4G MILL END MILLS

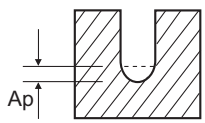
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
			LBS	1.5	2	2.5	3	4	5	6	8	10	1	1.5	2	2.5	3	4	5	6
P	1-8	Non-alloy steel	SFM(Vc)	170	170	150	150	150	135	135	100	50	175	175	175	175	160	160	160	140
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	41000	41000	36900	36900	36900	32800	32800	24600	12300	34200	34200	34200	34200	30780	30780	30780	27360
			IPM(FEED)	19	19	16	16	16	12	12	8	4	27	27	27	27	22	22	22	17
			Ap	.0010	.0010	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0018	.0018	.0013	.0013	.0007	.0007	.0004	.0004
	9	Low alloy steel	SFM(Vc)	160	160	145	145	145	130	130	95	50	165	165	165	165	150	150	150	135
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	38800	38800	34920	34920	34920	31040	31040	23280	11640	32300	32300	32300	32300	29070	29070	29070	25840
			IPM(FEED)	17	17	14	14	14	11	11	7	3	23	23	23	23	19	19	19	15
			Ap	.0008	.0008	.0004	.0004	.0003	.0003	.0002	.0001	.0001	.0014	.0014	.0010	.0010	.0006	.0006	.0004	.0004
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	170	170	150	150	150	135	135	100	50	175	175	175	175	160	160	160	140
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	41000	41000	36900	36900	36900	32800	32800	24600	12300	34200	34200	34200	34200	30780	30780	30780	27360
			IPM(FEED)	19	19	16	16	16	12	12	8	4	27	27	27	27	22	22	22	17
			Ap	.0010	.0010	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0018	.0018	.0013	.0013	.0007	.0007	.0004	.0004
	11.2		SFM(Vc)	160	160	145	145	145	130	130	95	50	165	165	165	165	150	150	150	135
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	38800	38800	34920	34920	34920	31040	31040	23280	11640	32300	32300	32300	32300	29070	29070	29070	25840
			IPM(FEED)	17	17	14	14	14	11	11	7	3	23	23	23	23	19	19	19	15
			Ap	.0008	.0008	.0004	.0004	.0003	.0003	.0002	.0001	.0001	.0014	.0014	.0010	.0010	.0006	.0006	.0004	.0004
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	170	170	150	150	150	135	135	100	50	175	175	175	175	160	160	160	140
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	41000	41000	36900	36900	36900	32800	32800	24600	12300	34200	34200	34200	34200	30780	30780	30780	27360
			IPM(FEED)	19	19	16	16	16	12	12	8	4	27	27	27	27	22	22	22	17
			Ap	.0010	.0010	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0018	.0018	.0013	.0013	.0007	.0007	.0004	.0004
H	38.1-38.2	Hardened steel	SFM(Vc)	140	140	125	125	125	115	115	85	40	145	145	145	145	130	130	130	115
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	34200	34200	30780	30780	30780	27360	27360	20520	10260	28500	28500	28500	28500	25650	25650	25650	22800
			IPM(FEED)	13.4	13.4	10.8	10.8	10.8	8.7	8.7	5.7	2.4	20.3	20.3	20.3	20.3	16.3	16.3	16.3	13.0
			Ap	.0006	.0006	.0003	.0003	.0002	.0002	.0001	.0001	.0001	.0010	.0010	.0007	.0007	.0004	.0004	.0002	.0002
	40	Chilled Cast Iron	SFM(Vc)	160	160	145	145	145	130	130	95	50	165	165	165	165	150	150	150	135
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	38800	38800	34920	34920	34920	31040	31040	23280	11640	32300	32300	32300	32300	29070	29070	29070	25840
			IPM(FEED)	17	17	14	14	14	11	11	7	3	23	23	23	23	19	19	19	15
			Ap	.0008	.0008	.0004	.0004	.0003	.0003	.0002	.0001	.0001	.0014	.0014	.0010	.0010	.0006	.0006	.0004	.0004
	41	Hardened Cast Iron	SFM(Vc)	140	140	125	125	125	115	115	85	40	145	145	145	145	130	130	130	115
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	34200	34200	30780	30780	30780	27360	27360	20520	10260	28500	28500	28500	28500	25650	25650	25650	22800
			IPM(FEED)	13.4	13.4	10.8	10.8	10.8	8.7	8.7	5.7	2.4	20.3	20.3	20.3	20.3	16.3	16.3	16.3	13.0
			Ap	.0006	.0006	.0003	.0003	.0002	.0002	.0001	.0001	.0001	.0010	.0010	.0007	.0007	.0004	.0004	.0002	.0002

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

(Depth of Cut per one pass)



4G MILL END MILLS

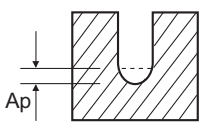
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
		LBS	8	10	12	14	16	1	2	3	4	5	6	8	10	12	14	16	2	4	6	8
P	1-8	SFM(Vc)	105	105	55	55	20	210	210	210	190	190	190	170	125	125	65	65	245	220	220	195
		IPT(fz)	.0003	.0003	.0002	.0002	.0002	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005
		RPM	20520	20520	10260	10260	3420	34200	34200	34200	30780	30780	30780	27360	20520	20520	10260	10260	34200	30780	30780	27360
		IPM(FEED)	11	11	5	5	1	40	40	40	33	33	33	26	17	17	7	7	44	36	36	29
		Ap	.0003	.0002	.0002	.0002	.0002	.0015	.0015	.0015	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0002	.0025	.0010	.0006	.0006
	9	SFM(Vc)	100	100	50	50	15	200	200	200	180	180	180	160	120	120	60	60	235	210	210	185
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0005
		RPM	19380	19380	9690	9690	3230	32300	32300	32300	29070	29070	29070	25840	19380	19380	9690	9690	32300	29070	29070	25840
		IPM(FEED)	10	10	4	4	1	33	33	33	27	27	27	21	14	14	6	6	37	30	30	23
		Ap	.0002	.0002	.0002	.0002	.0002	.0011	.0011	.0011	.0007	.0004	.0004	.0002	.0002	.0002	.0002	.0002	.0019	.0008	.0005	.0005
	10-11.1	SFM(Vc)	105	105	55	55	20	210	210	210	190	190	190	170	125	125	65	65	245	220	220	195
		IPT(fz)	.0003	.0003	.0002	.0002	.0002	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005
		RPM	20520	20520	10260	10260	3420	34200	34200	34200	30780	30780	30780	27360	20520	20520	10260	10260	34200	30780	30780	27360
		IPM(FEED)	11	11	5	5	1	40	40	40	33	33	33	26	17	17	7	7	44	36	36	29
		Ap	.0003	.0002	.0002	.0002	.0002	.0015	.0015	.0015	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0002	.0025	.0010	.0006	.0006
	11.2	SFM(Vc)	100	100	50	50	15	200	200	200	180	180	180	160	120	120	60	60	235	210	210	185
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0005
		RPM	19380	19380	9690	9690	3230	32300	32300	32300	29070	29070	29070	25840	19380	19380	9690	9690	32300	29070	29070	25840
		IPM(FEED)	10	10	4	4	1	33	33	33	27	27	27	21	14	14	6	6	37	30	30	23
		Ap	.0002	.0002	.0002	.0002	.0002	.0011	.0011	.0011	.0007	.0004	.0004	.0002	.0002	.0002	.0002	.0002	.0019	.0008	.0005	.0005
K	15-20	SFM(Vc)	105	105	55	55	20	210	210	210	190	190	190	170	125	125	65	65	245	220	220	195
		IPT(fz)	.0003	.0003	.0002	.0002	.0002	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005
		RPM	20520	20520	10260	10260	3420	34200	34200	34200	30780	30780	30780	27360	20520	20520	10260	10260	34200	30780	30780	27360
		IPM(FEED)	11	11	5	5	1	40	40	40	33	33	33	26	17	17	7	7	44	36	36	29
		Ap	.0003	.0002	.0002	.0002	.0002	.0015	.0015	.0015	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0002	.0025	.0010	.0006	.0006
H	38.1-38.2	SFM(Vc)	90	90	45	45	15	175	175	175	160	160	160	140	105	105	55	55	205	185	185	165
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0004
		RPM	17100	17100	8550	8550	2850	28500	28500	28500	25650	25650	25650	22800	17100	17100	8550	8550	28500	25650	25650	22800
		IPM(FEED)	8.5	8.5	3.7	3.7	1.0	27.0	27.0	27.0	21.9	21.9	21.9	17.3	11.4	11.4	4.9	4.9	30.1	24.4	24.4	19.3
		Ap	.0002	.0001	.0001	.0001	.0001	.0008	.0008	.0008	.0005	.0003	.0003	.0002	.0001	.0001	.0001	.0001	.0014	.0006	.0004	.0004
H	40	SFM(Vc)	100	100	50	50	15	200	200	200	180	180	180	160	120	120	60	60	235	210	210	185
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0005
		RPM	19380	19380	9690	9690	3230	32300	32300	32300	29070	29070	29070	25840	19380	19380	9690	9690	32300	29070	29070	25840
		IPM(FEED)	10	10	4	4	1	33	33	33	27	27	27	21	14	14	6	6	37	30	30	23
		Ap	.0002	.0002	.0002	.0002	.0002	.0011	.0011	.0011	.0007	.0004	.0004	.0002	.0002	.0002	.0002	.0002	.0019	.0008	.0005	.0005
H	41	SFM(Vc)	90	90	45	45	15	175	175	175	160	160	160	140	105	105	55	55	205	185	185	165
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0004
		RPM	17100	17100	8550	8550	2850	28500	28500	28500	25650	25650	25650	22800	17100	17100	8550	8550	28500	25650	25650	22800
		IPM(FEED)	8.5	8.5	3.7	3.7	1.0	27.0	27.0	27.0	21.9	21.9	21.9	17.3	11.4	11.4	4.9	4.9	30.1	24.4	24.4	19.3
		Ap	.0002	.0001	.0001	.0001	.0001	.0008	.0008	.0008	.0005	.0003	.0003	.0002	.0001	.0001	.0001	.0001	.0014	.0006	.0004	.0004

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

(Depth of Cut per one pass)



4G MILL END MILLS

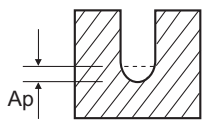
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
				LBS	10	12	2	3	4	5	6	8	10	12	14	16	20	4	6	8	10
P	1-8	Non-alloy steel	SFM(Vc)	195	150	280	280	280	255	255	255	225	225	170	170	85	270	270	270	240
			IPT(fz)	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0008	.0008	.0008	.0007
			RPM	27360	20520	34200	34200	34200	30780	30780	30780	27360	27360	20520	20520	10260	29250	29250	29250	26000
			IPM(FEED)	29	19	48	48	48	39	39	39	31	31	20	20	9	44	44	44	35
			Ap	.0004	.0002	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0004	.0003	.0003	.0003	.0013	.0013	.0008	.0008
	9	Low alloy steel	SFM(Vc)	185	140	265	265	265	240	240	240	215	215	160	160	80	255	255	255	230
			IPT(fz)	.0005	.0004	.0006	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0004	.0004	.0007	.0007	.0007	.0006
			RPM	25840	19380	32300	32300	32300	29070	29070	29070	25840	25840	19380	19380	9690	27630	27630	27630	24560
			IPM(FEED)	23	15	41	41	41	33	33	33	26	26	17	17	7	37	37	37	29
			Ap	.0003	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0010	.0010	.0006	.0006
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	195	150	280	280	280	255	255	255	225	225	170	170	85	270	270	270	240
			IPT(fz)	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0008	.0008	.0008	.0007
			RPM	27360	20520	34200	34200	34200	30780	30780	30780	27360	27360	20520	20520	10260	29250	29250	29250	26000
			IPM(FEED)	29	19	48	48	48	39	39	39	31	31	20	20	9	44	44	44	35
			Ap	.0004	.0002	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0004	.0003	.0003	.0003	.0013	.0013	.0008	.0008
	11.2		SFM(Vc)	185	140	265	265	265	240	240	240	215	215	160	160	80	255	255	255	230
			IPT(fz)	.0005	.0004	.0006	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0004	.0004	.0007	.0007	.0007	.0006
			RPM	25840	19380	32300	32300	32300	29070	29070	29070	25840	25840	19380	19380	9690	27630	27630	27630	24560
			IPM(FEED)	23	15	41	41	41	33	33	33	26	26	17	17	7	37	37	37	29
			Ap	.0003	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0010	.0010	.0006	.0006
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	195	150	280	280	280	255	255	255	225	225	170	170	85	270	270	270	240
			IPT(fz)	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0008	.0008	.0008	.0007
			RPM	27360	20520	34200	34200	34200	30780	30780	30780	27360	27360	20520	20520	10260	29250	29250	29250	26000
			IPM(FEED)	29	19	48	48	48	39	39	39	31	31	20	20	9	44	44	44	35
			Ap	.0004	.0002	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0004	.0003	.0003	.0003	.0013	.0013	.0008	.0008
H	38.1-38.2	Hardened steel	SFM(Vc)	165	125	235	235	235	210	210	210	190	190	140	140	70	225	225	225	200
			IPT(fz)	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0006
			RPM	22800	17100	28500	28500	28500	25650	25650	25650	22800	22800	17100	17100	8550	24390	24390	24390	21680
			IPM(FEED)	19.3	12.6	33.7	33.7	33.7	27.4	27.4	27.4	21.5	21.5	14.2	14.2	6.1	30.5	30.5	30.5	24.0
			Ap	.0002	.0002	.0016	.0011	.0011	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0002	.0007	.0007	.0004	.0004
	40	Chilled Cast Iron	SFM(Vc)	185	140	265	265	265	240	240	240	215	215	160	160	80	255	255	255	230
			IPT(fz)	.0005	.0004	.0006	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0004	.0004	.0007	.0007	.0007	.0006
			RPM	25840	19380	32300	32300	32300	29070	29070	29070	25840	25840	19380	19380	9690	27630	27630	27630	24560
			IPM(FEED)	23	15	41	41	41	33	33	33	26	26	17	17	7	37	37	37	29
			Ap	.0003	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0010	.0010	.0006	.0006
	41	Hardened Cast Iron	SFM(Vc)	165	125	235	235	235	210	210	210	190	190	140	140	70	225	225	225	200
			IPT(fz)	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0006
			RPM	22800	17100	28500	28500	28500	25650	25650	25650	22800	22800	17100	17100	8550	24390	24390	24390	21680
			IPM(FEED)	19.3	12.6	33.7	33.7	33.7	27.4	27.4	27.4	21.5	21.5	14.2	14.2	6.1	30.5	30.5	30.5	24.0
			Ap	.0002	.0002	.0016	.0011	.0011	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0002	.0007	.0007	.0004	.0004

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

(Depth of Cut per one pass)



4G MILL END MILLS

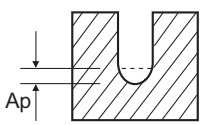
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.2
		LBS	2	3	4	5	6	7	8	10	12	14	16	18	20	22	26	30	40	50	4	6
P	1-8	SFM(Vc)	315	315	315	315	285	285	285	285	255	255	190	190	190	95	95	95	30	30	325	325
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0010	.0010
		RPM	30800	30800	30800	30800	27720	27720	27720	27720	24640	24640	18480	18480	18480	9240	9240	9240	3080	3080	26300	26300
		IPM(FEED)	61	61	61	61	49	49	49	49	39	39	25	25	25	11	11	11	3	3	54	54
		Ap	.0035	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0006	.0006	.0004	.0004	.0004	.0004	.0004	.0004	.0002	.0030	.0030
	9	SFM(Vc)	300	300	300	300	270	270	270	270	240	240	180	180	180	90	90	90	30	30	305	305
		IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	29100	29100	29100	29100	26190	26190	26190	26190	23280	23280	17460	17460	17460	8730	8730	8730	2910	2910	24800	24800
		IPM(FEED)	52	52	52	52	42	42	42	42	33	33	22	22	22	9	9	9	3	3	45	45
		Ap	.0028	.0028	.0019	.0019	.0011	.0011	.0011	.0007	.0007	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0023	.0023
	10-11.1	SFM(Vc)	315	315	315	315	285	285	285	285	255	255	190	190	190	95	95	95	30	30	325	325
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0010	.0010
		RPM	30800	30800	30800	30800	27720	27720	27720	27720	24640	24640	18480	18480	18480	9240	9240	9240	3080	3080	26300	26300
		IPM(FEED)	61	61	61	61	49	49	49	49	39	39	25	25	25	11	11	11	3	3	54	54
		Ap	.0035	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0006	.0006	.0004	.0004	.0004	.0004	.0004	.0004	.0002	.0030	.0030
	11.2	SFM(Vc)	300	300	300	300	270	270	270	270	240	240	180	180	180	90	90	90	30	30	305	305
		IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	29100	29100	29100	29100	26190	26190	26190	26190	23280	23280	17460	17460	17460	8730	8730	8730	2910	2910	24800	24800
		IPM(FEED)	52	52	52	52	42	42	42	42	33	33	22	22	22	9	9	9	3	3	45	45
		Ap	.0028	.0028	.0019	.0019	.0011	.0011	.0011	.0007	.0007	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0023	.0023
K	15-20	SFM(Vc)	315	315	315	315	285	285	285	285	255	255	190	190	190	95	95	95	30	30	325	325
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0010	.0010
		RPM	30800	30800	30800	30800	27720	27720	27720	27720	24640	24640	18480	18480	18480	9240	9240	9240	3080	3080	26300	26300
		IPM(FEED)	61	61	61	61	49	49	49	49	39	39	25	25	25	11	11	11	3	3	54	54
		Ap	.0035	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0006	.0006	.0004	.0004	.0004	.0004	.0004	.0004	.0002	.0030	.0030
H	38.1-38.2	SFM(Vc)	265	265	265	265	240	240	240	240	210	210	160	160	160	80	80	80	25	25	270	270
		IPT(fz)	.0008	.0008	.0008	.0008	.0007	.0007	.0007	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	25700	25700	25700	25700	23130	23130	23130	23130	20560	20560	15420	15420	15420	7710	7710	7710	2570	2570	21900	21900
		IPM(FEED)	42.3	42.3	42.3	42.3	34.3	34.3	34.3	34.3	27.2	27.2	17.7	17.7	17.7	7.7	7.7	7.7	2.2	2.2	37.4	37.4
		Ap	.0020	.0020	.0014	.0014	.0008	.0008	.0008	.0005	.0005	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0017	.0017
	40	SFM(Vc)	300	300	300	300	270	270	270	270	240	240	180	180	180	90	90	90	30	30	305	305
		IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	29100	29100	29100	29100	26190	26190	26190	26190	23280	23280	17460	17460	17460	8730	8730	8730	2910	2910	24800	24800
		IPM(FEED)	52	52	52	52	42	42	42	42	33	33	22	22	22	9	9	9	3	3	45	45
		Ap	.0028	.0028	.0019	.0019	.0011	.0011	.0011	.0007	.0007	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0023	.0023
	41	SFM(Vc)	265	265	265	265	240	240	240	240	210	210	160	160	160	80	80	80	25	25	270	270
		IPT(fz)	.0008	.0008	.0008	.0008	.0007	.0007	.0007	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	25700	25700	25700	25700	23130	23130	23130	23130	20560	20560	15420	15420	15420	7710	7710	7710	2570	2570	21900	21900
		IPM(FEED)	42.3	42.3	42.3	42.3	34.3	34.3	34.3	34.3	27.2	27.2	17.7	17.7	17.7	7.7	7.7	7.7	2.2	2.2	37.4	37.4
		Ap	.0020	.0020	.0014	.0014	.0008	.0008	.0008	.0005	.0005	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0017	.0017

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

(Depth of Cut per one pass)



4G MILL END MILLS

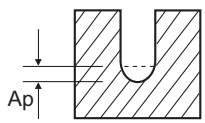
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5
			LBS	8	10	12	16	20	26	6	8	10	16	4	5	6	7	8	10	12
P	1-8	Non-alloy steel	SFM(Vc)	295	295	295	260	195	100	310	280	280	250	370	370	370	370	335	335	335
			IPT(fz)	.0009	.0009	.0009	.0008	.0007	.0006	.0012	.0011	.0011	.0009	.0013	.0013	.0013	.0013	.0012	.0012	.0012
			RPM	23670	23670	23670	21040	15780	7890	21500	19350	19350	17200	23900	23900	23900	23900	21510	21510	21510
			IPM(FEED)	44	44	44	35	23	10	51	41	41	33	62	62	62	62	50	50	50
			Ap	.0017	.0011	.0011	.0006	.0004	.0004	.0035	.0020	.0020	.0013	.0053	.0037	.0037	.0037	.0021	.0021	.0021
	9	Low alloy steel	SFM(Vc)	275	275	275	245	185	90	295	265	265	235	350	350	350	350	315	315	315
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0011	.0010	.0010	.0009	.0012	.0012	.0012	.0012	.0011	.0011	.0011
			RPM	22320	22320	22320	19840	14880	7440	20300	18270	18270	16240	22600	22600	22600	22600	20340	20340	20340
			IPM(FEED)	37	37	37	29	19	8	43	35	35	28	53	53	53	53	43	43	43
			Ap	.0013	.0008	.0008	.0005	.0003	.0003	.0027	.0015	.0015	.0010	.0041	.0029	.0029	.0029	.0017	.0017	.0017
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	295	295	295	260	195	100	310	280	280	250	370	370	370	370	335	335	335
			IPT(fz)	.0009	.0009	.0009	.0008	.0007	.0006	.0012	.0011	.0011	.0009	.0013	.0013	.0013	.0013	.0012	.0012	.0012
			RPM	23670	23670	23670	21040	15780	7890	21500	19350	19350	17200	23900	23900	23900	23900	21510	21510	21510
			IPM(FEED)	44	44	44	35	23	10	51	41	41	33	62	62	62	62	50	50	50
			Ap	.0017	.0011	.0011	.0006	.0004	.0004	.0035	.0020	.0020	.0013	.0053	.0037	.0037	.0037	.0021	.0021	.0021
	11.2		SFM(Vc)	275	275	275	245	185	90	295	265	265	235	350	350	350	350	315	315	315
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0011	.0010	.0010	.0009	.0012	.0012	.0012	.0012	.0011	.0011	.0011
			RPM	22320	22320	22320	19840	14880	7440	20300	18270	18270	16240	22600	22600	22600	22600	20340	20340	20340
			IPM(FEED)	37	37	37	29	19	8	43	35	35	28	53	53	53	53	43	43	43
			Ap	.0013	.0008	.0008	.0005	.0003	.0003	.0027	.0015	.0015	.0010	.0041	.0029	.0029	.0029	.0017	.0017	.0017
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	295	295	295	260	195	100	310	280	280	250	370	370	370	370	335	335	335
			IPT(fz)	.0009	.0009	.0009	.0008	.0007	.0006	.0012	.0011	.0011	.0009	.0013	.0013	.0013	.0013	.0012	.0012	.0012
			RPM	23670	23670	23670	21040	15780	7890	21500	19350	19350	17200	23900	23900	23900	23900	21510	21510	21510
			IPM(FEED)	44	44	44	35	23	10	51	41	41	33	62	62	62	62	50	50	50
			Ap	.0017	.0011	.0011	.0006	.0004	.0004	.0035	.0020	.0020	.0013	.0053	.0037	.0037	.0037	.0021	.0021	.0021
H	38.1-38.2	Hardened steel	SFM(Vc)	245	245	245	215	165	80	260	235	235	210	310	310	310	310	280	280	280
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0010	.0009	.0009	.0008	.0011	.0011	.0011	.0011	.0010	.0010	.0010
			RPM	19710	19710	19710	17520	13140	6570	18000	16200	16200	14400	20000	20000	20000	20000	18000	18000	18000
			IPM(FEED)	30.3	30.3	30.3	24.0	15.7	6.7	36.8	29.7	29.7	23.6	42.3	42.3	42.3	42.3	34.3	34.3	34.3
			Ap	.0009	.0006	.0006	.0004	.0002	.0002	.0019	.0011	.0011	.0007	.0030	.0021	.0021	.0021	.0012	.0012	.0012
	40	Chilled Cast Iron	SFM(Vc)	275	275	275	245	185	90	295	265	265	235	350	350	350	350	315	315	315
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0011	.0010	.0010	.0009	.0012	.0012	.0012	.0012	.0011	.0011	.0011
			RPM	22320	22320	22320	19840	14880	7440	20300	18270	18270	16240	22600	22600	22600	22600	20340	20340	20340
			IPM(FEED)	37	37	37	29	19	8	43	35	35	28	53	53	53	53	43	43	43
			Ap	.0013	.0008	.0008	.0005	.0003	.0003	.0027	.0015	.0015	.0010	.0041	.0029	.0029	.0029	.0017	.0017	.0017
	41	Hardened Cast Iron	SFM(Vc)	245	245	245	215	165	80	260	235	235	210	310	310	310	310	280	280	280
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0010	.0009	.0009	.0008	.0011	.0011	.0011	.0011	.0010	.0010	.0010
			RPM	19710	19710	19710	17520	13140	6570	18000	16200	16200	14400	20000	20000	20000	20000	18000	18000	18000
			IPM(FEED)	30.3	30.3	30.3	24.0	15.7	6.7	36.8	29.7	29.7	23.6	42.3	42.3	42.3	42.3	34.3	34.3	34.3
			Ap	.0009	.0006	.0006	.0004	.0002	.0002	.0019	.0011	.0011	.0007	.0030	.0021	.0021	.0021	.0012	.0012	.0012

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

(Depth of Cut per one pass)



4G MILL END MILLS

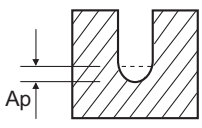
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.8	1.8	1.8	1.8
			LBS	14	16	18	20	22	26	30	35	40	4	6	8	10	12	16	20	4	6	8	10
P	1-8	SFM(Vc)	335	295	295	295	295	220	220	110	110	365	365	365	330	330	330	295	410	410	410	370
		IPT(fz)	.0012	.0010	.0010	.0010	.0010	.0009	.0009	.0008	.0008	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0016	.0016	.0016	.0014
		RPM	21510	19120	19120	19120	19120	14340	14340	7170	7170	22200	22200	22200	19980	19980	19980	17760	22200	22200	22200	19980
		IPM(FEED)	50	40	40	40	40	26	26	11	11	61	61	61	50	50	50	39	70	70	70	57
		Ap	.0013	.0013	.0013	.0008	.0008	.0006	.0006	.0004	.0004	.0040	.0040	.0040	.0023	.0023	.0014	.0014	.0044	.0044	.0044	.0026
	9	SFM(Vc)	315	280	280	280	280	210	210	105	105	345	345	345	310	310	310	275	390	390	390	350
		IPT(fz)	.0011	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0012	.0012	.0012	.0011	.0011	.0011	.0010	.0014	.0014	.0014	.0012
		RPM	20340	18080	18080	18080	18080	13560	13560	6780	6780	21000	21000	21000	18900	18900	18900	16800	21000	21000	21000	18900
		IPM(FEED)	43	34	34	34	34	22	22	10	10	51	51	51	42	42	42	33	58	58	58	47
		Ap	.0010	.0010	.0010	.0006	.0006	.0004	.0004	.0003	.0003	.0031	.0031	.0031	.0018	.0018	.0011	.0011	.0035	.0035	.0035	.0020
	10-11.1	SFM(Vc)	335	295	295	295	295	220	220	110	110	365	365	365	330	330	330	295	410	410	410	370
		IPT(fz)	.0012	.0010	.0010	.0010	.0010	.0009	.0009	.0008	.0008	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0016	.0016	.0016	.0014
		RPM	21510	19120	19120	19120	19120	14340	14340	7170	7170	22200	22200	22200	19980	19980	19980	17760	22200	22200	22200	19980
		IPM(FEED)	50	40	40	40	40	26	26	11	11	61	61	61	50	50	50	39	70	70	70	57
		Ap	.0013	.0013	.0013	.0008	.0008	.0006	.0006	.0004	.0004	.0040	.0040	.0040	.0023	.0023	.0014	.0014	.0044	.0044	.0044	.0026
	11.2	SFM(Vc)	315	280	280	280	280	210	210	105	105	345	345	345	310	310	310	275	390	390	390	350
		IPT(fz)	.0011	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0012	.0012	.0012	.0011	.0011	.0011	.0010	.0014	.0014	.0014	.0012
		RPM	20340	18080	18080	18080	18080	13560	13560	6780	6780	21000	21000	21000	18900	18900	18900	16800	21000	21000	21000	18900
		IPM(FEED)	43	34	34	34	34	22	22	10	10	51	51	51	42	42	42	33	58	58	58	47
		Ap	.0010	.0010	.0010	.0006	.0006	.0004	.0004	.0003	.0003	.0031	.0031	.0031	.0018	.0018	.0011	.0011	.0035	.0035	.0035	.0020
K	15-20	SFM(Vc)	335	295	295	295	295	220	220	110	110	365	365	365	330	330	330	295	410	410	410	370
		IPT(fz)	.0012	.0010	.0010	.0010	.0010	.0009	.0009	.0008	.0008	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0016	.0016	.0016	.0014
		RPM	21510	19120	19120	19120	19120	14340	14340	7170	7170	22200	22200	22200	19980	19980	19980	17760	22200	22200	22200	19980
		IPM(FEED)	50	40	40	40	40	26	26	11	11	61	61	61	50	50	50	39	70	70	70	57
		Ap	.0013	.0013	.0013	.0008	.0008	.0006	.0006	.0004	.0004	.0040	.0040	.0040	.0023	.0023	.0014	.0014	.0044	.0044	.0044	.0026
H	38.1-38.2	SFM(Vc)	280	245	245	245	245	185	185	95	95	305	305	305	275	275	275	245	345	345	345	310
		IPT(fz)	.0010	.0009	.0009	.0009	.0009	.0007	.0007	.0006	.0006	.0012	.0012	.0012	.0011	.0011	.0011	.0009	.0013	.0013	.0013	.0012
		RPM	18000	16000	16000	16000	16000	12000	12000	6000	6000	18500	18500	18500	16650	16650	16650	14800	18500	18500	18500	16650
		IPM(FEED)	34.3	27.2	27.2	27.2	27.2	17.7	17.7	7.7	7.7	43.7	43.7	43.7	35.4	35.4	35.4	28.0	48.2	48.2	48.2	39.0
		Ap	.0007	.0007	.0007	.0004	.0004	.0003	.0003	.0002	.0002	.0022	.0022	.0022	.0013	.0013	.0008	.0008	.0025	.0025	.0025	.0014
	40	SFM(Vc)	315	280	280	280	280	210	210	105	105	345	345	345	310	310	310	275	390	390	390	350
		IPT(fz)	.0011	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0012	.0012	.0012	.0011	.0011	.0011	.0010	.0014	.0014	.0014	.0012
		RPM	20340	18080	18080	18080	18080	13560	13560	6780	6780	21000	21000	21000	18900	18900	18900	16800	21000	21000	21000	18900
		IPM(FEED)	43	34	34	34	34	22	22	10	10	51	51	51	42	42	42	33	58	58	58	47
		Ap	.0010	.0010	.0010	.0006	.0006	.0004	.0004	.0003	.0003	.0031	.0031	.0031	.0018	.0018	.0011	.0011	.0035	.0035	.0035	.0020
	41	SFM(Vc)	280	245	245	245	245	185	185	95	95	305	305	305	275	275	275	245	345	345	345	310
		IPT(fz)	.0010	.0009	.0009	.0009	.0009	.0007	.0007	.0006	.0006	.0012	.0012	.0012	.0011	.0011	.0011	.0009	.0013	.0013	.0013	.0012
		RPM	18000	16000	16000	16000	16000	12000	12000	6000	6000	18500	18500	18500	16650	16650	16650	14800	18500	18500	18500	16650
		IPM(FEED)	34.3	27.2	27.2	27.2	27.2	17.7	17.7	7.7	7.7	43.7	43.7	43.7	35.4	35.4	35.4	28.0	48.2	48.2	48.2	39.0
		Ap	.0007	.0007	.0007	.0004	.0004	.0003	.0003	.0002	.0002	.0022	.0022	.0022	.0013	.0013	.0008	.0008	.0025	.0025	.0025	.0014

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

(Depth of Cut per one pass)



4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				1.8	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
			LBS	12	16	20	6	8	10	12	14	16	18	20	22	26	30	35	40	45
P	1-8	Non-alloy steel	SFM(Vc)	370	370	330	370	370	370	335	335	335	335	335	295	295	295	225	225	110
			IPT(fz)	.0014	.0014	.0013	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0012
			RPM	19980	19980	17760	18000	18000	18000	16200	16200	16200	16200	16200	14400	14400	14400	10800	10800	5400
			IPM(FEED)	57	57	45	71	71	71	57	57	57	57	57	45	45	45	30	30	13
			Ap	.0026	.0016	.0016	.0071	.0050	.0050	.0028	.0028	.0028	.0018	.0018	.0018	.0018	.0011	.0007	.0007	.0007
	9	Low alloy steel	SFM(Vc)	350	350	310	350	350	350	315	315	315	315	315	280	280	280	210	210	105
			IPT(fz)	.0012	.0012	.0011	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0012	.0012	.0011
			RPM	18900	18900	16800	17000	17000	17000	15300	15300	15300	15300	15300	13600	13600	13600	10200	10200	5100
			IPM(FEED)	47	47	37	60	60	60	49	49	49	49	49	38	38	38	25	25	11
			Ap	.0020	.0013	.0013	.0055	.0039	.0039	.0022	.0022	.0022	.0014	.0014	.0014	.0014	.0008	.0006	.0006	.0006
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	370	370	330	370	370	370	335	335	335	335	335	295	295	295	225	225	110
			IPT(fz)	.0014	.0014	.0013	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0012
			RPM	19980	19980	17760	18000	18000	18000	16200	16200	16200	16200	16200	14400	14400	14400	10800	10800	5400
			IPM(FEED)	57	57	45	71	71	71	57	57	57	57	57	45	45	45	30	30	13
			Ap	.0026	.0016	.0016	.0071	.0050	.0050	.0028	.0028	.0028	.0018	.0018	.0018	.0018	.0011	.0007	.0007	.0007
	11.2		SFM(Vc)	350	350	310	350	350	350	315	315	315	315	315	280	280	280	210	210	105
			IPT(fz)	.0012	.0012	.0011	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0012	.0012	.0011
			RPM	18900	18900	16800	17000	17000	17000	15300	15300	15300	15300	15300	13600	13600	13600	10200	10200	5100
			IPM(FEED)	47	47	37	60	60	60	49	49	49	49	49	38	38	38	25	25	11
			Ap	.0020	.0013	.0013	.0055	.0039	.0039	.0022	.0022	.0022	.0014	.0014	.0014	.0014	.0008	.0006	.0006	.0006
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	370	370	330	370	370	370	335	335	335	335	335	295	295	295	225	225	110
			IPT(fz)	.0014	.0014	.0013	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0012
			RPM	19980	19980	17760	18000	18000	18000	16200	16200	16200	16200	16200	14400	14400	14400	10800	10800	5400
			IPM(FEED)	57	57	45	71	71	71	57	57	57	57	57	45	45	45	30	30	13
			Ap	.0026	.0016	.0016	.0071	.0050	.0050	.0028	.0028	.0028	.0018	.0018	.0018	.0018	.0011	.0007	.0007	.0007
H	38.1-38.2	Hardened steel	SFM(Vc)	310	310	275	310	310	310	280	280	280	280	280	245	245	245	185	185	95
			IPT(fz)	.0012	.0012	.0010	.0017	.0017	.0017	.0015	.0015	.0015	.0015	.0015	.0013	.0013	.0013	.0012	.0012	.0010
			RPM	16650	16650	14800	15000	15000	15000	13500	13500	13500	13500	13500	12000	12000	12000	9000	9000	4500
			IPM(FEED)	39.0	39.0	30.9	50.6	50.6	50.6	40.9	40.9	40.9	40.9	40.9	32.3	32.3	32.3	21.3	21.3	9.1
			Ap	.0014	.0009	.0009	.0039	.0028	.0028	.0016	.0016	.0016	.0010	.0010	.0010	.0010	.0006	.0004	.0004	.0004
	40	Chilled Cast Iron	SFM(Vc)	350	350	310	350	350	350	315	315	315	315	315	280	280	280	210	210	105
			IPT(fz)	.0012	.0012	.0011	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0012	.0012	.0011
			RPM	18900	18900	16800	17000	17000	17000	15300	15300	15300	15300	15300	13600	13600	13600	10200	10200	5100
			IPM(FEED)	47	47	37	60	60	60	49	49	49	49	49	38	38	38	25	25	11
			Ap	.0020	.0013	.0013	.0055	.0039	.0039	.0022	.0022	.0022	.0014	.0014	.0014	.0014	.0008	.0006	.0006	.0006
	41	Hardened Cast Iron	SFM(Vc)	310	310	275	310	310	310	280	280	280	280	280	245	245	245	185	185	95
			IPT(fz)	.0012	.0012	.0010	.0017	.0017	.0017	.0015	.0015	.0015	.0015	.0015	.0013	.0013	.0013	.0012	.0012	.0010
			RPM	16650	16650	14800	15000	15000	15000	13500	13500	13500	13500	13500	12000	12000	12000	9000	9000	4500
			IPM(FEED)	39.0	39.0	30.9	50.6	50.6	50.6	40.9	40.9	40.9	40.9	40.9	32.3	32.3	32.3	21.3	21.3	9.1
			Ap	.0014	.0009	.0009	.0039	.0028	.0028	.0016	.0016	.0016	.0010	.0010	.0010	.0010	.0006	.0004	.0004	.0004

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
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Ap : mm (Axial Depth of Cut)
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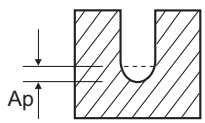
(Depth of Cut per one pass)



4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			2.0	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0	3.0	3.0	3.0	3.0	3.0
		LBS	50	60	8	10	12	16	20	22	26	30	35	40	45	50	6	8	10	12	14	16
P	1-8	SFM(Vc)	110	110	405	405	405	365	365	365	325	325	325	245	245	245	425	425	425	425	425	380
		IPT(fz)	.0012	.0012	.0024	.0024	.0024	.0022	.0022	.0022	.0019	.0019	.0019	.0017	.0017	.0017	.0029	.0029	.0029	.0029	.0029	.0026
		RPM	5400	5400	15800	15800	15800	14220	14220	14220	12640	12640	12640	9480	9480	9480	13700	13700	13700	13700	13700	12330
		IPM(FEED)	13	13	76	76	76	61	61	61	48	48	48	32	32	32	81	81	81	81	81	65
		Ap	.0007	.0007	.0062	.0062	.0062	.0035	.0035	.0022	.0022	.0022	.0013	.0013	.0009	.0009	.0106	.0106	.0074	.0074	.0074	.0043
	9	SFM(Vc)	105	105	385	385	385	345	345	345	305	305	305	230	230	230	400	400	400	400	400	360
		IPT(fz)	.0011	.0011	.0021	.0021	.0021	.0019	.0019	.0019	.0017	.0017	.0017	.0015	.0015	.0015	.0026	.0026	.0026	.0026	.0026	.0024
		RPM	5100	5100	14900	14900	14900	13410	13410	13410	11920	11920	11920	8940	8940	8940	12900	12900	12900	12900	12900	11610
		IPM(FEED)	11	11	63	63	63	51	51	51	40	40	40	27	27	27	68	68	68	68	68	55
		Ap	.0006	.0006	.0048	.0048	.0048	.0028	.0028	.0017	.0017	.0017	.0010	.0010	.0007	.0007	.0083	.0083	.0058	.0058	.0058	.0033
	10-11.1	SFM(Vc)	110	110	405	405	405	365	365	365	325	325	325	245	245	245	425	425	425	425	425	380
		IPT(fz)	.0012	.0012	.0024	.0024	.0024	.0022	.0022	.0022	.0019	.0019	.0019	.0017	.0017	.0017	.0029	.0029	.0029	.0029	.0029	.0026
		RPM	5400	5400	15800	15800	15800	14220	14220	14220	12640	12640	12640	9480	9480	9480	13700	13700	13700	13700	13700	12330
		IPM(FEED)	13	13	76	76	76	61	61	61	48	48	48	32	32	32	81	81	81	81	81	65
		Ap	.0007	.0007	.0062	.0062	.0062	.0035	.0035	.0022	.0022	.0022	.0013	.0013	.0009	.0009	.0106	.0106	.0074	.0074	.0074	.0043
	11.2	SFM(Vc)	105	105	385	385	385	345	345	345	305	305	305	230	230	230	400	400	400	400	400	360
		IPT(fz)	.0011	.0011	.0021	.0021	.0021	.0019	.0019	.0019	.0017	.0017	.0017	.0015	.0015	.0015	.0026	.0026	.0026	.0026	.0026	.0024
		RPM	5100	5100	14900	14900	14900	13410	13410	13410	11920	11920	11920	8940	8940	8940	12900	12900	12900	12900	12900	11610
		IPM(FEED)	11	11	63	63	63	51	51	51	40	40	40	27	27	27	68	68	68	68	68	55
		Ap	.0006	.0006	.0048	.0048	.0048	.0028	.0028	.0017	.0017	.0017	.0010	.0010	.0007	.0007	.0083	.0083	.0058	.0058	.0058	.0033
K	15-20	SFM(Vc)	110	110	405	405	405	365	365	365	325	325	325	245	245	245	425	425	425	425	425	380
		IPT(fz)	.0012	.0012	.0024	.0024	.0024	.0022	.0022	.0022	.0019	.0019	.0019	.0017	.0017	.0017	.0029	.0029	.0029	.0029	.0029	.0026
		RPM	5400	5400	15800	15800	15800	14220	14220	14220	12640	12640	12640	9480	9480	9480	13700	13700	13700	13700	13700	12330
		IPM(FEED)	13	13	76	76	76	61	61	61	48	48	48	32	32	32	81	81	81	81	81	65
		Ap	.0007	.0007	.0062	.0062	.0062	.0035	.0035	.0022	.0022	.0022	.0013	.0013	.0009	.0009	.0106	.0106	.0074	.0074	.0074	.0043
H	38.1-38.2	SFM(Vc)	95	95	340	340	340	305	305	305	270	270	270	205	205	205	350	350	350	350	350	315
		IPT(fz)	.0010	.0010	.0019	.0019	.0019	.0017	.0017	.0017	.0016	.0016	.0016	.0014	.0014	.0014	.0025	.0025	.0025	.0025	.0025	.0022
		RPM	4500	4500	13200	13200	13200	11880	11880	11880	10560	10560	10560	7920	7920	7920	11400	11400	11400	11400	11400	10260
		IPM(FEED)	9.1	9.1	51.4	51.4	51.4	41.5	41.5	41.5	32.9	32.9	32.9	21.7	21.7	21.7	56.5	56.5	56.5	56.5	56.5	45.7
		Ap	.0004	.0004	.0035	.0035	.0035	.0020	.0020	.0012	.0012	.0012	.0007	.0007	.0005	.0005	.0059	.0059	.0041	.0041	.0041	.0024
	40	SFM(Vc)	105	105	385	385	385	345	345	345	305	305	305	230	230	230	400	400	400	400	400	360
		IPT(fz)	.0011	.0011	.0021	.0021	.0021	.0019	.0019	.0019	.0017	.0017	.0017	.0015	.0015	.0015	.0026	.0026	.0026	.0026	.0026	.0024
		RPM	5100	5100	14900	14900	14900	13410	13410	13410	11920	11920	11920	8940	8940	8940	12900	12900	12900	12900	12900	11610
		IPM(FEED)	11	11	63	63	63	51	51	51	40	40	40	27	27	27	68	68	68	68	68	55
		Ap	.0006	.0006	.0048	.0048	.0048	.0028	.0028	.0017	.0017	.0017	.0010	.0010	.0007	.0007	.0083	.0083	.0058	.0058	.0058	.0033
	41	SFM(Vc)	95	95	340	340	340	305	305	305	270	270	270	205	205	205	350	350	350	350	350	315
		IPT(fz)	.0010	.0010	.0019	.0019	.0019	.0017	.0017	.0017	.0016	.0016	.0016	.0014	.0014	.0014	.0025	.0025	.0025	.0025	.0025	.0022
		RPM	4500	4500	13200	13200	13200	11880	11880	11880	10560	10560	10560	7920	7920	7920	11400	11400	11400	11400	11400	10260
		IPM(FEED)	9.1	9.1	51.4	51.4	51.4	41.5	41.5	41.5	32.9	32.9	32.9	21.7	21.7	21.7	56.5	56.5	56.5	56.5	56.5	45.7
		Ap	.0004	.0004	.0035	.0035	.0035	.0020	.0020	.0012	.0012	.0012	.0007	.0007	.0005	.0005	.0059	.0059	.0041	.0041	.0041	.0024

SFM = Surface Feet per Minute
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Ap : mm (Axial Depth of Cut)
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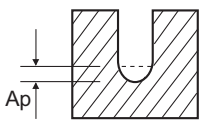
(Depth of Cut per one pass)



4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																		
				3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
			LBS	18	20	22	26	30	35	40	45	50	60	8	10	12	14	16	18	20	22	26
P	1-8	Non-alloy steel	SFM(Vc)	380	380	380	380	380	340	340	340	255	255	405	405	405	405	405	405	405	365	365
			IPT(fz)	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0021	.0021	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0035	.0035
			RPM	12330	12330	12330	12330	12330	10960	10960	10960	8220	8220	9800	9800	9800	9800	9800	9800	9800	8820	8820
			IPM(FEED)	65	65	65	65	65	52	52	52	34	34	77	77	77	77	77	77	77	63	63
			Ap	.0043	.0043	.0043	.0027	.0027	.0027	.0016	.0016	.0011	.0011	.0142	.0142	.0142	.0099	.0099	.0099	.0099	.0057	.0057
	9	Low alloy steel	SFM(Vc)	360	360	360	360	360	320	320	320	240	240	385	385	385	385	385	385	385	345	345
			IPT(fz)	.0024	.0024	.0024	.0024	.0024	.0021	.0021	.0021	.0018	.0018	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0032	.0032
			RPM	11610	11610	11610	11610	11610	10320	10320	10320	7740	7740	9300	9300	9300	9300	9300	9300	9300	8370	8370
			IPM(FEED)	55	55	55	55	55	44	44	44	29	29	66	66	66	66	66	66	66	53	53
			Ap	.0033	.0033	.0033	.0021	.0021	.0021	.0013	.0013	.0008	.0008	.0110	.0110	.0110	.0077	.0077	.0077	.0077	.0044	.0044
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	380	380	380	380	380	340	340	340	255	255	405	405	405	405	405	405	405	365	365
			IPT(fz)	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0021	.0021	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0035	.0035
			RPM	12330	12330	12330	12330	12330	10960	10960	10960	8220	8220	9800	9800	9800	9800	9800	9800	9800	8820	8820
			IPM(FEED)	65	65	65	65	65	52	52	52	34	34	77	77	77	77	77	77	77	63	63
			Ap	.0043	.0043	.0043	.0027	.0027	.0027	.0016	.0016	.0011	.0011	.0142	.0142	.0142	.0099	.0099	.0099	.0099	.0057	.0057
	11.2		SFM(Vc)	360	360	360	360	360	320	320	320	240	240	385	385	385	385	385	385	385	345	345
			IPT(fz)	.0024	.0024	.0024	.0024	.0024	.0021	.0021	.0021	.0018	.0018	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0032	.0032
			RPM	11610	11610	11610	11610	11610	10320	10320	10320	7740	7740	9300	9300	9300	9300	9300	9300	9300	8370	8370
			IPM(FEED)	55	55	55	55	55	44	44	44	29	29	66	66	66	66	66	66	66	53	53
			Ap	.0033	.0033	.0033	.0021	.0021	.0021	.0013	.0013	.0008	.0008	.0110	.0110	.0110	.0077	.0077	.0077	.0077	.0044	.0044
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	380	380	380	380	380	340	340	340	255	255	405	405	405	405	405	405	405	365	365
			IPT(fz)	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0021	.0021	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0035	.0035
			RPM	12330	12330	12330	12330	12330	10960	10960	10960	8220	8220	9800	9800	9800	9800	9800	9800	9800	8820	8820
			IPM(FEED)	65	65	65	65	65	52	52	52	34	34	77	77	77	77	77	77	77	63	63
			Ap	.0043	.0043	.0043	.0027	.0027	.0027	.0016	.0016	.0011	.0011	.0142	.0142	.0142	.0099	.0099	.0099	.0099	.0057	.0057
H	38.1-38.2	Hardened steel	SFM(Vc)	315	315	315	315	315	280	280	280	210	210	340	340	340	340	340	340	340	305	305
			IPT(fz)	.0022	.0022	.0022	.0022	.0022	.0020	.0020	.0020	.0017	.0017	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0030	.0030
			RPM	10260	10260	10260	10260	10260	9120	9120	9120	6840	6840	8200	8200	8200	8200	8200	8200	8200	7380	7380
			IPM(FEED)	45.7	45.7	45.7	45.7	45.7	36.2	36.2	36.2	23.8	23.8	54.9	54.9	54.9	54.9	54.9	54.9	54.9	44.5	44.5
			Ap	.0024	.0024	.0024	.0015	.0015	.0015	.0009	.0009	.0006	.0006	.0079	.0079	.0079	.0055	.0055	.0055	.0055	.0031	.0031
	40	Chilled Cast Iron	SFM(Vc)	360	360	360	360	360	320	320	320	240	240	385	385	385	385	385	385	385	345	345
			IPT(fz)	.0024	.0024	.0024	.0024	.0024	.0021	.0021	.0021	.0018	.0018	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0032	.0032
			RPM	11610	11610	11610	11610	11610	10320	10320	10320	7740	7740	9300	9300	9300	9300	9300	9300	9300	8370	8370
			IPM(FEED)	55	55	55	55	55	44	44	44	29	29	66	66	66	66	66	66	66	53	53
			Ap	.0033	.0033	.0033	.0021	.0021	.0021	.0013	.0013	.0008	.0008	.0110	.0110	.0110	.0077	.0077	.0077	.0077	.0044	.0044
	41	Hardened Cast Iron	SFM(Vc)	315	315	315	315	315	280	280	280	210	210	340	340	340	340	340	340	340	305	305
			IPT(fz)	.0022	.0022	.0022	.0022	.0022	.0020	.0020	.0020	.0017	.0017	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0030	.0030
			RPM	10260	10260	10260	10260	10260	9120	9120	9120	6840	6840	8200	8200	8200	8200	8200	8200	8200	7380	7380
			IPM(FEED)	45.7	45.7	45.7	45.7	45.7	36.2	36.2	36.2	23.8	23.8	54.9	54.9	54.9	54.9	54.9	54.9	54.9	44.5	44.5
			Ap	.0024	.0024	.0024	.0015	.0015	.0015	.0009	.0009	.0006	.0006	.0079	.0079	.0079	.0055	.0055	.0055	.0055	.0031	.0031

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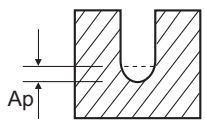
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																					
			4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.0	6.0	8.0	8.0	10.0	10.0	12.0	12.0
			LBS	30	35	40	45	50	60	15	20	26	30	35	40	50	60	20	30	25	30	30	40	32	45
P	1-8	SFM(Vc)		365	365	365	325	325	325	395	395	355	355	355	355	355	315	400	400	400	400	395	395	395	395
		IPT(fz)		.0035	.0035	.0035	.0032	.0032	.0032	.0047	.0047	.0042	.0042	.0042	.0042	.0042	.0038	.0058	.0058	.0073	.0073	.0084	.0084	.0094	.0094
		RPM		8820	8820	8820	7840	7840	7840	7700	7700	6930	6930	6930	6930	6930	6160	6500	6500	4850	4850	3850	3850	3200	3200
		IPM(FEED)		63	63	63	50	50	50	73	73	59	59	59	59	59	46	75	75	71	71	65	65	60	60
		Ap		.0057	.0035	.0035	.0035	.0035	.0021	.0124	.0124	.0071	.0071	.0071	.0071	.0044	.0044	.0149	.0149	.0198	.0198	.0354	.0248	.0425	.0298
	9	SFM(Vc)		345	345	345	305	305	305	375	375	340	340	340	340	340	300	385	385	380	380	380	380	375	375
		IPT(fz)		.0032	.0032	.0032	.0028	.0028	.0028	.0039	.0039	.0035	.0035	.0035	.0035	.0035	.0031	.0051	.0051	.0064	.0064	.0075	.0075	.0084	.0084
		RPM		8370	8370	8370	7440	7440	7440	7300	7300	6570	6570	6570	6570	6570	5840	6200	6200	4600	4600	3680	3680	3050	3050
		IPM(FEED)		53	53	53	42	42	42	57	57	46	46	46	46	46	37	63	63	59	59	55	55	51	51
		Ap		.0044	.0028	.0028	.0028	.0028	.0017	.0096	.0096	.0055	.0055	.0055	.0055	.0035	.0035	.0116	.0116	.0154	.0154	.0276	.0193	.0331	.0231
	10-11.1	SFM(Vc)		365	365	365	325	325	325	395	395	355	355	355	355	355	315	400	400	400	400	395	395	395	395
		IPT(fz)		.0035	.0035	.0035	.0032	.0032	.0032	.0047	.0047	.0042	.0042	.0042	.0042	.0042	.0038	.0058	.0058	.0073	.0073	.0084	.0084	.0094	.0094
		RPM		8820	8820	8820	7840	7840	7840	7700	7700	6930	6930	6930	6930	6930	6160	6500	6500	4850	4850	3850	3850	3200	3200
		IPM(FEED)		63	63	63	50	50	50	73	73	59	59	59	59	59	46	75	75	71	71	65	65	60	60
		Ap		.0057	.0035	.0035	.0035	.0035	.0021	.0124	.0124	.0071	.0071	.0071	.0071	.0044	.0044	.0149	.0149	.0198	.0198	.0354	.0248	.0425	.0298
	11.2	SFM(Vc)		345	345	345	305	305	305	375	375	340	340	340	340	340	300	385	385	380	380	380	380	375	375
		IPT(fz)		.0032	.0032	.0032	.0028	.0028	.0028	.0039	.0039	.0035	.0035	.0035	.0035	.0035	.0031	.0051	.0051	.0064	.0064	.0075	.0075	.0084	.0084
		RPM		8370	8370	8370	7440	7440	7440	7300	7300	6570	6570	6570	6570	6570	5840	6200	6200	4600	4600	3680	3680	3050	3050
		IPM(FEED)		53	53	53	42	42	42	57	57	46	46	46	46	46	37	63	63	59	59	55	55	51	51
		Ap		.0044	.0028	.0028	.0028	.0028	.0017	.0096	.0096	.0055	.0055	.0055	.0055	.0035	.0035	.0116	.0116	.0154	.0154	.0276	.0193	.0331	.0231
K	15-20	SFM(Vc)		365	365	365	325	325	325	395	395	355	355	355	355	355	315	400	400	400	400	395	395	395	395
		IPT(fz)		.0035	.0035	.0035	.0032	.0032	.0032	.0047	.0047	.0042	.0042	.0042	.0042	.0042	.0038	.0058	.0058	.0073	.0073	.0084	.0084	.0094	.0094
		RPM		8820	8820	8820	7840	7840	7840	7700	7700	6930	6930	6930	6930	6930	6160	6500	6500	4850	4850	3850	3850	3200	3200
		IPM(FEED)		63	63	63	50	50	50	73	73	59	59	59	59	59	46	75	75	71	71	65	65	60	60
		Ap		.0057	.0035	.0035	.0035	.0035	.0021	.0124	.0124	.0071	.0071	.0071	.0071	.0044	.0044	.0149	.0149	.0198	.0198	.0354	.0248	.0425	.0298
H	38.1-38.2	SFM(Vc)		305	305	305	270	270	270	330	330	295	295	295	295	295	265	340	340	330	330	330	330	330	330
		IPT(fz)		.0030	.0030	.0030	.0027	.0027	.0027	.0040	.0040	.0036	.0036	.0036	.0036	.0036	.0032	.0048	.0048	.0063	.0063	.0074	.0074	.0082	.0082
		RPM		7380	7380	7380	6560	6560	6560	6400	6400	5760	5760	5760	5760	5760	5120	5500	5500	4000	4000	3200	3200	2650	2650
		IPM(FEED)		44.5	44.5	44.5	35.2	35.2	35.2	50.6	50.6	40.9	40.9	40.9	40.9	40.9	32.3	52.4	52.4	50.4	50.4	47.2	47.2	43.3	43.3
		Ap		.0031	.0020	.0020	.0020	.0020	.0012	.0069	.0069	.0039	.0039	.0039	.0039	.0025	.0025	.0083	.0083	.0110	.0110	.0197	.0138	.0236	.0165
	40	SFM(Vc)		345	345	345	305	305	305	375	375	340	340	340	340	340	300	385	385	380	380	380	380	375	375
		IPT(fz)		.0032	.0032	.0032	.0028	.0028	.0028	.0039	.0039	.0035	.0035	.0035	.0035	.0035	.0031	.0051	.0051	.0064	.0064	.0075	.0075	.0084	.0084
		RPM		8370	8370	8370	7440	7440	7440	7300	7300	6570	6570	6570	6570	6570	5840	6200	6200	4600	4600	3680	3680	3050	3050
		IPM(FEED)		53	53	53	42	42	42	57	57	46	46	46	46	46	37	63	63	59	59	55	55	51	51
		Ap		.0044	.0028	.0028	.0028	.0028	.0017	.0096	.0096	.0055	.0055	.0055	.0055	.0035	.0035	.0116	.0116	.0154	.0154	.0276	.0193	.0331	.0231
	41	SFM(Vc)		305	305	305	270	270	270	330	330	295	295	295	295	295	265	340	340	330	330	330	330	330	330
		IPT(fz)		.0030	.0030	.0030	.0027	.0027	.0027	.0040	.0040	.0036	.0036	.0036	.0036	.0036	.0032	.0048	.0048	.0063	.0063	.0074	.0074	.0082	.0082
		RPM		7380	7380	7380	6560	6560	6560	6400	6400	5760	5760	5760	5760	5760	5120	5500	5500	4000	4000	3200	3200	2650	2650
		IPM(FEED)		44.5	44.5	44.5	35.2	35.2	35.2	50.6	50.6	40.9	40.9	40.9	40.9	40.9	32.3	52.4	52.4	50.4	50.4	47.2	47.2	43.3	43.3
		Ap		.0031	.0020	.0020	.0020	.0020	.0012	.0069	.0069	.0039	.0039	.0039	.0039	.0025	.0025	.0083	.0083	.0110	.0110	.0197	.0138	.0236	.0165

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