

## DNMG 150608 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	5.0	0.21	0.50	1.80	180	330	3.0	0.35	240							
				190 HB				0.50	1.80					220							
				250 HB				0.45	1.50					200							
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	3.0	0.32	200							
				230 HB										4.0	0.21	0.45	1.20	250	180		
				280 HB										4.0	0.18	0.40	1.20	210	150		
				350 HB										3.5	0.18	0.40	1.00	180	130		
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	2.5	0.30	140							
				280 HB										4.0	0.40	1.20	150	120			
				320 HB										3.0	0.35	0.80	130	100			
				350 HB										3.0	0.35	0.80	110	90			
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	3.0	0.25	190							
				240 HB										5.0	0.40	1.00	160	220	170		
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	2.5	0.28	100							
				310 HB										4.0	0.35	0.80	70	140	90		
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	3.0	0.32	190							
				42 HRC										4.0	0.40	1.00	120	190	130		
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	3.0	0.35	200							
				200 HB										5.0	0.60	1.80	160	230	180		
				250 HB										5.0	0.55	1.80	150	210	160		
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	230	3.0	0.30	160							
				200 HB										5.0	0.50	1.30	190	140			
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	2.0	0.28	32							
				250 HB										3.0	0.35	0.70	25	45	30		
				350 HB										3.0	0.35	0.70	23	40	28		
	Ti based	10	TiAl6V4, T40	-	0.5	3.5	0.20	0.40	0.80	45	65	2.0	0.33	55							
				-										3.0	0.35	0.70	35	55	45		
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.5	2.5	0.11	0.30	0.60	50	100	2.0	0.25	80							
				50 HRC										2.0	0.25	0.40	40	90	1.5	0.20	70
				55 HRC										1.5	0.20	0.30	40	80	1.0	0.18	60
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	1.5	0.18	50							
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.5	1.5	0.11	0.20	0.30	30	50	1.0	0.15	40							
NF	Al (>8%Si)	12	AISI12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	3.0	0.40	280							