X-POWER PRO END MILLS

RECOMMENDED CUTTING CONDITIONS

GM902 SERIES — 2 FLUTE BALL NOSE with TAPER NECK

NORMAL SPEED

ISO	VDI 3323	Material Description	Ae	Parameter	Diameter (Ø) 1.0	2.0	3.0	4.0	5.0	6.0	8.0
H	5	Non-alloy steel	0.2D	SFM(Vc)	115	195	260	295	310	360	395
				IPT(fz)	.0003	.0006	.0009	.0012	.0016	.0024	.0031
				RPM	11160	9460	8410	7160	6020	5820	4790
				IPM(FEED)	7	11	15	18	19	28	30
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	8-9	Low alloy steel	0.2D	SFM(Vc)	115	195	260	295	310	360	395
				IPT(fz)	.0003	.0006	.0009	.0012	.0016	.0024	.0031
				RPM	11160	9460	8410	7160	6020	5820	4790
				IPM(FEED)	7	11	15	18	19	28	30
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	11.1	High alloyed steel, and tool steel	0.2D	SFM(Vc)	115	195	260	295	310	360	395
				IPT(fz)	.0003	.0006	.0009	.0012	.0016	.0024	.0031
				RPM	11160	9460	8410	7160	6020	5820	4790
				IPM(FEED)	7	11	15	18	19	28	30
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	11.2		0.1D	SFM(Vc)	180	245	330	360	410	445	490
				IPT(fz)	.0005	.0011	.0017	.0020	.0023	.0026	.0030
				RPM	17470	11890	10670	8730	7960	7200	5940
				IPM(FEED)	17	26	36	36	37	38	35
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
H	38.1	Hardened steel	0.1D	SFM(Vc)	180	245	330	360	410	445	490
				IPT(fz)	.0005	.0011	.0017	.0020	.0023	.0026	.0030
				RPM	17470	11890	10670	8730	7960	7200	5940
				IPM(FEED)	17	26	36	36	37	38	35
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
	38.2		0.1D	SFM(Vc)	180	245	310	360	410	425	460
				IPT(fz)	.0005	.0010	.0017	.0020	.0023	.0027	.0029
				RPM	17470	11890	10030	8730	7960	6870	5580
				IPM(FEED)	17	24	34	36	37	37	33
				Ap	0.05	0.1	0.2	0.2	0.3	0.3	0.3
	40	Chilled Cast Iron	0.1D	SFM(Vc)	180	245	330	360	410	445	490
				IPT(fz)	.0005	.0011	.0017	.0020	.0023	.0026	.0030
				RPM	17470	11890	10670	8730	7960	7200	5940
				IPM(FEED)	17	26	36	36	37	38	35
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
	41	Hardened Cast Iron	0.1D	SFM(Vc)	180	245	310	360	410	425	460
				IPT(fz)	.0005	.0010	.0017	.0020	.0023	.0027	.0029
				RPM	17470	11890	10030	8730	7960	6870	5580
				IPM(FEED)	17	24	34	36	37	37	33
				Ap	0.05	0.1	0.2	0.2	0.3	0.3	0.3

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)

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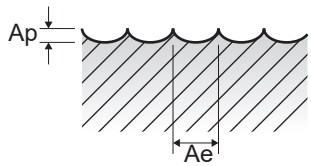

X-POWER PRO END MILLS

RECOMMENDED CUTTING CONDITIONS

GM902 SERIES — 2 FLUTE BALL NOSE with TAPER NECK

HIGH SPEED

ISO	VDI 3323	Material Description	Ae	Parameter	Diameter (Ø) 1.0	2.0	3.0	4.0	5.0	6.0	8.0
P	1-5	Non-alloy steel	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	6-9	Low alloy steel	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	10 - 11.2	High alloyed steel, and tool steel	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
H	38	Hardened steel	0.05D	SFM(Vc)	180	245	330	360	410	445	490
				IPT(fz)	.0008	.0015	.0027	.0032	.0035	.0040	.0044
				RPM	17470	11890	10670	8730	7960	7200	5940
				IPM(FEED)	26	35	58	55	55	57	53
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
	38.2		0.05D	SFM(Vc)	180	245	310	360	395	425	460
				IPT(fz)	.0007	.0017	.0026	.0031	.0034	.0040	.0043
				RPM	17470	11890	10030	8730	7670	6870	5580
				IPM(FEED)	23	40	52	54	52	55	48
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
	40	Chilled Cast Iron	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	41	Hardened Cast Iron	0.05D	SFM(Vc)	180	245	310	360	395	425	460
				IPT(fz)	.0007	.0017	.0026	.0031	.0034	.0040	.0043
				RPM	17470	11890	10030	8730	7670	6870	5580
				IPM(FEED)	23	40	52	54	52	55	48
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25

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