X5070 END MILLS

RECOMMENDED CUTTING CONDITIONS

G8A59 SERIES — 3 FLUTE BALL NOSE

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 3	4	5	6	8	10	12	16	20
P	5	Non-alloy steel	32	0.05D	0.02D	SFM (vc)	990	995	1030	1115	1115	1115	1120	1105	1115
						IPT (fz)	.0035	.0042	.0048	.0062	.0071	.0079	.0088	.0090	.0088
						RPM	32000	24080	20000	18000	13500	10800	9050	6700	5400
						IPM (feed)	339	303	285	337	289	257	240	181	142
	8-9	Low alloy steel	32-38	0.05D	0.02D	SFM (vc)	990	995	1030	1115	1115	1115	1120	1105	1115
						IPT (fz)	.0035	.0042	.0048	.0062	.0071	.0079	.0088	.0090	.0088
						RPM	32000	24080	20000	18000	13500	10800	9050	6700	5400
						IPM (feed)	339	303	285	337	289	257	240	181	142
	11.1 - 11.2	High alloyed steel, and tool steel	35-44	0.05D	0.02D	SFM (vc)	990	995	1030	1115	1115	1115	1120	1105	1115
						IPT (fz)	.0035	.0042	.0048	.0062	.0071	.0079	.0088	.0090	.0088
						RPM	32000	24080	20000	18000	13500	10800	9050	6700	5400
						IPM (feed)	339	303	285	337	289	257	240	181	142
H	38.1 - 38.2	Hardened steel	45-49 50-55	0.05D	0.02D	SFM (vc)	830	830	865	940	930	940	940	940	940
						IPT (fz)	.0028	.0035	.0043	.0054	.0061	.0066	.0074	.0075	.0075
						RPM	26840	20130	16780	15200	11300	9100	7590	5690	4550
						IPM (feed)	228	214	214	245	207	181	168	128	103
	39.1		56-60	0.05D	0.02D	SFM (vc)	615	615	640	755	760	760	760	760	755
						IPT (fz)	.0028	.0034	.0039	.0048	.0057	.0062	.0069	.0071	.0071
						RPM	19840	14880	12400	12200	9200	7350	6130	4600	3670
						IPM (feed)	169	153	145	177	157	136	126	98	78
	39.2		61-65	0.05D	0.02D	SFM (vc)	580	585	600	685	685	685	685	685	680
						IPT (fz)	.0028	.0034	.0039	.0045	.0053	.0057	.0057	.0057	.0058
						RPM	18680	14220	11670	11100	8320	6660	5530	4160	3300
						IPM (feed)	159	144	137	151	132	113	95	71	57
	39.3		66-70	0.05D	0.02D	SFM (vc)	395	395	410	470	470	470	470	470	470
						IPT (fz)	.0028	.0034	.0039	.0043	.0049	.0056	.0057	.0056	.0057
						RPM	12780	9580	8000	7590	5690	4550	3800	2850	2280
						IPM (feed)	109	98	93	97	84	77	65	48	39
	40	Chilled Cast Iron	42	0.05D	0.02D	SFM (vc)	990	995	1030	1115	1115	1115	1120	1105	1115
						IPT (fz)	.0035	.0042	.0048	.0062	.0071	.0079	.0088	.0090	.0088
						RPM	32000	24080	20000	18000	13500	10800	9050	6700	5400
						IPM (feed)	339	303	285	337	289	257	240	181	142
	41	Hardened Cast Iron	55	0.05D	0.02D	SFM (vc)	830	830	865	940	930	940	940	940	940
						IPT (fz)	.0028	.0035	.0043	.0054	.0061	.0066	.0074	.0075	.0075
						RPM	26840	20130	16780	15200	11300	9100	7590	5690	4550
						IPM (feed)	228	214	214	245	207	181	168	128	103

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)