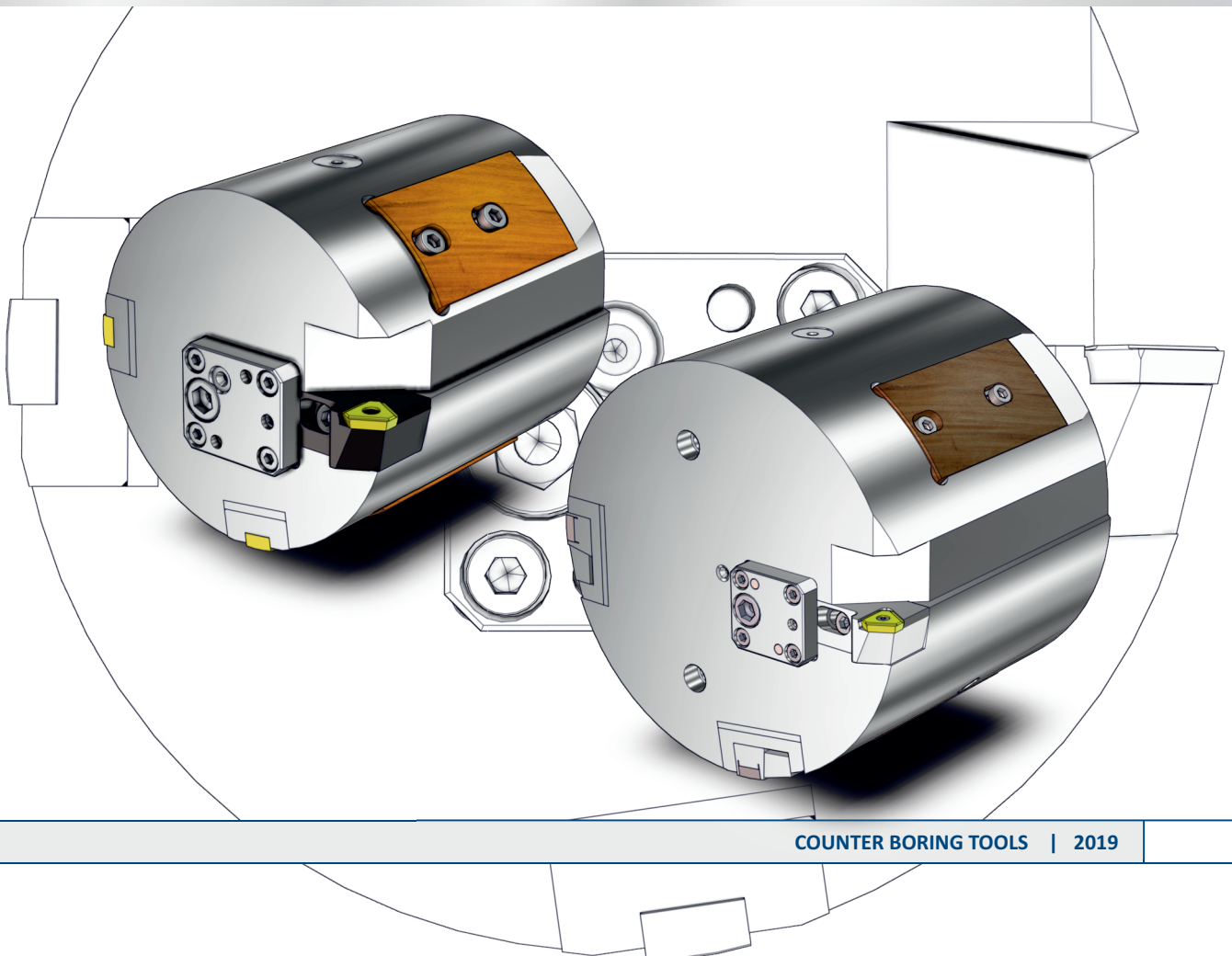
DEEP HOLE BORING TECHNOLOGY | EQUIPMENT

## Counter Boring Tools

### Type 1105

DEEP HOLE BORING TOOLS

BORING RANGE Ø 150,00 - 401,99 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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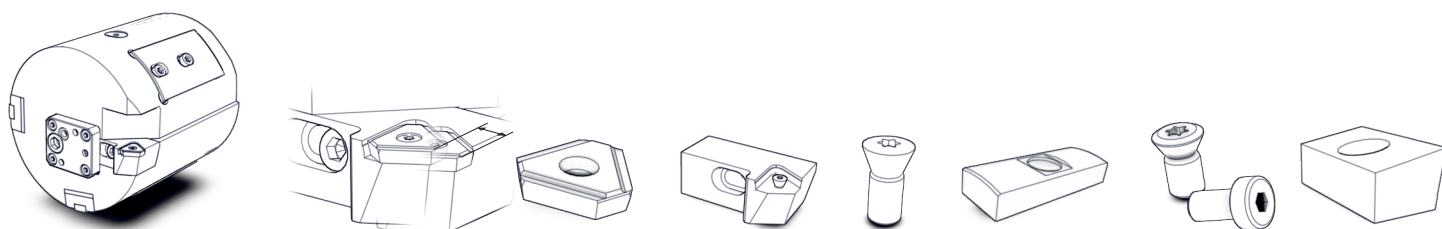
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### **Tool characteristics**

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

## Counter Boring Tools Type 1105

Boring Range Ø 150,00 - 401,99 mm



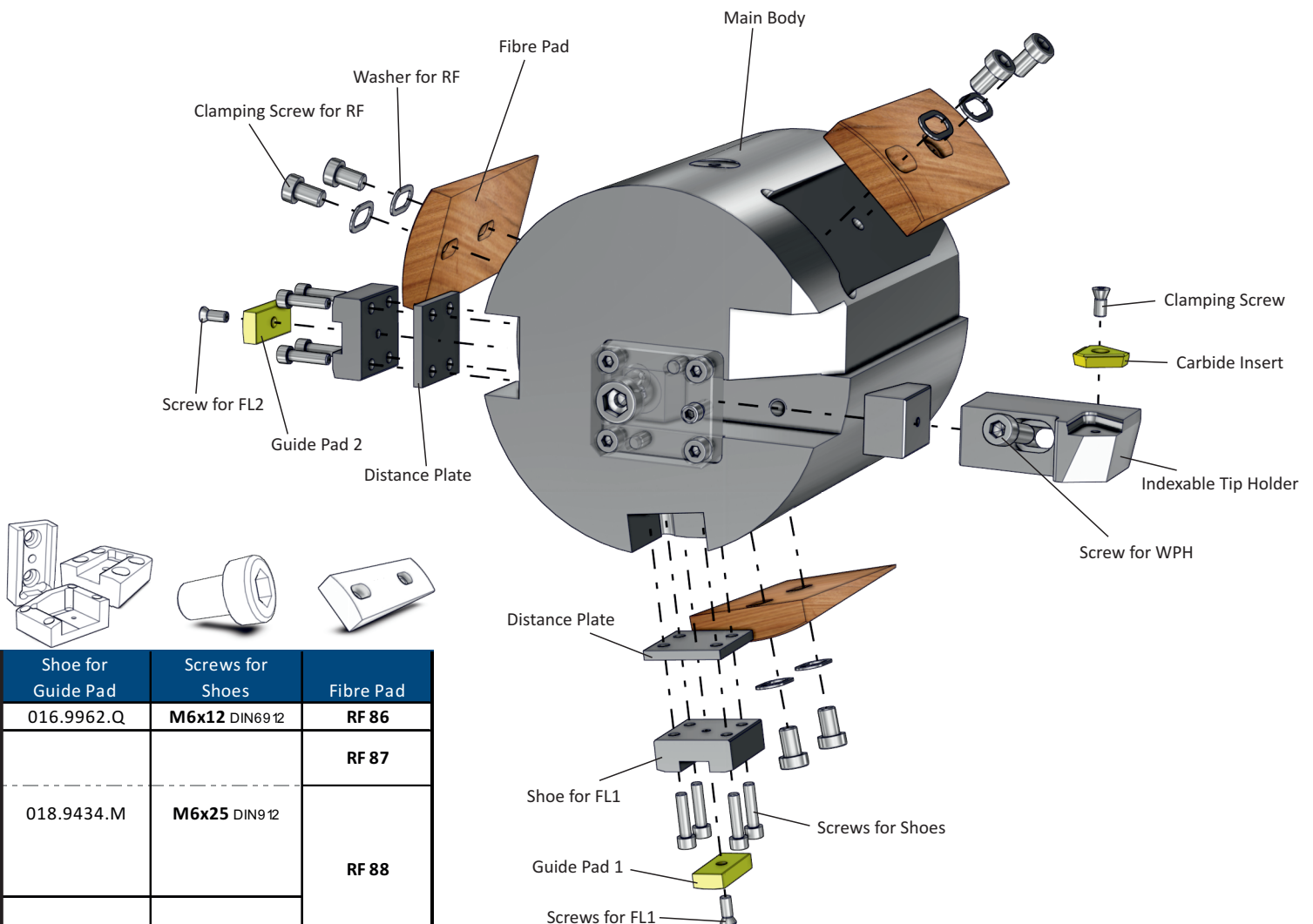
Boring Range	Drill Tube Connection	max. adjustment in diameter	Carbide Insert pos.1	Indexable Tip Holder	Clamping Screw	Guide Pad FL1 and FL2	Clamping Screw for FL/KL	Wedge
Ø 150,00 - Ø 161,99	118	+ 10 mm						
Ø 162,00 - Ø 173,99	130					FL 18 / R 65		
Ø 174,00 - Ø 185,99	142							
Ø 186,00 - Ø 197,99	154						M6x16 T20	-
Ø 198,00 - Ø 209,99	166					FL 18 / R 90		
Ø 210,00 - Ø 221,99	178							
Ø 222,00 - Ø 233,99	190							
Ø 234,00 - Ø 245,99	202					FL 30 / R 100		
Ø 246,00 - Ø 257,99	214							
Ø 258,00 - Ø 269,99	226							
Ø 270,00 - Ø 281,99	238	+ 20 mm	AK 40 cutting depth: $\alpha_p = 14$ mm	AK 40 013.9437.F	M6x14 T20	FL 30 / R 125		
Ø 282,00 - Ø 293,99	250							
Ø 294,00 - Ø 305,99	262							
Ø 306,00 - Ø 317,99	274							
Ø 318,00 - Ø 329,99	286					FL 30 / R 150	M10x16 DIN7984	010.2310.P
Ø 330,00 - Ø 341,99	298							
Ø 342,00 - Ø 353,99	310							
Ø 354,00 - Ø 365,99	322							
Ø 366,00 - Ø 377,99	334					FL 30 / R 170		
Ø 378,00 - Ø 389,99	346							
Ø 390,00 - Ø 401,99	358					FL 30 / R 190		

### Additional diameters on request

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

**Note:** Please activate the two-sided view so that the table is displayed completely.





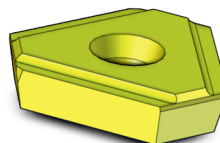
Shoe for Guide Pad	Screws for Shoes	Fibre Pad
016.9962.Q	<b>M6x12</b> DIN69 12	<b>RF 86</b>
		<b>RF 87</b>
018.9434.M	<b>M6x25</b> DIN9 12	<b>RF 88</b>
011.2270.S	<b>M6x30</b> DIN9 12	<b>RF 89</b>
		<b>RF 90</b>

## Spare and wear parts

### Indexable Insert AK 40

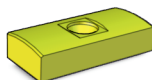
Description	Chip Breaker	Carbide		
		P20 TiN	K10 TiN	K10
AK 40	Gr.1 - 2,5x0,8	011.2844.S	013.9685.K	011.2779.B

Additional chip breaker and coatings on request

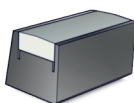


### Guide Pad 1 and 2

Description	Radius	Carbide	
		TiN coated	ML coated
FL 18	65	016.9238.S	019.6683.P
	90	019.2768.L	019.6684.Q



Description	Radius	Ident-No.
FL 30	100	010.2425.V
	125	010.2426.T
	150	010.2427.R
	170	010.2428.P
	190	010.2429.M



### Fibre Pads RF 86 to RF 90



Description	Ident-No. Hartgewebe	Washer	Screws
RF 86	018.4004.F	011.2043.E	<b>M6x16</b> DIN6912
RF 87	018.4005.G		
RF 88	018.4006.H		
RF 89	011.9935.B	011.2042.G	<b>M10x16</b> DIN7984
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.



## Spare and wear parts

### Torx-Screws



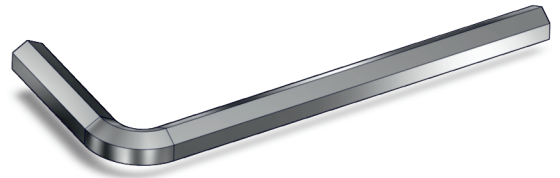
Size	Length	Ident-No. Clamping Screw	Torx Size	Ident-No. Torx-Screw
M6	14	016.4592.A	T20	008.7220.T
	16	010.7708.F		



### Socket Head Cap Screws



Size	Length	Ident-No. Clamping Screw	SW Size	Ident-No. Hexagon Wrench
M6 / DIN 7984	12	008.5020.N	SW 4	008.5837.K
M6 / DIN 6912	16	008.5021.L		008.6948.U
M6 / DIN 912	25	008.5123.C	SW 5	008.5838.H
	30	008.5124.A		
M10 / DIN 7984	16	008.5042.L	SW 7	008.5840.W



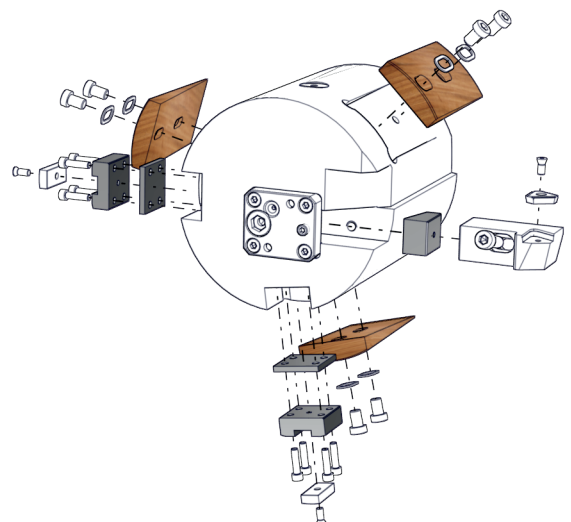
## Conversion instructions

To the remodeling of the counter boring tools on another diameter conversion kits are required, which consist of the following components:

- The diameter at a height corresponding **distance plates** and **shoes** for the guide pads.
- A the diameter range of the head associated **wedge** for insert holders.
- Excessive **fibre pads** (turning to the correct diameter necessary).

The setting of the holder via the measuring from cutting to opposite guide pad.

Different or larger diameter ranges and specific features of counter boring tools on request.





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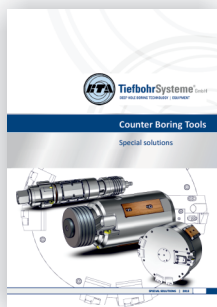
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