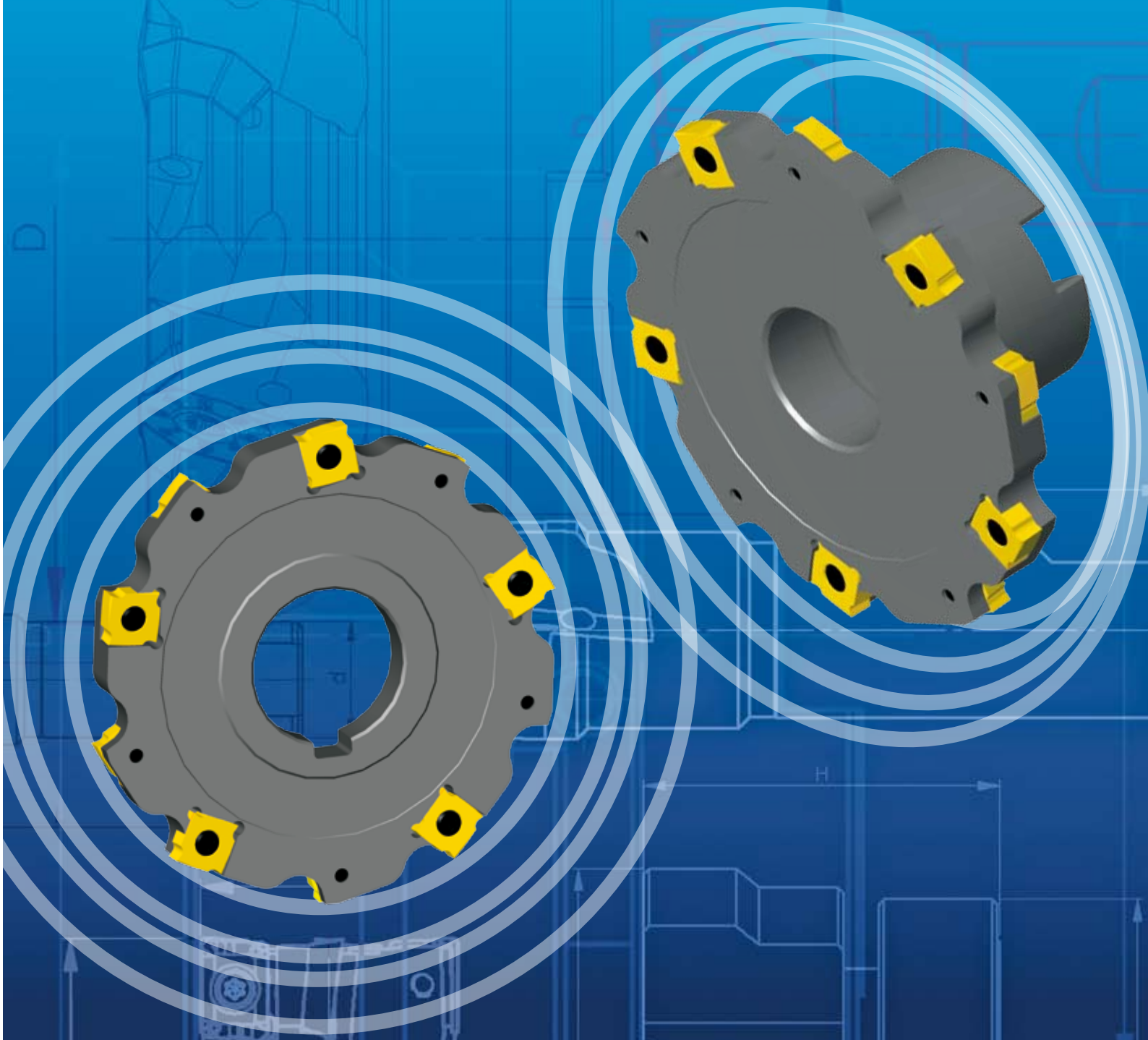


# High-Efficiency Side Milling Cutters



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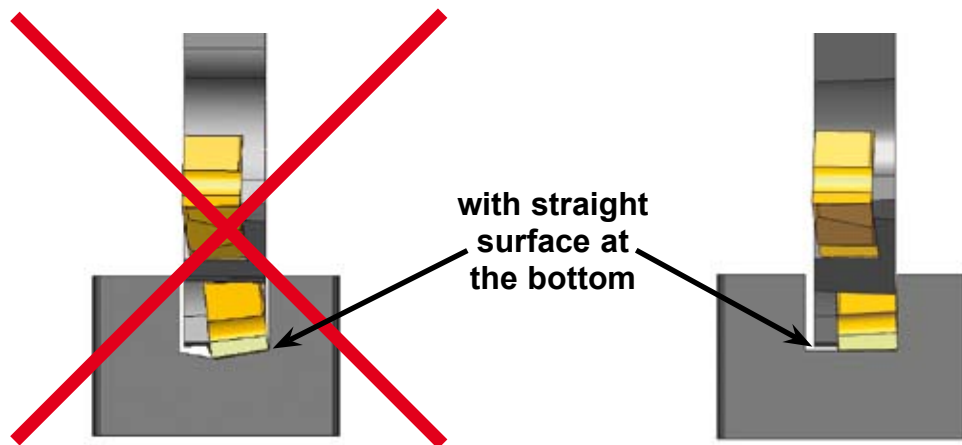
eMail: [info@jongen.de](mailto:info@jongen.de) • Internet: [www.jongen.de](http://www.jongen.de)

# Product Characteristics

Side milling cutters are available in versions made to DIN 138 and made to DIN 8030-A.

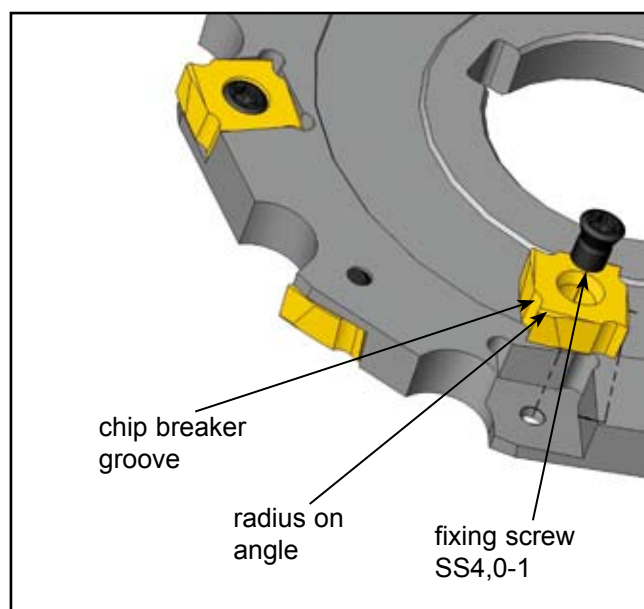
Diameters are: 63-250 mm, depending on the available version.

- ✓ Cutting widths: 4-9 mm
- ✓ High tool precision without complicated adjusting
- ✓ High stability due to embedded inserts
- ✓ Smooth running of the machine
- ✓ Close tip spacing
- ✓ High precision and constant tool life thanks to completely ground inserts.
- ✓ 4 real cutting edges per insert
- ✓ Stabilized cutting edges with flanging radius 0,4 mm
- ✓ Slot milling with straight surface at the bottom, surface quality =  $R_z$  25-30
- ✓ Suitable for almost all materials

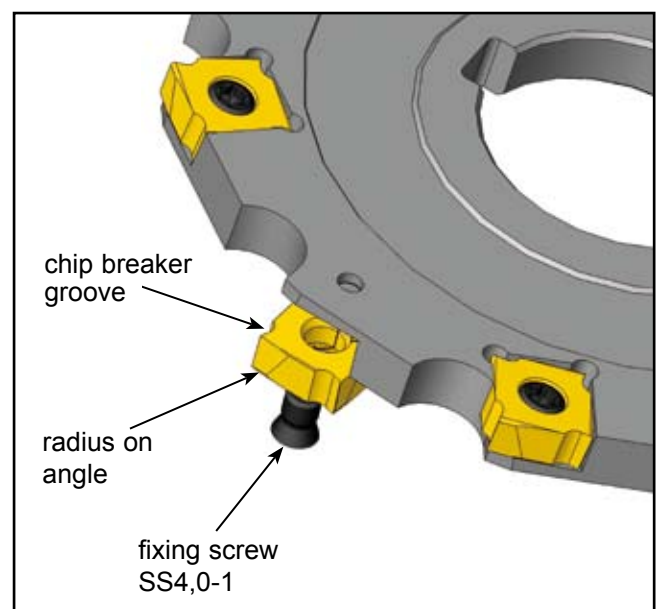


## Inserts' fitting

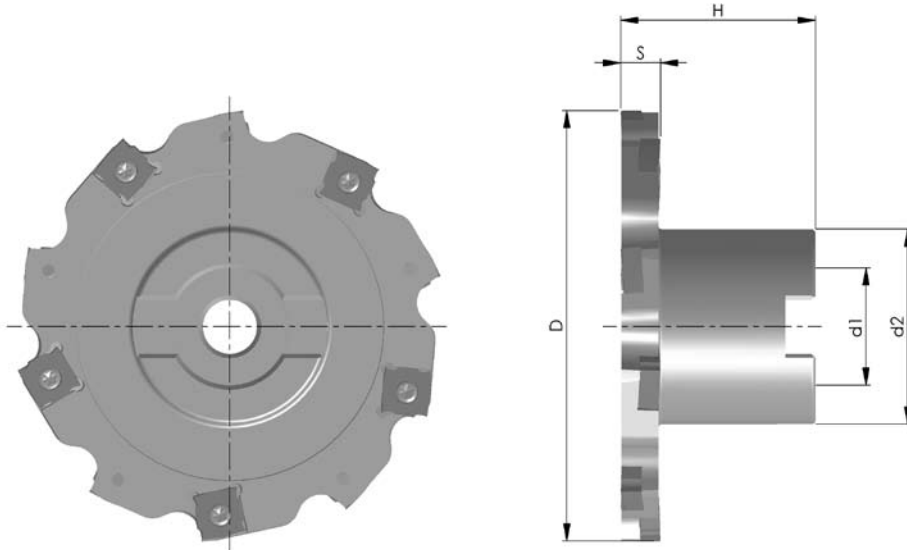
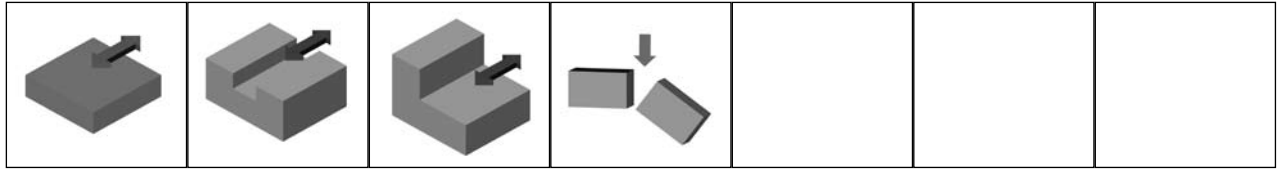
Inserts FP 9...-L



Inserts FP 9...-R



# Side Milling Cutter DIN 8030-A

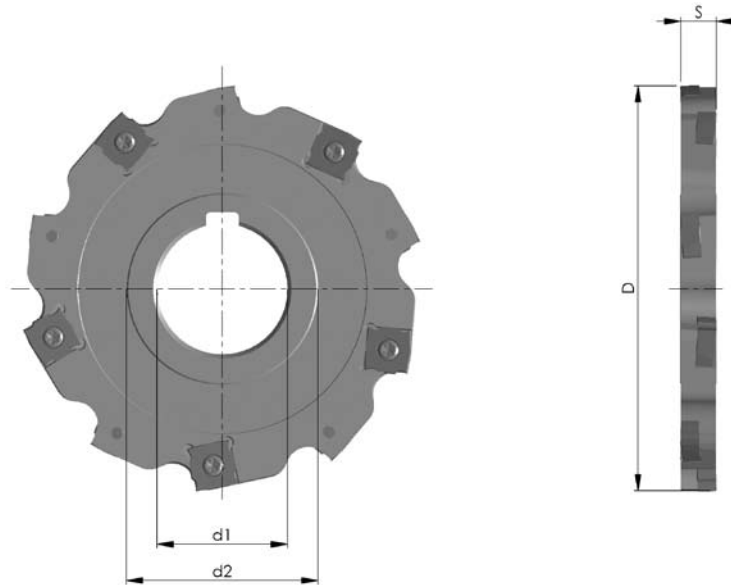
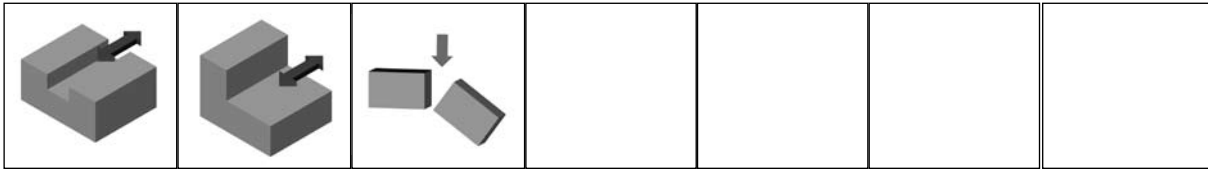


Order-No.	D	H	S <sub>h11</sub>	d <sub>1</sub> <sup>H6</sup>	d <sub>2</sub>	zz	z <sub>off.</sub>	Inserts	MS
SFA 063-04-4	63	40	4	16	32	4x2	4	FP 98	MS-8x25-912
SFA 063-05-4	63	40	5	16	32	4x2	4	FP 97	MS-8x25-912
SFA 063-06-4	63	40	6	16	32	4x2	4	FP 96	MS-8x25-912
SFA 080-04-5	80	40	4	22	40	5x2	5	FP 98	MS-10x25-912
SFA 080-05-5	80	40	5	22	40	5x2	5	FP 97	MS-10x25-912
SFA 080-06-5	80	40	6	22	40	5x2	5	FP 96	MS-10x25-912
SFA 080-07-4	80	40	7	22	40	4x2	4	FP 94	MS-10x25-912
SFA 080-08-4	80	40	8	22	40	4x2	4	FP 94	MS-10x25-912
SFA 080-09-4	80	40	9	22	40	4x2	4	FP 94	MS-10x25-912
SFA 100-04-7	100	45	4	27	45	7x2	7	FP 98	MS-12x30-912
SFA 100-05-7	100	45	5	27	45	7x2	7	FP 97	MS-12x30-912
SFA 100-06-7	100	45	6	27	45	7x2	7	FP 96	MS-12x30-912
SFA 100-07-5	100	45	7	27	45	5x2	5	FP 94	MS-12x30-912
SFA 100-08-5	100	45	8	27	45	5x2	5	FP 94	MS-12x30-912
SFA 100-09-5	100	45	9	27	45	5x2	5	FP 94	MS-12x30-912
SFA 125-04-9	125	50	4	32	58	9x2	9	FP 98	MS-16x30-912
SFA 125-05-9	125	50	5	32	58	9x2	9	FP 97	MS-16x30-912
SFA 125-06-9	125	50	6	32	58	9x2	9	FP 96	MS-16x30-912
SFA 125-07-6	125	50	7	32	58	6x2	6	FP 94	MS-16x30-912
SFA 125-08-6	125	50	8	32	58	6x2	6	FP 94	MS-16x30-912
SFA 125-09-6	125	50	9	32	58	6x2	6	FP 94	MS-16x30-912
SFA 160-05-11	160	63	5	40	68	11x2	11	FP 97	MS-20x40-912
SFA 160-06-11	160	63	6	40	68	11x2	11	FP 96	MS-20x40-912
SFA 160-07-8	160	63	7	40	68	8x2	8	FP 94	MS-20x40-912
SFA 160-08-8	160	63	8	40	68	8x2	8	FP 94	MS-20x40-912
SFA 160-09-8	160	63	9	40	68	8x2	8	FP 94	MS-20x40-912

MS = Central screw

Other dimensions available on demand

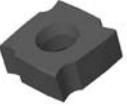
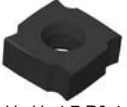
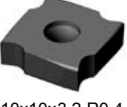

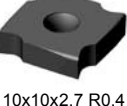
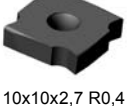


# Side Milling Cutter DIN 138



Order-No.	D	S <sub>h11</sub>	d <sub>1</sub> <sup>H6</sup>	d <sub>2</sub>	zz	z <sub>eff.</sub>	Inserts
SF 063-04-4	63	4	22	34	4x2	4	FP 98
SF 063-05-4	63	5	22	34	4x2	4	FP 97
SF 063-06-4	63	6	22	34	4x2	4	FP 96
SF 080-04-5	80	4	27	41	5x2	5	FP 98
SF 080-05-5	80	5	27	41	5x2	5	FP 97
SF 080-06-5	80	6	27	41	5x2	5	FP 96
SF 080-07-4	80	7	27	41	4x2	4	FP 94
SF 080-08-4	80	8	27	41	4x2	4	FP 94
SF 080-09-4	80	9	27	41	4x2	4	FP 94
SF 100-04-7	100	4	32	47	7x2	7	FP 98
SF 100-05-7	100	5	32	47	7x2	7	FP 97
SF 100-06-7	100	6	32	47	7x2	7	FP 96
SF 100-07-5	100	7	32	47	5x2	5	FP 94
SF 100-08-5	100	8	32	47	5x2	5	FP 94
SF 100-09-5	100	9	32	47	5x2	5	FP 94
SF 125-04-9	125	4	32	47	9x2	9	FP 98
SF 125-05-9	125	5	32	47	9x2	9	FP 97
SF 125-06-9	125	6	32	47	9x2	9	FP 96
SF 125-07-6	125	7	32	47	6x2	6	FP 94
SF 125-08-6	125	8	32	47	6x2	6	FP 94
SF 125-09-6	125	9	32	47	6x2	6	FP 94
SF 160-04-11	160	4	40	55	11x2	11	FP 98
SF 160-05-11	160	5	40	55	11x2	11	FP 97
SF 160-06-11	160	6	40	55	11x2	11	FP 96
SF 160-07-8	160	7	40	55	8x2	8	FP 94
SF 160-08-8	160	8	40	55	8x2	8	FP 94
SF 160-09-8	160	9	40	55	8x2	8	FP 94
SF 200-07-10	200	7	40	55	10x2	10	FP 94
SF 200-08-10	200	8	40	55	10x2	10	FP 94
SF 200-09-10	200	9	40	55	10x2	10	FP 94
SF 250-08-12	250	8	50	69	12x2	12	FP 94
SF 250-09-12	250	9	50	69	12x2	12	FP 94

Other dimensions available on demand



# Tungsten Carbide Inserts

 11x11x4,7 R0,4	<b>FP 94-R</b> (S1)	TA50 KT25	Ground periphery surface, chip breaker groove and supporting surface. Chamfered and rounded cutting edges Application areas (see next page): TA50: 1 - 4, KT25: 4 & 5
 11x11x4,7 R0,4	<b>FP 94-L</b> (S1)	TA50 KT25	Ground periphery surface, chip breaker groove and supporting surface. Chamfered and rounded cutting edges Application areas (see next page): TA50: 1 - 4, KT25: 4 & 5
 10x10x3,2 R0,4	<b>FP 96-R</b> (S4)	TA50 KT25	Ground periphery surface, chip breaker groove and supporting surface. Chamfered and rounded cutting edges Application areas (see next page): TA50: 1 - 4, KT25: 4 & 5
 10x10x3,2 R0,4	<b>FP 96-L</b> (S4)	TA50 KT25	Ground periphery surface, chip breaker groove and supporting surface. Chamfered and rounded cutting edges Application areas (see next page): TA50: 1 - 4, KT25: 4 & 5
 10x10x2,7 R0,4	<b>FP 97-R</b> (S3)	TA50 KT25	Ground periphery surface, chip breaker groove and supporting surface. Chamfered and rounded cutting edges Application areas (see next page): TA50: 1 - 4, KT25: 4 & 5
 10x10x2,7 R0,4	<b>FP 97-L</b> (S3)	TA50 KT25	Ground periphery surface, chip breaker groove and supporting surface. Chamfered and rounded cutting edges Application areas (see next page): TA50: 1 - 4, KT25: 4 & 5
 10x10x2,2 R0,4	<b>FP 98-R</b> (S2)	TA50 KT25	Ground periphery surface, chip breaker groove and supporting surface. Chamfered and rounded cutting edges Application areas (see next page): TA50: 1 - 4, KT25: 4 & 5
 10x10x2,2 R0,4	<b>FP 98-L</b> (S2)	TA50 KT25	Ground periphery surface, chip breaker groove and supporting surface. Chamfered and rounded cutting edges Application areas (see next page): TA50: 1 - 4, KT25: 4 & 5




Packed in boxes of: 10 piece

Further radius on angle can be offered on demand

## Spare Parts

	for FP 94	SS 4,0-1+S**	Fixing screw
	for FP 96 for FP 97 for FP 98	SS 2,5-1+S**	Fixing screw

\*\* for orders of the fixing screws please replace "S" with the cutting width

	for FP 94	T 15	Screwdriver
	for FP 96 for FP 97 for FP 98	T 08	Screwdriver
	for all	Fett, 100 g	Heavy duty grease

# Cutting speed recommendations

Material number	Radial depth of cut ( $a_e$ )	$V_c$	Unit	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	$\varnothing 125$	$\varnothing 160$	$\varnothing 200$	$\varnothing 250$
		220	n (min <sup>-1</sup> )	1.110	875	700	560	438	350	280
1	up to 0,2 x $\varnothing$		$f_z$ (mm)	0,25	0,25	0,25	0,25	0,25	0,25	0,25
	up to 0,3 x $\varnothing$		$f_z$ (mm)	-	-	-	-	-	0,18	0,18
	up to $a_e$ max.		$f_z$ (mm)	0,2	0,25	0,2	0,2	0,18	0,16	0,16
		200	n (min <sup>-1</sup> )	1.011	796	637	509	398	318	255
2	up to 0,2 x $\varnothing$		$f_z$ (mm)	0,25	0,25	0,25	0,25	0,25	0,25	0,25
	up to 0,3 x $\varnothing$		$f_z$ (mm)	-	-	-	-	-	0,28	0,28
	up to $a_e$ max.		$f_z$ (mm)	0,2	0,25	0,2	0,2	0,18	0,16	0,16
		180	n (min <sup>-1</sup> )	909	716	573	458	358	286	229
3	up to 0,2 x $\varnothing$		$f_z$ (mm)	0,25	0,25	0,25	0,25	0,25	0,25	0,25
	up to 0,3 x $\varnothing$		$f_z$ (mm)	-	-	-	-	-	0,18	0,18
	up to $a_e$ max.		$f_z$ (mm)	0,2	0,25	0,2	0,2	0,18	0,16	0,16
		160	n (min <sup>-1</sup> )	808	637	509	407	318	255	200
4	up to 0,2 x $\varnothing$		$f_z$ (mm)	0,25	0,25	0,25	0,25	0,25	0,25	0,25
	up to 0,3 x $\varnothing$		$f_z$ (mm)	-	-	-	-	-	0,18	0,18
	up to $a_e$ max.		$f_z$ (mm)	0,2	0,25	0,2	0,2	0,18	0,16	0,16
		800	n (min <sup>-1</sup> )	4.040	3.200	2.546	2.030	1.590	1.270	1.019
5	up to 0,2 x $\varnothing$		$f_z$ (mm)	0,3	0,3	0,3	0,3	0,3	0,3	0,3
	up to 0,3 x $\varnothing$		$f_z$ (mm)	-	-	-	-	-	0,23	0,23
	up to $a_e$ max.		$f_z$ (mm)	0,25	0,3	0,25	0,25	0,23	0,21	0,21

Material number	Groups of materials	Recommended carbide types / coatings
1	Unalloyed steel	Structural steel, tool steel, tempered steel TA50
2	Low alloyed steel	Machining steel, tempered steel, tool steel TA50
3	High grade steel	High temperature working steel, stainless steel, high-speed steel TA50
4	Iron, cast materials	GG, GGG, grey cast iron, grey cast iron with globular graphite, temper cast iron KT25 / TA50
5	Aluminium, Ne-metals	KT25