

## WCMX 080412 NN LT 30

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	Feed [mm/rev]		V <sub>c</sub> [m/min]		Optimal cutting conditions							
						min	max	min	max	Feed	V <sub>c</sub>						
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.06	0.16	180	270	0.11	225						
			2		190 HB							0.16	230	0.08	115		
			3		250 HB											0.16	200
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.06	0.16	120	230	0.11	175						
			4,6		230 HB							0.15	100	170	0.08	135	
			5,7		280 HB												0.15
			8		350 HB							0.15	100	150	0.08	125	
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.09	0.16	70	170	0.13	120						
			10		280 HB							0.16	70	150	0.08	110	
			11		320 HB												0.14
			11		350 HB							0.14	60	100	0.07	80	
	Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.06	0.15	170	230	0.11	200						
240 HB					0.09							0.15	120	210	0.12	165	
Duplex		5	14	X2CrNiN23-4, S31500	290 HB	0.09	0.14	70	120	0.11	95						
					310 HB							0.14	120	0.07	60		
Ferritic & Martensitic		6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.09	0.14	100	150	0.11	125						
			13		42 HRC							0.06	0.13	60	100	0.09	80
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.10	0.18	150	230	0.14	190							
				200 HB							0.18	210	0.09	105			
				250 HB											0.18	170	0.09
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.10	0.18	120	200	0.14	160						
			17,19		200 HB							0.18	170	0.09	85		
			18,20		250 HB											0.18	150
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800	240 HB	0.06	0.13	25	35	0.09	30							
				33							Inconel 700	250 HB	0.13	25	35	0.06	30
				34							Stellite 21	350 HB	0.13	23	35	0.06	29
	Ti based	10	36	TiAl6V4	-	0.06	0.13	35	60	0.09	45						
37			T40	-	0.13							28	40	0.06	34		
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.06	0.13	50	90	0.09	70							
				50 HRC							0.13	40	70	0.06	55		
				55 HRC												0.13	30
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.06	0.13	40	60	0.09	50							
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.06	0.13	30	50	0.09	40							
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.10	0.16	200	400	0.13	300						

