



RECOMMENDED CUTTING CONDITIONS

EMK73 SERIES

2 FLUTE BALL NOSE [AlTiN coated] - SLOTTING

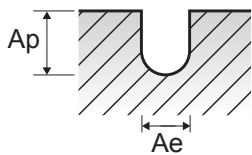


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	5/64	3/32	7/64	3.0mm	1/8
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0005	.0005	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	25	21	18	24	28	25	23	24	21	21	21	21	21	21	21	21	21
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0005	.0005	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	25	21	18	24	28	25	23	24	21	21	21	21	21	21	21	21	21
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0005	.0005	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	25	21	18	24	28	25	23	24	21	21	21	21	21	21	21	21	21
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	8020	6680	5730	5300	5000
			IPM (FEED)	6	5	5	3	4	3	3	3	3	3	3	3	3	3	3	3	3
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0004	.0004	.0005	.0005
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	10680	8900	7640	7070	6680
			IPM (FEED)	8	7	6	7	7	7	7	6	6	6	6	6	6	6	6	6	6
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0007	.0006	.0007	.0007	.0008	.0009	.0011	.0013	.0014	.0015
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	53420	44520	38160	35340	33380
			IPM (FEED)	107	107	107	107	116	116	116	116	100	100	100	100	100	101	100	100	100
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0002	.0003	.0003	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0006	.0006	.0008	.0009	.0011	.0011	.0012
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	26710	22250	19080	17660	16700
			IPM (FEED)	47	47	47	47	46	46	46	46	40	40	40	40	41	40	40	40	40

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
1.0D	OD ≤ 3/64 : 0.2D Ø 3/64 < OD : 0.5D



RECOMMENDED CUTTING CONDITIONS

EMK73 SERIES

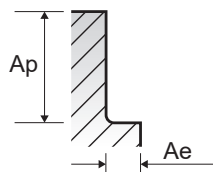
2 FLUTE BALL NOSE [AlTiN coated]- SIDE CUTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	5/64	3/32	7/64	3.0mm	1/8
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0005	.0006	.0006	.0007
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	30	30	30	30	31	31	31	31	27	27	27	27	27	27	27	27	27
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0005	.0006	.0006	.0007
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	30	30	30	30	31	31	31	31	27	27	27	27	27	27	27	27	27
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0003	.0003
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0005	.0006	.0006	.0007
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	30	30	30	30	31	31	31	31	27	27	27	27	27	27	27	27	27
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0003	.0003
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	8020	6680	5730	5300	5000
			IPM (FEED)	4	4	4	4	5	5	5	5	4	4	4	4	4	4	4	4	4
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17122, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0004	.0005	.0005	.0006	.0006
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0004	.0005	.0005	.0006	.0007	.0008	.0009	.0009	.0009	.0010	.0010	.0011	.0014	.0016	.0019	.0021	.0022
			RPM	21200	17660	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	53420	44520	38160	35340	33380
			IPM (FEED)	166	166	166	166	167	167	167	167	144	144	144	144	145	144	145	145	145
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0003	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0007	.0008	.0008	.0009	.0011	.0013	.0015	.0016	.0017
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	26710	22250	19080	17660	16700
			IPM (FEED)	67	67	67	67	67	67	67	67	57	57	57	57	58	57	58	58	58

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
OD ≤ 3/64 : 0.13D Ø 3/64 < OD : 0.25D	1.0D



RECOMMENDED CUTTING CONDITIONS

EMK74 SERIES

3 FLUTE BALL NOSE [AlTiN coated] - SLOTTING

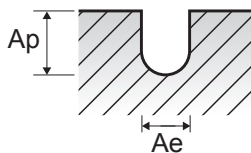


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	5/64	3/32	7/64	3.0mm	1/8
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0004	.0004	.0004	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	24	24	24	24	32	32	32	32	28	28	28	28	28	28	28	28	28
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0004	.0004	.0004	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	24	24	24	24	32	32	32	32	28	28	28	28	28	28	28	28	28
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0004	.0004	.0004	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	24	24	24	24	32	32	32	32	28	28	28	28	28	28	28	28	28
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	8020	6680	5730	5300	5000
			IPM (FEED)	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0004
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	10680	8900	7640	7070	6680
			IPM (FEED)	10	10	10	10	10	10	10	10	8	8	8	8	9	9	9	9	9
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0002	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0006	.0006	.0006	.0007	.0009	.0010	.0012	.0013	.0014
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	53420	44520	38160	35340	33380
			IPM (FEED)	156	156	156	156	158	158	158	158	136	136	136	136	136	135	136	136	136
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0002	.0002	.0003	.0003	.0036	.0039	.0043	.0047	.0004	.0005	.0005	.0005	.0007	.0008	.0010	.0010	.0011
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	26710	22250	19080	17660	16700
			IPM (FEED)	62	62	62	62	628	628	628	628	54	54	54	54	54	54	55	55	55

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
1.0D	OD ≤ 3/64 : 0.2D Ø 3/64 < OD : 0.5D



RECOMMENDED CUTTING CONDITIONS

EMK74 SERIES

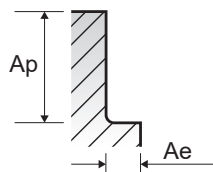
3 FLUTE BALL NOSE [AlTiN coated]- SIDE CUTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	5/64	3/32	7/64	3.0mm	1/8
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0002	.0003	.0003	.0003	.0004	.0005	.0005	.0006	.0006
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	41	41	41	41	42	42	42	42	36	36	36	36	37	36	37	37	37
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0002	.0003	.0003	.0003	.0004	.0005	.0005	.0006	.0006
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	41	41	41	41	42	42	42	42	36	36	36	36	37	36	37	37	37
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0002	.0003	.0003	.0003	.0004	.0005	.0005	.0006	.0006
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	41	41	41	41	42	42	42	42	36	36	36	36	37	36	37	37	37
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0003	.0004
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	8020	6680	5730	5300	5000
			IPM (FEED)	6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17122, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0005	.0006
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0009	.0008	.0009	.0009	.0010	.0012	.0015	.0017	.0019	.0020
			RPM	21200	17660	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	53420	44520	38160	35340	33380
			IPM (FEED)	224	224	224	224	227	227	227	227	194	194	194	194	196	194	196	196	196
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0003	.0003	.0004	.0005	.0005	.0006	.0006	.0007	.0006	.0007	.0007	.0008	.0010	.0012	.0014	.0015	.0016
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	26710	22250	19080	17660	16700
			IPM (FEED)	90	90	90	90	91	91	91	91	78	78	78	78	79	77	78	78	78
			SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0003	.0003	.0004	.0005	.0005	.0006	.0006	.0007	.0006	.0007	.0007	.0008	.0010	.0012	.0014	.0015	.0016

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
OD ≤ 3/64 : 0.13D	1.0D
Ø 3/64 < OD : 0.25D	



RECOMMENDED CUTTING CONDITIONS

EMK75 SERIES

4 FLUTE BALL NOSE [AlTiN coated] - SLOTTING

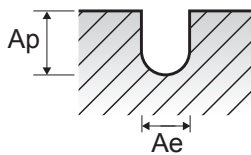


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	5/64	3/32	7/64	3.0mm	1/8
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0004
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	38	38	38	38	38	38	38	38	34	34	34	34	33	33	34	34	34
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0004
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	38	38	38	38	38	38	38	38	34	34	34	34	33	33	34	34	34
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00003	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	3	3	3	3	3	3	3	3	2	2	2	2	3	2	3	3	3
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0004
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	38	38	38	38	38	38	38	38	34	34	34	34	33	33	34	34	34
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00003	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	3	3	3	3	3	3	3	3	2	2	2	2	3	2	3	3	3
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	8020	6680	5730	5300	5000
			IPM (FEED)	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0000	.0003	.0003	.0004	.0004
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	10680	8900	7640	7070	6680
			IPM (FEED)	12	12	12	12	11	11	11	10	10	10	10	10	1	10	10	10	10
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0002	.0003	.0003	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0006	.0006	.0008	.0009	.0011	.0011	.0012
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	53420	44520	38160	35340	33380
			IPM (FEED)	187	187	187	187	185	185	185	185	160	160	160	160	162	160	160	160	160
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0006	.0007	.0008	.0009	.0010
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	26710	22250	19080	17660	16700
			IPM (FEED)	75	75	75	75	75	75	75	75	64	64	64	64	64	64	65	65	65

*** Reduce cutting speed -15% for uncoated tools**



Ae	Ap
1.0D	$OD \leq 3/64 : 0.2D$ $\emptyset 3/64 < OD : 0.5D$



RECOMMENDED CUTTING CONDITIONS

EMK75 SERIES

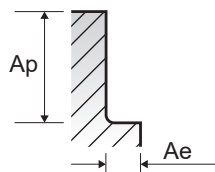
4 FLUTE BALL NOSE [AlTiN coated]- SIDE CUTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	5/64	3/32	7/64	3.0mm	1/8
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0004	.0005	.0005	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	48	48	48	48	49	49	49	49	43	43	43	43	44	43	43	43	43
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0004	.0005	.0005	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	48	48	48	48	49	49	49	49	43	43	43	43	44	43	43	43	43
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0004	.0005	.0005	.0005
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	32050	26710	22900	21210	20030
			IPM (FEED)	48	48	48	48	49	49	49	49	43	43	43	43	44	43	43	43	43
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	5350	4450	3820	3530	3330
			IPM (FEED)	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	8020	6680	5730	5300	5000
			IPM (FEED)	7	7	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17122, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0005
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	10680	8900	7640	7070	6680
			IPM (FEED)	15	15	15	15	15	15	15	15	13	13	13	13	13	13	13	13	13
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0003	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0007	.0008	.0008	.0009	.0011	.0013	.0015	.0016	.0017
			RPM	21200	17660	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	53420	44520	38160	35340	33380
			IPM (FEED)	267	267	267	267	267	267	267	267	230	230	230	230	231	230	232	232	232
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0006	.0006	.0006	.0007	.0007	.0009	.0010	.0012	.0013	.0014
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	26710	22250	19080	17660	16700
			IPM (FEED)	107	107	107	107	107	107	107	107	92	92	92	92	93	92	93	93	93

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
OD ≤ 3/64 : 0.13D	1.0D
Ø 3/64 < OD : 0.25D	



RECOMMENDED CUTTING CONDITIONS

EMK70 SERIES

2 FLUTE [AlTiN coated] - SLOTTING

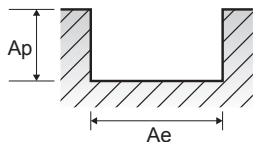


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)													
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	1.6mm	1.7mm
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	25	21	18	24	28	25	23	24	21	21	21	21	24	22
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	25	21	18	24	28	25	23	24	21	21	21	21	24	22
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	4	4	3	2	2	2	2	2	2	2	2	2	2	2
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	25	21	18	24	28	25	23	24	21	21	21	21	24	22
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	4	4	3	2	2	2	2	2	2	2	2	2	2	2
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	9940	9350
			IPM (FEED)	6	5	5	3	4	3	3	3	3	3	3	3	3	3
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	13250	12470
			IPM (FEED)	8	7	6	7	7	7	7	7	6	6	6	6	6	6
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0007	.0006	.0007	.0007	.0008	.0008	.0008
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	66250	62350
			IPM (FEED)	107	107	107	107	116	116	116	116	100	100	100	100	100	100
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0002	.0003	.0003	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0006	.0006	.0006	.0007
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	33130	31180
			IPM (FEED)	47	47	47	47	46	46	46	46	40	40	40	40	41	41

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
1.0D	OD ≤ 3/64 : 0.2D Ø 3/64 < OD : 0.5D



RECOMMENDED CUTTING CONDITIONS

EMK70_{SERIES}

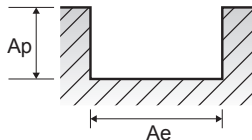
2 FLUTE [AlTiN coated] - SLOTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Parameter	Diameter (Ø)															
			1.8mm	1.9mm	5/64	2.1mm	2.2mm	2.3mm	3/32	2.4mm	2.5mm	2.6mm	2.7mm	7/64	2.8mm	2.9mm	3.0mm	1/8
P	1-5	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	21	20	21	21	21	21	21	21	21	21	21	21	21	21	21	21
	6-8	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	21	20	21	21	21	21	21	21	21	21	21	21	21	21	21	21
	9	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPM (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	10-11.1	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	21	20	21	21	21	21	21	21	21	21	21	21	21	21	21	21
	11.2	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPM (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M	12-13	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
		IPM (fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003
		RPM	8830	8370	8020	7570	7220	6910	6680	6620	6360	6120	5890	5730	5680	5490	5300	5000
		IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	14	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
		IPM (fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005
		RPM	11780	11160	10680	10100	9640	9220	8900	8830	8480	8150	7850	7640	7570	7310	7070	6680
		IPM (FEED)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
N	21-25	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
		IPM (fz)	.0009	.0009	.0009	.0010	.0010	.0011	.0011	.0011	.0012	.0012	.0013	.0013	.0013	.0014	.0014	.0015
		RPM	58890	55790	53420	50470	48180	46090	44520	44170	42400	40770	39260	38160	37860	36560	35340	33380
		IPM (FEED)	100	100	100	101	101	101	101	100	100	100	100	100	100	100	100	100
	26-28	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
		IPM (fz)	.0007	.0007	.0008	.0008	.0008	.0009	.0009	.0009	.0009	.0010	.0010	.0010	.0011	.0011	.0011	.0012
		RPM	29440	27900	26710	25240	24090	23050	22250	22080	21210	20390	19630	19080	18930	18270	17660	16700
		IPM (FEED)	41	41	41	40	40	40	40	40	40	40	40	40	40	40	40	40

*** Reduce cutting speed -15% for uncoated tools**



Ae	Ap
1.0D	$OD \leq 3/64 : 0.2D$ $\emptyset 3/64 < OD : 0.5D$



RECOMMENDED CUTTING CONDITIONS

EMK70 SERIES

2 FLUTE [AlTiN coated] - SIDE CUTTING

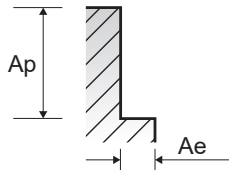


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)													
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	1.6mm	1.7mm
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	30	30	30	30	31	31	31	31	27	27	27	27	27	27
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	30	30	30	30	31	31	31	31	27	27	27	27	27	27
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	30	30	30	30	31	31	31	31	27	27	27	27	27	27
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	13250	12470
			IPM (FEED)	10	10	10	10	10	10	10	10	8	8	8	8	8	8
	14	Stainless steel (SUS 316, 316L, XSGNiMo 17 12, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	13250	12470
			IPM (FEED)	10	10	10	10	10	10	10	10	8	8	8	8	8	8
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0004	.0005	.0005	.0006	.0007	.0008	.0009	.0009	.0009	.0010	.0010	.0011	.0011	.0012
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	66250	62350
			IPM (FEED)	166	166	166	166	167	167	167	167	144	144	144	144	145	145
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0003	.0004	.0004	.0005	.0006	.0006	.0007	.0007	.0007	.0008	.0008	.0009	.0009	.0009
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	33130	31180
			IPM (FEED)	67	67	67	67	67	67	67	67	57	57	57	57	58	58

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
OD ≤ 3/64 : 0.13D	1.0D
Ø 3/64 < OD : 0.25D	



RECOMMENDED CUTTING CONDITIONS

EMK70 SERIES

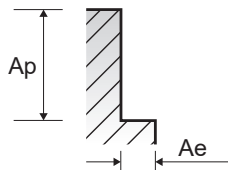
2 FLUTE [AlTiN coated]- SIDE CUTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Parameter	Diameter (Ø)															
			1.8mm	1.9mm	5/64	2.1mm	2.2mm	2.3mm	3/32	2.4mm	2.5mm	2.6mm	2.7mm	7/64	2.8mm	2.9mm	3.0mm	1/8
P	1-5	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006	.0006	.0006	.0006	.0007
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	6-8	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006	.0006	.0006	.0006	.0007
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	9	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPT (fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	10-11.1	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006	.0006	.0006	.0006	.0007
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	11.2	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPT (fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M	12-13	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
		IPT (fz)	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006
		RPM	11780	11160	10680	10100	9640	9220	8900	8830	8480	8150	7850	7640	7570	7310	7070	6680
		IPM (FEED)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	14	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
		IPT (fz)	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006
		RPM	11780	11160	10680	10100	9640	9220	8900	8830	8480	8150	7850	7640	7570	7310	7070	6680
		IPM (FEED)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
N	21-25	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
		IPT (fz)	.0012	.0013	.0014	.0014	.0015	.0016	.0016	.0016	.0017	.0018	.0018	.0019	.0019	.0020	.0021	.0022
		RPM	58890	55790	53420	50470	48180	46090	44520	44170	42400	40770	39260	38160	37860	36560	35340	33380
		IPM (FEED)	145	145	145	144	144	144	144	145	145	145	145	145	145	145	145	145
	26-28	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
		IPT (fz)	.0010	.0010	.0011	.0011	.0012	.0012	.0013	.0013	.0014	.0014	.0015	.0015	.0015	.0016	.0016	.0017
		RPM	29440	27900	26710	25240	24090	23050	22250	22080	21210	20390	19630	19080	18930	18270	17660	16700
		IPM (FEED)	58	58	58	57	57	57	57	58	58	58	58	58	58	58	58	58

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
OD ≤ 3/64 : 0.13D Ø 3/64 < OD : 0.25D	1.0D



RECOMMENDED CUTTING CONDITIONS

EMK71 SERIES

3 FLUTE [AlTiN coated] - **SLOTTING**

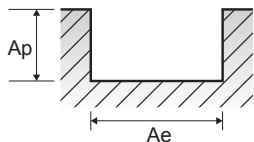


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)													
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	1.6mm	1.7mm
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	24	24	24	24	32	32	32	32	28	28	28	28	28	28
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	24	24	24	24	32	32	32	32	28	28	28	28	28	28
	9		SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	10-11.1		SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	24	24	24	24	32	32	32	32	28	28	28	28	28	28
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	9940	9350
			IPM (FEED)	5	5	5	5	5	5	5	5	4	4	4	4	4	4
	14	Stainless steel (SUS 316, 316L, X6CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	13250	12470
			IPM (FEED)	10	10	10	10	10	10	10	10	8	8	8	8	9	9
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0002	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0006	.0006	.0006	.0007	.0007	.0007
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	66250	62350
			IPM (FEED)	156	156	156	156	158	158	158	158	136	136	136	136	136	136
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0002	.0002	.0003	.0003	.0036	.0039	.0043	.0047	.0004	.0005	.0005	.0005	.0005	.0006
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	33130	31180
			IPM (FEED)	62	62	62	62	628	628	628	628	54	54	54	54	54	54

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
1.0D	OD ≤ 3/64 : 0.2D Ø 3/64 < OD : 0.5D



RECOMMENDED CUTTING CONDITIONS

EMK71 SERIES

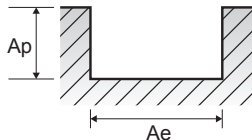
3 FLUTE [AlTiN coated] - SLOTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Parameter	Diameter (Ø)															
			1.8mm	1.9mm	5/64	2.1mm	2.2mm	2.3mm	3/32	2.4mm	2.5mm	2.6mm	2.7mm	7/64	2.8mm	2.9mm	3.0mm	1/8
P	1-5	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
	6-8	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
	9	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPM (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	10-11.1	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
	11.2	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPM (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M	12-13	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
		IPM (fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003
		RPM	8830	8370	8020	7570	7220	6910	6680	6620	6360	6120	5890	5730	5680	5490	5300	5000
		IPM (FEED)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	14	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
		IPM (fz)	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004
		RPM	11780	11160	10680	10100	9640	9220	8900	8830	8480	8150	7850	7640	7570	7310	7070	6680
		IPM (FEED)	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
N	21-25	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
		IPM (fz)	.0008	.0008	.0009	.0009	.0009	.0010	.0010	.0010	.0011	.0011	.0012	.0012	.0012	.0012	.0013	.0014
		RPM	58890	55790	53420	50470	48180	46090	44520	44170	42400	40770	39260	38160	37860	36560	35340	33380
		IPM (FEED)	136	136	136	135	135	135	135	136	136	136	136	136	136	136	136	136
	26-28	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
		IPM (fz)	.0006	.0007	.0007	.0007	.0007	.0008	.0008	.0008	.0009	.0009	.0009	.0010	.0010	.0010	.0010	.0011
		RPM	29440	27900	26710	25240	24090	23050	22250	22080	21210	20390	19630	19080	18930	18270	17660	16700
		IPM (FEED)	54	54	54	54	54	54	54	55	55	55	55	55	55	55	55	55

*** Reduce cutting speed -15% for uncoated tools**



Ae	Ap
1.0D	$OD \leq 3/64 : 0.2D$ $\emptyset 3/64 < OD : 0.5D$



RECOMMENDED CUTTING CONDITIONS

EMK71 SERIES

3 FLUTE [AlTiN coated] - SIDE CUTTING

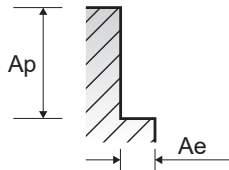


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)													
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	1.6mm	1.7mm
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0002	.0003	.0003	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	41	41	41	41	42	42	42	42	36	36	36	36	37	37
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0002	.0003	.0003	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	41	41	41	41	42	42	42	42	36	36	36	36	37	37
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0002	.0003	.0003	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	41	41	41	41	42	42	42	42	36	36	36	36	37	37
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0001	.0001	.0002	.0002	.0002	.0002
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	9940	9350
			IPM (FEED)	6	6	6	6	6	6	6	6	5	5	5	5	5	5
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	13250	12470
			IPM (FEED)	13	13	13	13	13	13	13	13	11	11	11	11	11	11
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
			IPT (fz)	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0009	.0008	.0009	.0009	.0010	.0010	.0010
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	66250	62350
			IPM (FEED)	224	224	224	224	227	227	227	227	194	194	194	194	196	196
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0003	.0003	.0004	.0005	.0005	.0006	.0006	.0007	.0006	.0007	.0007	.0008	.0008	.0008
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	33130	31180
			IPM (FEED)	90	90	90	90	91	91	91	91	78	78	78	78	79	79

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
OD ≤ 3/64 : 0.13D	1.0D
Ø 3/64 < OD : 0.25D	



RECOMMENDED CUTTING CONDITIONS

EMK71 SERIES

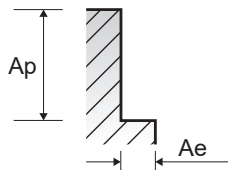
3 FLUTE [AlTiN coated]- SIDE CUTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Parameter	Diameter (Ø)															
			1.8mm	1.9mm	5/64	2.1mm	2.2mm	2.3mm	3/32	2.4mm	2.5mm	2.6mm	2.7mm	7/64	2.8mm	2.9mm	3.0mm	1/8
P	1-5	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0003	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	37	37	37	36	36	36	36	37	37	37	37	37	37	37	37	37
	6-8	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0003	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	37	37	37	36	36	36	36	37	37	37	37	37	37	37	37	37
	9	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPT (fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	10-11.1	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0003	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	37	37	37	36	36	36	36	37	37	37	37	37	37	37	37	37
	11.2	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPT (fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
M	12-13	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
		IPT (fz)	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004
		RPM	8830	8370	8020	7570	7220	6910	6680	6620	6360	6120	5890	5730	5680	5490	5300	5000
		IPM (FEED)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	14	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
		IPT (fz)	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005	.0006
		RPM	11780	11160	10680	10100	9640	9220	8900	8830	8480	8150	7850	7640	7570	7310	7070	6680
		IPM (FEED)	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
N	21-25	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
		IPT (fz)	.0011	.0012	.0012	.0013	.0013	.0014	.0015	.0015	.0015	.0016	.0017	.0017	.0017	.0018	.0019	.0020
		RPM	58890	55790	53420	50470	48180	46090	44520	44170	42400	40770	39260	38160	37860	36560	35340	33380
		IPM (FEED)	196	196	196	194	194	194	194	196	196	196	196	196	196	196	196	196
	26-28	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
		IPT (fz)	.0009	.0009	.0010	.0010	.0011	.0011	.0012	.0012	.0012	.0013	.0013	.0014	.0014	.0014	.0015	.0016
		RPM	29440	27900	26710	25240	24090	23050	22250	22080	21210	20390	19630	19080	18930	18270	17660	16700
		IPM (FEED)	79	79	79	77	77	77	77	78	78	78	78	78	78	78	78	78

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
OD ≤ 3/64 : 0.13D Ø 3/64 < OD : 0.25D	1.0D



RECOMMENDED CUTTING CONDITIONS

EMK72 SERIES

4 FLUTE [AlTiN coated] - **SLOTTING**

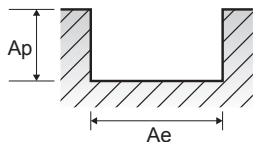


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)													
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	1.6mm	1.7mm
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	38	38	38	38	38	38	38	38	34	34	34	34	33	33
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	38	38	38	38	38	38	38	38	34	34	34	34	33	33
	9		SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00003	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	3	3	3	3	3	3	3	3	2	2	2	2	3	3
	10-11.1		SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	38	38	38	38	38	38	38	38	34	34	34	34	33	33
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00003	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	3	3	3	3	3	3	3	3	2	2	2	2	3	3
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	9940	9350
			IPM (FEED)	6	6	6	6	5	5	5	5	5	5	5	5	5	5
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0000	.0000
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	13250	12470
			IPM (FEED)	12	12	12	12	11	11	11	11	10	10	10	10	1	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	
			IPT (fz)	.0002	.0003	.0003	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0006	.0006	.0006	.0007
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	66250	62350
			IPM (FEED)	187	187	187	187	185	185	185	185	160	160	160	160	162	162
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	
			IPT (fz)	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	33130	31180
			IPM (FEED)	75	75	75	75	75	75	75	75	64	64	64	64	64	64

*** Reduce cutting speed -15% for uncoated tools**



Ae	Ap
1.0D	OD ≤ 3/64 : 0.2D Ø 3/64 < OD : 0.5D



RECOMMENDED CUTTING CONDITIONS

EMK72 SERIES

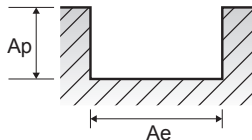
4 FLUTE [AlTiN coated] - SLOTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Parameter	Diameter (Ø)															
			1.8mm	1.9mm	5/64	2.1mm	2.2mm	2.3mm	3/32	2.4mm	2.5mm	2.6mm	2.7mm	7/64	2.8mm	2.9mm	3.0mm	1/8
P	1-5	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	33	33	33	33	33	33	33	34	34	34	34	34	34	34	34	34
	6-8	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	33	33	33	33	33	33	33	34	34	34	34	34	34	34	34	34
	9	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPM (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3
	10-11.1	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPM (fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	33	33	33	33	33	33	33	34	34	34	34	34	34	34	34	34
	11.2	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPM (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3
M	12-13	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
		IPM (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
		RPM	8830	8370	8020	7570	7220	6910	6680	6620	6360	6120	5890	5730	5680	5490	5300	5000
		IPM (FEED)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	14	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
		IPM (fz)	.0000	.0000	.0000	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004
		RPM	11780	11160	10680	10100	9640	9220	8900	8830	8480	8150	7850	7640	7570	7310	7070	6680
		IPM (FEED)	1	1	1	10	10	10	10	10	10	10	10	10	10	10	10	10
N	21-25	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
		IPM (fz)	.0007	.0007	.0008	.0008	.0008	.0009	.0009	.0009	.0009	.0010	.0010	.0011	.0011	.0011	.0011	.0012
		RPM	58890	55790	53420	50470	48180	46090	44520	44170	42400	40770	39260	38160	37860	36560	35340	33380
		IPM (FEED)	162	162	162	160	160	160	160	160	160	160	160	160	160	160	160	160
	26-28	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
		IPM (fz)	.0005	.0006	.0006	.0006	.0007	.0007	.0007	.0007	.0008	.0008	.0008	.0008	.0009	.0009	.0009	.0010
		RPM	29440	27900	26710	25240	24090	23050	22250	22080	21210	20390	19630	19080	18930	18270	17660	16700
		IPM (FEED)	64	64	64	64	64	64	64	65	65	65	65	65	65	65	65	65

*** Reduce cutting speed -15% for uncoated tools**



Ae	Ap
1.0D	$OD \leq 3/64 : 0.2D$ $\emptyset 3/64 < OD : 0.5D$



RECOMMENDED CUTTING CONDITIONS

EMK72 SERIES

4 FLUTE [AlTiN coated] - SIDE CUTTING

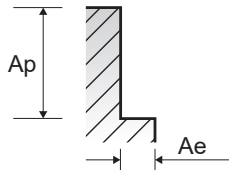


RPM = rev./min.
Vc = ft./min.

Feed = in./min.
fz = in./tooth

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)														
				0.5mm	0.6mm	0.7mm	1/32	0.9mm	1.0mm	1.1mm	3/64	1.3mm	1.4mm	1.5mm	1/16	1.6mm	1.7mm	
P	1-5	Non-alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410	37410
			IPM (FEED)	48	48	48	48	49	49	49	49	49	43	43	43	43	44	44
	6-8	Low alloy steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410	37410
			IPM (FEED)	48	48	48	48	49	49	49	49	49	43	43	43	43	44	44
	9	Low alloy steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230	6230
			IPM (FEED)	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3
	10-11.1	High alloyed steel, and tool steel	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
			IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410	37410
			IPM (FEED)	48	48	48	48	49	49	49	49	49	43	43	43	43	44	44
	11.2	High alloyed steel, and tool steel	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
			IPT (fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230	6230
			IPM (FEED)	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	9940	9350	9350
			IPM (FEED)	7	7	7	7	7	7	7	7	7	6	6	6	6	6	6
	14	Stainless steel (SUS 316, 316L, X5CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0002	.0003
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	13250	12470	12470
			IPM (FEED)	15	15	15	15	15	15	15	15	15	13	13	13	13	13	13
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	
			IPT (fz)	.0003	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0007	.0008	.0008	.0009	.0009	.0009	.0009
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	66250	62350	62350
			IPM (FEED)	267	267	267	267	267	267	267	267	267	230	230	230	230	231	231
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
			IPT (fz)	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0006	.0006	.0006	.0007	.0007	.0007	.0007	.0007
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	33130	31180	31180
			IPM (FEED)	107	107	107	107	107	107	107	107	107	92	92	92	92	93	93

* Reduce cutting speed -15% for uncoated tools



Ae	Ap
OD ≤ 3/64 : 0.13D Ø 3/64 < OD : 0.25D	1.0D

RECOMMENDED CUTTING CONDITIONS

EMK72 SERIES

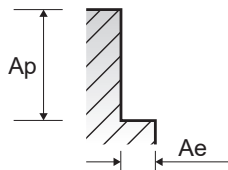
4 FLUTE [AlTiN coated]- SIDE CUTTING



RPM = rev./min. Feed = in./min.
Vc = ft./min. fz = in./tooth

ISO	VDI 3323	Parameter	Diameter (Ø)															
			1.8mm	1.9mm	5/64	2.1mm	2.2mm	2.3mm	3/32	2.4mm	2.5mm	2.6mm	2.7mm	7/64	2.8mm	2.9mm	3.0mm	1/8
P	1-5	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	44	44	44	43	43	43	43	43	43	43	43	43	43	43	43	43
	6-8	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	44	44	44	43	43	43	43	43	43	43	43	43	43	43	43	43
	9	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPT (fz)	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	10-11.1	SFM (Vc)	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
		IPT (fz)	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005
		RPM	35340	33480	32050	30290	28910	27660	26710	26500	25440	24460	23550	22900	22710	21930	21210	20030
		IPM (FEED)	44	44	44	43	43	43	43	43	43	43	43	43	43	43	43	43
	11.2	SFM (Vc)	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
		IPT (fz)	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003
		RPM	5890	5580	5350	5050	4820	4610	4450	4420	4240	4080	3920	3820	3780	3660	3530	3330
		IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
M	12-13	SFM (Vc)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
		IPT (fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003
		RPM	8830	8370	8020	7570	7220	6910	6680	6620	6360	6120	5890	5730	5680	5490	5300	5000
		IPM (FEED)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	14	SFM (Vc)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
		IPT (fz)	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005
		RPM	11780	11160	10680	10100	9640	9220	8900	8830	8480	8150	7850	7640	7570	7310	7070	6680
		IPM (FEED)	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
N	21-25	SFM (Vc)	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
		IPT (fz)	.0010	.0010	.0011	.0011	.0012	.0012	.0013	.0013	.0014	.0014	.0015	.0015	.0015	.0016	.0016	.0017
		RPM	58890	55790	53420	50470	48180	46090	44520	44170	42400	40770	39260	38160	37860	36560	35340	33380
		IPM (FEED)	231	231	231	230	230	230	230	232	232	232	232	232	232	232	232	232
	26-28	SFM (Vc)	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545	545
		IPT (fz)	.0008	.0008	.0009	.0009	.0010	.0010	.0010	.0011	.0011	.0011	.0012	.0012	.0012	.0013	.0013	.0014
		RPM	29440	27900	26710	25240	24090	23050	22250	22080	21210	20390	19630	19080	18930	18270	17660	16700
		IPM (FEED)	93	93	93	92	92	92	92	93	93	93	93	93	93	93	93	93

*** Reduce cutting speed -15% for uncoated tools**



Ae	Ap
OD ≤ 3/64 : 0.13D Ø 3/64 < OD : 0.25D	1.0D