

Material groups			Application	Cutting speed m/min
Steel, cast steel	Non-hardened, non-heat treated steels up to 1200 N/mm ² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steels	Fine machining = medium stock removal	650-750
	Hardened, heat-treated steels exceeding 1200 N/mm ² (> 38 HRC)	Tool steels, tempering steels, alloyed steel, cast steels		450-600
Stainless steel (INOX)	Rust- and acid-resistant steels	Austenitic and ferritic stainless steels	Fine machining = medium stock removal	450-600
Non-ferrous metals	Hard-non-ferrous metals	Bronze, titanium/titanium alloys, hard alu-alloys (high Si content)	Fine machining = medium stock removal	450-600
	High-temperature resistant materials	Nickel based alloys, cobalt based alloys (aircraft engine and turbine construction)		
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL, with nodular graphite cast iron EN-GJS, white annealed cast iron EN-GJMW, black cast iron EN-GJMB	Fine machining = medium stock removal	650-750



Cutting speed (m/min)				
	450	600	650	750
∅ (mm)	Rotational speed (rpm)			
2	72,000	95,000	104,000	120,000
3	48,000	64,000	68,000	80,000
4	36,000	48,000	52,000	60,000
6	24,000	32,000	34,000	40,000
8	18,000	24,000	26,000	30,000
10	14,000	19,000	21,000	24,000
12	12,000	16,000	18,000	21,000
16	9,000	12,000	14,000	17,000

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