



# MACHINING CONDITIONS

## SPKN 1204 EDTR LT 30

FM000047

Material Group	SAPPHIRE CUTTING TOOLS 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	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7	0.18	0.43	190	330	3	0.3	250
			190 HB	0.5	7	0.18	0.43	190	300	3	0.3	220
			250 HB	0.5	7	0.18	0.43	190	250	3	0.3	200
	Low Alloyed	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	230 HB	0.5	7	0.15	0.34	150	210	3	0.26	180
			280 HB	0.5	7	0.15	0.3	130	190	3	0.23	150
			180 HB	0.5	7	0.15	0.34	150	240	3	0.26	200
			350 HB	0.5	7	0.15	0.3	130	170	3	0.23	140
	High Alloyed	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	5	0.12	0.3	90	150	2.3	0.23	130
			280 HB	0.5	5	0.12	0.3	90	130	2.3	0.23	120
			320 HB	0.5	5	0.12	0.24	60	110	2.3	0.21	100
			350 HB	0.5	5	0.12	0.24	60	90	2.3	0.21	80
Cast Iron	Grey	GG20, GG40, EN-GJL-250, N030B	150 HB	0.5	7	0.18	0.43	150	240	3	0.3	200
			200 HB	0.5	7	0.18	0.43	150	220	3	0.3	180
			250 HB	0.5	7	0.18	0.43	150	190	3	0.3	160
	Malleable & Nodular	GGG40, GGG70, 50005	150 HB	0.5	7	0.15	0.38	100	200	3	0.26	180
			200 HB	0.5	7	0.15	0.38	100	180	3	0.26	150
			250 HB	0.5	7	0.15	0.38	100	150	3	0.26	130
Hardened Materials	Steel Chilled Cast Iron White Cast Iron	G-X300CrMo15	55 HRc	0.5	1.5	0.1	0.19	30	60	0.8	0.16	40
			Ni-Hard 2	400 HB	0.5	2	0.1	0.24	40	80	1.1	0.18
		X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.1	0.24	40	80	1.5	0.18	60
			50 HRc	0.5	1.8	0.1	0.22	40	70	1.1	0.17	55
			55 HRc	0.5	1.5	0.1	0.19	40	60	0.8	0.16	50