

## Selection of grades and guideline values for different operations

material	PCBN grade*		v <sub>c</sub> m/min	f mm/rev	a <sub>p</sub> mm			
	uncoated	edge geometry				coated	edge geometry	
H steel 48 - 54 HRC smooth cut	FJM1A0	chamfer	FJM7A0	chamfer	120 - 160	0.05 - 0.1	0.05 - 0.12	
	FJF1A0	chamfer			130 - 180			
	FJG1A0	sharp	FJG7A0	chamfer	160 - 220			
	FDG1A0	chamfer			100 - 190			
			FDH6A0	chamfer	120 - 250			
			FJM7A0	chamfer	110 - 160			
	(R <sub>z</sub> = 4 - 8 μ)	FJF1A0	chamfer			130 - 170	0.05 - 0.3	0.12 - 0.25
		FJG1A0	sharp	FJG7A0	chamfer	150 - 190		
		FDG1A0	chamfer			100 - 190		
				FDH6A0	chamfer	120 - 250		
				FJM7A0	chamfer	120 - 160		
				FJH7A0	chamfer	130 - 170		
steel 48 - 54 HRCc interrupted cut	FJJ1A0	chamfer			120 - 160	0.05 - 0.1	0.05 - 0.12	
	FJF1A0	chamfer			150 - 190			
	FJG1A0	sharp	FJG7A0	chamfer	130 - 180			
	FDG1A0	chamfer			150 - 200			
					110 - 150			
					140 - 180			
	(R <sub>z</sub> = 4 - 8 μ)	FJF1A0	chamfer			140 - 180	0.05 - 0.3	0.12 - 0.25
		FJG1A0	sharp	FJG7A0	chamfer	110 - 180		
		FDG1A0	chamfer			100 - 170		
						120 - 150		
				FJM7A0	chamfer	130 - 170		
				FJH7A0	chamfer	120 - 160		
steel 54 - 64 HRC smooth cut	FJM1A0	chamfer			130 - 240	0.05 - 0.1	0.05 - 0.12	
	FJG1A0	chamfer			130 - 180			
	FJG1A0	sharp			160 - 220			
	FDG1A0	chamfer			100 - 190			
			FDH6A0	chamfer	120 - 250			
					120 - 240			
	(R <sub>z</sub> = 4 - 8 μ)	FJH1A0	chamfer	FJH7A0	chamfer	120 - 180	0.05 - 0.3	0.12 - 0.25
		FJJ1A0	chamfer			120 - 170		
		FDG1A0	chamfer			100 - 240		
				FDH6A0	chamfer	120 - 300		
				FJM7A0	chamfer	110 - 160		
				FJH7A0	chamfer	120 - 180		
steel 54 - 64 HRC interrupted cut	FJM1A0	chamfer			130 - 240	0.05 - 0.1	0.05 - 0.12	
	FJG1A0	chamfer			130 - 180			
	FJG1A0	sharp			160 - 220			
					120 - 240			
					120 - 180			
	(R <sub>z</sub> = 4 - 8 μ)	FJH1A0	chamfer			120 - 180	0.05 - 0.3	0.12 - 0.25
		FJJ1A0	chamfer			120 - 170		
		FDG1A0	chamfer			100 - 240		
						110 - 160		
				FJH7A0	chamfer	120 - 180		
						120 - 180		
K pearlitic grey cast iron	FDC1A0	chamfer			500 - 1000	0.1 - 0.3	0.2 - 0.3	
	FDA1A0	chamfer			500 - 700			
	FJC1A0	chamfer	FJC7A0	chamfer	300 - 700			
	FJD1A0	chamfer	FJE7A0	chamfer	500 - 700			
					80 - 150			
					80 - 160			
	P hard cast iron	FDC1A0	chamfer			150 - 400	0.1 - 0.2	0.1 - 0.3
		FDA1A0	chamfer			150 - 400		
		FJC1A0	sharp	FJC7A0	chamfer	150 - 400		
						50 - 80		
						50 - 80		
						150 - 400		
sintered metal		FDC1A0	chamfer			150 - 400	0.1 - 0.2	0.1 - 0.3
		FDA1A0	chamfer			150 - 400		
		FJC1A0	sharp	FJC7A0	chamfer	150 - 400		
						150 - 400		
						150 - 400		
						150 - 400		
S HSS	FDA1A0	chamfer			80 - 150	0.1 - 0.2	0.1 - 0.5	
	FDC1A0	chamfer			150 - 400			
	FJC1A0	sharp	FJC7A0	chamfer	150 - 400			
	FJD1A0	sharp	FJE7A0	chamfer	150 - 400			
					50 - 100			
					50 - 100			
Sintered metal, hardened	FDA1A0	chamfer			80 - 150	0.08 - 0.2	0.1 - 0.5	
	FDC1A0	chamfer			150 - 400			
	FJC1A0	sharp	FJC7A0	chamfer	150 - 400			
	FJD1A0	sharp	FJE7A0	chamfer	150 - 400			
					50 - 100			
					50 - 100			

\* further grades available on request.