



TiefbohrSysteme[®] GmbH

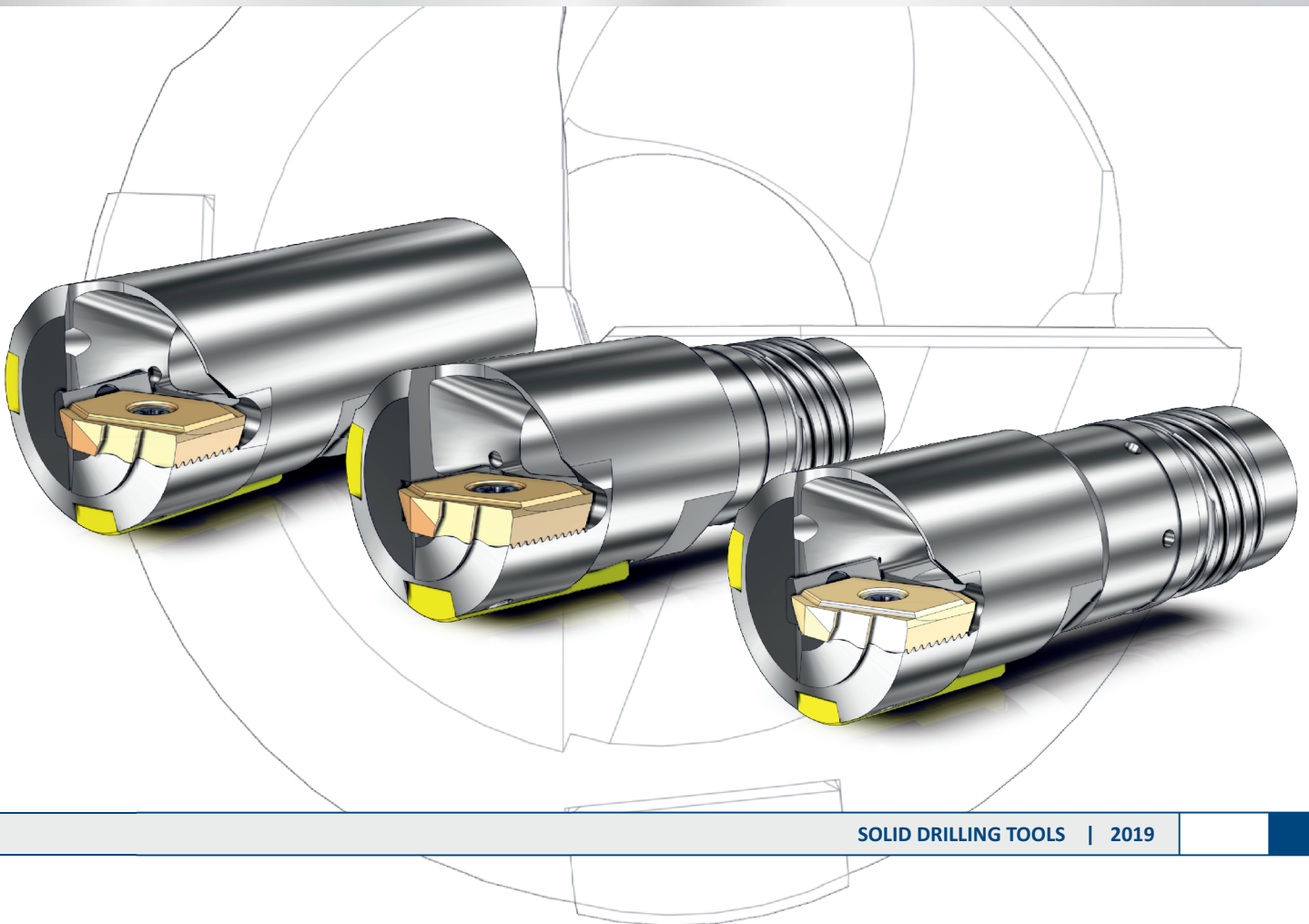
DEEP HOLE BORING TECHNOLOGY | EQUIPMENT

Solid Drilling Tools

Type 1465 / 1466 / 1467

DEEP HOLE DRILLING TOOLS

BORING RANGE Ø16,00 - 35,00 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

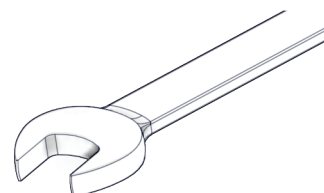
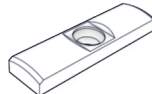
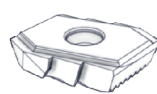
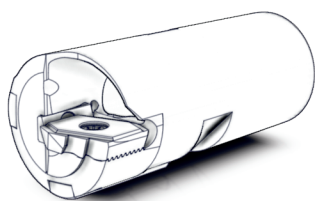
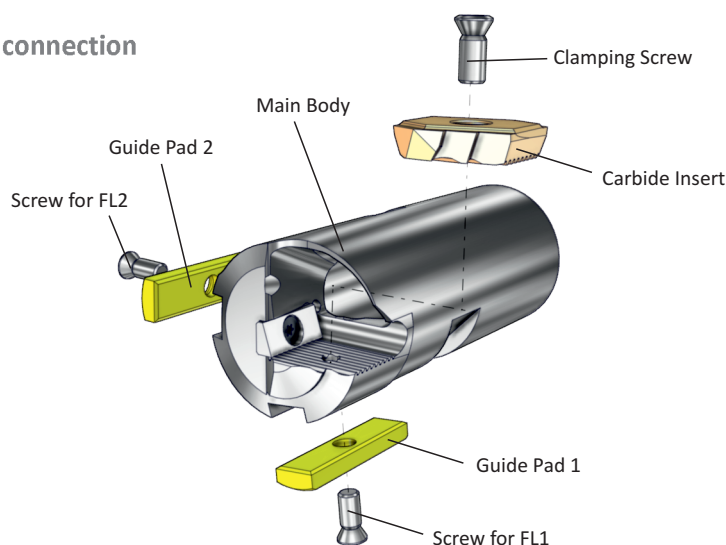
- Solid drilling tool with one indexable insert and two guide pads
- The drill diameter is fixed
- Available as bta- and ejector-tool

Tool characteristics

- drilling depth $\leq 100 \times$ tool diameter
- surface $\geq R_a 1,25 \mu\text{m}$
- mismatch of axes $\geq 0,2 \text{ mm/m}$
- drilling accuracy $\geq \text{IT9}$

Solid Drilling Tools Type 1465

Boring range: Ø16,00 - 35,00 mm - BTA drill tube connection



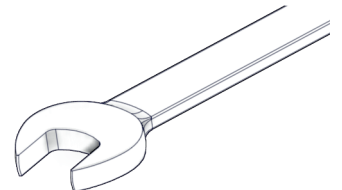
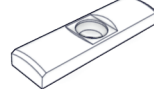
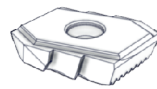
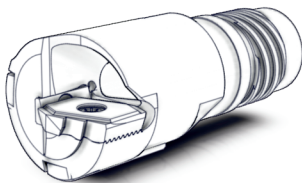
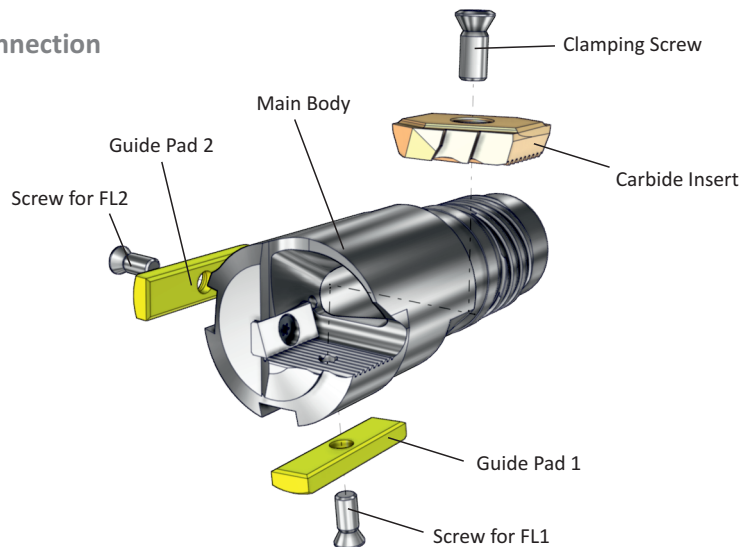
Boring Range	Drill Tube Connection	Carbide Insert	Clamping Screw	Guide Pad FL1 and FL2	Screw for FL1 and FL2	Wrench	
						Size	Ident-No.
Ø 16,00 - Ø 16,50	14	E 10	M2,5x5 T8	FL 5 / R6	M2,5x5 T8	SW 12	009.0003.C
Ø 16,51 - Ø 18,00	15					SW 13	008.7157.X
Ø 18,01 - Ø 19,99	16,5	E 20	M3x5,8 T9	FL 6 / R7	M3x5,1 T9	SW 14	008.0004.D
Ø 20,00	18						
Ø 20,01 - Ø 21,99		E 30			SW 17	008.7821.Q	
Ø 22,00 - Ø 23,00	20						M3x7,4 T9
Ø 23,01 - Ø 24,99		E 40			SW 19	008.7471.R	
Ø 25,00 - Ø 26,40	22						
Ø 26,41 - Ø 26,99		E 50	M4x8,2 T15		M3x7,4 T9	SW 22	
Ø 27,00 - Ø 29,99	24						
Ø 30,00 - Ø 31,00		26					
Ø 31,01 - Ø 31,99	E 60						M4x10 T15
Ø 32,00 - Ø 33,99		28					
Ø 34,00 - Ø 35,00	30						

See **Page 7** for Cutting Inserts, Guide Pads and Screws ordering data



Solid Drilling Tools Type 1466

Boring range: Ø16,00 - 35,00 mm - STS drill tube connection

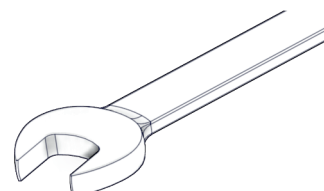
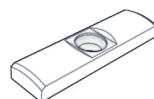
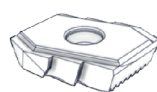
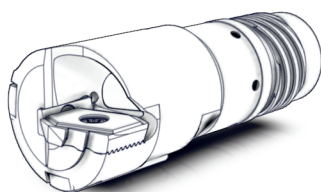
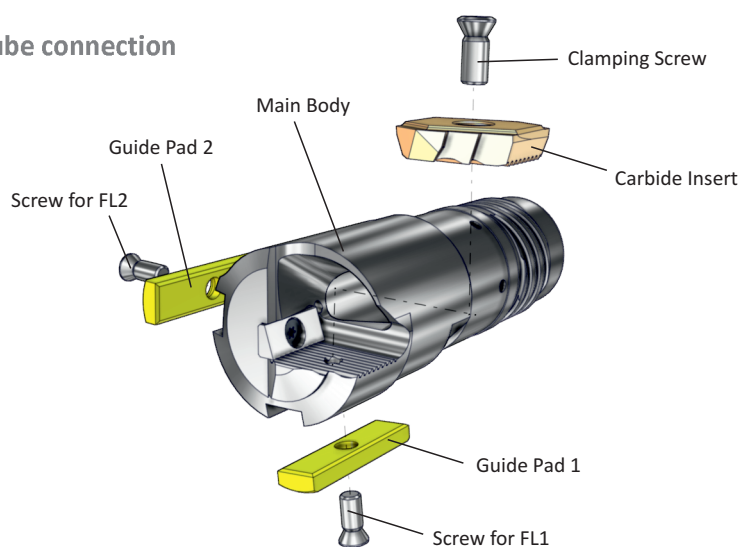


Boring Range	Drill Tube Connection	Carbide Insert	Clamping Screw	Guide Pad FL1 and FL2	Screw for FL1 and FL2	Wrench	
						Size	Ident-No.
Ø 16,00 - Ø 16,70	14					SW 12	009.0003.C
Ø 16,71 - Ø 17,70	15	E 10	M2,5x5 T8	FL 5 / R6	M2,5x5 T8	SW 13	008.7157.X
Ø 17,71 - Ø 18,00	16	E 20	M3x5,8 T9	FL 6 / R7	M3x5,1 T9	SW 14	009.0004.D
Ø 18,01 - Ø 18,90					M3x5,8 T9		
Ø 18,91 - Ø 20,00	17	E 30	M3x7,4 T9	FL 6 / R9	M3x7,4 T9	SW 16	009.0005.E
Ø 20,01 - Ø 21,80	18						
Ø 21,81 - Ø 23,00	20	E 40	M4x8,2 T15	FL 8 / R10	M3x7,4 T9	SW 17	008.7821.Q
Ø 23,01 - Ø 24,10							
Ø 24,11 - Ø 25,50	22	E 50	M4x10 T15			SW 19	008.7471.R
Ø 25,51 - Ø 26,40							
Ø 26,41 - Ø 28,70	24	E 60				SW 22	008.6762.K
Ø 28,71 - Ø 30,00	26						
Ø 30,01 - Ø 31,00	28					SW 24	008.6754.X
Ø 31,01 - Ø 33,30						30	
Ø 33,31 - Ø 35,00							

See **Page 7** for Cutting Inserts, Guide Pads and Screws ordering data

Solid Drilling Tools Type 1467

Boring range: Ø18,40 - 35,00 mm - Ejector drill tube connection



Boring Range	Drill Tube Connection	Carbide Insert	Clamping Screw	Guide Pad FL1 and FL2	Screw for FL1 and FL2	Wrench	
						Size	Ident-No.
Ø 18,40 - Ø 18,90	18	E 20	M3x5,8 T9	FL 6 / R7	M3x5,1 T9	SW 14	009.0004.D
Ø 18,91 - Ø 20,00					M3x5,8 T9	SW 16	009.0005.E
Ø 20,01 - Ø 21,80	19,5	E 30	M3x7,4 T9	FL 6 / R9		SW 17	008.7821.Q
Ø 21,81 - Ø 23,00	21,5					SW 19	008.7471.R
Ø 23,01 - Ø 24,10	23,5	E 40				SW 22	008.6762.K
Ø 24,11 - Ø 25,50						SW 24	008.6754.X
Ø 25,51 - Ø 26,40	26	E 50	M4x8,2 T15	FL 8 / R10	M3x7,4 T9	SW 27	010.8929.H
Ø 26,41 - Ø 28,70	28						
Ø 28,71 - Ø 30,00	30,5	E 60	M4x10 T15				
Ø 30,01 - Ø 31,00							
Ø 31,01 - Ø 33,30	33						
Ø 33,31 - Ø 35,00							

See Page 7 for Cutting Inserts, Guide Pads and Screws ordering data

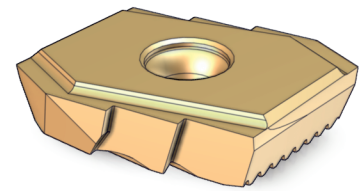


Spare and wear parts

For Solid Drilling Tools Type 1465 / 1466 / 1467

Indexable Inserts size E 10 - E 60

Description	Chip Breaker	Carbide		
		P25 TiN	P40 TiN	K20 TiN
E 10	Size 1 - 1,2x0,45	019.3051.F	019.3586.N	019.3572.Y
	Size 2 - 1,5x0,45	019.3600.C	019.3628.G	019.3614.S
E 20	Size 1 - 1,2x0,45	019.3053.H	019.3588.Q	019.3574.A
	Size 2 - 1,5x0,45	019.3602.E	019.3630.J	019.3616.U
E 30	Size 1 - 1,4x0,45	019.3055.K	019.3590.S	019.3576.C
	Size 2 - 1,7x0,45	019.3604.G	019.3632.L	019.3618.W
E 40	Size 1 - 1,5x0,45	019.3057.M	019.3592.U	019.3578.E
	Size 2 - 1,8x0,45	019.3606.J	019.3634.N	019.3620.Y
E 50	Size 1 - 1,6x0,5	019.3059.P	019.3594.W	019.3580.G
	Size 2 - 1,9x0,5	019.3608.L	019.3636.Q	019.3622.A
E 60	Size 1 - 1,8x0,6	019.3061.R	019.3596.Y	019.3582.J
	Size 2 - 2,1x0,6	019.3610.N	019.3638.S	019.3624.C



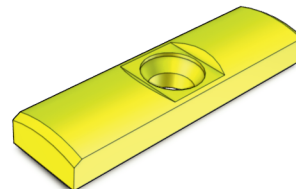
Chip breaker Size 1 for unalloyed steels $C > 0.2$, alloyed steels, heat-treated steels, tool steel

Chip breaker Size 2 for unalloyed steels $C < 0.2$, long chipping special purpose steel, stainless and acid-resistant steel

Additional chip breakers and coatings on request

Guide Pads FL 5 - FL 8

Description	Radius	Carbide	
		TiN coated	ML coated
FL 5	6	019.6572.Y	019.6672.C
FL 6	7	014.4755.L	019.6674.E
	9	014.4756.J	019.6675.F
FL 8	10	014.4757.G	019.6676.G



Torx-Screw M2,5 - M4

Size	Length	Ident-No. Clamping Screw	Torx Size	Ident-No. Torx-Wrench
M2,5	5	010.8405.U	T8	010.8812.F
	10	010.8778.C		
M3	5,1	014.4771.N	T9	008.1104.D
	5,8	014.4772.L		
	6,2	014.4773.J		
	7,4	008.1065.L		
M4	8,2	008.1066.J	T15	008.7219.C
	10	010.7499.M		





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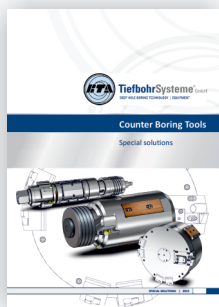
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