

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	0.020	0.157	0.008	0.020	0.0025	590	1080	0.118	0.012	780	
		190 HB		910										720	
		250 HB		820										650	
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.020	0.157	0.008	0.018	0.0017	390	910	0.118	0.011	650	
				230 HB										820	590
				280 HB										680	490
				350 HB										590	420
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.020	0.126	0.007	0.016	0.0017	220	620	0.098	0.011	450	
				280 HB										490	390
				320 HB										420	320
				350 HB										360	290
	Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.020	0.157	0.008	0.016	0.0017	550	880	0.118	0.012	650
240 HB					720										590
Duplex		5	X2CrNiN23-4, S31500	290 HB	0.020	0.126	0.007	0.014	0.0011	260	490	0.098	0.010	320	
				310 HB										220	290
Ferritic & Martensitic		6	410, X6Cr17, 17-4 PH, 430	200 HB	0.020	0.157	0.009	0.016	0.0014	550	820	0.118	0.011	620	
				42 HRc										390	420
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.020	0.157	0.006	0.024	0.0028	550	820	0.118	0.012	650	
				200 HB										520	590
				250 HB										490	520
Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.020	0.157	0.006	0.020	0.0021	390	820	0.118	0.011	590		
			200 HB										750	520	
			250 HB										620	450	
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.094	0.008	0.014	0.0010	80	140	0.079	0.010	100	
			33	Inconel 700	250 HB	0.094	0.008	0.014	0.0010	80	140	0.079	0.010	90	
			34	Stellite 21	350 HB	0.094	0.008	0.014	0.0010	70	130	0.079	0.010	90	
	Ti based	10	36	TiAl6V4	-	0.126	0.008	0.016	0.0011	140	210	0.079	0.012	180	
			37	T40	-	0.094	0.008	0.014	0.0010	110	180	0.079	0.011	140	
	Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.020	0.079	0.004	0.012	0.0008	160	320	0.079	0.009	260
50 HRc					290										220
55 HRc					260										190
Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.020	0.063	0.004	0.010	0.0006	130	190	0.059	0.006	160	
White Cast Iron		41	G-X300CrMo15	55 HRc	0.020	0.047	0.004	0.008	0.0004	90	160	0.039	0.005	130	
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.020	0.189	0.008	0.024	0.0025	650	1310	0.118	0.014	910

