X-POWER PRO END MILLS

RECOMMENDED CUTTING CONDITIONS

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)

GM812 SERIES — 6&8 FLUTE - SIDE CUTTING

NORMAL SPEED

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0
P	1-4	Non-alloy steel	0.1D	1.5D	SFM(Vc)	345	360	360	360	360	345
					IPT(fz)	.0024	.0031	.0039	.0039	.0039	.0029
					RPM	5580	4370	3490	2910	2180	1670
					IPM(FEED)	79	82	82	68	52	40
	5		0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
	6-7	Low alloy steel	0.1D	1.5D	SFM(Vc)	345	360	360	360	360	345
					IPT(fz)	.0024	.0031	.0039	.0039	.0039	.0029
					RPM	5580	4370	3490	2910	2180	1670
					IPM(FEED)	79	82	82	68	52	40
	8-9		0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM(Vc)	345	360	360	360	360	345
					IPT(fz)	.0024	.0031	.0039	.0039	.0039	.0029
					RPM	5580	4370	3490	2910	2180	1670
					IPM(FEED)	79	82	82	68	52	40
	11.1 - 11.2		0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
H	38.1	Hardened steel	0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
	38.2		0.05D	1.0D	SFM(Vc)	100	100	100	100	115	100
					IPT(fz)	.0009	.0012	.0014	.0014	.0014	.0011
					RPM	1620	1210	970	810	700	490
					IPM(FEED)	8	9	8	7	6	4
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	100	100	100	100	115	100
					IPT(fz)	.0009	.0012	.0014	.0014	.0014	.0011
					RPM	1620	1210	970	810	700	490
					IPM(FEED)	8	9	8	7	6	4

HIGH SPEED

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0
P	1-5	Non-alloy steel	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
	6-9	Low alloy steel	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
	10 - 11.2	High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
H	38.1	Hardened steel	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
	38.2		0.05D	1.0D	SFM(Vc)	525	525	525	525	525	525
					IPT(fz)	.0024	.0032	.0040	.0039	.0039	.0029
					RPM	8490	6370	5090	4250	3180	2550
					IPM(FEED)	120	122	122	100	75	59
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	525	525	525	525	525	525
					IPT(fz)	.0024	.0032	.0040	.0039	.0039	.0029
					RPM	8490	6370	5090	4250	3180	2550
					IPM(FEED)	120	122	122	100	75	59