

CCMT 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	1	C35, Ck45, 1020,	125 HB	0.5	5.0	0.21	0.60	2.16	180	330	3.0	0.42	240						
		2	1045, 1060,	190 HB	5.0										0.60	2.16	280	220			
		3	28Mn6	250 HB	5.0										0.54	1.80	250	200			
	Low alloyed	2	6	42CrMo4, Si50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.54	1.44	120	280	3.0	0.38	200						
			4,6		230 HB										4.0	0.21	0.54	1.44	250	180	
			5,7		280 HB										4.0	0.18	0.48	1.44	210	150	
			8		350 HB										3.5	0.18	0.48	1.20	180	130	
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.48	1.44	70	190	2.5	0.36	140						
			10		280 HB										4.0	0.48	1.44	150	120		
			11		320 HB										3.0	0.42	0.96	130	100		
			11		350 HB										3.0	0.42	0.96	110	90		
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.48	1.44	170	270	3.0	0.35	190							
				240 HB										5.0	0.48	1.20	160	220	170		
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.42	0.96	80	150	2.5	0.28	100							
				310 HB										4.0	0.42	0.96	70	140	90		
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.48	1.20	170	250	3.0	0.35	190							
				42 HRc										4.0	0.48	1.20	120	190	130		
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.72	2.40	170	250	3.0	0.42	200							
				200 HB										5.0	0.72	2.16	160	230	180		
				250 HB										5.0	0.66	2.16	150	210	160		
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.60	1.80	120	250	3.0	0.36	180							
				200 HB										5.0	0.60	1.56	230	160			
250 HB	5.0	0.60	1.44	190	140																
High Temp Alloys	Fe, Ni & Co based	9	Incoloy 800	240 HB	0.5	3.0	0.20	0.42	0.84	25	45	2.0	0.30	32							
				250 HB										3.0	0.42	0.84	25	45	30		
				350 HB										3.0	0.42	0.84	23	40	28		
	Ti based	10	TiAl6V4	-	0.5	4.0	0.20	0.48	0.96	45	65	2.0	0.35	55							
				-										3.0	0.42	0.84	35	55	45		
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.36	0.72	50	100	2.0	0.30	80							
				50 HRc										2.0	0.30	0.48	40	90	1.5	0.24	70
				55 HRc										1.5	0.24	0.36	40	80	1.0	0.22	60
	Chilled Cast Iron White Cast Iron	40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.30	0.48	40	60	1.5	0.22	50							
				55 HRc										1.5	0.11	0.24	0.36	30	50	1.0	0.18
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.72	2.20	200	400	3.0	0.48	280						