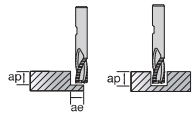
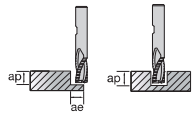
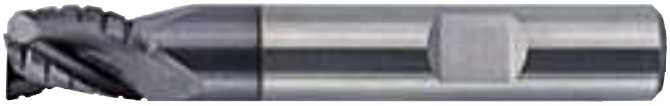
SFRHEC

Coarse Pitch		Reduce speed by 20% for slotting applications							
	Application			Vc K600	Recommended fz- Feed Per Tooth (Inch/th) for side cutting operations. For slotting operations, reduce fz by 20%.					
	Side Milling		Slotting		D1- Diameter (Inch)					
Material	ap	ae	ap	SFM	1/4"	3/8"	1/2"	5/8"	3/4"	1"
N1	1.5XD	0.5XD	1XD	600~1800	.0015	.0025	.0030	.0040	.0045	.0060

These guidelines may require variations to achieve optimum results.

HPRSS

Chipbreaker Pitch		Reduce speed by 20% for slotting applications							
	Application			Vc K600	Recommended fz- Feed Per Tooth (Inch/th) for side cutting operations. For slotting operations, reduce fz by 20%.					
	Side Milling		Slotting		D1- Diameter (Inch)					
Group	ap	ae	ap	SFM	1/4"	3/8"	1/2"	5/8"	3/4"	1"
P2	1XD	0.5XD	1XD	400~500	.0013	.0020	.0030	.0035	.0040	.0045
M1	1XD	0.5XD	1XD	350~450	.0012	.0016	.0024	.0030	.0035	.0040
M2	1XD	0.5XD	1XD	250~325	.0008	.0016	.0024	.0030	.0035	.0040
S3	1XD	0.5XD	1XD	65~95	.0006	.0008	.0012	.0015	.0020	.0024

These guidelines may require variations to achieve optimum results.

Group	Material	Description	
P2	Medium and high carbon steels > 0.3% C	AISI:	1008, 1010, 1020, 1026, 1035, 1040, 1045, 1080, 1525, 1541, 1551, 1561, 1572
P3	Alloy steels and tool steels <330HB, <35HRC	AISI:	1300, 2000, 3000, 4000, 5000, 6000, 7000, and 8000 series steels.
		Tool Steels:	SAE classes M and T hot and cold work SAE classes: A, D, H, O, and S; Wrought high carbon/low alloy W1, W2, L2, P1, P6, and P20
P4	Alloy steels and tool steels 340-450HB, 36-48HRC	AISI:	1300, 2000, 3000, 4000, 5000, 6000, 7000, and 8000 series steels.
		Tool Steels:	SAE classes M and T hot and cold work SAE classes: A, D, H, O, and S; Wrought high carbon/low alloy W1, W2, L2, P1, P6, and P20
P5	Ferritic, martensitic and PH stainless steels <330HB, <35HRC	AISI:	410, 416, 416F, 416 Se, 420F, 15-5 PH, 17-4 PH, 13-8 PH
P6	Ferritic, martensitic and PH stainless steels >330HB, >35HRC	AISI:	410, 416, 416F, 416 Se, 420F, 15-5 PH, 17-4 PH, 13-8 PH
M1	Austenitic stainless steel	AISI:	200, 201, 202, 209, 219, 301, 302, 303, 304, 304L, 305
M2	Austenitic stainless steel	AISI:	310, 314, 316, 316L, 317, 321, 347, 384, ASTM: XM-1, XM-5 XM-7, XM-21, CF-8M
M3	Austenitic stainless steel: Duplex (ferritic and austenitic mixture)	AISI:	323, 329, F55, 2205, S329000
K1	Grey cast iron (GG)	ASTM A48:	Class 20, 25, 30, 35, 40, 45, 50, 55, 60, SAE J431: grade G1800, G3000, G3500
		SAE J431:	grade G1800, G3000, G3500
K2	Ductile, CGI, and malleable cast iron <80KSI	SAE J431:	60-40-18, 65-45-12
		SAE J434:	D4018, D4512, D5506
		ASTM A47:	grade 32510, 35018
		SAE J58:	grade M3210, M4504, M5503
		ASTM A842:	grade 250, 300, 350, 400, 450
N1	Aluminum alloys <12.2% Si	Low silicon aluminum, 6061-T6, 7075-T6	
N2	Aluminum alloys >12.2% Si	High silicon aluminum, 6061-T6, 7075-T6	
S1	Iron-based heat-resistant alloys	Wrought:	A-286, Discaloy, Incoloy 801, N-155, 16-25-6, 19-9 DL
		Cast:	ASTM A297, A351, A608, A567
S2	Cobalt-based heat-resistant alloys	Wrought:	AiResist 213, Haynes 25 (L605), Haynes 188, J-1570, Stellite
		Cast:	AiResist 13, Haynes 21, MAR-M302, MAR-M509, NASA Co-W-Re, WI-52
S3	Nickel-based heat-resistant alloys	Astroloy, Hastelloy C/C/C-276/X, Inconel 6061/617-625/700/706/718	
		IN102, Incoloy 901, Mar-M200, Nimonic, Rene 41, Udimet, Waspaloy, Monel	
S4	Alpha-Beta titanium alloys	Pure: Ti98.9, Ti99.9 Alloyed Ti-5Al-2.5Sn, Ti-6Al-4V, Ti-6Al-2SN-4Zr-2Mo, Ti-3Al-8V-6Cr-4Mo-4Zr, Ti-10V-2Fe-3Al, Ti-13V-11Cr-3Al	
H1	Hardened steels <48HRC	Tool steels: H10, H11, H13, D2, D3, Alloy steels AISI: 1335, 4140, 4150, 4320, 4340, Die steels P20, P21	
H2	Hardened steels 48~55HRC	Tool steels: H10, H11, H13, Alloy steels AISI: 1335, 4140, 4150, 4320, 4340, Die steels P20, P21	
H3	Hardened steels 56~60HRC	Tool steels: H10, H11, H13, Alloy steels AISI: 1335, 4140, 4150, 4320, 4340, Die steels P20, P21	
H4	Hardened steels >60HRC	Tool steels: H10, H11, H13, Alloy steels AISI: 1335, 4140, 4150, 4320, 4340, Die steels P20, P21	

See page 516 for complete material listing.