MACHINING CONDITIONS

APKT 100340 PDTR LT 30

M0002923

Material Group		Lamina Group	Material Example	Hardness	D.O.C		Feed		Vc		Advised D.O.C	Advised Feed	Advised Vc
					min[mm]	max[mm]	min[mm/t]	max [mm/t]	min [m/min]	max [m/min]	[mm]	[mm/t]	[m/min]
Steel	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	9	0.13	0.32	190	330	1	0.25	250
				190 HB	0.5	9	0.13	0.32	190	300	1	0.25	220
				250 HB	0.5	9	0.13	0.32	190	250	1	0.25	200
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	230 HB	0.5	9	0.1	0.25	150	210	1	0.22	180
				280 HB	0.5	9	0.1	0.22	130	190	1	0.2	150
				180 HB	0.5	9	0.1	0.25	150	240	1	0.22	200
				350 HB	0.5	9	0.1	0.22	130	170	1	0.2	140
	High Alloyed	3	X40CrM0V5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	6.4	0.08	0.22	90	150	1	0.2	130
				280 HB	0.5	6.4	0.08	0.22	90	130	1	0.2	120
				320 HB	0.5	6.4	0.08	0.18	60	110	1	0.18	100
				350 HB	0.5	6.4	0.08	0.18	60	90	1	0.18	80
Stainless Steel	Austentic	4	304, 316, X5CrNi18-9	180 HB	0.5	9	0.1	0.25	190	250	1	0.22	220
				240 HB	0.5	9	0.08	0.22	160	210	1	0.22	190
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	6.4	0.08	0.18	70	130	1	0.18	100
				310 HB	0.5	6.4	0.08	0.18	70	120	1	0.18	90
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	9	0.1	0.25	150	210	1	0.22	190
				42 HRc	0.5	6.4	0.1	0.2	90	150	1	0.18	130
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, N030B	150 HB	0.5	9	0.13	0.32	150	240	1	0.25	200
				200 HB	0.5	9	0.13	0.32	150	220	1	0.25	180
				250 HB	0.5	9	0.13	0.32	150	190	1	0.25	160
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	9	0.1	0.28	100	200	1	0.22	180
				200 HB	0.5	9	0.1	0.28	100	180	1	0.22	150
				250 HB	0.5	9	0.1	0.28	100	150	1	0.22	130
NiTi Alloy	Fe, Ni & Co Based	9	Incoloy 800	240 HB	0.5	6.4	0.08	0.18	30	50	1	0.18	32
			Inconel 700	250 HB	0.5	6.4	0.08	0.18	30	50	1	0.18	30
			Stellite 21	350 HB	0.5	6.4	0.08	0.18	30	50	1	0.18	30
	Ti Based	10	T40	-	0.5	6.4	0.08	0.18	30	60	1	0.18	40
			TiAl6V4	-	0.5	6.4	0.08	0.2	40	70	1	0.2	55
Hardened Materials	Steel Chilled Cast Iron White Cast Iron	11	G-X300CrMo15	55 HRc	0.4	1	0.07	0.14	30	60	0.7	0.13	40
			Ni-Hard 2	400 HB	0.4	2.6	0.07	0.18	40	80	0.7	0.15	50
			X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.4	3.2	0.07	0.18	40	80	0.7	0.15	60
				50 HRc	0.4	1.9	0.07	0.16	40	70	0.7	0.14	55
				55 HRc	0.4	1	0.07	0.14	40	60	0.7	0.13	50
Aluminium	Al (>8%Si)	12	AlSi12	130 HB	0.5	9	0.13	0.32	200	400	1	0.28	280