

DNMG 441 NN LT 10 & LT 1000

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [inch]		Feed [inch/rev]		Amax [inch ²]	V _c [sfm]		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		0.118		0.009	0.0009		1080	0.079	0.007	980	
		2	2	1045, 1060, 28Mn6	190 HB	0.008	0.098	0.004	0.009	0.0008	590	910			850	
		3	3		250 HB		0.098		0.008	0.0007		820			780	
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB			0.098		0.008	0.0008		910	0.079	0.006	850
			4,6		230 HB	0.008	0.098	0.004	0.008	0.0007	390	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			0.098		0.007	0.0006		620	0.079	0.005	590
			11		280 HB	0.008	0.098	0.004	0.006	0.0006	220	490	450			
			10		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	304, 316, X5CrNi18-9	180 HB	0.008	0.098	0.004	0.007	0.0005	550	880	0.079	0.005	850		
				240 HB		0.098		0.007	0.0004	520	720			680		
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.008	0.079	0.004	0.006	0.0003	260	490	0.079	0.005	450		
				310 HB		0.079		0.006	0.0003	220	450			450		
	Ferritic & Martensitic	6	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		
				42 HRC		0.079		0.006	0.0004	390	620			590		
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB			0.118		0.008	0.0010	550	820	0.079	0.007	780	
				200 HB	0.008	0.118	0.003	0.008	0.0009	520	750	720				
				250 HB		0.118		0.008	0.0009	490	680	650				
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.008	0.098	0.003	0.007	0.0007		820	0.079	0.006	780		
				200 HB		0.098		0.003	0.007	0.0006	390			750	720	
				250 HB		0.098			0.007	0.0006				620	590	
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800	240 HB	0.008	0.079	0.004	0.006	0.0004	80	160	0.079	0.005	130		
				250 HB		0.079		0.006	0.0004	80	160			130		
				350 HB		0.079		0.006	0.0004	70	140			110		
	Ti based	10	TiAl6V4	-	0.008	0.079	0.004	0.006	0.0005	140	210	0.079	0.006	190		
				-		0.079		0.006	0.0004	110	190			160		
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.008	0.000	0.002	0.005	0.0003	160	320	0.059	0.004	290		
				50 HRC		0.000		0.004	0.0003	130	290	0.047	0.004	260		
				55 HRC		0.000		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	