


* When ae is less than 25% DC, recommend use of Chip Thinning Calculator to ensure hmax is within fz range.

Materials				Full Slot 		Side Cut 		Coolant
ISO	Mat'l Group #VDI 3323	Type	Examples	Vc Cutting Speed SFM	fz* Feed/Tooth (inch)	Vc Cutting Speed SFM	fz* Feed/Tooth (inch)	
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	300-400	.001-.004	450-650	.002-.005	No
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	300-400		450-650		
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	250-350		400-600		
M	12 thru 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	200-450	.001-.004	250-550	.002-.005	Yes
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4					May not be required at high speeds
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	400-700	.001-.005	500-800	.002-.006	No
	17 thru 20	Nodular Cast Iron	60-40-18, 100-70-03					
N	21-30	Aluminum	7075, 6061	1000-2000	.002-.006	1000-3000	.002-.007	Yes
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	65-125	.001-.004	65-150	.002-.004	Yes
	36 thru 37	Titanium Alloys	6Al-4V, 5Al-5Mo-5V-3Cr					

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.