

## APMT 1135 PDTR LT 30

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/tooth]		V <sub>c</sub> [m/min]		Optimal cutting conditions			
					min	max	min	max	min	max	D.O.C.	Feed	V <sub>c</sub>	
Steel	Non-alloyed	1	1	C35, Ck45, 1020,	125 HB	0.5	10.0	0.13	0.22	190	330	2.0	0.15	250
		2	2	1045, 1060,	190 HB									220
		3	3	28Mn6	250 HB									200
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	10.0	0.11	0.18	150	240	2.0	0.13	200
			4,6		230 HB									180
			5,7		280 HB									150
			8		350 HB									140
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	7.2	0.08	0.15	90	150	1.5	0.12	130
			10		280 HB									120
			11		320 HB									100
			11		350 HB									80
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	10.0	0.11	0.18	190	250	2.0	0.13	220	
				14									240 HB	190
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	7.2	0.08	0.13	70	130	1.5	0.10	100	
				14									310 HB	90
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	10.0	0.11	0.18	150	210	2.0	0.13	190	
				13									42 HRC	130
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	10.0	0.13	0.22	150	240	2.0	0.15	200	
				200 HB									180	
				250 HB									160	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	10.0	0.11	0.20	100	180	2.0	0.13	180	
				200 HB									150	
				250 HB									130	
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.5	7.2	0.08	0.13	25	45	1.5	0.10	32
			33	Inconel 700	250 HB									30
			34	Stellite 21	350 HB									30
	Ti based	10	TiAl6V4	-	0.5	7.2	0.08	0.14	40	65	1.5	0.12	55	
				37									T40	-
Hardened Mat.	Steel	11	38	X100CrMo13, 440C,	45 HRC	0.5	3.6	0.07	0.13	40	80	1.0	0.09	60
			38	G-X260NiCr42	50 HRC									55
			38		55 HRC									50
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	2.9	0.07	0.13	40	80	0.8	0.09	50	
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.5	1.1	0.07	0.10	30	60	0.5	0.08	40	
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	10.0	0.13	0.22	200	400	2.0	0.16	280