



# X-POWER PRO END MILLS

## RECOMMENDED CUTTING CONDITIONS

### GM156 SERIES

### 3-5FLUTE Roughing - Side Cutting

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)							
						1/4	5/16	3/8	1/2	5/8	3/4	1	
P	1-4	Non-alloy steel	0.3D	1.5D	SFM(Vc)	1070	995	950	1100	1030	1070	1320	
					IPT(fz)	.0020	.0026	.0033	.0030	.0039	.0044	.0035	
					RPM	16350	12160	9680	8400	6300	5450	5040	
	5	Non-alloy steel	0.3D	1.5D	SFM(Vc)	850	790	785	825	825	905	990	
					IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012	
					RPM	12990	9660	8000	6300	5040	4610	3780	
	6-7	Low alloy steel	0.3D	1.5D	SFM(Vc)	1070	995	950	1100	1030	1070	1320	
					IPT(fz)	.0020	.0026	.0033	.0030	.0039	.0044	.0035	
					RPM	16350	12160	9680	8400	6300	5450	5040	
	8-9	Low alloy steel	0.3D	1.5D	SFM(Vc)	850	790	785	825	825	905	990	
					IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012	
					RPM	12990	9660	8000	6300	5040	4610	3780	
10	High alloyed steel, and tool steel	0.3D	1.5D	SFM(Vc)	1070	995	950	1100	1030	1070	1320		
				IPT(fz)	.0020	.0026	.0033	.0030	.0039	.0044	.0035		
				RPM	16350	12160	9680	8400	6300	5450	5040		
11.1	High alloyed steel, and tool steel	0.3D	1.5D	SFM(Vc)	850	790	785	825	825	905	990		
				IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012		
				RPM	12990	9660	8000	6300	5040	4610	3780		
11.2	High alloyed steel, and tool steel	0.3D	1.5D	SFM(Vc)	575	540	525	575	570	560	660		
				IPT(fz)	.0009	.0012	.0015	.0013	.0015	.0015	.0012		
				RPM	8790	6600	5350	4390	3480	2850	2520		
K	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	235	205	205	230	205	230	275	
					IPT(fz)	.0010	.0013	.0019	.0015	.0013	.0013	.0012	
					RPM	3590	2510	2090	1760	1250	1170	1050	
	40	Chilled Cast Iron	0.3D	1.5D	SFM(Vc)	575	540	525	575	570	560	660	
					IPT(fz)	.0009	.0012	.0015	.0013	.0015	.0015	.0012	
					RPM	8790	6600	5350	4390	3480	2850	2520	
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	235	205	205	230	205	230	275	
					IPT(fz)	.0010	.0013	.0019	.0015	.0013	.0013	.0012	
					RPM	3590	2510	2090	1760	1250	1170	1050	
	IPM(FEED)						11	10	12	11	7	6	6
	IPM(FEED)						24	24	24	24	21	17	15
	IPM(FEED)						11	10	12	11	7	6	6

SFM = Surface Feet per Minute  
 RPM = Revolutions Per Minute  
 IPT = Inches Per Tooth  
 IPM = Inches Per Minute  
 Ap : Inch (Axial Depth of Cut)  
 Ae : Inch (Radial Depth of Cut)