

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

90° 4 FLUTE, SHORT | LT 40 Ø 1 - 5

Material Group	Lamina Gr. N°	Material Examples	Hardness	Profiling		Slotting		fz [mm/tooth]				
				ap	ae	ap	Ø1.0	Ø2.0	Ø3.0	Ø4.0	Ø5.0	
P	Non-Alloyed	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	1.5xØ	0.5xØ	1.0xØ	0.008	0.010	0.014	0.019	0.024	
			190 HB									
			250 HB									
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	1.5xØ	0.5xØ	1.0xØ	0.008	0.009	0.013	0.020	0.024
				230 HB								
				280 HB								
				350 HB								
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	1.5xØ	0.5xØ	1.0xØ	0.007	0.008	0.012	0.017	0.021
				280 HB								
				320 HB								
				350 HB								
	M	Austenitic	4	304, 316, X5CrNi18-9	1.5xØ	0.5xØ	1.0xØ	0.006	0.007	0.010	0.014	0.017
180 HB 240 HB												
M	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	1.5xØ	0.5xØ	1.0xØ	0.004	0.005	0.007	0.011	0.013	
			200 HB 42 HRc									
K	Grey	7	GG20, GG40, EN-GJL-250, No30B	1.5xØ	0.5xØ	1.0xØ	0.010	0.011	0.016	0.023	0.029	
			150 HB 200 HB 250 HB									
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	1.5xØ	0.5xØ	1.0xØ	0.008	0.010	0.014	0.020	0.025
				200 HB 250 HB								
H	Steel	11	X100CrMo13, 440C, G-X260NiCr42	1.5xØ	0.3xØ	0.2xØ	0.003	0.004	0.005	0.009	0.011	
NF	Al (>8%Si)	12	AlSi12	130 HB	1.5xØ	0.5xØ	0.1xØ	0.009	0.010	0.015	0.021	0.026

90° 4 FLUTE, SHORT | LT 40 Ø 6, 8, 10, 12, 16

Material Group	Lamina Gr. N°	Material Examples	Hardness	Profiling		Slotting		fz [mm/tooth]				
				ap	ae	ap	Ø6.0	Ø8.0	Ø10.0	Ø12.0	Ø16.0	
P	Non-Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	1.5xØ	0.5xØ	1.0xØ	0.032	0.044	0.052	0.062	0.084	
			125 HB 190 HB 250 HB									
			180 HB									
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	230 HB	1.5xØ	0.5xØ	1.0xØ	0.031	0.042	0.050	0.059	0.074
				280 HB								
				350 HB								
				150 HB								
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	1.5xØ	0.5xØ	1.0xØ	0.027	0.037	0.044	0.051	0.059
				280 HB								
				320 HB								
				350 HB								
	M	Austenitic	4	304, 316, X5CrNi18-9	1.5xØ	0.5xØ	1.0xØ	0.022	0.030	0.036	0.042	0.054
180 HB 240 HB												
M	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	1.5xØ	0.5xØ	1.0xØ	0.017	0.023	0.028	0.032	0.040	
			200 HB 42 HRc									
K	Grey	7	GG20, GG40, EN-GJL-250, No30B	1.5xØ	0.5xØ	1.0xØ	0.037	0.051	0.061	0.071	0.079	
			150 HB 200 HB 250 HB									
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	1.5xØ	0.5xØ	1.0xØ	0.032	0.044	0.052	0.062	0.075
				200 HB 250 HB								
H	Steel	11	X100CrMo13, 440C, G-X260NiCr42	1.5xØ	0.3xØ	0.2xØ	0.014	0.019	0.022	0.026	0.029	
NF	Al (>8%Si)	12	AlSi12	130 HB	1.5xØ	0.5xØ	0.1xØ	0.034	0.046	0.055	0.065	0.084