

CNMP 120412 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	0.7	6.0	0.26	0.68	3.06	180	330	4.0	0.46	240		
				190 HB		6.0		0.68	3.06		280			220		
				250 HB		6.0		0.61	2.55		250			200		
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	120	280	4.0	0.42	200		
				230 HB		4.8		0.26	0.61		2.04			250	180	
				280 HB		4.8		0.23	0.54		2.04			210	150	
				350 HB		4.2		0.23	0.54		1.70			180	130	
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	70	190	3.4	0.40	140		
				280 HB		4.8		0.54	2.04		150			120		
				320 HB		3.6		0.47	1.36		130			100		
				350 HB		3.6		0.47	1.36		110			90		
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.25	0.54	2.04	170	250	4.0	0.40	190		
				240 HB		6.0		0.54	1.70		160			220	170	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.23	0.47	1.36	80	150	3.4	0.32	100		
				310 HB		4.8		0.47	1.36		70			140	90	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.28	0.54	1.70	170	250	4.0	0.40	190		
				42 HRC		4.8		0.54	1.70		120			190	130	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.81	3.40	170	250	4.0	0.46	200		
				200 HB		6.0		0.81	3.06		160			230	180	
				250 HB		6.0		0.74	3.06		150			210	160	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.68	2.55	120	230	4.0	0.40	160		
				200 HB		6.0		0.68	2.21		190			140		
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.7	3.6	0.25	0.47	1.19	25	45	2.7	0.37	32		
				250 HB		3.6		0.47		1.19	25			45	30	
				350 HB		3.6		0.47		1.19	23			40	28	
	Ti based	10	TiAl6V4, T40	-	0.7	4.8	0.25	0.54	1.36	45	65	2.7	0.40	55		
				-		3.6		0.47	1.19	35	55			45		
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.7	3.0	0.14	0.41	1.02	50	100	2.7	0.33	80		
				50 HRC		2.4		0.34	0.68	40	90			2.0	0.26	70
				55 HRC		1.8		0.27	0.51	40	80			1.3	0.24	60
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.34	0.68	40	60	2.0	0.24	50		
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.7	1.8	0.14	0.27	0.51	30	50	1.3	0.20	40		
NF	Al (>8%Si)	12	AISI12	130 HB	0.7	7.0	0.25	0.81	3.10	200	400	4.0	0.50	280		