

RUSHMORE USA SOLID CARBIDE 3 FLUTE 37° HELIX ZrN COATED END MILLS FOR ALUMINUM

STARTING RECOMMENDED SPEEDS/FEEDS

Tool Size		1/8"			1/4"		3/8"		1/2"		5/8"		3/4"		1"	
Highest RPM RANGE		.002"CPT			.004"CPT		.0065"CPT		.008"CPT		.010"CPT		.012"CPT		.015"CPT	
RPM		SFM	IPM	SFM	IPM	SFM	IPM	SFM	IPM	SFM	IPM	SFM	IPM	SFM	IPM	
Radial Slotting	4,000	130	24	260	48	400	79	525	96	660	121	800	147	1050	180	
	2,900	95	17	191	33	284	56	380	67	476	85	571	103	760	126	
	6,000	200	37	390	72	590	117	790	145	990	182	1175	215	1550	266	
	4,280	141	26	282	50	419	82	561	101	702	127	843	151	1121	187	
	8,000	260	48	525	96	790	157	1050	193	1300	238	1580	290	2100	361	
	5,560	183	33	367	67	545	110	728	135	912	167	1095	203	1457	253	
	10,000	328	60	650	119	975	194	1310	240	1650	303	1950	358	2500	430	
	7,000	231	42	469	83	686	136	917	168	1148	212	1379	250	1834	301	
	12,000	400	73	790	145	1180	234	1570	288	1950	358	2375	435	3150	541	
	8,550	282	51	573	101	838	164	1120	202	1402	250	1684	305	2240	379	
	15,000	490	90	985	181	1470	292	1950	358	2455	450	2950	541	3900	670	
	10,500	347	63	704	126	103	204	1376	250	1722	315	2069	379	2751	469	
	18,000	590	108	1175	215	1775	353	2358	431	2950	541	3550	651	4700	808	
	12,600	416	76	844	151	1234	247	1651	302	2066	379	2482	456	3301	566	

Legend:

CPT:	Chip per tooth
SFM:	Surface feet per minute
IPM:	Inches per minute
DOC:	Depth of cut
FPT:	Feed per Turn

Formulas:

SFM=	.262 x Dia. X RPM
RPM=	3.82 x SFM/DIA.
IPM=	FPT x No. Teeth X RPM
FPT=	IPM/ (No. Teeth x RPM)
IPR=	IPM/RPM

RADIAL: 30% CUTTER DIAMETER (Full DOC)

SLOTING DEPTH: 1 X CUTTER DIA.

Example: 1/2" cutter with .150" Radial engagement (30% of 1/2")
 at 4,000 RPM & 96 IPM, tool will have .008" CPT
 at 18,000 RPM & 431 IPM, tool will have .008" CPT