

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

BALL NOSE 2 FLUTE | LT 40 - Ø 1 - 5

Material Group	Lamina Gr. N°	Material Examples*	Hardness	Contouring		fz [mm/tooth]				
				ap	ae	Ø1.0	Ø2.0	Ø3.0	Ø4.0	Ø5.0
P Non-Alloyed Low Alloyed High Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.25xØ	0.7xØ	0.028	0.036	0.052	0.064	0.084
			190 HB							
			250 HB							
	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.25xØ	0.7xØ	0.021	0.027	0.039	0.048	0.063
			230 HB							
			280 HB			0.018	0.023	0.033	0.041	0.054
			350 HB							
	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.25xØ	0.7xØ	0.018	0.023	0.033	0.040	0.053
			280 HB							
320 HB			0.013			0.017	0.025	0.031	0.040	
350 HB										
M Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.25xØ	0.7xØ	0.015	0.019	0.027	0.033	0.044
			240 HB							
K Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.25xØ	0.7xØ	0.015	0.020	0.028	0.035	0.046
			42 HRC							
K Grey Malleable & Nodular	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.25xØ	0.7xØ	0.025	0.032	0.046	0.056	0.074
			200 HB							
			250 HB							
	8	GGG40, GGG70, 50005	150 HB	0.25xØ	0.7xØ	0.021	0.027	0.040	0.049	0.064
200 HB										
250 HB										
H Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.25xØ	0.6xØ	0.009	0.012	0.017	0.020	0.027
50 HRC										
NF Al (>8%Si)	12	AlSi12	130 HB	0.25xØ	0.7xØ	0.022	0.029	0.042	0.051	0.067

BALL NOSE 2 FLUTE | LT 40 - Ø 6, 8, 10, 12, 16

Material Group	Lamina Gr. N°	Material Examples*	Hardness	Contouring		fz [mm/tooth]				
				ap	ae	Ø6.0	Ø8.0	Ø10.0	Ø12.0	Ø16.0
P Non-Alloyed Low Alloyed High Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.25xØ	0.7xØ	0.080	0.092	0.100	0.112	0.106
			190 HB							
			250 HB							
	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.25xØ	0.7xØ	0.060	0.069	0.075	0.084	0.080
			230 HB							
			280 HB			0.051	0.059	0.064	0.072	0.068
			350 HB							
	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.25xØ	0.7xØ	0.051	0.058	0.063	0.071	0.067
			280 HB							
320 HB			0.038			0.044	0.048	0.054	0.051	
350 HB										
M Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.25xØ	0.7xØ	0.042	0.048	0.052	0.058	0.055
			240 HB							
K Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.25xØ	0.7xØ	0.044	0.050	0.054	0.061	0.058
			42 HRC							
K Grey Malleable & Nodular	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.25xØ	0.7xØ	0.070	0.081	0.088	0.099	0.093
			200 HB							
			250 HB							
	8	GGG40, GGG70, 50005	150 HB	0.25xØ	0.7xØ	0.061	0.070	0.076	0.085	0.081
200 HB										
250 HB										
H Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.25xØ	0.6xØ	0.026	0.029	0.032	0.036	0.034
50 HRC										
NF Al (>8%Si)	12	AlSi12	130 HB	0.25xØ	0.7xØ	0.064	0.074	0.080	0.090	0.085