

APMT 1604 PDTR & APMT 160408 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	1	C35, Ck45, 1020,	125 HB	0.5	15.0	0.16	0.30	330	4.0	0.21	250			
		2	2	1045, 1060,	190 HB		15.0		0.30	190			300	220		
		3	3	28Mn6	250 HB		15.0		0.30				250	200		
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	15.0	0.14	0.23	150	240	4.0	0.18	200		
			4,6		230 HB		15.0		0.23	150	210			180		
			5,7		280 HB		15.0		0.20	130	190			150		
			8		350 HB		15.0		0.20	130	170			140		
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	10.7	0.11	0.20	90	150	3.0	0.16	130		
			10		280 HB		10.7		0.20	90	130			120		
			11		320 HB		10.7		0.17	60	110			100		
			11		350 HB		10.7		0.17	60	90			80		
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	15.0	0.14	0.23	190	250	4.0	0.18	220			
				240 HB		15.0		0.11	0.20	160			210	190		
	Duplex	5	X2CrNi23-4, S31500	290 HB	0.5	10.7	0.11	0.17	70	130	3.0	0.14	100			
				310 HB		10.7		0.17		120			90			
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	15.0	0.14	0.23	150	210	4.0	0.18	190			
				42 HRC		10.7		0.19	90	150			3.0	0.14	130	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	15.0	0.16	0.30		240	4.0	0.21	200			
				200 HB		15.0		0.30	150	220			180			
				250 HB		15.0		0.30		190			160			
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	15.0	0.14	0.26		200	4.0	0.18	180			
				200 HB		15.0		0.26	100	180			150			
				250 HB		15.0		0.26		150			130			
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.5	10.7	0.11	0.17	45	3.0	0.14	32			
			33	Inconel 700	250 HB		10.7		0.17	25			45	30		
			34	Stellite 21	350 HB		10.7		0.17				45	30		
	Ti based	10	36	TiAl6V4	-	0.5	10.7	0.11	0.19	40	65	3.0	0.16	55		
			37	T40	-		10.7		0.17	30	55			0.14	40	
Hardened Mat.	Steel	11	38	X100CrMo13,	45 HRC	0.5	5.4	0.09	0.17	80	2.0	0.13	60			
			38	440C,	50 HRC		3.2		0.15	40			70	1.5	0.12	55
			38	G-X260NiCr42	55 HRC		1.6		0.13				60	1.0	0.11	50
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	4.3	0.09	0.17	40	80	1.5	0.13	50			
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.5	1.6	0.09	0.13	30	60	1.0	0.11	40			
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	15.0	0.16	0.30	200	400	4.0	0.23	280		

