

DNMG 110404 NN LT 10 & LT 1000

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm ²]	V _c [m/min]		Optimal cutting conditions			
					min	max	min	max		min	max	D.O.C.	Feed	V _c	
Steel	Non-alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.2	3.0	0.11	0.23	0.60	180	330	2.0	0.18	300	
		190 HB		2.5		0.22		0.52	280					260	
		250 HB		2.5		0.20		0.48	250					240	
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.2	2.5	0.10	0.20	0.50	120	280	2.0	0.15	260	
		230 HB		2.5		0.20		0.48	250					240	
		280 HB		2.0		0.18		0.40	210					200	
		350 HB		2.0		0.18		0.36	180					180	
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.2	2.5	0.09	0.18	0.40	70	190	2.0	0.12	180	
		280 HB		2.5		0.16		0.40	150					140	
		320 HB		2.0		0.14		0.32	130					120	
		350 HB		2.0		0.14		0.26	110					110	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.2	2.5	0.10	0.18	0.32	170	270	2.0	0.12	260	
		240 HB		2.5		0.18		0.26	160					210	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.2	2.0	0.09	0.14	0.20	80	150	2.0	0.12	140	
		310 HB		2.0		0.14		0.20	70					140	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.2	2.5	0.10	0.18	0.32	170	250	2.0	0.15	240	
		42 HRC		2.0		0.16		0.26	120					180	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.2	3.0	0.08	0.20	0.64	170	250	2.0	0.18	240	
		200 HB		3.0		0.20		0.60	160					230	
		250 HB		3.0		0.20		0.60	150					210	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.2	2.5	0.08	0.18	0.48	120	230	2.0	0.15	240	
		200 HB		2.5		0.18		0.40	190					220	
250 HB	2.5	0.18	0.40	190	180										
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.2	2.0	0.09	0.15	0.26	25	50	2.0	0.12	40	
		250 HB		2.0		0.15		0.26	25					50	
		350 HB		2.0		0.15		0.26	23					45	
	Ti based	10	TiAl6V4, T40	-	0.2	2.0	0.09	0.16	0.32	45	65	2.0	0.15	60	
-		2.0		0.14		0.26		35	60						
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.2	1.8	0.05	0.12	0.20	50	100	1.5	0.11	90	
		50 HRC		1.5		0.10		0.17	40					90	
		55 HRC		1.4		0.09		0.13	40					80	
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.2	1.6	0.05	0.12	0.17	40	60	1.2	0.11	50	
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.2	1.4	0.05	0.09	0.13	30	50	1.0	0.07	40	
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.2	4.0	0.10	0.30	0.70	200	400	2.0	0.20	350