

MACHINING CONDITIONS

OFER 070405 TN – LT 3000

Catalog N°: M0003401

Material Group	Gr. N°	VDI Group	Material Examples	Hardness	DOC [mm]		Feed [mm/rev]		V _c [m/min]		Suggested Starting Parameters				
					min	max	min	max	min	max	DOC	Feed	V _c		
P	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.5	0.22	0.51	190	330	3	0.37	250	
		2			190 HB	0.5	4.5	0.22	0.51	190	300	3	0.37	220	
		3			250 HB	0.5	4.5	0.22	0.51	190	250	3	0.37	200	
	Low Alloyed	2	4, 6	42CrMo4, S150, Ck60, 4140, 4340, 100Cr06	180 HB	0.5	4.5	0.18	0.4	150	210	3	0.32	180	
		5, 7			230 HB	0.5	4.5	0.18	0.35	130	190	3	0.29	150	
		6			280 HB	0.5	4.5	0.18	0.4	150	240	3	0.32	200	
		8			350 HB	0.5	4.5	0.18	0.35	130	170	3	0.29	140	
		10			220 HB	0.5	3.2	0.14	0.35	90	150	2.2	0.29	130	
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	280 HB	0.5	3.2	0.14	0.35	90	130	2.2	0.29	120	
		11			320 HB	0.5	3.2	0.14	0.29	60	110	2.2	0.26	100	
		11			350 HB	0.5	3.2	0.14	0.29	60	90	2.2	0.26	80	
M	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	4.5	0.18	0.35	190	250	3	0.29	220	
		14			240 HB	0.5	4.5	0.14	0.32	160	210	3	0.29	190	
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.14	0.29	70	130	2.2	0.26	100	
		14			310 HB	0.5	3.2	0.14	0.29	70	120	2.2	0.26	90	
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4PH, 430	200 HB	0.5	4.5	0.18	0.35	150	210	3	0.29	190	
		13			42 HRc	0.5	3.2	0.18	0.32	90	150	2.2	0.26	130	
K	Grey	7	15	GG20, GG40, EN-GJL-250	150 HB	0.5	4.5	0.22	0.51	150	240	3	0.37	200	
		15			200 HB	0.5	4.5	0.22	0.51	150	220	3	0.37	180	
		16			250 HB	0.5	4.5	0.22	0.51	150	190	3	0.37	160	
	Malleable & Nodular	8	17, 19	GG20, GG70, 50005	150 HB	0.5	4.5	0.18	0.45	100	200	3	0.32	180	
		17, 19			200 HB	0.5	4.5	0.18	0.45	100	180	3	0.32	150	
		18, 20			250 HB	0.5	4.5	0.18	0.45	100	150	3	0.32	130	
	S	Fe, Ni & Co based	9	31, 32	Incoloy 800	240 HB	0.5	3.2	0.14	0.29	30	50	2.2	0.26	32
			33		Inconel 700	250 HB	0.5	3.2	0.14	0.29	30	50	2.2	0.26	30
34				Stellite 21	350 HB	0.5	3.2	0.14	0.29	30	50	2.2	0.26	30	
Ti based		10	36	TiAl6V4	-	0.5	3.2	0.14	0.29	30	60	2.2	0.26	40	
		37		T40	-	0.5	3.2	0.14	0.32	40	70	2.2	0.29	55	
H	Steel	11	38	X100 CrMo13, 440C,	45 HRc	0.4	1.6	0.12	0.29	40	80	1.5	0.22	60	
		38		G-X260NiCr42	55 HRc	0.4	1	0.12	0.22	40	60	0.7	0.19	50	
		12	40	Ni-Hard 2	400 HB	0.4	1.3	0.12	0.29	40	80	1.1	0.22	50	
	Chilled Cast Iron	13	41	G-X300CrMo15	55 HRc	0.4	1	0.12	0.22	30	60	0.7	0.19	40	
	White Cast Iron														
NF	Aluminium	14	25	AlSi12	130 HB	0.5	4.5	0.22	0.51	200	400	3	0.4	280	

