MACHINING CONDITIONS - SOLID END MILLS - DEPTH OF CUT AND FEED

90° 4 FLUTE WITH RADIUS 2.0 | LT 4000 - Ø 6, 8, 10, 12

	Material Group	Lamina Gr. N°	Material Examples	Hardness	Profiling		Slotting	fz [mm/tooth]			
					ap	ae	ap	Ø 6	Ø 8	Ø 10	Ø 12
P	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	1.5xØ	0.5xØ	1.0xØ	0.040	0.055	0.065	0.077
				190 HB							
				250 HB							
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	1.5xØ	0.5xØ	1.0xØ	0.039	0.053	0.063	0.074
				230 HB							
				280 HB			0.7xØ	0.032	0.043	0.052	0.062
				350 HB							
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	1.5xØ	0.5xØ	1.0xØ	0.033	0.046	0.055	0.064
				280 HB							
				320 HB			0.6xØ	0.025	0.035	0.041	0.049
				350 HB							
M	Austenitic	4	304, 316, X5CrNi18-9	180 HB	1.5xØ	0.5xØ	1.0xØ	0.028	0.038	0.045	0.053
				240 HB							
	Duplex	5	X2CrNiN23-4, S31500	290 HB	1.5xØ	0.5xØ	1.0xØ	0.021	0.029	0.035	0.040
				310 HB							
	Ferritic & Martensitic	6	410, X6Cr17, 17-4PH, 430	200 HB	1.5xØ	0.5xØ	1.0xØ	0.021	0.029	0.035	0.040
				42 HRc							
K	Grey	7	GG20, GG40, EN-GJL-250, N030B	150 HB	1.5xØ	0.5xØ	1.0xØ	0.047	0.064	0.076	0.089
				200 HB							
				250 HB							
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	1.5xØ	0.5xØ	1.0xØ	0.040	0.055	0.066	0.077
				200 HB							
				250 HB							
S	Fe, Ni & Co based	9	Incoloy 800	240 HB	1.5xØ	0.3xØ	1.0xØ	0.023	0.031	0.037	0.044
			Inconel 700	250 HB							
			Stellite 21	350 HB							
	Ti based	10	T40	-	1.5xØ	0.5xØ	1.0xØ	0.023	0.032	0.038	0.045
			TiAl6V4	-							
H	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	1.5xØ	0.3xØ	0.2xØ	0.017	0.023	0.028	0.032
				50 HRc							
				55 HRc		0.2xØ	0.1xØ	0.013	0.017	0.021	0.024
	Chilled Cast Iron	12	Ni-Hard 2	400 HB	1.5xØ	0.2xØ	0.1xØ	0.013	0.017	0.021	0.024
	White Cast Iron	13	G-X300CrMo15	55 HRc	1.5xØ	0.2xØ	0.1xØ	0.013	0.017	0.021	0.024
NF	Aluminium	14	AlSi12	130 HB	1.5xØ	0.5xØ	1.0xØ	0.042	0.058	0.069	0.081

90° 4 FLUTE WITH RADIUS 0.5, LONG | LT 4000 - Ø 8, 10, 12

	Material Group	Lamina Gr. N°	Material Examples	Hardness	Profiling		Slotting	fz [mm/tooth]		
					ap	ae	ap	Ø 8	Ø 10	Ø 12
P	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	3.0xØ	0.25xØ	1.0xØ	0.050	0.059	0.070
				190 HB						
				250 HB						
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	3.0xØ	0.25xØ	1.0xØ	0.044	0.053	0.062
				230 HB						
				280 HB			0.7xØ	0.035	0.042	0.049
				350 HB						
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	3.0xØ	0.25xØ	0.7xØ	0.035	0.042	0.049
				280 HB						
				320 HB			0.5xØ	0.025	0.030	0.035
				350 HB						
M	Austenitic	4	304, 316, X5CrNi18-9	180 HB	3.0xØ	0.25xØ	1.0xØ	0.032	0.039	0.045
				240 HB						
	Duplex	5	X2CrNiN23-4, S31500	290 HB	3.0xØ	0.25xØ	1.0xØ	0.025	0.030	0.035
				310 HB						
	Ferritic & Martensitic	6	410, X6Cr17, 17-4PH, 430	200 HB	3.0xØ	0.25xØ	1.0xØ	0.024	0.029	0.033
				42 HRc						
K	Grey	7	GG20, GG40, EN-GJL-250, N030B	150 HB	3.0xØ	0.25xØ	1.0xØ	0.047	0.056	0.066
				200 HB						
				250 HB						
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	3.0xØ	0.25xØ	1.0xØ	0.045	0.053	0.063
				200 HB						
				250 HB						
S	Fe, Ni & Co based	9	Incoloy 800	240 HB	3.0xØ	0.10xØ	1.0xØ	0.020	0.024	0.028
			Inconel 700	250 HB						
			Stellite 21	350 HB						
	Ti based	10	T40	-	3.0xØ	0.25xØ	1.0xØ	0.020	0.024	0.028
			TiAl6V4	-						
H	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	3.0xØ	0.10xØ	0.1xØ	0.017	0.021	0.024
				50 HRc						
				55 HRc				0.015	0.018	0.021
	Chilled Cast Iron	12	Ni-Hard 2	400 HB	3.0xØ	0.10xØ	0.1xØ	0.015	0.018	0.021
	White Cast Iron	13	G-X300CrMo15	55 HRc	3.0xØ	0.10xØ	0.1xØ	0.015	0.018	0.021
NF	Aluminium	14	AlSi12	130 HB	3.0xØ	0.25xØ	1.0xØ	0.050	0.050	0.070