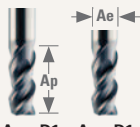










Hardness BRINELL	Series 33 Fractalal			Vc (SFM)	Diameter (inch)								
		Ap x D1	Ae x D1		RPM	1/8	1/4	3/8	1/2	5/8	3/4	1	
						Fz	Fz	Fz	Fz	Fz	Fz	Fz	
< 300	NICKEL, COBALT AND IRON BASED SUPERALLOYS Inconel 601, 617, 625, Incoly 800, Monel 400	Profile 	1.5	0.5	85	RPM	2384	1192	795	596	477	397	298
					(70-120)	Fz	0.00026	0.00068	0.00128	0.00170	0.00187	0.00204	0.00234
					Feed (IPM)	2	2	3	3	3	2	2	
		Slotting 	1	1	60	RPM	1925	963	642	481	385	321	241
					(50-100)	Fz	0.00026	0.00068	0.00128	0.00170	0.00187	0.00204	0.00234
					Feed (IPM)	2	2	2	2	2	2	2	
> 300	NICKEL, COBALT AND IRON BASED SUPERALLOYS (DIFFICULT) Inconel 718, 750X, Incoly 925, Waspaloy, Hastelloy, Rene	Profile 	1.5	0.5	60	RPM	1895	947	632	474	379	316	237
					(45-75)	Fz	0.00018	0.00048	0.00089	0.00119	0.00131	0.00143	0.00167
					Feed (IPM)	1	1	2	2	1	1	1	
		Slotting 	1	1	40	RPM	1497	749	499	374	299	250	187
					(20-60)	Fz	0.00018	0.00048	0.00089	0.00119	0.00131	0.00143	0.00167
					Feed (IPM)	1	1	1	1	1	1	1	
< 350	TITANIUM BASE ALLOY Pure Titanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si	Profile 	1.5	0.5	275	RPM	6570	3285	2190	1643	1314	1095	821
					(200-350)	Fz	0.00030	0.00080	0.00150	0.00200	0.00220	0.00240	0.00281
					Feed (IPM)	6	8	10	10	9	8	7	
		Slotting 	1	1	150	RPM	5195	2598	1732	1299	1039	866	649
					(100-250)	Fz	0.00030	0.00080	0.00150	0.00200	0.00220	0.00240	0.00281
					Feed (IPM)	5	6	8	8	7	6	5	
< 450	TITANIUM BASE ALLOY (DIFFICULT) Ti10Al2Fe3Al, Ti5Al5V5Mo3Cr, Ti7Al4Mo, Ti3Al8V6Cr4Zr4Mo, Ti6Al6V6Sn, Ti15V3 Cr3Sn3Al	Profile 	1.5	0.5	180	RPM	2445	1222	815	611	489	407	306
					(140-220)	Fz	0.00030	0.00080	0.00120	0.00180	0.00210	0.00240	0.00280
					Feed (IPM)	2	3	3	3	3	3	3	
		Slotting 	1	1	100	RPM	1834	917	611	458	367	306	229
					(80-140)	Fz	0.00030	0.00080	0.00120	0.00180	0.00210	0.00240	0.00280
					Feed (IPM)	2	2	2	2	2	2	2	

* Maximum recommended depth shown

* For High Speed Machining with a Radial Width of Cut 5%-7% of D1 please refer for the SGS Website Calculators and Tool Wizard to compensate for chip thinning in the Feed Rate parameters

* Finish cuts typically require reduced Feed; also the Radial Width of Cut recommended is not more than 2% x D1

* Reduce Speed & Feed for material harder than listed

* Above recommendations are based on ideal conditions; For smaller taper machining centers or less rigid conditions please adjust parameters accordingly on diameters greater than 1/2"