

Operating Guidelines

Series 12J1R, 12J1X, 12V1X, 12R1X, 22J3X, 22N3X, 12J1G, 12V1G, 12J1B, 12J4B, 12R1B, 12N1B, 12S1B, 22J5B, 22J3B, 22J3G, 22J3Q					Grades						Coolant
Material	Brinell Hardness	SFM	Feed per Insert	IN10K	IN20S/IN20B	IN210/IN210	IN1030	IN2030	IN2030	IN2015	
Aluminum	7075-T6, 6061-T6, 2024	-	1500-8000	.004-.010	1	3	2				Yes
Cast Iron	Gray		300-1000	.004-.010	3	1			2		No
	Nodular	150-250	300-600								
Steel	Low Carbon 1018-8620	100-250	400-1000	.004-.010	2	1	1*	3			No
	High Carbon F-6180	250-400	350-500	.004-.008							
	Alloyed Steel 4140, 4340	150-300	300-700	.004-.010							
	Tool Steel A-6, D-1, D-2	Up to 300									
Stainless Steel	300 Series, 304, 316	-	300-700	.004-.010	2	1	1*	3			May not be required at high speeds
	400 Series 15-5 PH	-	400-900								
	13-8 PH	-	200-400								
Nickel Alloys	Inconel 600, 706, 718, 803, Hastelloy, Waspalloy	-	75-120	.003-.006	2	3	1	1*			Yes
Titanium	6AL-4V	-	100-150	.005-.008	2		1	1			Yes

*Preferred for higher SFM.

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.