

YG

SOLID CARBIDE END MILLS
MINIATURE
for PRECISE DETAIL MACHINING

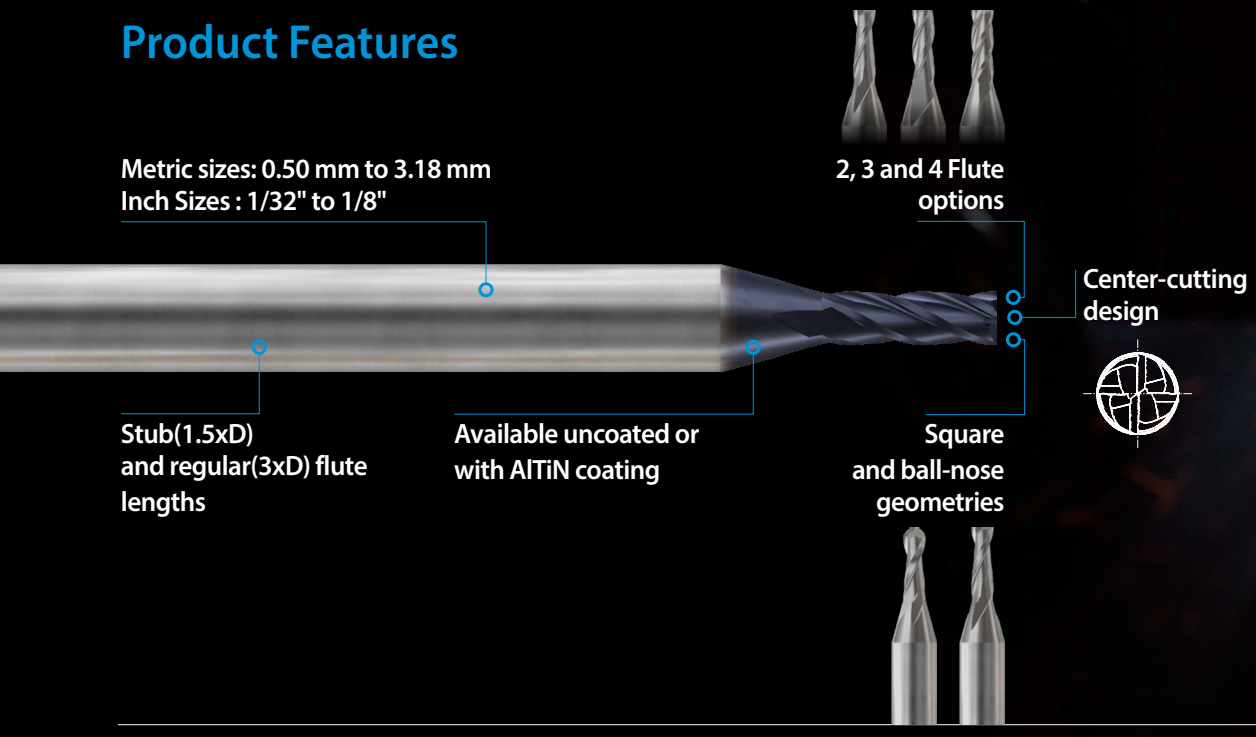
- Center-cutting design
- 2, 3, and 4 flute options
- Available uncoated or with AlTiN coating
- Stub and regular flute lengths
- Square and ball-nose geometries
- 0.50mm to 3.00mm in 0.10mm increments
  1/32″ to 1/8″ in 1/64″ increments
- Tight tolerances for both diameter
  and length of cut

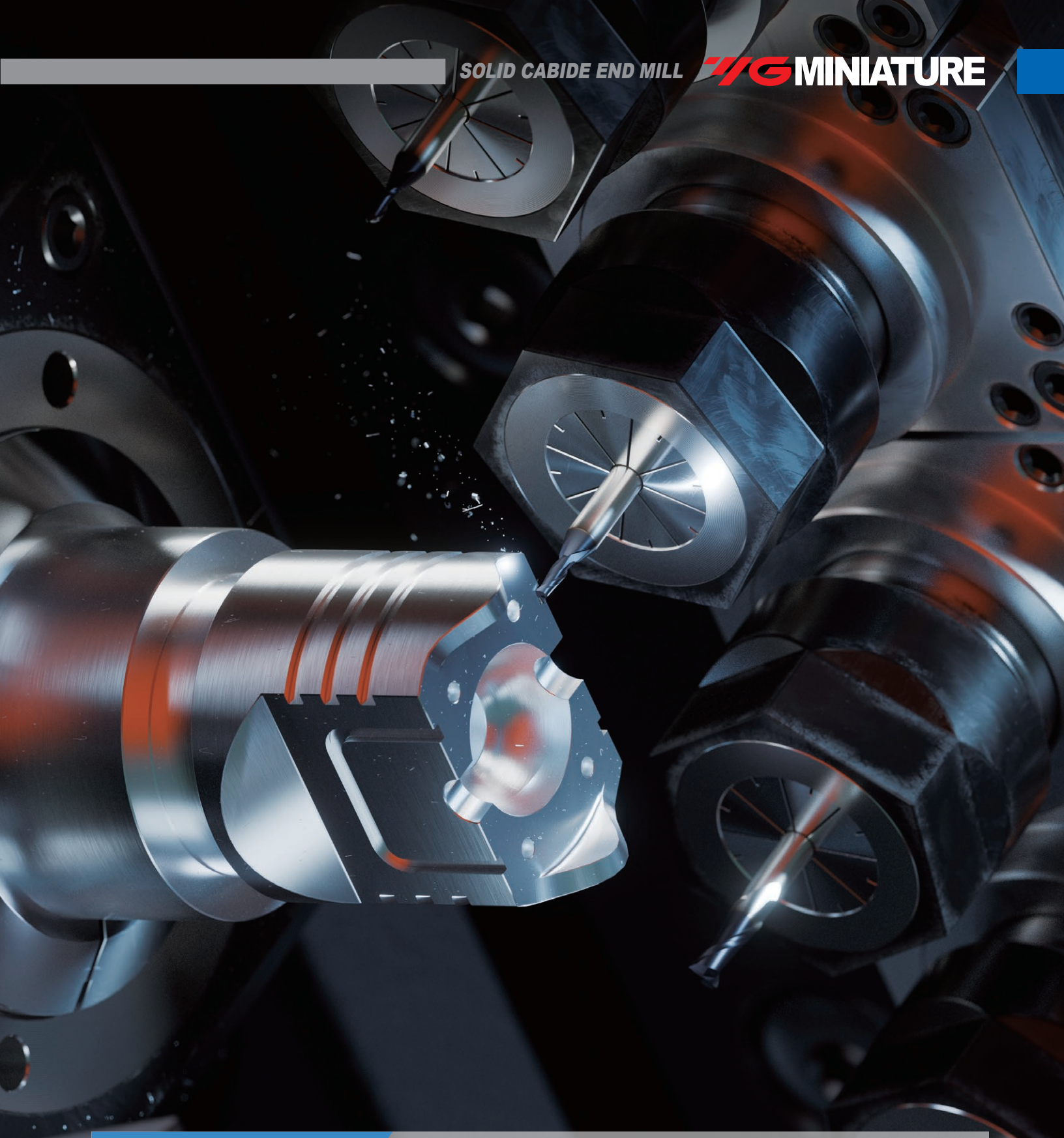
SOLID CARBIDE END MILLS
MINIATURE
for PRECISE DETAIL MACHINING

Industries & Applications

- **Medical Devices:** Small implants, precision components, and surgical tooling
- **Electronics:** Micro-features for electronic devices and telecom components
- **Jewelry:** Intricate shapes and designs in precious metals with fine detail
- **Watchmaking:** Ultra-precise timepiece components
- **Aerospace:** Small parts for aircraft, spacecraft, and communication systems

Product Features





GUIDE TO ICONS

Tool Material	Type of Coating	Type of Shank	No. of Flutes	Helix Angle	Tolerance of Ball Radius	Cutting Condition Pages
CARBIDE	UNCOATED / AlTiN	PLAIN	2 / 3 / 4	30° / 30°	R ±.0008	

SELECTION GUIDE
INCH / METRIC

SERIES	E5K73	EMK73	E5K74	EMK74	E5K75	EMK75
FLUTE	2		3		4	
HELIX ANGLE	30°		30°		30°	
CUTTING EDGE SHAPE	BALL NOSE		BALL NOSE		BALL NOSE	
SIZE MIN	R0.25mm		R0.25mm		R0.25mm	
SIZE MAX	R1/16		R1/16		R1/16	
PAGE	6-7		6-7		6-7	
	Miniature		Miniature		Miniature	
	Uncoated	AlTiN	Uncoated	AlTiN	Uncoated	AlTiN

SOLID CARBIDE YG MINIATURE END MILLS

Miniature End Mills
for Precise Detail Machining



Please visit globalyg1.com/mat for material search

Recommended cutting conditions : p.12-29

◎ : Excellent ○ : Good

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc						
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎
	8			Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎
	9			Quenched & Tempered	350	38	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎	◎	◎	◎	◎
	11			Quenched & Tempered	325	35	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○	○	○	○	○	○
	13		Martensitic	Quenched & Tempered	240	23	○	○	○	○	○	○
	14		Austenitic		180	10	○	○	○	○	○	○
K	15	Grey cast iron	Pearlitic / ferritic		180	10						
	16		Pearlitic (Martensitic)		260	26						
	17	Nodular cast iron	Ferritic		160	3						
	18		Pearlitic		250	25						
	19	Malleable cast iron	Ferritic		130							
	20		Pearlitic		230	21						
N	21	Aluminum-wrought alloy	Not Curable		60		○	○	○	○	○	○
	22		Curable	Hardened	100		○	○	○	○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○	○	○
	24		≤ 12% Si, Curable	Hardened	90		○	○	○	○	○	○
	25		> 12% Si, Not Curable		130		○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○	○	○	○	○	○
	27		CuZn, CuSnZn (Brass)		90		○	○	○	○	○	○
	28		CuSn, lead-free copper and electrolytic copper		100		○	○	○	○	○	○
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic									
	30		Rubber, Wood, etc.									
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15						
	32			Cured	280	30						
	33		Ni or Co Based	Annealed	250	25						
	34			Cured	350	38						
	35			Cast	320	34						
	36	Titanium Alloys	Pure Titanium		400 Rm							
	37		Alpha + Beta Alloys	Hardened	1050 Rm							
H	38	Hardened steel		Hardened	550	55						
	39			Hardened	630	60						
	40	Chilled Cast Iron		Cast	400	42						
	41	Hardened Cast Iron		Hardened	550	55						

E5K70	EMK70	E5K71	EMK71	E5K72	EMK72		
2		3		4			
30°		30°		30°			
SQUARE		SQUARE		SQUARE			
0.5mm		0.5mm		0.5mm			
1/8		1/8		1/8			
8-11		8-11		8-11			
Miniature		Miniature		Miniature			
Uncoated	AlTiN	Uncoated	AlTiN	Uncoated	AlTiN		
							
◎	◎	◎	◎	◎	◎	1	P
◎	◎	◎	◎	◎	◎	2	
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						41	

SOLID CARBIDE END MILLS

2 & 3 & 4 FLUTE BALL NOSE - MINIATURE

	2 Flute	3 Flute	4 Flute
Uncoated	E5K73	E5K74	E5K75
Coated	EMK73	EMK74	EMK75

SERIES

- Sharp cutting edges for clean, burr-free finishes
- Engineered for maximum precision on intricate workpieces





Unit : INCH / METRIC

Radius of Ball Nose (R)	OD (D_1)	SD (D_2)	LOC (L_1)	OAL (L_2)	2 Flute Ball Nose		3 Flute Ball Nose		4 Flute Ball Nose	
					Uncoated	AlTiN	Uncoated	AlTiN	Uncoated	AlTiN
					EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
R0.25mm	0.5mm	1/8	.030	1-1/2	E5K73901	EMK73901	E5K74901	EMK74901	E5K75901	EMK75901
		1/8	.060	1-1/2	E5K73902	EMK73902	E5K74902	EMK74902	E5K75902	EMK75902
R0.3mm	0.6mm	1/8	.036	1-1/2	E5K73903	EMK73903	E5K74903	EMK74903	E5K75903	EMK75903
		1/8	.072	1-1/2	E5K73904	EMK73904	E5K74904	EMK74904	E5K75904	EMK75904
R0.35mm	0.7mm	1/8	.042	1-1/2	E5K73905	EMK73905	E5K74905	EMK74905	E5K75905	EMK75905
		1/8	.084	1-1/2	E5K73906	EMK73906	E5K74906	EMK74906	E5K75906	EMK75906
R1/64	1/32	1/8	.046	1-1/2	E5K73002	EMK73002	E5K74002	EMK74002	E5K75002	EMK75002
		1/8	.093	1-1/2	E5K73907	EMK73907	E5K74907	EMK74907	E5K75907	EMK75907
R0.45mm	0.9mm	1/8	.052	1-1/2	E5K73908	EMK73908	E5K74908	EMK74908	E5K75908	EMK75908
		1/8	.105	1-1/2	E5K73909	EMK73909	E5K74909	EMK74909	E5K75909	EMK75909
R0.5mm	1.0mm	1/8	.058	1-1/2	E5K73910	EMK73910	E5K74910	EMK74910	E5K75910	EMK75910
		1/8	.117	1-1/2	E5K73911	EMK73911	E5K74911	EMK74911	E5K75911	EMK75911
R0.55mm	1.1mm	1/8	.129	1-1/2	E5K73912	EMK73912	E5K74912	EMK74912	E5K75912	EMK75912
R.0234	3/64	1/8	.070	1-1/2	E5K73003	EMK73003	E5K74003	EMK74003	E5K75003	EMK75003
		1/8	.141	1-1/2	E5K73913	EMK73913	E5K74913	EMK74913	E5K75913	EMK75913
R0.65mm	1.3mm	1/8	.153	1-1/2	E5K73914	EMK73914	E5K74914	EMK74914	E5K75914	EMK75914

NEXT PAGE ▶

Ball Radius Tolerance (in)	Mill Dia.Tolerance (in)	Shank Dia.Tolerance
± .0008	± .0005	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

SOLID CARBIDE END MILLS
2 & 3 & 4 FLUTE BALL NOSE - MINIATURE

	2 Flute	3 Flute	4 Flute
Uncoated	E5K73	E5K74	E5K75
Coated	EMK73	EMK74	EMK75

SERIES

- Sharp cutting edges for clean, burr-free finishes
- Engineered for maximum precision on intricate workpieces

2 Flute

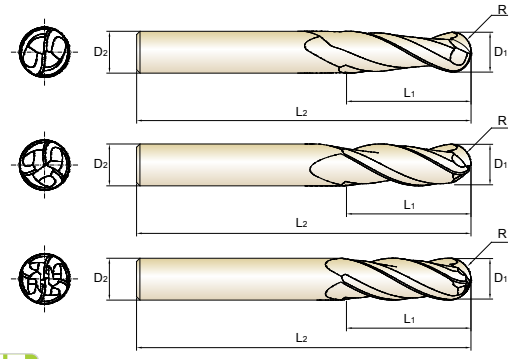


3 Flute



4 Flute





CARBIDE | 2 | 3 | 4 | 30° | R ±.0008 | UNCOATED | AlTiN | PLAIN | P. 12-P.17

Unit : INCH / METRIC

Radius of Ball Nose (R)	OD (D_1)	SD (D_2)	LOC (L_1)	OAL (L_2)	2 Flute Ball Nose		3 Flute Ball Nose		4 Flute Ball Nose	
					Uncoated	AlTiN	Uncoated	AlTiN	Uncoated	AlTiN
					EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
R0.7mm	1.4mm	1/8	.082	1-1/2	E5K73915	EMK73915	E5K74915	EMK74915	E5K75915	EMK75915
		1/8	.165	1-1/2	E5K73916	EMK73916	E5K74916	EMK74916	E5K75916	EMK75916
R0.75mm	1.5mm	1/8	.089	1-1/2	E5K73917	EMK73917	E5K74917	EMK74917	E5K75917	EMK75917
		1/8	.177	1-1/2	E5K73918	EMK73918	E5K74918	EMK74918	E5K75918	EMK75918
R1/32	1/16	1/8	.093	1-1/2	E5K73004	EMK73004	E5K74004	EMK74004	E5K75004	EMK75004
		1/8	.186	1-1/2	E5K73919	EMK73919	E5K74919	EMK74919	E5K75919	EMK75919
R.039	5/64	1/8	.117	1-1/2	E5K73005	EMK73005	E5K74005	EMK74005	E5K75005	EMK75005
		1/8	.234	1-1/2	E5K73920	EMK73920	E5K74920	EMK74920	E5K75920	EMK75920
R3/64	3/32	1/8	.139	1-1/2	E5K73006	EMK73006	E5K74006	EMK74006	E5K75006	EMK75006
		1/8	.279	1-1/2	E5K73921	EMK73921	E5K74921	EMK74921	E5K75921	EMK75921
R.054	7/64	1/8	.164	1-1/2	E5K73007	EMK73007	E5K74007	EMK74007	E5K75007	EMK75007
		1/8	.327	1-1/2	E5K73922	EMK73922	E5K74922	EMK74922	E5K75922	EMK75922
R1.5mm	3.0mm	1/8	.177	1-1/2	E5K73923	EMK73923	E5K74923	EMK74923	E5K75923	EMK75923
		1/8	.354	1-1/2	E5K73924	EMK73924	E5K74924	EMK74924	E5K75924	EMK75924
R1/16	1/8	1/8	.187	1-1/2	E5K73008	EMK73008	E5K74008	EMK74008	E5K75008	EMK75008
		1/8	3/8	1-1/2	E5K73925	EMK73925	E5K74925	EMK74925	E5K75925	EMK75925

Ball Radius Tolerance (in)	Mill Dia. Tolerance (in)	Shank Dia. Tolerance
± .0008	± .0005	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

SOLID CARBIDE END MILLS
2 & 3 & 4 FLUTE SQUARE

	2 Flute	3 Flute	4 Flute
Uncoated	E5K70	E5K71	E5K72
Coated	EMK70	EMK71	EMK72

SERIES

- Sharp cutting edges for clean, burr-free finishes
- Engineered for maximum precision on intricate workpieces

2 Flute

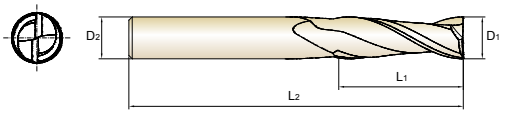


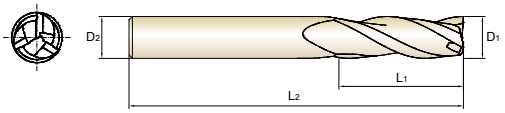
3 Flute

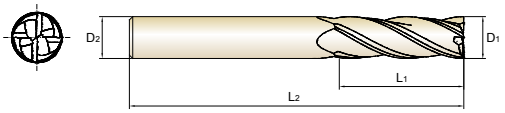


4 Flute









CARBIDE | 2 | 3 | 4 | 30° | UNCOATED | AlTiN | PLAIN | P. 18-P.29

Unit : INCH / METRIC

OD (D_1)	SD (D_2)	LOC (L_1)	OAL (L_2)	2 Flute Square End		3 Flute Square End		4 Flute Square End	
				Uncoated	AlTiN	Uncoated	AlTiN	Uncoated	AlTiN
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
0.5mm	1/8	.030	1-1/2	E5K70901	EMK70901	E5K71901	EMK71901	E5K72901	EMK72901
		.060	1-1/2	E5K70902	EMK70902	E5K71902	EMK71902	E5K72902	EMK72902
0.6mm	1/8	.036	1-1/2	E5K70903	EMK70903	E5K71903	EMK71903	E5K72903	EMK72903
		.072	1-1/2	E5K70904	EMK70904	E5K71904	EMK71904	E5K72904	EMK72904
0.7mm	1/8	.042	1-1/2	E5K70905	EMK70905	E5K71905	EMK71905	E5K72905	EMK72905
		.084	1-1/2	E5K70906	EMK70906	E5K71906	EMK71906	E5K72906	EMK72906
1/32	1/8	.046	1-1/2	E5K70002	EMK70002	E5K71002	EMK71002	E5K72002	EMK72002
		.093	1-1/2	E5K70907	EMK70907	E5K71907	EMK71907	E5K72907	EMK72907
0.9mm	1/8	.052	1-1/2	E5K70908	EMK70908	E5K71908	EMK71908	E5K72908	EMK72908
		.105	1-1/2	E5K70909	EMK70909	E5K71909	EMK71909	E5K72909	EMK72909
1mm	1/8	.058	1-1/2	E5K70910	EMK70910	E5K71910	EMK71910	E5K72910	EMK72910
		.117	1-1/2	E5K70911	EMK70911	E5K71911	EMK71911	E5K72911	EMK72911
1.1mm	1/8	.065	1-1/2	E5K70912	EMK70912	E5K71912	EMK71912	E5K72912	EMK72912
		.129	1-1/2	E5K70913	EMK70913	E5K71913	EMK71913	E5K72913	EMK72913
3/64	1/8	.070	1-1/2	E5K70003	EMK70003	E5K71003	EMK71003	E5K72003	EMK72003
		.141	1-1/2	E5K70914	EMK70914	E5K71914	EMK71914	E5K72914	EMK72914

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
± .0005	h5

NEXT PAGE ▶

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

SOLID CARBIDE END MILLS
2 & 3 & 4 FLUTE SQUARE - MINIATURE

	2 Flute	3 Flute	4 Flute
Uncoated	E5K70	E5K71	E5K72
Coated	EMK70	EMK71	EMK72

SERIES

- Sharp cutting edges for clean, burr-free finishes
- Engineered for maximum precision on intricate workpieces

2 Flute

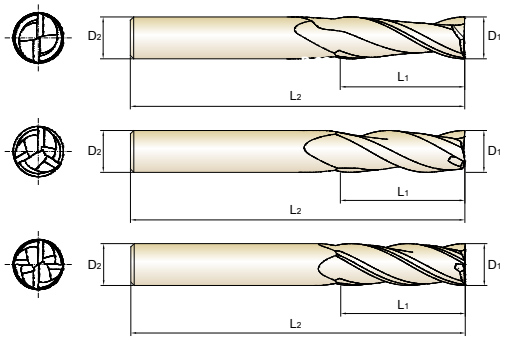


3 Flute



4 Flute





CARBIDE | 2 | 3 | 4 | 30° | UNCOATED | AlTiN | PLAIN | P. 18-P.29

Unit : INCH / METRIC

OD (D_1)	SD (D_2)	LOC (L_1)	OAL (L_2)	2 Flute Square End		3 Flute Square End		4 Flute Square End	
				Uncoated	AlTiN	Uncoated	AlTiN	Uncoated	AlTiN
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1.3mm	1/8	.077	1-1/2	E5K70915	EMK70915	E5K71915	EMK71915	E5K72915	EMK72915
		.153	1-1/2	E5K70916	EMK70916	E5K71916	EMK71916	E5K72916	EMK72916
1.4mm	1/8	.082	1-1/2	E5K70917	EMK70917	E5K71917	EMK71917	E5K72917	EMK72917
		.165	1-1/2	E5K70918	EMK70918	E5K71918	EMK71918	E5K72918	EMK72918
1.5mm	1/8	.089	1-1/2	E5K70919	EMK70919	E5K71919	EMK71919	E5K72919	EMK72919
		.177	1-1/2	E5K70920	EMK70920	E5K71920	EMK71920	E5K72920	EMK72920
1/16	1/8	.093	1-1/2	E5K70004	EMK70004	E5K71004	EMK71004	E5K72004	EMK72004
		.186	1-1/2	E5K70921	EMK70921	E5K71921	EMK71921	E5K72921	EMK72921
1.6mm	1/8	.095	1-1/2	E5K70922	EMK70922	E5K71922	EMK71922	E5K72922	EMK72922
		.189	1-1/2	E5K70923	EMK70923	E5K71923	EMK71923	E5K72923	EMK72923
1.7mm	1/8	.201	1-1/2	E5K70924	EMK70924	E5K71924	EMK71924	E5K72924	EMK72924
1.8mm	1/8	.107	1-1/2	E5K70925	EMK70925	E5K71925	EMK71925	E5K72925	EMK72925
		.213	1-1/2	E5K70926	EMK70926	E5K71926	EMK71926	E5K72926	EMK72926
1.9mm	1/8	.112	1-1/2	E5K70927	EMK70927	E5K71927	EMK71927	E5K72927	EMK72927
		.225	1-1/2	E5K70928	EMK70928	E5K71928	EMK71928	E5K72928	EMK72928

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
± .0005	h5

NEXT PAGE ▶

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

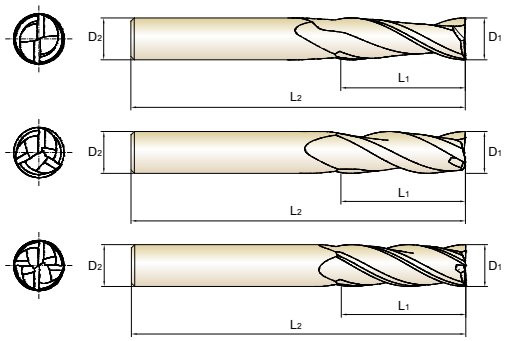
SOLID CARBIDE END MILLS
2 & 3 & 4 FLUTE SQUARE - MINIATURE

	2 Flute	3 Flute	4 Flute
Uncoated	E5K70	E5K71	E5K72
Coated	EMK70	EMK71	EMK72

SERIES

- Sharp cutting edges for clean, burr-free finishes
- Engineered for maximum precision on intricate workpieces





CARBIDE | 2 | 3 | 4 | 30° | UNCOATED | AlTiN | PLAIN | P. 18-P.29

Unit : INCH / METRIC

OD (D_1)	SD (D_2)	LOC (L_1)	OAL (L_2)	2 Flute Square End		3 Flute Square End		4 Flute Square End	
				Uncoated	AlTiN	Uncoated	AlTiN	Uncoated	AlTiN
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
5/64	1/8	.117	1-1/2	E5K70005	EMK70005	E5K71005	EMK71005	E5K72005	EMK72005
		.234	1-1/2	E5K70929	EMK70929	E5K71929	EMK71929	E5K72929	EMK72929
2.1mm	1/8	.249	1-1/2	E5K70930	EMK70930	E5K71930	EMK71930	E5K72930	EMK72930
2.2mm	1/8	.261	1-1/2	E5K70931	EMK70931	E5K71931	EMK71931	E5K72931	EMK72931
2.3mm	1/8	.273	1-1/2	E5K70932	EMK70932	E5K71932	EMK71932	E5K72932	EMK72932
3/32	1/8	.139	1-1/2	E5K70006	EMK70006	E5K71006	EMK71006	E5K72006	EMK72006
		.279	1-1/2	E5K70933	EMK70933	E5K71933	EMK71933	E5K72933	EMK72933
2.4mm	1/8	.141	1-1/2	E5K70934	EMK70934	E5K71934	EMK71934	E5K72934	EMK72934
		.282	1-1/2	E5K70935	EMK70935	E5K71935	EMK71935	E5K72935	EMK72935
2.5mm	1/8	.147	1-1/2	E5K70936	EMK70936	E5K71936	EMK71936	E5K72936	EMK72936
		.294	1-1/2	E5K70937	EMK70937	E5K71937	EMK71937	E5K72937	EMK72937
2.6mm	1/8	.306	1-1/2	E5K70938	EMK70938	E5K71938	EMK71938	E5K72938	EMK72938
2.7mm	1/8	.318	1-1/2	E5K70939	EMK70939	E5K71939	EMK71939	E5K72939	EMK72939
7/64	1/8	.164	1-1/2	E5K70007	EMK70007	E5K71007	EMK71007	E5K72007	EMK72007
		.327	1-1/2	E5K70940	EMK70940	E5K71940	EMK71940	E5K72940	EMK72940

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
± .0005	h5

NEXT PAGE ▶

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

SOLID CARBIDE END MILLS
2 & 3 & 4 FLUTE SQUARE - MINIATURE

	2 Flute	3 Flute	4 Flute
Uncoated	E5K70	E5K71	E5K72
Coated	EMK70	EMK71	EMK72

SERIES

- Sharp cutting edges for clean, burr-free finishes
- Engineered for maximum precision on intricate workpieces

2 Flute

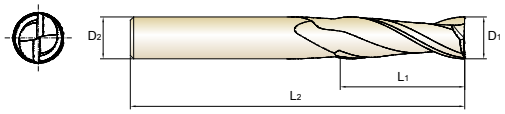


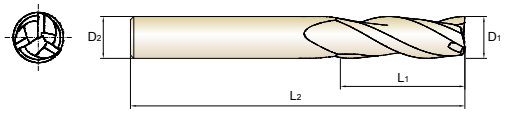
3 Flute

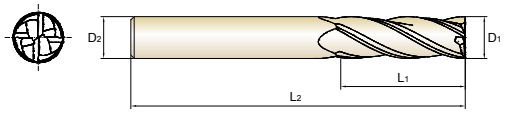


4 Flute











Unit : INCH / METRIC

OD (D_1)	SD (D_2)	LOC (L_1)	OAL (L_2)	2 Flute Square End		3 Flute Square End		4 Flute Square End	
				Uncoated	AlTiN	Uncoated	AlTiN	Uncoated	AlTiN
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
2.8mm	1/8	.333	1-1/2	E5K70941	EMK70941	E5K71941	EMK71941	E5K72941	EMK72941
2.9mm	1/8	.341	1-1/2	E5K70942	EMK70942	E5K71942	EMK71942	E5K72942	EMK72942
3.0mm	1/8	.177	1-1/2	E5K70943	EMK70943	E5K71943	EMK71943	E5K72943	EMK72943
		.354	1-1/2	E5K70944	EMK70944	E5K71944	EMK71944	E5K72944	EMK72944
1/8	1/8	.187	1-1/2	E5K70008	EMK70008	E5K71008	EMK71008	E5K72008	EMK72008
		3/8	1-1/2	E5K70945	EMK70945	E5K71945	EMK71945	E5K72945	EMK72945

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
± .0005	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

RECOMMENDED CUTTING CONDITIONS

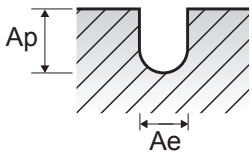
EMK73 SERIES — 2 FLUTE BALL NOSE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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		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		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, 316, 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	7	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

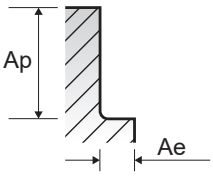
EMK73 SERIES — 2 FLUTE BALL NOSE [AlTiN coated]- SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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		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	.0002	.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		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	.0002	.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, 316, 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	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0004	.0005	.0005	.0006	.0006
			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	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	1095	1095	1095
			IPT (fz)	.0004	.0005	.0005	.0006	.0007	.0008	.0009	.0009	.0009	.0010	.0010	.0011	.0014	.0016	.0019	.0021	.0022
			RPM	212000	176670	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

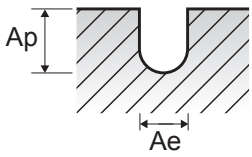
EMK74 SERIES — 3 FLUTE BALL NOSE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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		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		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, 316, 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

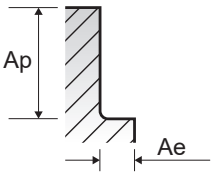
EMK74 SERIES — 3 FLUTE BALL NOSE [AlTiN coated]- SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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		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		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, 316, 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	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0005	.0006
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	10680	8900	7640	7070	6680
			IPM (FEED)	13	13	13	13	13	13	13	13	11	11	11	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	1095	1095	1095
			IPT (fz)	.0004	.0004	.0005	.0006	.0006	.0007	.0008	.0009	.0008	.0009	.0009	.0010	.0012	.0015	.0017	.0019	.0020
			RPM	212000	176670	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

*** 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

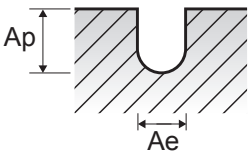
EMK75 SERIES — 4 FLUTE BALL NOSE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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		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		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)	.00004	.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, 316, 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	.0002	.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	11	10	10	10	10	10	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≤3/64 : 0.2D Ø 3/64<OD : 0.5D

RECOMMENDED CUTTING CONDITIONS

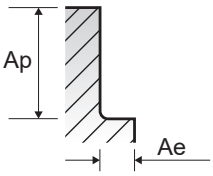
EMK75 SERIES 4 FLUTE BALL NOSE [AlTiN coated]- SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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		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		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, 316, 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	.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	212000	176670	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 Ø 3/64<OD : 0.25D	1.0D

RECOMMENDED CUTTING CONDITIONS

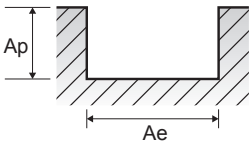
EMK70 SERIES — 2 FLUTE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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		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		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, 316, 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

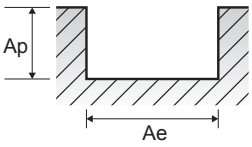
EMK70 SERIES 2 FLUTE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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	.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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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≤3/64 : 0.2D Ø 3/64<OD : 0.5D

RECOMMENDED CUTTING CONDITIONS

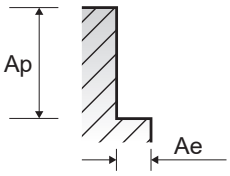
EMK70 SERIES — 2 FLUTE [AlTiN coated] - SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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	1/16	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
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.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
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.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		SFM (Vc)	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
			IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0002	.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		SFM (Vc)	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)	165	165	165	165	165	165	165	165	165	165	165	165	165
			IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	9940	9350
			IPM (FEED)	4	4	4	4	4	4	4	4	3	3	3	3	3	3
	14	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2, SUS 630, PH 15-5)	SFM (Vc)	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 Ø 3/64<OD : 0.25D	1.0D

RECOMMENDED CUTTING CONDITIONS

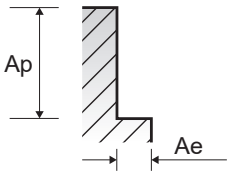
EMK70 SERIES 2 FLUTE [AlTiN coated]- SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
		IPT (fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004
		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
		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

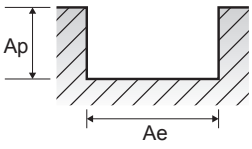
EMK71 SERIES — 3 FLUTE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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	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	.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		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, 316, 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	.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

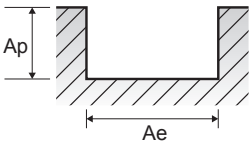
EMK71 SERIES 3 FLUTE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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	.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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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≤3/64 : 0.2D Ø 3/64<OD : 0.5D

RECOMMENDED CUTTING CONDITIONS

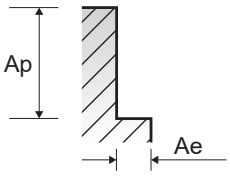
EMK71 SERIES — 3 FLUTE [AlTiN coated] - SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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		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		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, 316, 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 Ø 3/64<OD : 0.25D	1.0D

RECOMMENDED CUTTING CONDITIONS

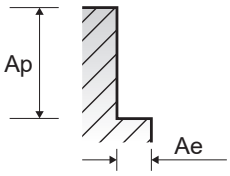
EMK71 SERIES 3 FLUTE [AlTiN coated]- SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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

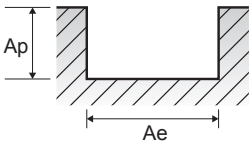
EMK72 SERIES — 4 FLUTE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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	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	.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		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)	.00004	.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, 316, 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	.0002	.0002
			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	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
			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	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

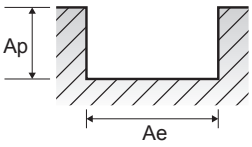
EMK72 SERIES 4 FLUTE [AlTiN coated] - SLOTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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)	.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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (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
		IPT (fz)	.0002	.0002	.0002	.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)	10	10	10	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
		IPT (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
		IPT (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≤3/64 : 0.2D Ø 3/64<OD : 0.5D

RECOMMENDED CUTTING CONDITIONS

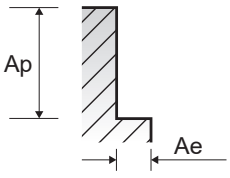
EMK72 SERIES — 4 FLUTE [AlTiN coated] - SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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	.0003	.0003	.0003	.0003
			RPM	127200	106010	90860	80130	70670	63610	57820	53420	48920	45430	42400	40070	39760	37410
			IPM (FEED)	48	48	48	48	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
			IPT (fz)	.0001	.0001	.0001	.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
			IPM (FEED)	48	48	48	48	49	49	49	49	43	43	43	43	44	44
	9		SFM (Vc)	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
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	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
			IPT (fz)	.0001	.0001	.0001	.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
			IPM (FEED)	48	48	48	48	49	49	49	49	43	43	43	43	44	44
	11.2		SFM (Vc)	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
			RPM	21210	17660	15150	13350	11780	10600	9640	8900	8150	7570	7070	6680	6620	6230
			IPM (FEED)	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	.0002	.0002	.0002
			RPM	31800	26500	22710	20030	17660	15900	14460	13350	12240	11360	10600	10020	9940	9350
			IPM (FEED)	7	7	7	7	7	7	7	7	6	6	6	6	6	6
	14	Stainless steel (SUS 316, 316, 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	.0003	.0002	.0003
			RPM	42400	35340	30290	26710	23550	21210	19270	17800	16310	15150	14130	13350	13250	12470
			IPM (FEED)	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
			RPM	212000	176670	151430	133550	117780	106010	96370	89030	81550	75720	70670	66770	66250	62350
			IPM (FEED)	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
			IPT (fz)	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0006	.0006	.0006	.0007	.0007	.0007	.0007
			RPM	106010	88330	75720	66770	58890	53000	48180	44520	40770	37860	35340	33380	33130	31180
			IPM (FEED)	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

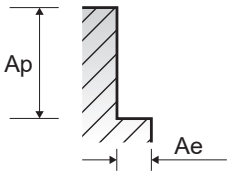
EMK72 SERIES 4 FLUTE [AlTiN coated]- SIDE CUTTING



SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

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

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