

## WNGM 080408 NN LT 10 &amp; LT 1000

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Optimal cutting conditions			
					min	max	min	max		min	max	D.O.C.	Feed	V <sub>c</sub>	
Steel	Non-alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.21	0.50	1.80	180	330	2.4	0.35	240	
				190 HB										220	
				250 HB										200	
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.21	0.45	1.20	120	280	2.4	0.32	200	
				230 HB										180	
				280 HB										150	
				350 HB										130	
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.18	0.40	1.20	70	190	2.0	0.30	140	
				280 HB										120	
				320 HB										100	
				350 HB										90	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.20	0.40	1.20	170	270	2.4	0.25	190	
				240 HB										170	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.18	0.35	0.80	80	150	2.0	0.28	100	
				310 HB										90	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.22	0.40	1.00	170	250	2.4	0.32	190	
				42 HRC										130	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.15	0.60	2.00	170	250	2.4	0.35	200	
				200 HB										180	
				250 HB										160	
	Malleable & Nodular	8	17,19, 18,20	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.15	0.50	1.50	120	230	2.4	0.30	180
					200 HB										160
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.5	2.1	0.20	0.35	0.70	25	45	1.6	0.28	32	
				250 HB										30	
				350 HB										28	
	Ti based	10	36, 37	TiAl6V4, T40	-	0.5	2.8	0.20	0.40	0.80	45	65	1.6	0.33	55
					-										45
	Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.5	1.8	0.11	0.30	0.60	50	100	1.6	0.25	80
					50 HRC										70
55 HRC					60										
Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.5	0.11	0.25	0.40	40	60	1.2	0.18	50	
White Cast Iron		41	G-X300CrMo15	55 HRC	0.5	1.5	0.11	0.20	0.30	30	50	0.8	0.15	40	
NF	Al (>8%Si)	12	25	AISI12	130 HB	0.5	4.2	0.20	0.60	1.80	200	400	2.4	0.40	280