

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

90° 4 FLUTE, LONG | LT 4000 - Ø 1 - 5

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	
P Non Alloyed Low Alloyed High Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	1.5xØ	0.5xØ	1.0xØ	0.010	0.011	0.016	0.023	0.029	
			190 HB									
			250 HB									
	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	1.5xØ	0.5xØ	1.0xØ	0.008	0.010	0.014	0.020	0.025	
			230 HB									
			280 HB									
			350 HB									
	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	1.5xØ	0.5xØ	1.0xØ	0.007	0.008	0.011	0.016	0.020	
			280 HB									
320 HB												
350 HB												
M Austenitic Duplex Ferritic & Martensitic	4	304, 316, X5CrNi18-9	180 HB	1.5xØ	0.5xØ	1.0xØ	0.006	0.007	0.010	0.015	0.019	
			240 HB									
	5	X2CrNiN23-4, S31500	290 HB	1.5xØ	0.5xØ	1.0xØ	0.005	0.006	0.008	0.011	0.014	
			310 HB									
	6	410, X6Cr17, 17-4PH, 430	200 HB	1.5xØ	0.5xØ	1.0xØ	0.005	0.005	0.008	0.011	0.014	
			42 HRc									
K Grey Malleable & Nodular	7	GG20, GG40, EN-GJL-250, N030B	150 HB	1.5xØ	0.5xØ	1.0xØ	0.009	0.011	0.015	0.022	0.027	
			200 HB									
			250 HB									
	8	GGG40, GGG70, 50005	150 HB	1.5xØ	0.5xØ	1.0xØ	0.009	0.010	0.014	0.021	0.026	
200 HB												
250 HB												
S Fe, Ni & Co based Ti based	9	Incoloy 800 Inconel 700 Stellite 21	240 HB	1.5xØ	0.3xØ	1.0xØ	0.004	0.004	0.006	0.009	0.011	
			250 HB									
			350 HB									
	10	T40 TiAl6V4	-	1.5xØ	0.5xØ	1.0xØ	0.004	0.004	0.006	0.009	0.011	
-												
H Steel Chilled Cast Iron White Cast Iron	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	1.5xØ	0.3xØ	0.2xØ	0.003	0.004	0.006	0.008	0.010	
			50 HRc									
			55 HRc									
	12	Ni-Hard 2	400 HB	1.5xØ	0.2xØ	0.1xØ	0.003	0.003	0.005	0.007	0.009	
55 HRc												
13	G-X300CrMo15	55 HRc	1.5xØ	0.2xØ	0.1xØ	0.003	0.003	0.005	0.007	0.009		
NF Aluminium	14	AlSi12	130 HB	1.5xØ	0.5xØ	1.0xØ	0.010	0.011	0.016	0.023	0.029	

90° 4 FLUTE, LONG | LT 4000 - Ø 6, 8, 10, 12, 16

Material Group	Lamina Gr. N°	Material Examples	Hardness	Profiling		Slotting		fz [mm/tooth]				
				ap	ae	ap	Ø 6	Ø 8	Ø 10	Ø 12	Ø 16	
P Non Alloyed Low Alloyed High Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	1.5xØ	0.5xØ	1.0xØ	0.036	0.050	0.059	0.070	0.090	
			190 HB									
			250 HB									
	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	1.5xØ	0.5xØ	1.0xØ	0.032	0.044	0.053	0.062	0.088	
			230 HB									
			280 HB									
			350 HB									
	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	1.5xØ	0.5xØ	1.0xØ	0.026	0.035	0.042	0.049	0.069	
			280 HB									
320 HB												
350 HB												
M Austenitic Duplex Ferritic & Martensitic	4	304, 316, X5CrNi18-9	180 HB	1.5xØ	0.5xØ	1.0xØ	0.024	0.032	0.039	0.045	0.064	
			240 HB									
	5	X2CrNiN23-4, S31500	290 HB	1.5xØ	0.5xØ	1.0xØ	0.018	0.025	0.030	0.035	0.050	
			310 HB									
	6	410, X6Cr17, 17-4PH, 430	200 HB	1.5xØ	0.5xØ	1.0xØ	0.017	0.024	0.029	0.033	0.048	
			42 HRc									
K Grey Malleable & Nodular	7	GG20, GG40, EN-GJL-250, N030B	150 HB	1.5xØ	0.5xØ	1.0xØ	0.035	0.047	0.056	0.066	0.094	
			200 HB									
			250 HB									
	8	GGG40, GGG70, 50005	150 HB	1.5xØ	0.5xØ	1.0xØ	0.033	0.045	0.053	0.063	0.089	
200 HB												
250 HB												
S Fe, Ni & Co based Ti based	9	Incoloy 800 Inconel 700 Stellite 21	240 HB	1.5xØ	0.3xØ	1.0xØ	0.015	0.020	0.024	0.028	0.040	
			250 HB									
			350 HB									
	10	T40 TiAl6V4	-	1.5xØ	0.5xØ	1.0xØ	0.015	0.020	0.024	0.028	0.040	
-												
H Steel Chilled Cast Iron White Cast Iron	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	1.5xØ	0.3xØ	0.2xØ	0.013	0.017	0.021	0.024	0.035	
			50 HRc									
			55 HRc									
	12	Ni-Hard 2	400 HB	1.5xØ	0.2xØ	0.1xØ	0.011	0.015	0.018	0.021	0.030	
55 HRc												
13	G-X300CrMo15	55 HRc	1.5xØ	0.2xØ	0.1xØ	0.011	0.015	0.018	0.021	0.030		
NF Aluminium	14	AlSi12	130 HB	1.5xØ	0.5xØ	1.0xØ	0.036	0.050	0.059	0.070	0.099	