



TiefbohrSysteme[®] GmbH

DEEP HOLE BORING TECHNOLOGY | EQUIPMENT

Skiving Tools

Type 1200

DEEP HOLE DRILLING TOOLS

BORING RANGE Ø 15,00 - 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 Ra < 0.1 µm e.g. by skiving and roller burnishing
- Mismatch of axes < 0.1mm/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 characteristics

- drilling depth to 400 x tool diameter
- surface up to R_a 1,25 μ m
- mismatch of axes to 0,05mm/m
- drilling accuracy up to IT8

Skiving Tool Type 1209

Skiving tools with carbide insert



Tool description:

Skiving tools with exchangeable cutting inserts and fiber pads. These tools are designed for sizing holes to achieve extremely close boring tolerances and geometrically round holes.

The tool cutters are ground radially. Four each fiber pads support the tools in the bores.

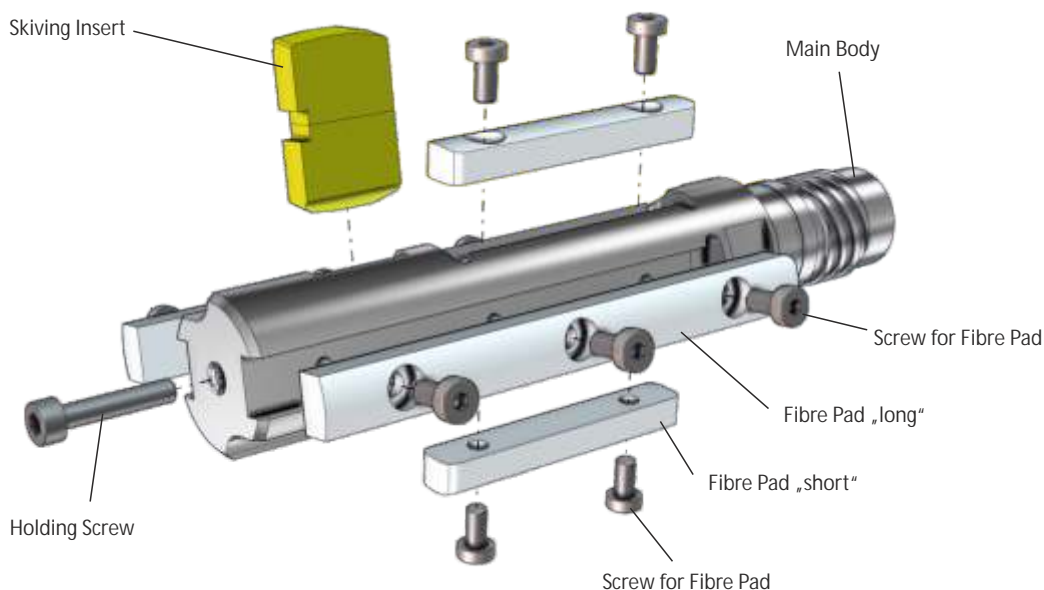
Cutting depths of between 0.05 and 0.35 mm are achieved per side. The application range for these tools is for diameters between 15.00 and 29.99 mm.

Floating skiving inserts or cartridges are used to keep the bore constantly centered.

Peak-to-valley heights are less than R 2.5 µm. The surface quality is open, i.e. particularly suited for subsequent burnishing or honing.

Skiving tools follow the pilot hole and do not change the direction of the hole.

Boring Range	Drill Tube Connection	Fibre Pads
Ø 15,00 - Ø 15,99	14	Gr. 1
Ø 16,00 - Ø 16,99		Gr. 2
Ø 17,00 - Ø 17,99	15	Gr. 3
Ø 18,00 - Ø 19,99	16,5	
Ø 20,00 - Ø 20,99	18	Gr. 4
Ø 21,00 - Ø 21,99		
Ø 22,00 - Ø 24,99	20	Gr. 5
Ø 25,00 - Ø 26,99	22	
Ø 27,00 - Ø 29,99	24	





Skiving Tool Type 1209 - Spare and wear parts

Fibre Pad for Type 1209, long design



Description	Order No.		Screws for Fibre Pad	Hexagon Wrench
	Fibre	Polyamid		
Gr. 1	011.8421.Q	011.8433.H	M3x6 008.5467.S	SW 2 008.5439.X
Gr. 2	011.8423.L	011.8435.D		
Gr. 3	011.8425.G	011.8437.Z		
Gr. 4	011.8427.C	011.8439.U		
Gr. 5	011.8429.X	011.8441.J	M3x8 - 008.5436.E	



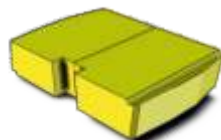
Fibre Pad for Type 1209, short design



Description	Order No.		Screws for Fibre Pad	Hexagon Wrench
	Fibre	Polyamid		
Gr. 1	011.8420.S	011.8432.K	M3x6 008.5467.S	SW 2 008.5439.X
Gr. 2	011.8422.N	011.8434.F		
Gr. 3	011.8424.J	011.8436.B		
Gr. 4	011.8426.E	011.8438.W		
Gr. 5	011.8428.A	011.8440.L	M3x8 - 008.5436.E	



Skiving Insert



Boring Range	Ident-No. Carbide P10
Ø 15,00 - Ø 29,99	Numbering depending on the diameter

Skiving Tool Type 1232

Skiving tools Type 1232 with Threaded Adapter Type 0740



Tool description:

Skiving tools with indexable insert holders. Each insert holder holds one indexable insert.

Floating skiving inserts or insert holders are used to keep the hole constantly centered.

The base body has four fiber pads for supporting the tool in the hole. The burnishing tool has a threaded intermediate element for hydraulic connection. All parts mentioned are replaceable.

Tools of this type allow skiving in the pushing direction with the chips exiting in the feed direction.

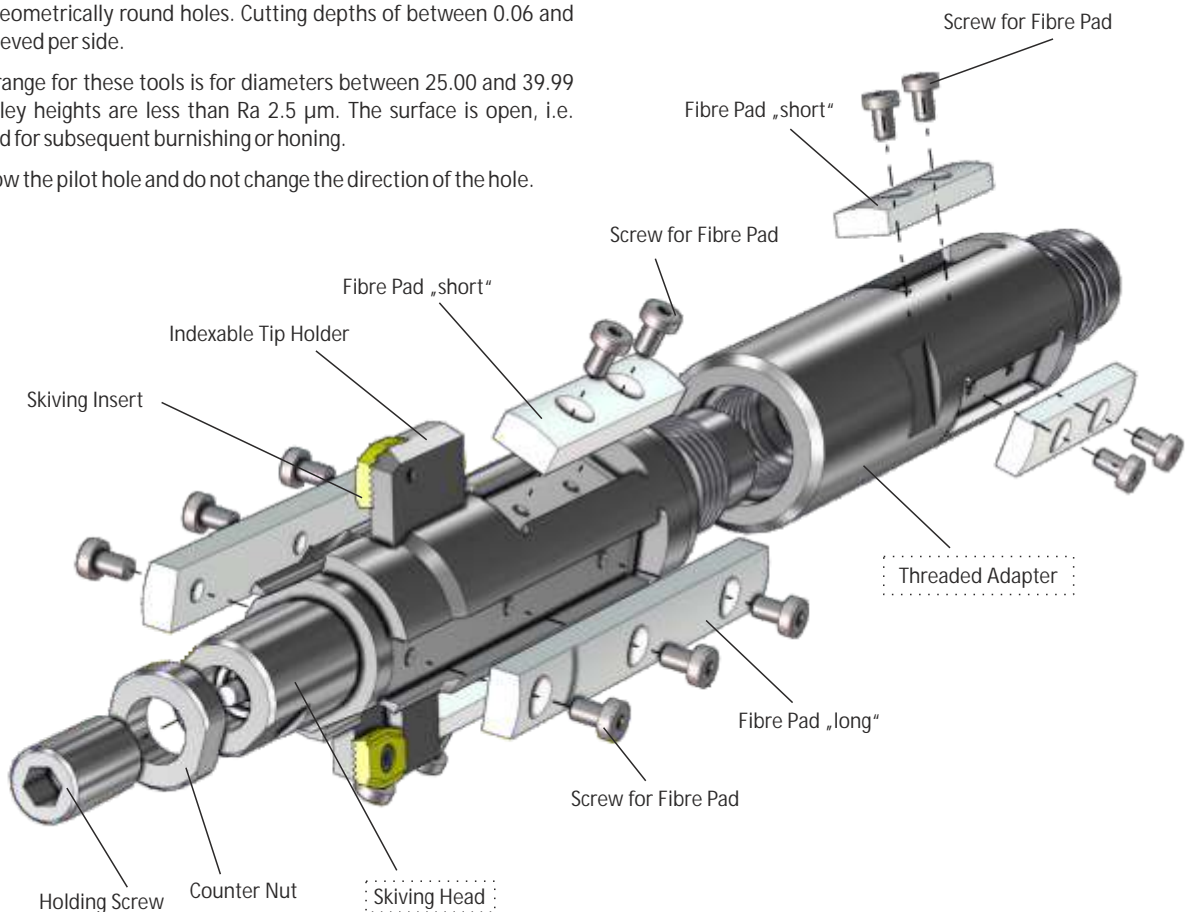
These tools are designed for sizing holes to achieve extremely close hole tolerances and geometrically round holes. Cutting depths of between 0.06 and 0.50 mm are achieved per side.

The application range for these tools is for diameters between 25.00 and 39.99 mm. Peak-to-valley heights are less than Ra 2.5 µm. The surface is open, i.e. particularly suited for subsequent burnishing or honing.

Skiving tools follow the pilot hole and do not change the direction of the hole.

Boring Range	Drill Tube Connection	Ident-No. Skiving Tool
Ø 25,00 - Ø 31,99	22	Numbering depending on the diameter
Ø 32,00 - Ø 35,99	26	
Ø 36,00 - Ø 39,99	30	

The mechanical design allows no automatic cutting inserts retraction.



Skiving Tool Type 1232 - Spare and wear parts

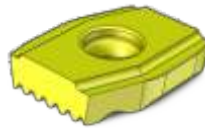
Cutter Magazine
for Type 1232



Boring Range	Ident-No. Cutter Magazine	Ident-No. Clamping Screw	Ident-No. Hexagon Wrench
Ø 25,00 - Ø 39,99	Numbering depending on the diameter	M2,5 x 5 - 010.8405.U	T8 - 010.8812.F

Indexable Insert for Type 1232

Boring Range	Ident-No. Carbide coated
Ø 25,00 - Ø 39,99	019.2704.U



Fibre Pad for Type 1232



Boring Range	Fibre Pad "short"	Fibre Pad "long"	Screw for Fibre Pad	Ident-No. Hexagon Wrench
Ø 25,00 - Ø 29,99	018.6358.H	018.7344.K	M3x5 - 010.8643.C	SW 2
Ø 30,00 - Ø 39,99		018.2254.G	M3x6 - 008.5467.S	008.5439.X

Skiving Tools Type 1210/1217

Type 1210 - Skiving Tools in mechanical design

Type 1217 - Skiving Tools hydraulically extended skiving inserts

Boring Range	Drill Tube Connection
Ø 40,00 - Ø 45,99	33
Ø 46,00 - Ø 49,99	36
Ø 50,00 - Ø 56,99	39
Ø 57,00 - Ø 60,99	43
Ø 61,00 - Ø 67,99	47
Ø 68,00 - Ø 74,99	51
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
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
Ø 162,00 - Ø 173,99	130
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
Ø 234,00 - Ø 245,99	202
Ø 246,00 - Ø 257,99	214
Ø 258,00 - Ø 269,99	226
Ø 270,00 - Ø 281,99	238
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
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
Ø 378,00 - Ø 389,99	346
Ø 390,00 - Ø 401,99	358



Tool description:

Skiving tool with insert holders installed in exchangeable insert pocket. Each insert holder is equipped with one indexable insert, one chip breaker and one auxiliary cutter.

If desired a version with clamping plates can also be used.

Floating skiving inserts or cartridges are used to keep the hole constantly centered.

The base body has four fiber pads for supporting the tool in the hole.

Tools of this type allow skiving in the pushing direction with the chips exiting in the feed direction.

These tools are designed for sizing holes to achieve extremely close boring tolerances and geometrically round holes.

The cutting depths are distributed between two cutters to ensure better chip removal and optimum surfaces.

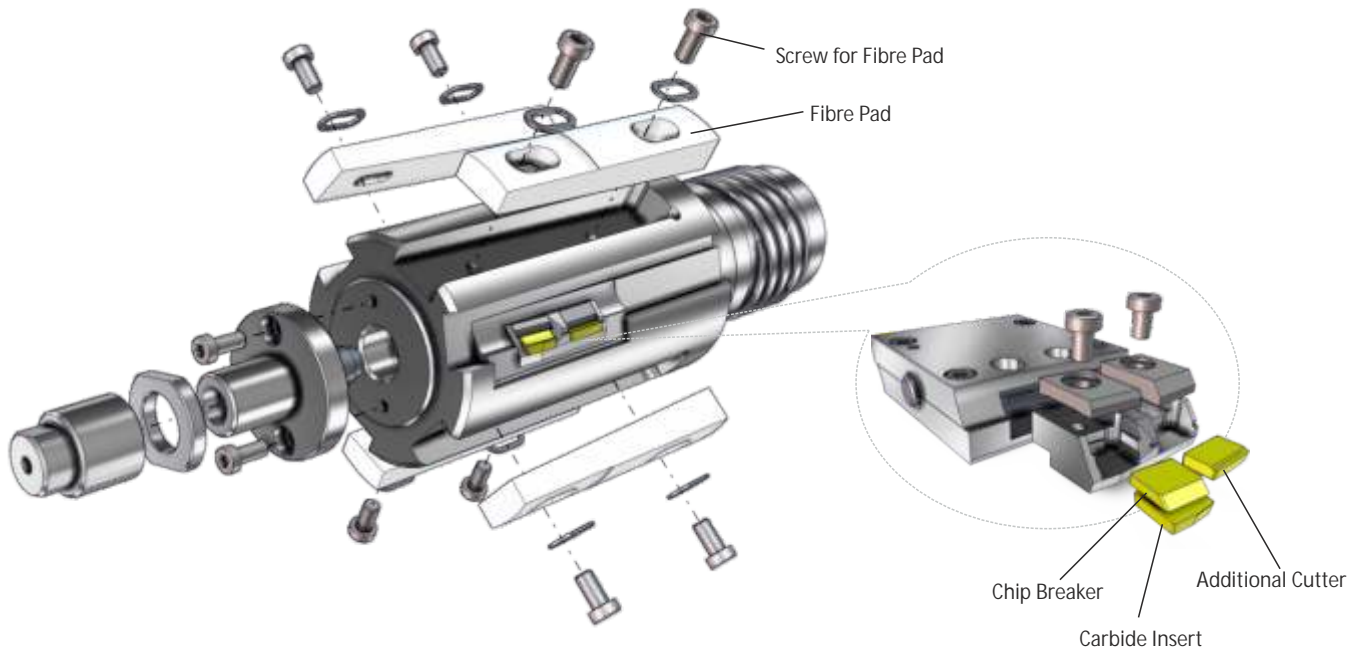
Cutting depths of between 0.05 and 0.50 mm are achieved per side. The application range for these tools is for diameters between 40.00 and 401.99 mm.

Peak-to-valley heights are less than R 2.5 µm. The surface quality is open, i.e. particularly suited for subsequent burnishing or honing.

Skiving tools follow the pilot hole and do not change the direction of the hole.



Skiving Tools Type 1210/1217 - Spare and wear parts



Indexable / Clamping Insert Holder for Type 1210/1217

Boring Range	WPH Size	Ident-No. Indexable Insert Holder	Ident-No. Clamping Insert Holder
Ø 40,00 - Ø 42,99	01	018.9654.R	019.6580.G
Ø 43,00 - Ø 45,99		019.2185.D	019.6979.X
Ø 46,00 - Ø 49,99	1	019.2186.E	019.6980.Y
Ø 50,00 - Ø 60,99		018.9719.J	017.0613.K
Ø 61,00 - Ø 122,99		014.0238.E	017.0616.D
Ø 123,00 - Ø 401,99	3	014.0240.T	017.0618.Z



Skiving Tools Type 1210/1217 - Spare and wear parts

Indexable Insert / Additional Insert for Type 1210/1217

Range: Ø40,00 - 60,99 mm



Boring Range	Indexable Insert		Additional Insert	
	P20 coated	K35 coated	P20 coated	K20 coated
Ø 40,00 - Ø 60,99	018.9670.H	019.2704.U	018.9705.U	018.9657.U

Indexable Insert / Chip Breaker / Additional Insert for Type 1210/1217

Range: at Ø61,00 mm



Boring Range	Indexable Insert		Chip Breaker		Additional Insert	
	P20 coated	P20	P20 coated	P20	P20 beschichtet	P20
Ø 61,00 - Ø 122,99	014.0842.N	014.0837.F	008.0104.J	008.5342.P	014.0329.B	014.0328.D
Ø 123,00 - Ø 401,99	014.0843.L	014.0838.D	008.0246.M	008.0236.Q		

Clamping Insert for Type 1210/1217



Boring Range	Radius 80		Radius 165	
	P10 coated	P10	P10 coated	P10
Ø 50,00 - Ø 60,99	018.0435.N	-	018.3372.X	-
Ø 61,00 - Ø 122,99	018.0436.P	011.8586.F	017.3628.E	011.8584.K
Ø 123,00 - Ø 401,99	018.1142.Y	011.8544.X	016.9840.F	011.8585.H

Skiving Tools Type 1210/1217 - Spare and wear parts

Fibre Pads for Type 1210/1217



Boring Range	Size	Ident-No. Polyamid	Washer	Screws for Fibre Pads	Ident-No. Hexagon Wrench
Ø 40,00 - Ø 43,99	10	011.8381.A	011.2044.C	M4x10 DIN7984 008.5000.U	SW2,5 - 008.5836.M
Ø 44,00 - Ø 56,99	12	011.8382.X			
Ø 57,00 - Ø 67,99	16	013.2517.V			
Ø 68,00 - Ø 110,99	20	011.8383.V	011.2043.E	M6x12 DIN7984 008.5020.N	SW4 - 008.5837.K
Ø 111,00 - Ø 148,99	30	013.2531.C			
Ø 149,00 - Ø 257,99	50	011.8384.T			
Ø 258,00 - Ø 401,99	80	013.2535.T	011.2042.G	M10x20 DIN7984 008.5043.A	SW7 - 008.5840.W

Notice: The Fibre Pads are supplied oversize. To achieve the correct diameter they will have to be turned to size once mounted in the tool.

Standard placement: 4 pieces per tool.



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