X5070 END MILLS

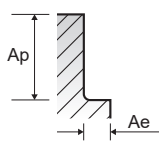
RECOMMENDED CUTTING CONDITIONS

G859, G854 SERIES — 4 FLUTE CORNER RADIUS - SIDE CUTTING

HIGH SPEED

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 2	3	4	5	6	8	10	12	16
P	5	Non-alloy steel	32	0.3D	0.1R	SFM (vc)	600	680	700	775	835	825	825	815	825
						IPT (fz)	.0051	.0072	.0101	.0118	.0135	.0182	.0228	.0276	.0364
						RPM	29000	22000	17000	15000	13500	10000	8000	6600	5000
						IPM (feed)	591	630	689	709	728	728	728	728	728
	8-9	Low alloy steel	32-38	0.3D	0.1R	SFM (vc)	600	680	700	775	835	825	825	815	825
						IPT (fz)	.0051	.0072	.0101	.0118	.0135	.0182	.0228	.0276	.0364
						RPM	29000	22000	17000	15000	13500	10000	8000	6600	5000
						IPM (feed)	591	630	689	709	728	728	728	728	728
	11.1	High alloyed steel, and tool steel	35	0.3D	0.1R	SFM (vc)	600	680	700	775	835	825	825	815	825
						IPT (fz)	.0051	.0072	.0101	.0118	.0135	.0182	.0228	.0276	.0364
						RPM	29000	22000	17000	15000	13500	10000	8000	6600	5000
						IPM (feed)	591	630	689	709	728	728	728	728	728
	11.2		44	0.3D	0.1R	SFM (vc)	455	525	535	565	650	660	660	655	645
						IPT (fz)	.0044	.0058	.0091	.0044	.0129	.0172	.0215	.0260	.0353
						RPM	22000	17000	13000	11000	10500	8000	6400	5300	3900
						IPM (feed)	386	394	472	192	543	551	551	551	551
H	38.1	Hardened steel	45-49	0.3D	0.1R	SFM (vc)	455	525	535	565	650	660	660	655	645
						IPT (fz)	.0044	.0058	.0091	.0044	.0129	.0172	.0215	.0260	.0353
						RPM	22000	17000	13000	11000	10500	8000	6400	5300	3900
						IPM (feed)	386	394	472	192	543	551	551	551	551
	38.2		50-55	0.3D	0.1R	SFM (vc)	310	385	455	515	555	560	555	555	545
						IPT (fz)	.0052	.0063	.0082	.0099	.0120	.0159	.0200	.0241	.0328
						RPM	15000	12500	11000	10000	9000	6800	5400	4500	3300
						IPM (feed)	309	315	362	394	433	433	433	433	433
	39.1		56-60	0.3D	0.05R	SFM (vc)	225	295	330	360	395	395	390	395	395
						IPT (fz)	.0040	.0048	.0068	.0084	.0098	.0138	.0176	.0216	.0288
						RPM	11000	9500	8000	7000	6400	4800	3800	3200	2400
						IPM (feed)	175	181	217	236	252	264	268	276	276
	39.2		61-65	0.3D	0.05R	SFM (vc)	180	215	230	255	280	280	280	280	270
						IPT (fz)	.0028	.0036	.0051	.0062	.0079	.0118	.0139	.0158	.0197
						RPM	8700	6900	5600	4900	4500	3400	2700	2250	1650
						IPM (feed)	97	98	114	122	142	161	150	142	130
	40	Chilled Cast Iron	42	0.3D	0.1R	SFM (vc)	455	525	535	565	650	660	660	655	645
						IPT (fz)	.0044	.0058	.0091	.0044	.0129	.0172	.0215	.0260	.0353
						RPM	22000	17000	13000	11000	10500	8000	6400	5300	3900
						IPM (feed)	386	394	472	192	543	551	551	551	551
	41	Hardened Cast Iron	55	0.3D	0.1R	SFM (vc)	310	385	455	515	555	560	555	555	545
						IPT (fz)	.0052	.0063	.0082	.0099	.0120	.0159	.0200	.0241	.0328
						RPM	15000	12500	11000	10000	9000	6800	5400	4500	3300
						IPM (feed)	309	315	362	394	433	433	433	433	433

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)



YG X5070 END MILLS

RECOMMENDED CUTTING CONDITIONS

G859, G854 SERIES — 4 FLUTE CORNER RADIUS - SIDE CUTTING

NORMAL SPEED

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 2	3	4	5	6	8	10	12	16
P	5	Non-alloy steel	32	0.5D	0.2R	SFM (vc)	280	295	330	335	360	360	360	360	365
						IPT (fz)	.0047	.0067	.0087	.0110	.0130	.0173	.0215	.0259	.0342
						RPM	13500	9550	7950	6500	5800	4350	3500	2900	2200
						IPM (feed)	256	256	276	287	301	301	301	301	301
	8-9	Low alloy steel	32-38	0.5D	0.2R	SFM (vc)	280	295	330	335	360	360	360	360	365
						IPT (fz)	.0047	.0067	.0087	.0110	.0130	.0173	.0215	.0259	.0342
						RPM	13500	9550	7950	6500	5800	4350	3500	2900	2200
						IPM (feed)	256	256	276	287	301	301	301	301	301
	11.1	High alloyed steel, and tool steel	35	0.5D	0.2R	SFM (vc)	280	295	330	335	360	360	360	360	365
						IPT (fz)	.0047	.0067	.0087	.0110	.0130	.0173	.0215	.0259	.0342
						RPM	13500	9550	7950	6500	5800	4350	3500	2900	2200
						IPM (feed)	256	256	276	287	301	301	301	301	301
	11.2		44	0.5D	0.2R	SFM (vc)	195	215	235	245	255	250	255	255	255
						IPT (fz)	.0039	.0059	.0079	.0098	.0118	.0158	.0197	.0235	.0311
						RPM	9550	6900	5750	4800	4100	3050	2450	2050	1550
						IPM (feed)	150	163	181	189	193	193	193	193	193
H	38.1	Hardened steel	45-49	0.5D	0.2R	SFM (vc)	195	215	235	245	255	250	255	255	255
						IPT (fz)	.0039	.0059	.0079	.0098	.0118	.0158	.0197	.0235	.0311
						RPM	9550	6900	5750	4800	4100	3050	2450	2050	1550
						IPM (feed)	150	163	181	189	193	193	193	193	193
	38.2		50-55	0.5D	0.2R	SFM (vc)	115	140	165	175	180	180	180	180	180
						IPT (fz)	.0040	.0059	.0079	.0093	.0119	.0157	.0197	.0238	.0314
						RPM	5500	4550	4000	3400	2900	2200	1750	1450	1100
						IPM (feed)	87	108	126	126	138	138	138	138	138
	39.1		56-60	0.5D	0.1R	SFM (vc)	65	90	105	115	115	115	115	115	115
						IPT (fz)	.0030	.0039	.0052	.0072	.0099	.0130	.0166	.0197	.0261
						RPM	3200	2850	2550	2200	1850	1400	1100	925	700
						IPM (feed)	39	45	53	63	73	73	73	73	73
	39.2		61-65	0.5D	0.1R	SFM (vc)	45	60	70	75	85	80	80	80	80
						IPT (fz)	.0025	.0032	.0040	.0047	.0057	.0078	.0097	.0117	.0155
						RPM	2200	1900	1750	1500	1350	995	795	665	500
						IPM (feed)	22	24	28	28	31	31	31	31	31
	40	Chilled Cast Iron	42	0.5D	0.2R	SFM (vc)	195	215	235	245	255	250	255	255	255
						IPT (fz)	.0039	.0059	.0079	.0098	.0118	.0158	.0197	.0235	.0311
						RPM	9550	6900	5750	4800	4100	3050	2450	2050	1550
						IPM (feed)	150	163	181	189	193	193	193	193	193
	41	Hardened Cast Iron	55	0.5D	0.2R	SFM (vc)	115	140	165	175	180	180	180	180	180
						IPT (fz)	.0040	.0059	.0079	.0093	.0119	.0157	.0197	.0238	.0314
						RPM	5500	4550	4000	3400	2900	2200	1750	1450	1100
						IPM (feed)	87	108	126	126	138	138	138	138	138

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)