

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [inch]		Feed [inch/rev]		Amax [mm²]	V _c [sfm]		Suggested Starting Parameters						
					min	max	min	max		min	max	D.O.C.	Feed	V _c				
Steel	Non-alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.008	0.118	0.004	0.009	0.0009	590	1080	0.079	0.007	980				
				190 HB							0.098			0.009	0.0008	910	850	
				250 HB							0.098			0.008	0.0007	820	780	
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.008	0.098	0.004	0.008	0.0008	390	910	0.079	0.006	850				
				230 HB							0.098			0.008	0.0007	0	820	780
				280 HB							0.079			0.007	0.0006	0	680	650
				350 HB							0.079			0.007	0.0006	0	590	590
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.008	0.098	0.004	0.007	0.0006	220	620	0.079	0.005	590				
				280 HB							0.098			0.006	0.0006	490	450	
320 HB				0.079							0.006			0.0005	420	390		
350 HB				0.079							0.006			0.0004	360	360		
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.008	0.098	0.004	0.007	0.0005	550	880	0.079	0.005	850				
				240 HB						0.098	0.007			0.0004	520	720	680	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.008	0.079	0.004	0.006	0.0003	260	490	0.079	0.005	450				
				310 HB						0.079	0.006			220	450	450		
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.008	0.098	0.004	0.007	0.0005	550	820	0.079	0.006	780				
				42 HRc						0.079	0.006			0.0004	390	620	590	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.008	0.118	0.003	0.008	0.0010	550	820	0.079	0.007	780				
				200 HB						0.118	0.008			0.0009	520	750	720	
				250 HB						0.118	0.008			0.0009	490	680	650	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.008	0.098	0.003	0.007	0.0007	820	780	0.079	0.006	780				
				200 HB						0.098	0.007			0.0006	390	750	720	
				250 HB						0.098	0.007			0.0006	620	590		
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800	0.008	0.079	0.004	0.006	0.0004	80	160	0.079	0.005	130					
			Inconel 700						80	160			130					
			Stellite 21						70	140			110					
	Ti based	10	TiAl6V4	0.008	0.079	0.004	0.006	0.0005	140	210	0.079	0.006	190					
T40			0.079						0.006	0.0004			110	190	160			
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.008	0.071	0.002	0.005	0.0003	160	320	0.059	0.004	290				
				50 HRc						0.059	0.004			0.0003	130	290	260	
				55 HRc						0.055	0.004			0.0002	130	260	220	
	Chilled Cast Iron White Cast Iron	41	G-X300CrMo15	400 HB	0.008	0.063	0.002	0.005	0.0003	130	190	0.047	0.004	160				
				55 HRc						0.055	0.002			0.004	0.0002	90	160	130
NF	Al (>8%Si)	12	AlSi12	130 HB	0.008	0.157	0.004	0.012	0.0011	650	1310	0.079	0.008	1140				

