VNMG 331 NN LT 10 & LT 1000

Speeds & Feeds

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [inch]		Feed [inch/rev]		Amax	V_c [sfm]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C.	Feed	V_c
Steel	Non-alloyed	1	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
			2		190 HB		0.098		0.009	0.0008		910			850
			3		250 HB		0.098		0.008	0.0007		820			780
	Low alloyed	2	6	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
			4,6		230 HB		0.098		0.008	0.0007		820			780
			5,7		280 HB		0.079		0.007	0.0006		680			650
			8		350 HB		0.079		0.007	0.0006		590			590
	High alloyed	3	10	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
			10		280 HB		0.098		0.006	0.0006		490			450
			11		320 HB		0.079		0.006	0.0005		420			390
			11		350 HB		0.079		0.006	0.0004		360			360
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.008	0.098	0.004	0.007	0.0005	550	880	0.079	0.005	850
			14		240 HB		0.098		0.007	0.0004	520	720			680
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.008	0.079	0.004	0.006	0.0003	260	490	0.079	0.005	450
			14		310 HB		0.079		0.006	0.0003	220	450			
	Ferritic & Martensitic	6	12	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
			13		42 HRc		0.079		0.006	0.0004	390	620		0.005	590
Cast Iron	Grey	7	15	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
			15		200 HB		0.118		0.008	0.0009	520	750			720
			16		250 HB		0.118		0.008	0.0009	490	680			650
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.008	0.098	0.003	0.007	0.0007	390	820	0.079	0.006	780
			17,19		200 HB		0.098		0.007	0.0006		750			720
			18,20		250 HB		0.098		0.007	0.0006		620			590
High Temp.Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.008	0.079	0.004	0.006	0.0004	80	160	0.079	0.005	130
			33	Inconel 700	250 HB		0.079		0.006	0.0004	80	160			130
			34	Stellite 21	350 HB		0.079		0.006	0.0004	70	140			110
	Ti based	10	36	TiAl6V4	-	0.008	0.079	0.004	0.006	0.0005	140	210	0.079	0.006	190
			37	T40	-		0.079		0.006	0.0004	110	190		0.005	160
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.008	0.071	0.002	0.005	0.0003	160	320	0.059	0.004	290
			38		50 HRc		0.059		0.004	0.0003	130	290	0.047	0.004	260
			38		55 HRc		0.055		0.004	0.0002	130	260	0.039	0.003	220
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.008	0.063	0.002	0.005	0.0003	130	190	0.047	0.004	160
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.008	0.055	0.002	0.004	0.0002	90	160	0.039	0.003	130
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.008	0.157	0.004	0.012	0.0011	650	1310	0.079	0.008	1140