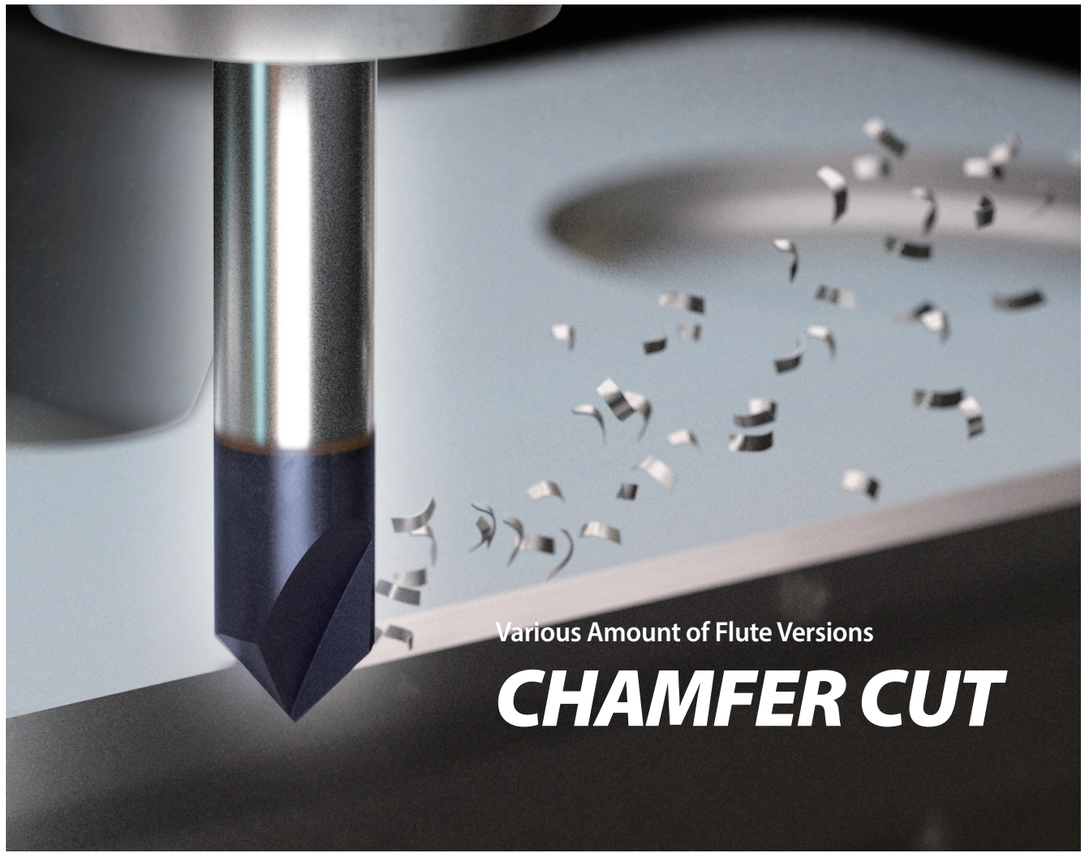
YE-CF25 METRIC

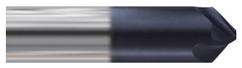
CHAMFERING TOOLS

FEATURES - CHAMFER CUT



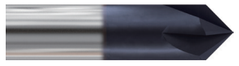
2-edge 90° Point Angle Series

- Suitable for edge chamfering, centering, and similar operations.
- Excellent performance on materials such as stainless steel, mild steel, and cast iron.



3-edge 90° Point Angle Series

- The helix design enhances cutting performance and improves chamfer surface finish quality.
- Designed with a dubbed point to prevent chipping at the tip.



4-edge 90° Point Angle Series

- The increased number of cutting edges extends tool life and improves productivity.
- Improved surface finish quality on workpiece.

FEATURES - CHAMFER MILL

- Suitable for machining an inclined surface with the side cutting edge.
- Performs many drilling and milling operations that are not presently done with the standard end mill.
- Among the many vertical milling machine operations, applications for the Drill Mill are Drilling, Slotting, NC Milling, Drilling & Slotting, and Chamfering.

SELECTION GUIDE

SOLID CARBIDE CHAMFERING TOOLS

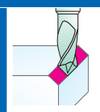
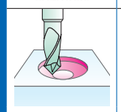
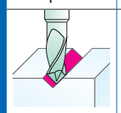
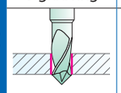
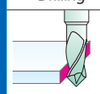
Please visit globalyg1.com/mat for material search

Recommended cutting conditions : p12

◎ : Excellent ○ : Good

							CHAMFER CUT			CHAMFER MILL		
						SERIES	EHI28 EHK37	EHI29 EHK38	EHI30 EHK39	EHK28 EHK34	EHK29 EHK35	EHK30 EHK36
						FLUTE	2	3	4	2	2	2
						HELIX ANGLE	0°	30°	0°	30°	30°	30°
						POINT ANGLE	90°	90°	90°	60°	90°	120°
						SIZE MIN	-	D0.8	-	D3.0	D3.0	D3.0
						SIZE MAX	-	D2.0	-	D20.0	D20.0	D20.0
						PAGE	6	7	8	9	10	11
							TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN
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						

Selection application for Chamfering tool

Type		CHAMFER CUT			CHAMFER MILL
Flute		2	3	4	2
Application	 Chamfers	○	○	○	○
	 Interpolation	○	○	○	○
	 V-grooving	○	-	-	○
	 Drilling	-	-	-	○
	 Countouring	-	-	-	○
	Longitudinal chamfers	-	-	-	○

GUIDE TO ICONS

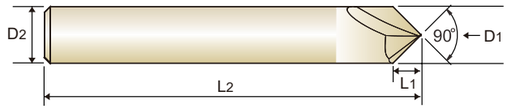
SERIES

PLAIN SHANK **EHI28**

FLAT SHANK **EHK37**

SOLID CARBIDE END MILLS
2 FLUTE CHAMFER CUT

▶ Suitable for edge chamfering, centering, and similar operations.
▶ Excellent performance on materials such as stainless steel, mild steel, and cast iron.



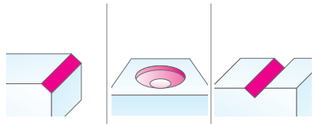
CARBIDE | 2 | 0° | 90° | PLAIN | FLAT | TiAlN

P. 12~13, P. 15

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	D_1	D_2	L_1	L_2
EHI28030	-	**0**	3	1.5	60
EHI28040	-	**0**	4	2	60
EHI28060	**EHK37060**	**0**	6	3	60
EHI28080	**EHK37080**	**0**	8	4	70
EHI28100	**EHK37100**	**0**	10	5	75
EHI28120	**EHK37120**	**0**	12	6	80
EHI28160	**EHK37160**	**0**	16	8	100
EHI28200	**EHK37200**	**0**	20	10	100

Shank Dia. Tolerance
h5



Chamfers | Interpolation | V-grooving

◎ : 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
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

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
Recommended	○	○	○	○	○											○	○				

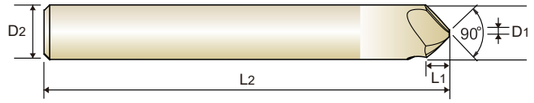
SERIES

PLAIN SHANK **EHI29**

FLAT SHANK **EHK38**

SOLID CARBIDE END MILLS
3 FLUTE CHAMFER CUT

▶ The helix design enhances cutting performance and improves chamfer surface finish quality.
▶ Designed with a dubbed point to prevent chipping at the tip.



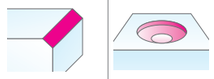
CARBIDE | 3 | 30° | 90° | PLAIN | FLAT | TiAlN

P. 12

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	D_1	D_2	L_1	L_2
EHI29030	-	**0.8**	3	1.1	60
EHI29040	-	**0.8**	4	1.6	60
EHI29060	**EHK38060**	**1.0**	6	2.5	60
EHI29080	**EHK38080**	**1.0**	8	3.5	70
EHI29100	**EHK38100**	**2.0**	10	4	75
EHI29120	**EHK38120**	**2.0**	12	5	80

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.020	h5



Chamfers | Interpolation

◎ : 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
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

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
Recommended	○	○	○	○	○											○	○				

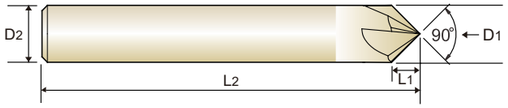
SERIES

PLAIN SHANK **EHI30**

FLAT SHANK **EHK39**

SOLID CARBIDE END MILLS
4 FLUTE CHAMFER CUT

- The increased number of cutting edges extends tool life and improves productivity.
- Improved surface finish quality on workpiece.



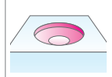
CARBIDE | 4 | 0° | 90° | PLAIN | FLAT | TiAlN | P. 12

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	D_1	D_2	L_1	L_2
EHI30030	-	**0**	3	1.5	60
EHI30040	-	**0**	4	2	60
EHI30060	**EHK39060**	**0**	6	3	60
EHI30080	**EHK39080**	**0**	8	4	70
EHI30100	**EHK39100**	**0**	10	5	75
EHI30120	**EHK39120**	**0**	12	6	80
EHI30160	**EHK39160**	**0**	16	8	100
EHI30200	**EHK39200**	**0**	20	10	100

Shank Dia. Tolerance
h5

Chamfers


Interpolation

◎ : 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
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

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
Recommended	○	○	○	○	○											○	○				

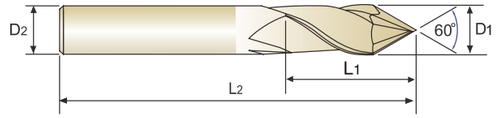
SERIES

PLAIN SHANK **EHK28**

FLAT SHANK **EHK34**

SOLID CARBIDE END MILLS
2 FLUTE CHAMFER MILL

- Performs many drilling and milling operations that are not presently done with the standard end mill.
- Among the many vertical milling machine operations, applications for the Drill Mill are: Drilling, Slotting, NC Milling, Drilling & Slotting, Profile Milling and Chamfering.



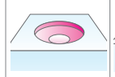
CARBIDE | 2 | 30° | 60° | PLAIN | FLAT | TiAlN | P. 13-15

Unit : mm

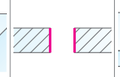
EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Angle°
PLAIN	FLAT	D_1	D_2	L_1	L_2	
EHK28030	-	**3.0**	4	6	50	60°
EHK28040	**EHK34040**	**4.0**	6	8	50	
EHK28050	**EHK34050**	**5.0**	6	10	50	
EHK28060	**EHK34060**	**6.0**	6	12	60	
EHK28080	**EHK34080**	**8.0**	8	16	70	
EHK28100	**EHK34100**	**10.0**	10	20	70	
EHK28120	**EHK34120**	**12.0**	12	24	80	
EHK28160	**EHK34160**	**16.0**	16	32	90	
EHK28200	**EHK34200**	**20.0**	20	40	100	

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.030	h5

Chamfers


Interpolation

V-grooving


Drilling

Countouring

Longitudinal chamfers

◎ : 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
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

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
Recommended	○	○	○	○	○											○	○				

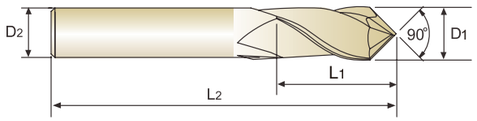
SERIES

PLAIN SHANK **EHK29**

FLAT SHANK **EHK35**

SOLID CARBIDE END MILLS
2 FLUTE CHAMFER MILL

- Performs many drilling and milling operations that are not presently done with the standard end mill.
- Among the many vertical milling machine operations, applications for the Drill Mill are: Drilling, Slotting, NC Milling, Drilling & Slotting, Profile Milling and Chamfering.



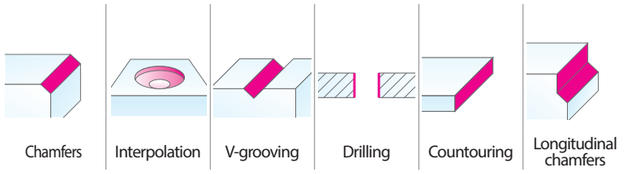
CARBIDE | 2 | 30° | 90° | PLAIN | FLAT | TiAlN

P. 13-15

Unit : mm

EDP No. PLAIN	EDP No. FLAT	Mill Diameter D_1	Shank Diameter D_2	Length of Cut L_1	Overall Length L_2	Angle°
EHK29030	-	3.0	4	6	50	90°
EHK29040	EHK35040	4.0	6	8	50	
EHK29050	EHK35050	5.0	6	10	50	
EHK29060	EHK35060	6.0	6	12	60	
EHK29080	EHK35080	8.0	8	16	70	
EHK29100	EHK35100	10.0	10	20	70	
EHK29120	EHK35120	12.0	12	24	80	
EHK29160	EHK35160	16.0	16	32	90	
EHK29200	EHK35200	20.0	20	40	100	

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.030	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
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

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
Recommended	○	○	○	○	○											○	○				

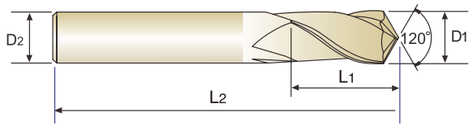
SERIES

PLAIN SHANK **EHK30**

FLAT SHANK **EHK36**

SOLID CARBIDE END MILLS
2 FLUTE CHAMFER MILL

- Performs many drilling and milling operations that are not presently done with the standard end mill.
- Among the many vertical milling machine operations, applications for the Drill Mill are: Drilling, Slotting, NC Milling, Drilling & Slotting, Profile Milling and Chamfering.



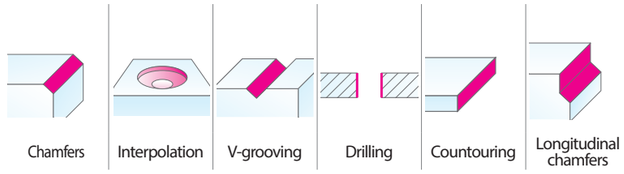
CARBIDE | 2 | 30° | 120° | PLAIN | FLAT | TiAlN

P. 13-15

Unit : mm

EDP No. PLAIN	EDP No. FLAT	Mill Diameter D_1	Shank Diameter D_2	Length of Cut L_1	Overall Length L_2	Angle°
EHK30030	-	3.0	4	6	50	120°
EHK30040	EHK36040	4.0	6	8	50	
EHK30050	EHK36050	5.0	6	10	50	
EHK30060	EHK36060	6.0	6	12	60	
EHK30080	EHK36080	8.0	8	16	70	
EHK30100	EHK36100	10.0	10	20	70	
EHK30120	EHK36120	12.0	12	24	80	
EHK30160	EHK36160	16.0	16	32	90	
EHK30200	EHK36200	20.0	20	40	100	

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.030	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
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

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
Recommended	○	○	○	○	○											○	○				

EHI28, EHI29, EHI30, EHK37, EHK38, EHK39 SERIES

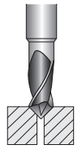
2&3&4 FLUTE - CHAMFERING

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
P	1-2	Non-alloy steel	Vc	96	102	102	96	96	108	114	108	114
			fz	0.013	0.017	0.022	0.030	0.042	0.050	0.061	0.090	0.105
			RPM	10185	8115	6495	5095	3820	3440	3025	2150	1815
			FEED	270	270	280	305	320	345	370	385	380
	3-4		Vc	60	66	66	66	66	66	72	78	72
			fz	0.013	0.017	0.021	0.030	0.040	0.050	0.068	0.084	0.107
			RPM	6365	5250	4200	3500	2625	2100	1910	1550	1145
			FEED	170	175	180	210	210	210	260	260	245
	5		Vc	54	60	60	60	54	66	66	66	66
			fz	0.013	0.015	0.020	0.028	0.042	0.045	0.060	0.076	0.100
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	150	145	150	180	180	190	210	200	210
	6	Low alloy steel	Vc	96	102	102	96	96	108	114	108	114
			fz	0.013	0.017	0.022	0.030	0.042	0.050	0.061	0.090	0.105
			RPM	10185	8115	6495	5095	3820	3440	3025	2150	1815
			FEED	270	270	280	305	320	345	370	385	380
	7		Vc	60	66	66	66	66	66	72	78	72
			fz	0.013	0.017	0.021	0.030	0.040	0.050	0.068	0.084	0.107
			RPM	6365	5250	4200	3500	2625	2100	1910	1550	1145
			FEED	170	175	180	210	210	210	260	260	245
	8-9		Vc	54	60	60	60	54	66	66	66	66
			fz	0.013	0.015	0.020	0.028	0.042	0.045	0.060	0.076	0.100
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	150	145	150	180	180	190	210	200	210
	10	High alloyed steel, and tool steel	Vc	96	102	102	96	96	108	114	108	114
			fz	0.013	0.017	0.022	0.030	0.042	0.050	0.061	0.090	0.105
			RPM	10185	8115	6495	5095	3820	3440	3025	2150	1815
			FEED	270	270	280	305	320	345	370	385	380
	11.1		Vc	54	60	60	60	54	66	66	66	66
			fz	0.013	0.015	0.020	0.028	0.042	0.045	0.060	0.076	0.100
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	150	145	150	180	180	190	210	200	210
M	14.1	Stainless steel	Vc	30	35	40	35	40	45	45	45	40
			fz	0.008	0.01	0.013	0.018	0.024	0.027	0.036	0.046	0.069
			RPM	3183	2785	2546	1857	1592	1432	1194	895	637
			FEED	51	56	66	67	76	77	86	82	88
K	15	Grey cast iron	Vc	80	85	85	80	80	90	95	90	95
			fz	0.008	0.010	0.013	0.018	0.025	0.030	0.037	0.054	0.063
			RPM	8488	6764	5411	4244	3183	2865	2520	1790	1512
			FEED	136	135	141	153	159	172	186	193	191
	16		Vc	50	55	55	55	55	55	60	65	60
			fz	0.008	0.010	0.013	0.018	0.024	0.030	0.041	0.050	0.064
			RPM	5305	4377	3501	2918	2188	1751	1592	1293	955
			FEED	85	88	91	105	105	105	131	129	122
	17	Nodular cast iron	Vc	80	85	85	80	80	90	95	90	95
			fz	0.008	0.010	0.013	0.018	0.025	0.030	0.037	0.054	0.063
			RPM	8488	6764	5411	4244	3183	2865	2520	1790	1512
			FEED	136	135	141	153	159	172	186	193	191
	18		Vc	50	55	55	55	55	55	60	65	60
			fz	0.008	0.010	0.013	0.018	0.024	0.030	0.041	0.050	0.064
			RPM	5305	4377	3501	2918	2188	1751	1592	1293	955
			FEED	85	88	91	105	105	105	131	129	122
	19	Malleable cast iron	Vc	80	85	85	80	80	90	95	90	95
			fz	0.008	0.010	0.013	0.018	0.025	0.030	0.037	0.054	0.063
			RPM	8488	6764	5411	4244	3183	2865	2520	1790	1512
			FEED	136	135	141	153	159	172	186	193	191
	20		Vc	50	55	55	55	55	55	60	65	60
			fz	0.008	0.010	0.013	0.018	0.024	0.030	0.041	0.050	0.064
			RPM	5305	4377	3501	2918	2188	1751	1592	1293	955
			FEED	85	88	91	105	105	105	131	129	122
N	21~22	Aluminum-wrought alloy	Vc	185	210	210	205	205	225	230	230	230
			fz	0.008	0.01	0.013	0.019	0.03	0.037	0.045	0.05	0.064
			RPM	19629	16711	13369	10876	8157	7162	6101	4576	3661
			FEED	314	334	348	413	489	530	549	458	469
	23~25	Aluminum-cast, alloyed	Vc	185	210	210	205	205	225	230	230	230
			fz	0.008	0.01	0.013	0.019	0.03	0.037	0.045	0.05	0.064
			RPM	19629	16711	13369	10876	8157	7162	6101	4576	3661
			FEED	314	334	348	413	489	530	549	458	469
S	36-37	Titanium Alloys	Vc	30	35	40	35	40	45	45	45	40
			fz	0.008	0.01	0.013	0.018	0.024	0.027	0.036	0.046	0.069
			RPM	3183	2785	2546	1857	1592	1432	1194	895	637
			FEED	51	56	66	67	76	77	86	82	88

EHK28, EHK29, EHK30, EHI28, EHK34, EHK35, EHK36, EHK37 SERIES

2 FLUTE - CHAMFERING

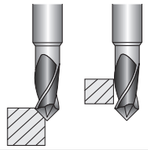


Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
P	1-2	Non-alloy steel	Vc	72	78	78	72	72	78	84	84	102
			fz	0.042	0.052	0.066	0.086	0.119	0.138	0.166	0.208	0.228
			RPM	7640	6210	4965	3820	2865	2485	2230	1670	1625
			FEED	635	640	660	660	680	685	740	695	740
	3-4		Vc	54	66	66	66	66	66	72	78	78
			fz	0.038	0.045	0.060	0.071	0.097	0.121	0.152	0.176	0.234
			RPM	5730	5250	4200	3500	2625	2100	1910	1550	1240
			FEED	440	470	505	500	510	510	580	545	580
	5		Vc	48	54	54	48	48	60	60	60	66
			fz	0.038	0.047	0.058	0.074	0.099	0.110	0.138	0.192	0.224
			RPM	5095	4295	3440	2545	1910	1910	1590	1195	1050
			FEED	390	400	400	375	380	420	440	460	470
	6	Low alloy steel	Vc	72	78	78	72	72	78	84	84	102
			fz	0.042	0.052	0.066	0.086	0.119	0.138	0.166	0.208	0.228
			RPM	7640	6210	4965	3820	2865	2485	2230	1670	1625
			FEED	635	640	660	660	680	685	740	695	740
	7		Vc	54	66	66	66	66	66	72	78	78
			fz	0.038	0.045	0.060	0.071	0.097	0.121	0.152	0.176	0.234
			RPM	5730	5250	4200	3500	2625	2100	1910	1550	1240
			FEED	440	470	505	500	510	510	580	545	580
	8-9		Vc	48	54	54	48	48	60	60	60	66
			fz	0.038	0.047	0.058	0.074	0.099	0.110	0.138	0.192	0.224
			RPM	5095	4295	3440	2545	1910	1910	1590	1195	1050
			FEED	390	400	400	375	380	420	440	460	470
	10	High alloyed steel, and tool steel	Vc	72	78	78	72	72	78	84	84	102
			fz	0.042	0.052	0.066	0.086	0.119	0.138	0.166	0.208	0.228
			RPM	7640	6210	4965	3820	2865	2485	2230	1670	1625
			FEED	635	640	660	660	680	685	740	695	740
	11.1		Vc	48	54	54	48	48	60	60	60	66
			fz	0.038	0.047	0.058	0.074	0.099	0.110	0.138	0.192	0.224
			RPM	5095	4295	3440	2545	1910	1910	1590	1195	1050
			FEED	390	400	400	375	380	420	440	460	470
M	14.1	Stainless steel	Vc	30	35	40	35	35	40	40	40	45
			fz	0.021	0.025	0.029	0.037	0.055	0.064	0.078	0.11	0.122
			RPM	3183	2785	2546	1857	1393	1273	1061	796	716
			FEED	134	139	148	137	153	163	166	175	175
K	15	Grey cast iron	Vc	60	65	65	60	60	65	70	70	85
			fz	0.025	0.031	0.040	0.052	0.071	0.083	0.100	0.125	0.137
			RPM	6366	5173	4138	3183	2387	2069	1857	1393	1353
			FEED	318	321	331	331	339	343	371	348	371
	16		Vc	45	55	55	55	55	55	60	65	65
			fz	0.023	0.027	0.036	0.043	0.058	0.073	0.091	0.105	0.140
			RPM	4775	4377	3501	2918	2188	1751	1592	1293	1035
			FEED	220	236	252	251	254	256	290	272	290
	17	Nodular cast iron	Vc	60	65	65	60	60	65	70	70	85
			fz	0.025	0.031	0.040	0.052	0.071	0.083	0.100	0.125	0.137
			RPM	6366	5173	4138	3183	2387	2069	1857	1393	1353
			FEED	318	321	331	331	339	343	371	348	371
	18		Vc	45	55	55	55	55	55	60	65	65
			fz	0.023	0.027	0.036	0.043	0.058	0.073	0.091	0.105	0.140
			RPM	4775	4377	3501	2918	2188	1751	1592	1293	1035
			FEED	220	236	252	251	254	256	290	272	290
	19	Malleable cast iron	Vc	60	65	65	60	60	65	70	70	85
			fz	0.025	0.031	0.040	0.052	0.071	0.083	0.100	0.125	0.137
			RPM	6366	5173	4138	3183	2387	2069	1857	1393	1353
			FEED	318	321	331	331	339	343	371	348	371
	20		Vc	45	55	55	55	55	55	60	65	65
			fz	0.023	0.027	0.036	0.043	0.058	0.073	0.091	0.105	0.140
			RPM	4775	4377	3501	2918	2188	1751	1592	1293	1035
			FEED	220	236	252	251	254	256	290	272	290
N	21~22	Aluminum-wrought alloy	Vc	145	160	150	150	155	175	185	195	195
			fz	0.025	0.032	0.045	0.057	0.075	0.085	0.1	0.134	0.175
			RPM	15385	12732	9549	7958	6167	5570	4907	3879	3104
			FEED	769	815	859	907	925	947	981	1040	1086
	23~25	Aluminum-cast, alloyed	Vc	145	160	150	150	155	175	185	195	195
			fz	0.025	0.032	0.045	0.057	0.075	0.085	0.1	0.134	0.175
			RPM	15385	12732	9549	7958	6167	5570	4907	3879	3104
			FEED	769	815	859	907	925	947	981	1040	1086

EHK28, EHK29, EHK30, EHK34, EHK35, EHK36 SERIES

2 FLUTE - CHAMFERING & SIDE CUTTING

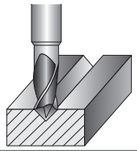


Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
P	1-2	Non-alloy steel	Vc	96	102	102	96	96	108	114	108	114
			fz	0.013	0.017	0.022	0.030	0.042	0.050	0.061	0.090	0.105
			RPM	10185	8115	6495	5095	3820	3440	3025	2150	1815
			FEED	270	270	280	305	320	345	370	385	380
	3-4		Vc	60	66	66	66	66	66	72	78	72
			fz	0.013	0.017	0.021	0.030	0.040	0.050	0.068	0.084	0.107
			RPM	6365	5250	4200	3500	2625	2100	1910	1550	1145
			FEED	170	175	180	210	210	210	260	260	245
	5		Vc	54	60	60	60	54	66	66	66	66
			fz	0.013	0.015	0.020	0.028	0.042	0.045	0.060	0.076	0.100
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	150	145	150	180	180	190	210	200	210
	6	Low alloy steel	Vc	96	102	102	96	96	108	114	108	114
			fz	0.013	0.017	0.022	0.030	0.042	0.050	0.061	0.090	0.105
			RPM	10185	8115	6495	5095	3820	3440	3025	2150	1815
			FEED	270	270	280	305	320	345	370	385	380
	7		Vc	60	66	66	66	66	66	72	78	72
			fz	0.013	0.017	0.021	0.030	0.040	0.050	0.068	0.084	0.107
			RPM	6365	5250	4200	3500	2625	2100	1910	1550	1145
			FEED	170	175	180	210	210	210	260	260	245
	8-9		Vc	54	60	60	60	54	66	66	66	66
			fz	0.013	0.015	0.020	0.028	0.042	0.045	0.060	0.076	0.100
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	150	145	150	180	180	190	210	200	210
	10	High alloyed steel, and tool steel	Vc	96	102	102	96	96	108	114	108	114
			fz	0.013	0.017	0.022	0.030	0.042	0.050	0.061	0.090	0.105
			RPM	10185	8115	6495	5095	3820	3440	3025	2150	1815
			FEED	270	270	280	305	320	345	370	385	380
	11.1		Vc	54	60	60	60	54	66	66	66	66
			fz	0.013	0.015	0.020	0.028	0.042	0.045	0.060	0.076	0.100
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	150	145	150	180	180	190	210	200	210
M	14.1	Stainless steel	Vc	30	35	40	35	40	45	45	45	40
			fz	0.008	0.01	0.013	0.018	0.024	0.027	0.036	0.046	0.069
			RPM	3183	2785	2546	1857	1592	1432	1194	895	637
			FEED	51	56	66	67	76	77	86	82	88
K	15	Grey cast iron	Vc	80	85	85	80	80	90	95	90	95
			fz	0.008	0.010	0.013	0.018	0.025	0.030	0.037	0.054	0.063
			RPM	8488	6764	5411	4244	3183	2865	2520	1790	1512
			FEED	136	135	141	153	159	172	186	193	191
	16		Vc	50	55	55	55	55	55	60	65	60
			fz	0.008	0.010	0.013	0.018	0.024	0.030	0.041	0.050	0.064
			RPM	5305	4377	3501	2918	2188	1751	1592	1293	955
			FEED	85	88	91	105	105	105	131	129	122
	17	Nodular cast iron	Vc	80	85	85	80	80	90	95	90	95
			fz	0.008	0.010	0.013	0.018	0.025	0.030	0.037	0.054	0.063
			RPM	8488	6764	5411	4244	3183	2865	2520	1790	1512
			FEED	136	135	141	153	159	172	186	193	191
	18		Vc	50	55	55	55	55	55	60	65	60
			fz	0.008	0.010	0.013	0.018	0.024	0.030	0.041	0.050	0.064
			RPM	5305	4377	3501	2918	2188	1751	1592	1293	955
			FEED	85	88	91	105	105	105	131	129	122
	19	Malleable cast iron	Vc	80	85	85	80	80	90	95	90	95
			fz	0.008	0.010	0.013	0.018	0.025	0.030	0.037	0.054	0.063
			RPM	8488	6764	5411	4244	3183	2865	2520	1790	1512
			FEED	136	135	141	153	159	172	186	193	191
	20		Vc	50	55	55	55	55	55	60	65	60
			fz	0.008	0.010	0.013	0.018	0.024	0.030	0.041	0.050	0.064
			RPM	5305	4377	3501	2918	2188	1751	1592	1293	955
			FEED	85	88	91	105	105	105	131	129	122
N	21~22	Aluminum-wrought alloy	Vc	185	210	210	205	205	225	230	230	230
			fz	0.008	0.01	0.013	0.019	0.03	0.037	0.045	0.05	0.064
			RPM	19629	16711	13369	10876	8157	7162	6101	4576	3661
			FEED	314	334	348	413	489	530	549	458	469
	23~25	Aluminum-cast, alloyed	Vc	185	210	210	205	205	225	230	230	230
			fz	0.008	0.01	0.013	0.019	0.03	0.037	0.045	0.05	0.064
			RPM	19629	16711	13369	10876	8157	7162	6101	4576	3661
			FEED	314	334	348	413	489	530	549	458	469
S	36-37	Titanium Alloys	Vc	30	35	40	35	40	45	45	45	40
			fz	0.008	0.01	0.013	0.018	0.024	0.027	0.036	0.046	0.069
			RPM	3183	2785	2546	1857	1592	1432	1194	895	637
			FEED	51	56	66	67	76	77	86	82	88

EHK28, EHK29, EHK30, EHI28, EHK34, EHK35, EHK36, EHK37 SERIES

2 FLUTE - V-GROOVING



Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
P	1-2	Non-alloy steel	Vc	96	102	102	96	96	108	114	120	114
			fz	0.008	0.010	0.013	0.017	0.024	0.027	0.030	0.039	0.048
			RPM	10185	8115	6495	5095	3820	3440	3025	2385	1815
			FEED	170	160	175	170	180	185	180	185	175
	3-4		Vc	66	72	66	66	66	66	66	78	72
			fz	0.007	0.007	0.010	0.011	0.020	0.024	0.033	0.037	0.046
			RPM	7005	5730	4200	3500	2625	2100	1750	1550	1145
			FEED	95	75	85	80	105	100	115	115	105
	5		Vc	54	60	60	60	54	66	66	66	66
			fz	0.007	0.007	0.010	0.013	0.023	0.025	0.030	0.038	0.050
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	75	65	75	85	100	105	105	100	105
	6	Low alloy steel	Vc	96	102	102	96	96	108	114	120	114
			fz	0.008	0.010	0.013	0.017	0.024	0.027	0.030	0.039	0.048
			RPM	10185	8115	6495	5095	3820	3440	3025	2385	1815
			FEED	170	160	175	170	180	185	180	185	175
	7		Vc	66	72	66	66	66	66	66	78	72
			fz	0.007	0.007	0.010	0.011	0.020	0.024	0.033	0.037	0.046
			RPM	7005	5730	4200	3500	2625	2100	1750	1550	1145
			FEED	95	75	85	80	105	100	115	115	105
	8-9		Vc	54	60	60	60	54	66	66	66	66
			fz	0.007	0.007	0.010	0.013	0.023	0.025	0.030	0.038	0.050
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	75	65	75	85	100	105	105	100	105
	10	High alloyed steel, and tool steel	Vc	96	102	102	96	96	108	114	120	114
			fz	0.008	0.010	0.013	0.017	0.024	0.027	0.030	0.039	0.048
			RPM	10185	8115	6495	5095	3820	3440	3025	2385	1815
			FEED	170	160	175	170	180	185	180	185	175
	11.1		Vc	54	60	60	60	54	66	66	66	66
			fz	0.007	0.007	0.010	0.013	0.023	0.025	0.030	0.038	0.050
			RPM	5730	4775	3820	3185	2150	2100	1750	1315	1050
			FEED	75	65	75	85	100	105	105	100	105
M	14.1	Stainless steel	Vc	30	35	40	35	40	45	45	45	40
			fz	0.004	0.005	0.006	0.008	0.01	0.011	0.013	0.019	0.028
			RPM	3183	2785	2546	1857	1592	1432	1194	895	637
			FEED	25	28	31	30	32	32	31	34	36
K	15	Grey cast iron	Vc	80	85	85	80	80	90	95	100	95
			fz	0.005	0.006	0.008	0.010	0.014	0.016	0.018	0.023	0.029
			RPM	8488	6764	5411	4244	3183	2865	2520	1989	1512
			FEED	85	81	87	85	89	92	91	92	88
	16		Vc	55	60	55	55	55	55	55	65	60
			fz	0.004	0.004	0.006	0.007	0.012	0.014	0.020	0.022	0.028
			RPM	5836	4775	3501	2918	2188	1751	1459	1293	955
			FEED	47	38	42	41	53	49	58	57	53
	17	Nodular cast iron	Vc	80	85	85	80	80	90	95	100	95
			fz	0.005	0.006	0.008	0.010	0.014	0.016	0.018	0.023	0.029
			RPM	8488	6764	5411	4244	3183	2865	2520	1989	1512
			FEED	85	81	87	85	89	92	91	92	88
	18		Vc	55	60	55	55	55	55	55	65	60
			fz	0.004	0.004	0.006	0.007	0.012	0.014	0.020	0.022	0.028
			RPM	5836	4775	3501	2918	2188	1751	1459	1293	955
			FEED	47	38	42	41	53	49	58	57	53
	19	Malleable cast iron	Vc	80	85	85	80	80	90	95	100	95
			fz	0.005	0.006	0.008	0.010	0.014	0.016	0.018	0.023	0.029
			RPM	8488	6764	5411	4244	3183	2865	2520	1989	1512
			FEED	85	81	87	85	89	92	91	92	88
	20		Vc	55	60	55	55	55	55	55	65	60
			fz	0.004	0.004	0.006	0.007	0.012	0.014	0.020	0.022	0.028
			RPM	5836	4775	3501	2918	2188	1751	1459	1293	955
			FEED	47	38	42	41	53	49	58	57	53
N	21~22	Aluminum-wrought alloy	Vc	185	210	210	205	205	220	230	230	230
			fz	0.008	0.01	0.013	0.016	0.022	0.026	0.03	0.041	0.052
			RPM	19629	16711	13369	10876	8157	7003	6101	4576	3661
			FEED	314	334	348	348	359	364	366	375	381
	23~25	Aluminum-cast, alloyed	Vc	185	210	210	205	205	220	230	230	230
			fz	0.008	0.01	0.013	0.016	0.022	0.026	0.03	0.041	0.052
			RPM	19629	16711	13369	10876	8157	7003	6101	4576	3661
			FEED	314	334	348	348	359	364	366	375	381
S	36-37	Titanium Alloys	Vc	30	35	40	35	40	45	45	45	40
			fz	0.004	0.005	0.006	0.008	0.01	0.011	0.013	0.019	0.028
			RPM	3183	2785	2546	1857	1592	1432	1194	895	637
			FEED	25	28	31	30	32	32	31	34	36

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