

Material Groups

Recommended Machining Conditions

ISO	Material	Condition	Tensile Strength [N/mm ²]	Hardness HB	Material No. ⁽¹⁾	V m/min	SUMOCHAM					
							Feed vs. Drill Diameter					
							D=10-11.9	D=12-13.9	D=14-15.9	D=16-19.9	D=20-26.9	
							mm/rev					
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	1	80- 110 -140	0.15 0.21	0.18 0.24	0.20 0.27	0.25 0.35	0.25 0.35
		≥ 0.25 %C	Annealed	650	190	2	80- 105 -130					
		< 0.55 %C	Quenched and tempered	850	250	3	80- 100 -120					
		≥ 0.55 %C	Annealed	750	220	4	70- 90 -110					
			Quenched and tempered	1000	300	5	50- 70 -90					
	Low alloy and cast steel (less than 5% of alloying elements)	Annealed	600	200	6	80- 100 -120	0.14 0.21	0.16 0.24	0.18 0.26	0.23 0.31	0.25 0.35	
		Quenched and tempered	930	275	7	70- 90 -110						
			1000	300	8	50- 70 -90						
			1200	350	9	40- 55 -70						
	High alloyed steel, cast steel and tool steel	Annealed	680	200	10	50- 70 -90	0.12 0.17	0.15 0.20	0.18 0.23	0.20 0.25	0.22 0.27	
		Quenched and tempered	1100	325	11	40- 60 -80						

■ Recommended cutting data