

WNMG 080412 NN LT 10 & LT 1000

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V _c [m/min]		Optimal cutting conditions										
					min	max	min	max		min	max	D.O.C.	Feed	V _c								
Steel	Non-alloyed	1	1	C35, Ck45, 1020,	125 HB	0.7	3.5	0.25	0.65	2.16	180	330	3.0	0.44	240							
		2	1045, 1060,	190 HB	3.5										0.65	2.16	280	220				
		3	28Mn6	250 HB	3.5										0.59	1.80	250	200				
	Low alloyed	2	6	42CrMo4, Si50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	3.5	0.25	0.59	1.44	120	280	3.0	0.40	200							
			4,6		230 HB										2.8	0.59	1.44	250	180			
			5,7		280 HB										2.8	0.22	0.52	1.44	210	150		
			8		350 HB										2.5	0.22	0.52	1.20	180	130		
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	2.8	0.22	0.52	1.44	70	190	2.5	0.38	140							
			10		280 HB										2.8	0.52	1.44	150	120			
			11		320 HB										2.1	0.46	0.96	130	100			
			11		350 HB										2.1	0.46	0.96	110	90			
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	3.5	0.24	0.52	1.44	170	270	3.0	0.40	190							
				240 HB	3.5										0.52	1.20	160	220	0.36	170		
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	2.8	0.22	0.46	0.96	80	150	2.5	0.32	100							
					310 HB										2.8	0.46	0.96	70	140	90		
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	3.5	0.26	0.52	1.20	170	250	3.0	0.40	190							
					42 HRc										2.8	0.52	1.20	120	190	2.5	0.36	130
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.7	3.5	0.18	0.78	2.40	170	250	3.0	0.44	200							
				16	EN-GJL-250, No30B										200 HB	3.5	0.78	2.16	160	230	180	
				16	250 HB										3.5	0.72	2.16	150	210	160		
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	3.5	0.18	0.65	1.80	120	250	3.0	0.38	180							
					200 HB										3.5	0.65	1.56	230	160			
250 HB	3.5	0.65	1.44	190	140																	
High Temp Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	0.7	2.1	0.24	0.46	0.84	25	45	2.0	0.35	32								
				33										Inconel 700	250 HB	2.1	0.46	0.84	25	45	30	
				34										Stellite 21	350 HB	2.1	0.46	0.84	23	40	28	
	Ti based	10	36	TiAl6V4	-	0.7	2.8	0.24	0.52	0.96	45	65	2.0	0.40	55							
					-										2.1	0.46	0.84	35	55	0.36	45	
Hardened Mat.	Steel	11	38	X100CrMo13,	0.7	1.8	0.13	0.39	0.72	50	100	2.0	0.31	80								
				440C,										50 HRc	1.5	0.33	0.48	40	90	1.5	0.25	70
				G-X260NiCr42										55 HRc	1.5	0.26	0.36	40	80	1.0	0.23	60
	Chilled Cast Iron White Cast Iron	40	41	Ni-Hard 2	400 HB	0.7	1.5	0.13	0.33	0.48	40	60	1.5	0.23	50							
					55 HRc										1.5	0.26	0.36	30	50	1.0	0.19	40
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.7	4.2	0.24	0.78	2.20	200	400	3.0	0.50	280							

