

APKT 100312 PDTR LT 30

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/tooth]		V _c [m/min]		Optimal cutting conditions					
					min	max	min	max	min	max	D.O.C.	Feed	V _c			
Steel	Non-alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	9.0	0.13	0.28	190	330	2.0	0.20	250			
		2		190 HB		0.28		300		220						
		3		250 HB		0.28		250		200						
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	9.0	0.11	0.22	150	240	2.0	0.18	200			
				230 HB		0.22		150		210			180			
				280 HB		0.19		130		190			150			
				350 HB		0.19		130		170			140			
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	6.4	0.08	0.19	90	150	1.5	0.16	130			
				280 HB		0.19		90		130			120			
				320 HB		0.16		60		110			100			
				350 HB		0.16		60		90			80			
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	9.0	0.11	0.22	190	250	2.0	0.18	220			
				240 HB		9.0		0.08		0.19			160	210	190	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	6.4	0.08	0.16	70	130	1.5	0.14	100			
				310 HB		6.4		0.16		120			90			
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	9.0	0.11	0.22	150	210	2.0	0.18	190			
				42 HRC		6.4		0.18		90			150	1.5	0.14	130
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	9.0	0.13	0.28	150	240	2.0	0.20	200			
				200 HB		9.0		0.28		220			180			
				250 HB		9.0		0.28		190			160			
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	9.0	0.11	0.25	100	200	2.0	0.18	180			
				200 HB		9.0		0.25		180			150			
				250 HB		9.0		0.25		150			130			
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	0.5	6.4	0.08	0.16	25	45	1.5	0.14	32			
			33			Inconel 700		250 HB		6.4			0.16	45	30	
			34			Stellite 21		350 HB		6.4			0.16	45	30	
	Ti based	10	36, 37	TiAl6V4	0.5	6.4	0.08	0.18	40	65	1.5	0.16	55			
T40				-		6.4		0.16		30			55	0.14	40	
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	0.5	3.2	0.07	0.16	40	80	1.0	0.12	60			
			38			50 HRC		1.9		0.14			70	0.8	0.11	55
			38			55 HRC		1.0		0.12			60	0.5	0.11	50
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	2.6	0.07	0.16	40	80	0.8	0.12	50			
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.5	1.0	0.07	0.12	30	60	0.5	0.11	40			
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	9.0	0.13	0.28	200	400	2.0	0.22	280		