

TNMP 160408 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	0.50	1.80	180	330	3.0	0.35	240
			2	1045, 1060, 28Mn6	190 HB		5.0		0.50	1.80		280			220
			3		250 HB		5.0		0.45	1.50		250			200
	Low alloyed	2	6	42CrMo4, St50,	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	3.0	0.32	200
			4,6	Ck60, 4140, 4340,	230 HB		4.0	0.21	0.45	1.20		250		0.32	180
			5,7	100Cr6	280 HB		4.0	0.18	0.40	1.20		210		0.30	150
			8		350 HB		3.5	0.18	0.40	1.00		180		0.30	130
	High alloyed	3	10	X40CrMoV5,	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	2.5	0.30	140
			10	H13, M42, D3,	280 HB		4.0		0.40	1.20		150		0.30	120
			11	S6-5-2, 12Ni19	320 HB		3.0		0.35	0.80		130		0.28	100
			11		350 HB		3.0		0.35	0.80		110		0.28	90
Stainless Steel	Austenitic	4	14	304, 316,	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	3.0	0.35	190
			14	X5CrNi18-9	240 HB		5.0		0.40	1.00	160	220		0.32	170
	Duplex	5	14	X2CrNiN23-4,	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	2.5	0.28	100
			14	S31500	310 HB		4.0		0.35	0.80	70	140			90
	Ferritic & Martensitic	6	12	410, X6Cr17,	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	3.0	0.32	190
			13	17-4 PH, 430	42 HRC		4.0		0.40	1.00	120	190			130
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	3.0	0.35	200
			15	EN-GJL-250,	200 HB		5.0		0.60	1.80	160	230			180
			16	No30B	250 HB		5.0		0.55	1.80	150	210			160
	Malleable & Nodular	8	17,19	GGG40, GGG70,	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	3.0	0.30	180
			17,19	50005	200 HB		5.0		0.50	1.30		230			160
			18,20		250 HB		5.0		0.50	1.20		190			140
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35		25	45	2.0	0.28	32
			33	Inconel 700	250 HB		3.0		0.35	0.70	25	45			30
			34	Stellite 21	350 HB		3.0		0.35		23	40			28
	Ti based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.40	0.80	45	65	2.0	0.33	55
			37	T40	-		3.0		0.35	0.70	35	55		0.30	45
Hardened Mat.	Steel	11	38	X100CrMo13,	45 HRC	0.5	2.5	0.11	0.30	0.60	50	100	2.0	0.25	80
			38	440C,	50 HRC		2.0		0.25	0.40	40	90	1.5	0.20	70
			38	G-X260NiCr42	55 HRC	0.5	1.5		0.20	0.30	40	80	1.0	0.18	60
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	1.5	0.18	50
	White Cast Iron		41	G-X300CrMo15	55 HRC	0.5	1.5	0.11	0.20	0.30	30	50	1.0	0.15	40
NF	Al (>8%Si)	12	25	AISI12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	3.0	0.40	280