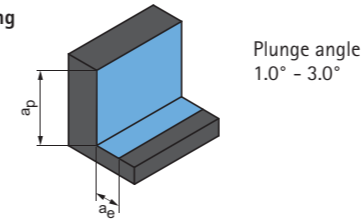


Cutting data recommendations for ball nose milling cutters

Feed and cutting speed

Roughing

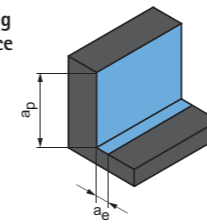


OptiMill-3D-BN-Graphite | MBN110, 111

MMG*	Workpiece material	Strength/hardness [N/mm ²] [HRC]	Cooling			a_p [mm]	a_e [mm]	v_c [m/min]	f_z [mm]																	
			Dry	Air/MQL	KSS				Diameter of milling cutter [mm]																	
									0.20	0.30	0.40	0.50	0.60	0.80	1.00	1.20	1.50	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	16.00
N N3	N3.1 Graphite, > 8 μm		✓	✓	✓	0.2xD	0.3xD	500-600	0.011	0.013	0.016	0.018	0.019	0.020	0.022	0.030	0.038	0.045	0.057	0.062	0.082	0.090	0.102	0.120	0.155	0.180
	N3.2 Graphite, \leq 8 μm		✓	✓	✓	0.2xD	0.3xD	400-500	0.011	0.013	0.016	0.018	0.019	0.020	0.022	0.030	0.038	0.045	0.057	0.062	0.082	0.090	0.102	0.120	0.155	0.180

Next table:
Finishing (3D, face milling)

Finishing (3D, face milling)



OptiMill-3D-BN-Graphite | MBN110, 111

MMG*	Workpiece material	Strength/hardness [N/mm ²] [HRC]	Cooling			a_p [mm]	a_e [mm]	v_c [m/min]	f_z [mm]																	
			Dry	Air/MQL	KSS				Diameter of milling cutter [mm]																	
									0.20	0.30	0.40	0.50	0.60	0.80	1.00	1.20	1.50	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	16.00
N N3	N3.1 Graphite, > 8 μm		✓	✓	✓	0.015xD	0.025xD	700-800	0.011	0.013	0.016	0.018	0.019	0.020	0.022	0.030	0.038	0.045	0.057	0.062	0.082	0.090	0.102	0.120	0.155	0.180
	N3.2 Graphite, \leq 8 μm		✓	✓	✓	0.015xD	0.025xD	600-700	0.011	0.013	0.016	0.018	0.019	0.020	0.022	0.030	0.038	0.045	0.057	0.062	0.082	0.090	0.102	0.120	0.155	0.180