

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

BALL NOSE, 2 FLUTE | LT 4000 - Ø 1 - 6, 8, 10, 12

Material Group	Lamina Gr. N°	Material Examples	Hardness	Profiling		Slotting		fz [mm/tooth]							
				ap	ae	ap	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	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	0.035	0.045	0.065	0.080	0.105	0.100	0.115	0.125	0.140
			190 HB												
			250 HB												
P Low Alloyed	2	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	1.5xØ	0.5xØ	1.0xØ	0.033	0.042	0.061	0.075	0.099	0.094	0.108	0.118	0.132
			230 HB												
			280 HB												
P High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	1.5xØ	0.5xØ	1.0xØ	0.028	0.036	0.051	0.063	0.083	0.079	0.091	0.099	0.111
			280 HB												
			320 HB												
M Austenitic	4	304, 316, X5CrNi18-9	180 HB	1.5xØ	0.5xØ	1.0xØ	0.023	0.029	0.042	0.052	0.068	0.065	0.075	0.081	0.091
			240 HB												
			290 HB												
M Duplex	5	X2CrNiN23-4, S31500	290 HB	1.5xØ	0.5xØ	1.0xØ	0.018	0.023	0.033	0.040	0.053	0.050	0.058	0.063	0.070
			310 HB												
			310 HB												
M Ferritic & Martensitic	6	410, X6Cr17, 17-4PH, 430	200 HB	1.5xØ	0.5xØ	1.0xØ	0.024	0.031	0.044	0.054	0.071	0.068	0.078	0.085	0.095
			42 HRC												
			150 HB												
K Grey	7	GG20, GG40, EN-GJL-250, N030B	200 HB	1.5xØ	0.5xØ	1.0xØ	0.039	0.050	0.072	0.088	0.116	0.110	0.127	0.138	0.154
			250 HB												
			250 HB												
K Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	1.5xØ	0.5xØ	1.0xØ	0.033	0.043	0.062	0.076	0.100	0.095	0.109	0.119	0.133
			200 HB												
			250 HB												
S Fe, Ni & Co based	9	Incoloy 800	240 HB	1.5xØ	0.3xØ	1.0xØ	0.022	0.029	0.042	0.051	0.067	0.064	0.074	0.080	0.090
		Inconel 700	250 HB												
		Stellite 21	350 HB												
S Ti based	10	T40	-	1.5xØ	0.5xØ	1.0xØ	0.019	0.025	0.036	0.044	0.058	0.055	0.063	0.069	0.077
		TiAl6V4	-												
		-	-												
H Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	1.5xØ	0.3xØ	0.2xØ	0.014	0.018	0.026	0.032	0.042	0.040	0.046	0.050	0.056
			50 HRC												
			55 HRC												
H Chilled Cast Iron	12	Ni-Hard 2	400 HB	1.5xØ	0.2xØ	0.1xØ	0.011	0.014	0.020	0.024	0.032	0.030	0.035	0.038	0.042
			400 HB												
			400 HB												
H White Cast Iron	13	G-X300CrMo15	55 HRC	1.5xØ	0.2xØ	0.1xØ	0.011	0.014	0.020	0.024	0.032	0.030	0.035	0.038	0.042
			55 HRC												
			55 HRC												
NF Aluminium	14	AlSi12	130 HB	1.5xØ	0.5xØ	1.0xØ	0.035	0.045	0.065	0.080	0.105	0.100	0.115	0.125	0.140

ROUGHER, 3 - 4 FLUTE | LT 4000 - Ø 4 - 6, 8, 10, 12

Material Group	Lamina Gr. N°	Material Examples	Hardness	Profiling		Slotting		fz [mm/tooth]					
				ap	ae	ap	Ø 4 (Z3)	Ø 5	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	0.024	0.030	0.040	0.055	0.065	0.077	
			190 HB										
			250 HB										
P Low Alloyed	2	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	1.5xØ	0.5xØ	1.0xØ	0.025	0.030	0.039	0.053	0.063	0.074	
			230 HB										
			280 HB										
P High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	1.5xØ	0.5xØ	1.0xØ	0.021	0.026	0.033	0.046	0.055	0.064	
			280 HB										
			320 HB										
M Austenitic	4	304, 316, X5CrNi18-9	180 HB	1.5xØ	0.5xØ	1.0xØ	0.017	0.022	0.028	0.038	0.045	0.053	
			240 HB										
			290 HB										
M Duplex	5	X2CrNiN23-4, S31500	290 HB	1.5xØ	0.5xØ	1.0xØ	0.013	0.017	0.021	0.029	0.035	0.040	
			310 HB										
			310 HB										
M Ferritic & Martensitic	6	410, X6Cr17, 17-4PH, 430	200 HB	1.5xØ	0.5xØ	1.0xØ	0.013	0.017	0.021	0.029	0.035	0.040	
			42 HRC										
			150 HB										
K Grey	7	GG20, GG40, EN-GJL-250, N030B	200 HB	1.5xØ	0.5xØ	1.0xØ	0.029	0.036	0.047	0.064	0.076	0.089	
			250 HB										
			250 HB										
K Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	1.5xØ	0.5xØ	1.0xØ	0.025	0.031	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	0.014	0.018	0.023	0.031	0.037	0.044	
		Inconel 700	250 HB										
		Stellite 21	350 HB										
S Ti based	10	T40	-	1.5xØ	0.5xØ	1.0xØ	0.015	0.018	0.023	0.032	0.038	0.045	
		TiAl6V4	-										
		-	-										
H Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	1.5xØ	0.3xØ	0.2xØ	0.011	0.013	0.017	0.023	0.028	0.032	
			50 HRC										
			55 HRC										
H Chilled Cast Iron	12	Ni-Hard 2	400 HB	1.5xØ	0.2xØ	0.1xØ	0.008	0.010	0.013	0.017	0.021	0.024	
			400 HB										
			400 HB										
H White Cast Iron	13	G-X300CrMo15	55 HRC	1.5xØ	0.2xØ	0.1xØ	0.008	0.010	0.013	0.017	0.021	0.024	
			55 HRC										
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NF Aluminium	14	AlSi12	130 HB	1.5xØ	0.5xØ	1.0xØ	0.027	0.033	0.042	0.058	0.069	0.081	