

WNMP 060404 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, 2 1045, 1060, 3 28Mn6	125 HB 190 HB 250 HB	0.2	3.0 2.5 2.5	0.11	0.23 0.22 0.20	0.60 0.52 0.48	180	330 280 250	2.0	0.18	300 260 240
		2	6 42CrMo4, St50, 4,6 Ck60, 4140, 4340, 5,7 100Cr6 8	180 HB 230 HB 280 HB 350 HB	0.2	2.5 2.5 2.0 2.0	0.10	0.20 0.20 0.18 0.18	0.50 0.48 0.40 0.36	120	280 250 210 180	2.0	0.15	260 240 200 180
	High alloyed	3	10 X40CrMoV5, 10 H13, M42, D3, 11 S6-5-2, 12Ni19 11	220 HB 280 HB 320 HB 350 HB	0.2	2.5 2.5 2.0 2.0	0.09	0.18 0.16 0.14 0.14	0.40 0.40 0.32 0.26	70	190 150 130 110	2.0	0.12	180 140 120 110
	Austenitic	4	14 304, 316, 14 X5CrNi18-9	180 HB 240 HB	0.2	2.5 2.5	0.10	0.18 0.18	0.32 0.26	170 160	270 220	2.0	0.12	260 210
	Duplex	5	14 X2CrNiN23-4, 14 S31500	290 HB 310 HB	0.2	2.0 2.0	0.09	0.14 0.14	0.20 0.20	80 70	150 140	2.0	0.12	140
	Ferritic & Martensitic	6	12 410, X6Cr17, 13 17-4 PH, 430	200 HB 42 HRc	0.2	2.5 2.0	0.10	0.18 0.16	0.32 0.26	170 120	250 190	2.0	0.15 0.12	240 180
	Grey	7	15 GG20, GG40, 15 EN-GJL-250, 16 No30B	150 HB 200 HB 250 HB	0.2	3.0 3.0 3.0	0.08	0.20 0.20 0.20	0.64 0.60 0.60	170 160 150	250 230 210	2.0	0.18	240 220 200
	Malleable & Nodular	8	17,19 GGG40, GGG70, 17,19 50005 18,20	150 HB 200 HB 250 HB	0.2	2.5 2.5 2.5	0.08	0.18 0.18 0.18	0.48 0.40 0.40	250 120 190	250 230 190	2.0	0.15	240 220 180
	Fe, Ni & Co based	9	31,32 Incoloy 800 33 Inconel 700 34 Stellite 21	240 HB 250 HB 350 HB	0.2	2.0 2.0 2.0	0.09	0.15 0.15 0.15	0.26 0.26 0.26	25 25 23	50 50 45	2.0	0.12	40 40 35
	Ti based	10	36 TiAl6V4 37 T40	- -	0.2	2.0 2.0	0.09	0.16 0.14	0.32 0.26	45 35	65 60	2.0	0.15 0.12	60 50
Hardened Mat.	Steel	11	38 X100CrMo13, 38 440C, 38 G-X260NiCr42	45 HRc 50 HRc 55 HRc	0.2	1.8 1.5 1.4	0.05	0.12 0.10 0.09	0.20 0.17 0.13	50 40 40	100 90 80	1.5 1.2 1.0	0.11 0.09 0.07	90 80 70
	Chilled Cast Iron White 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
		41	G-X300CrMo15	55 HRc	0.2	1.4	0.05	0.09	0.13	30	50	1.0	0.07	40
	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