

MACHINING CONDITIONS

SEKN 1203 AFTN – LT 3000

Catalog N°: M0004031

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	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7	0.18	0.46	190	330	3	0.34	250
		2		190 HB	0.5	7	0.18	0.46	190	300	3	0.34	220
		3		250 HB	0.5	7	0.18	0.46	190	250	3	0.34	200
	Low Alloyed	2	4, 6 42CrMo4, S150, Ck60, 4140, 4340, 100Cr06	180 HB	0.5	7	0.15	0.36	150	210	3	0.3	180
		5, 7		230 HB	0.5	7	0.15	0.32	130	190	3	0.27	150
		6		280 HB	0.5	7	0.15	0.36	150	240	3	0.3	200
		8		350 HB	0.5	7	0.15	0.32	130	170	3	0.27	140
		10		220 HB	0.5	5	0.12	0.32	90	150	2.3	0.27	130
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	280 HB	0.5	5	0.12	0.32	90	130	2.3	0.27	120
		11		320 HB	0.5	5	0.12	0.26	60	110	2.3	0.24	100
		11		350 HB	0.5	5	0.12	0.26	60	90	2.3	0.24	80
M	Austenitic	4	14 304, 316, X5CrNi18-9	180 HB	0.5	7	0.15	0.32	190	250	3	0.27	220
		14		240 HB	0.5	7	0.12	0.29	160	210	3	0.27	190
	Duplex	5	14 X2CrNiN23-4, S31500	290 HB	0.5	5	0.12	0.26	70	130	2.3	0.24	100
		14		310 HB	0.5	5	0.12	0.26	70	120	2.3	0.24	90
	Ferritic & Martensitic	6	12 410, X6Cr17, 17-4PH, 430	200 HB	0.5	7	0.15	0.32	150	210	3	0.27	190
		13		42 HRc	0.5	5	0.15	0.26	90	150	2.3	0.24	130
K	Grey	7	15 GG20, GG40, EN-GJL-250	150 HB	0.5	7	0.18	0.46	150	240	3	0.34	200
		15		200 HB	0.5	7	0.18	0.46	150	220	3	0.34	180
		16		250 HB	0.5	7	0.18	0.46	150	190	3	0.34	160
	Malleable & Nodular	8	17, 19 GG20, GG70, 50005	150 HB	0.5	7	0.15	0.41	100	200	3	0.3	180
		17, 19		200 HB	0.5	7	0.15	0.41	100	180	3	0.3	150
		18, 20		250 HB	0.5	7	0.15	0.41	100	150	3	0.3	130
	S	Fe, Ni & Co based	9	31, 32 Incoloy 800	240 HB	0.5	5	0.12	0.26	30	50	2.3	0.24
33			Inconel 700	250 HB	0.5	5	0.12	0.26	30	50	2.3	0.24	30
34			Stellite 21	350 HB	0.5	5	0.12	0.26	30	50	2.3	0.24	30
Ti based		10	36 TiAl6V4	-	0.5	5	0.12	0.26	30	60	2.3	0.24	40
		37	T40	-	0.5	5	0.12	0.29	40	70	2.3	0.27	55
H	Steel	11	38 X100 CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.1	0.26	40	80	1.5	0.21	60
		38		50 HRc	0.5	1.8	0.1	0.23	40	70	1.1	0.19	55
		38		55 HRc	0.5	1.5	0.1	0.2	40	60	0.8	0.18	50
	Chilled Cast Iron	12	40 Ni-Hard 2	400 HB	0.5	2	0.1	0.26	40	80	1.1	0.21	50
		13	41 G-X300CrMo15	55 HRc	0.5	1.5	0.1	0.2	30	60	0.8	0.18	40
NF	Aluminium	14	25 AlSi12	130 HB	0.5	7	0.18	0.46	200	400	3	0.37	280

