

General Purpose Solid Carbide End Mills • Roughing/Finishing

Application Data • Series 4011 4021 • VariMill™ GP



■ Series 4011 4021 • TiAlN • VariMill GP

		Side Milling (A)		TiAlN		Recommended feed per tooth (fz = mm/th) for side milling (A).															
		A		Cutting Speed – vc m/min		D1 – Diameter															
Material Group	ap	ae	min	max	mm	2,0	3,0	4,0	5,0	6,0	8,0	10,0	12,0	14,0	16,0	18,0	20,0				
P	0	Ap1 max	0,1 x D	150	–	200	fz	0,014	0,021	0,028	0,036	0,044	0,060	0,072	0,083	0,092	0,101	0,108	0,114		
	1	Ap1 max	0,1 x D	150	–	200	fz	0,014	0,021	0,028	0,036	0,044	0,060	0,072	0,083	0,092	0,101	0,108	0,114		
	2	Ap1 max	0,1 x D	140	–	190	fz	0,014	0,021	0,028	0,036	0,044	0,060	0,072	0,083	0,092	0,101	0,108	0,114		
	3	Ap1 max	0,1 x D	120	–	160	fz	0,011	0,017	0,023	0,030	0,036	0,050	0,061	0,070	0,079	0,087	0,095	0,101		
	4	Ap1 max	0,1 x D	90	–	150	fz	0,010	0,016	0,021	0,027	0,033	0,045	0,054	0,062	0,070	0,077	0,083	0,088		
M	1	Ap1 max	0,1 x D	90	–	115	fz	0,011	0,017	0,023	0,030	0,036	0,050	0,061	0,070	0,079	0,087	0,095	0,101		
	2	Ap1 max	0,1 x D	60	–	80	fz	0,009	0,014	0,019	0,024	0,029	0,040	0,048	0,056	0,063	0,070	0,076	0,081		
K	1	Ap1 max	0,1 x D	120	–	150	fz	0,014	0,021	0,028	0,036	0,044	0,060	0,072	0,083	0,092	0,101	0,108	0,114		
	2	Ap1 max	0,1 x D	110	–	140	fz	0,011	0,017	0,023	0,030	0,036	0,050	0,061	0,070	0,079	0,087	0,095	0,101		

NOTE: Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.
Above parameters are based on ideal conditions. For smaller taper machining centres, please adjust parameters accordingly on >12mm diameters.

■ Series 4011 4021 • Uncoated • VariMill GP

		Side Milling (A)		uncoated		Recommended feed per tooth (fz = mm/th) for side milling (A).															
		A		Cutting Speed – vc m/min		D1 – Diameter															
Material Group	ap	ae	min	max	mm	2,0	3,0	4,0	6,0	8,0	10,0	12,0	16,0	20,0							
P	0	Ap1 max	0,1 x D	120	–	160	fz	0,014	0,021	0,028	0,044	0,060	0,072	0,083	0,101	0,114					
	1	Ap1 max	0,1 x D	120	–	160	fz	0,014	0,021	0,028	0,044	0,060	0,072	0,083	0,101	0,114					
	2	Ap1 max	0,1 x D	112	–	152	fz	0,014	0,021	0,028	0,044	0,060	0,072	0,083	0,101	0,114					

NOTE: Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.
Above parameters are based on ideal conditions. For smaller taper machining centres, please adjust parameters accordingly on >12mm diameters.

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