

## Фреза VHM, 2-х перьевая.

Kod	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
EA0104	1,0	3	50	4	6,78
EA0154	1,5	4	50	4	6,78
EA0204	2,0	6	50	4	6,78
EA0254	2,5	8	50	4	6,78
EA0304	3,0	8	50	4	6,78
EA0404	4,0	11	50	4	6,78
EA0506	5,0	13	50	6	8,28
EA0606	6,0	16	50	6	8,28
EA0808	8,0	20	60	8	17,32
EA1010	10,0	25	75	10	26,36
EA1212	12,0	30	75	12	33,13
EA1414	14,0	30	75	14	79,07
EA1616	16,0	40	100	16	89,61
EA1818	18,0	40	100	18	101,66
EA2020	20,0	45	100	20	112,95



### Recommended cutting condition for EA

MATERIAL	Carbon Steels . Alloy Steels		Alloy Steels . Tool Steels		Hardened Steels	
	S45C, FC, FCD, SCM, S50C, SKS...		SCr, SNCM, SKD11, SKD61, NAK80...		SKD11	
HARDNESS	~HRC30		~HRC50		~HRC60	
DIAMETER	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
1	20000	80	15000	45	11000	30
1.5	13600	135	10000	60	9000	40
2	9600	150	8500	50	6000	45
3	6500	200	5800	75	4000	60
4	5500	250	4000	80	3200	60
5	4500	300	3000	80	2500	70
6	4000	300	2500	80	2200	70
8	3500	350	2200	90	1700	70
10	3000	400	2000	90	1500	70
12	2500	400	1500	100	1000	70
16	2000	400	1200	100	800	70

DEPTH OF CUT



## Фреза VHM, 4-х перьевая

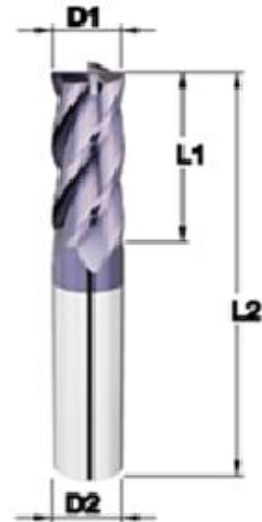
Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
EB0104	1,0	3	50	4	6,78
EB0154	1,5	4	50	4	6,78
EB0204	2,0	6	50	4	6,78
EB0254	2,5	8	50	4	6,78
EB0304	3,0	8	50	4	6,78
EB0404	4,0	11	50	4	6,78
EB0506	5,0	13	50	6	8,28
EB0606	6,0	16	50	6	8,28
EB0808	8,0	20	60	8	17,32
EB1010	10,0	25	75	10	26,36
EB1212	12,0	30	75	12	33,13
EB1414	14,0	30	75	14	79,07
EB1616	16,0	40	100	16	89,61
EB1818	18,0	40	100	18	101,66
EB2020	20,0	45	100	20	112,95



Co  
10%

Wc  
90%

Dia  
0.6µm



### Recommended cutting condition for EB

MATERIAL	Carbon Steels . Alloy Steels S45C , FC , FCD , SCM , S50C , SKS...		Alloy Steels . Tool Steels SCr , SNCM , SKD11 , SKD61 , NAK80...		Hardened Steels SKD11	
	-HRC30		-HRC50		-HRC60	
DIAMETER	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
1	22000	400	18000	200	9000	140
1.5	12000	500	11000	280	5200	150
2	10000	550	10000	280	4600	170
3	9000	600	5500	310	3500	220
4	6000	600	5000	400	2200	220
5	4800	750	4000	400	1700	240
6	4500	800	3800	420	1600	300
8	3500	820	2800	420	1000	300
10	3000	820	1800	420	900	300
12	2000	820	1600	350	800	300
16	1500	650	1000	300	500	150
20	1200	600	900	300	400	150

DEPTH  
OF CUT



## Фреза VHM, 3-х перьевая

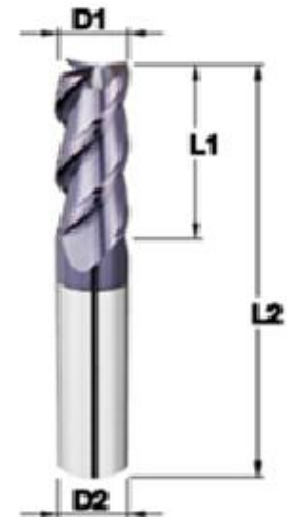
Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
EC0304	3,0	8	50	4	6,78
EC0404	4,0	11	50	4	6,78
EC0506	5,0	13	50	6	8,28
EC0606	6,0	16	50	6	8,28
EC0808	8,0	20	60	8	17,32
EC1010	10,0	25	75	10	26,36
EC1212	12,0	30	75	12	33,13
EC1616	16,0	40	100	16	89,61



Co  
10%

Wc  
90%

Dia  
0.6µm



- 3 Flutes
- 45°
- HRC 55
- TiAlN
- Planing
- Slotting
- Profiling

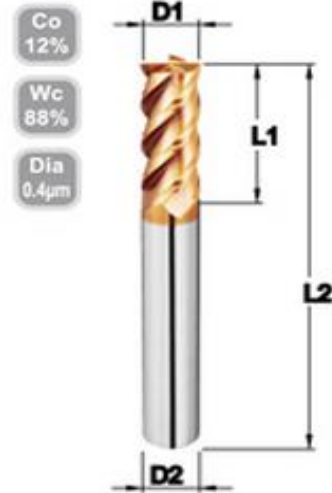
### Recommended cutting condition for EC

MATERIAL	Carbon Steels . Alloy Steels		Alloy Steels . Tool Steels		Hardened Steels	
	S45C , FC , FCD , SCM , S50C , SKS...		SCr , SNCM , SKD11 , SKD61 , NAK80...		SKD11	
HARDNESS	-HRC30		-HRC50		-HRC60	
DIAMETER	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
3	8000	550(300)	5500	300(100)	3500	200(95)
4	6500	550(300)	4500	300(100)	2200	200(95)
5	5000	800(400)	3600	350(120)	1800	210(100)
6	4000	800(400)	2800	350(120)	1500	210(110)
8	3500	800(400)	2600	350(120)	1300	210(100)
10	2500	800(400)	2000	350(120)	1100	210(100)
12	1800	750(350)	1500	350(120)	700	210(100)
16	1400	700(300)	1000	300(100)	500	170(70)



## Фреза VHM 4-х перьевая для труднообрабатываемых сталей

Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
SEI0304	3,0	8	50	4	14,31
SEI0404	4,0	11	50	4	14,31
SEI0506	5,0	13	50	6	14,31
SEI0606	6,0	16	50	6	14,31
SEI0808	8,0	20	60	8	25,60
SEI1010	10,0	25	75	10	41,42
SEI1212	12,0	30	75	12	56,48
SEI1616	16,0	40	100	16	120,48
SEI2020	20,0	45	100	20	176,96



### Recommended cutting condition for SEI

MATERIAL	Carbon Steels . Alloy Steels		Alloy Steels . Tool Steels		Hardened Steels	
	S45C, FC, FCD, SCM, S50C, SKS...		SCr, SNCM, SKD11, SKD61, NAK80...		SKD11	
HARDNESS	~HRC30		~HRC50		~HRC60	
DIAMETER	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
3	9000	600	5500	310	3500	220
4	6000	600	5000	400	2200	220
5	4800	750	4000	400	1700	240
6	4500	800	3800	420	1600	300
8	3500	820	2800	420	1000	300
10	3000	820	1800	420	900	300
12	2000	820	1600	350	800	300
16	1500	650	1000	300	500	150
20	1200	600	900	300	400	150

DEPTH OF CUT



Flank Diameter



## Фреза VHM удлиненная, 2-х перьевая

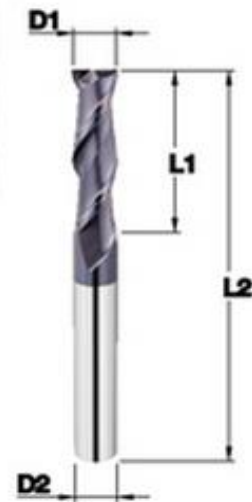
Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
ELC 0204	2,0	12	50	4	8,98
ELC 0304	3,0	20	50	4	9,04
ELC 0404	4,0	25	75	4	12,80
ELC 0506	5,0	30	75	6	18,07
ELC 0606	6,0	30	75	6	18,07
ELC 0808	8,0	40	100	8	30,12
ELC 1010	10,0	40	100	10	44,43
ELC 1212	12,0	45	100	12	54,22

# ELC

Co  
10%

Wc  
90%

Dia  
0.6µm



### Recommended cutting condition for ELC

MATERIAL	Carbon Steels . Alloy Steels S45C , FC , FCD , SCM , S50C , SKS...		Alloy Steels . Tool Steels SCr , SNCM , SKD11 , SKD61 , NAK80...		Hardened Steels SKD11	
	~HRC30		~HRC50		~HRC60	
DIAMETER	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
2	3000	25	1700	20	1000	15
3	2300	35	1900	25	800	10
4	2000	45	1600	35	650	15
5	1800	40	1400	40	600	20
6	1700	60	1300	50	550	25
8	1300	60	1000	50	450	25
10	1000	60	800	50	350	25
12	800	60	700	50	300	25

DEPTH  
OF CUT



## Фреза VHM удлиненная, 4-х перьевая

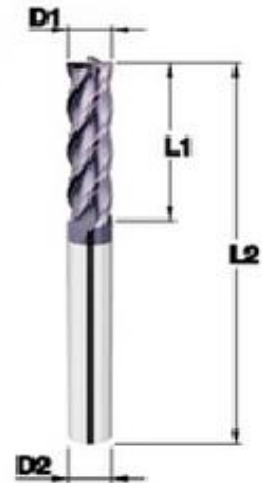
Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
ELD 0204	2,0	15	50	4	8,98
ELD 0304	3,0	20	50	4	8,98
ELD 0404	4,0	25	75	4	12,74
ELD 0506	5,0	30	75	6	17,96
ELD 0606	6,0	30	75	6	17,96
ELD 0808	8,0	40	100	8	30,12
ELD 1010	10,0	40	100	10	44,31
ELD 1212	12,0	45	100	12	54,16
ELD 1616	16,0	60	150	16	130,91
ELD 2020	20,0	60	150	20	199,55

# ELD

Co  
10%

Wc  
90%

Dia  
0,6µm



### Recommended cutting condition for ELD

MATERIAL	Carbon Steels . Alloy Steels S45C , FC , FCD , SCM , S50C , SKS...		Alloy Steels . Tool Steels SCr , SNCM , SKD11 , SKD61 , NAK80...		Hardened Steels SKD11	
	-HRC30		-HRC50		-HRC60	
DIAMETER	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
2	3000	50	2500	40	1000	15
3	2500	60	2000	50	800	20
4	2000	80	1700	70	700	30
5	1800	110	1500	85	600	40
6	1500	110	1400	75	550	50
8	1300	110	1100	75	450	50
10	1000	110	800	75	300	50
12	900	110	700	75	250	40
16	800	95	500	70	150	20
20	500	80	400	60	120	20

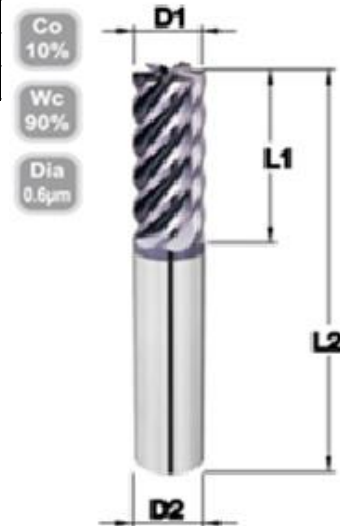
DEPTH  
OF CUT



Drillingmaster

## Фреза VHM, 6-и перьевая

Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
EH0606	6,0	16	50	6	15,93
EH0808	8,0	20	60	8	21,08
EH1010	10,0	25	75	10	33,89
EH1212	12,0	30	75	12	45,18
EH1616	16,0	40	100	16	99,40
EH2020	20,0	45	100	20	148,34



### Recommended cutting condition for EH

MATERIAL	Carbon Steels . Alloy Steels S45C , FC , FCD , SCM , S50C , SKS...		Alloy Steels . Tool Steels SCr , SNCM , SKD11 , SKD61 , NAK80...		Hardened Steels SKD11	
	-HRC30		-HRC50		-HRC60	
DIAMETER	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
6	5500	1000	4500	850	3800	650
8	4000	1000	3500	850	3000	650
10	3300	1000	3100	850	2400	650
12	3000	900	2500	700	2000	600
16	2500	700	2000	550	1500	450
20	1800	550	1500	420	1200	380

DEPTH OF CUT



## Фреза VHM по алюминию, 2-х перьевая

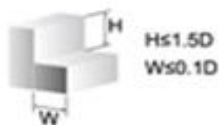
Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
DEB0106	1,0	3	50	6	10,43
DEB0206	2,0	6	50	6	10,54
DEB0306	3,0	9	50	6	10,54
DEB0406	4,0	12	50	6	10,54
DEB0506	5,0	15	50	6	10,54
DEB0606	6,0	18	50	6	10,54
DEB0808	8,0	20	60	6	21,08
DEB1010	10,0	30	75	10	31,63
DEB1212	12,0	30	75	12	39,16
DEB1616	16,0	45	100	16	96,39



### Recommended cutting condition for DEB

MATERIAL	Aluminum 1070		Aluminum alloy 2014 / 4032 / 5052 / 6061 / 7075		Aluminum alloy AC85	
	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
2	37000	2000(800)	16000	850(350)	20000	1100(450)
3	35000	2000(900)	14000	850(450)	18000	1100(550)
4	26000	2000(1100)	11000	850(550)	13000	1100(660)
5	21000	2000(1100)	9000	850(550)	10000	1100(660)
6	17000	2000(1100)	7000	850(550)	9000	1100(660)
8	13000	2000(1100)	5500	850(650)	7000	1100(800)
10	11000	2000(1300)	7000	850(650)	5500	1100(800)
12	8800	2000(1300)	3600	850(800)	4500	1100(800)
16	6500	2000(1100)	3000	850(550)	3500	1100(900)
20	5300	2000(1100)	2200	850(550)	2500	1100(650)

DEPTH  
OF CUT





## Фреза VHM по алюминию, 3-х перьевая

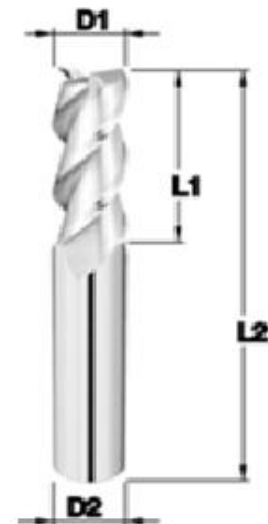
Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
DED0206	2,0	6	50	6	10,54
DED0306	3,0	9	50	6	10,54
DED0406	4,0	12	50	6	10,54
DED0506	5,0	15	50	6	10,54
DED0606	6,0	18	50	6	10,54
DED0808	8,0	20	60	8	21,08
DED1010	10,0	30	75	10	31,63
DED1212	12,0	30	75	12	39,16
DED1616	16,0	45	100	16	96,39
DED2020	20,0	45	100	20	124,25

# DED

Co  
10%

Wc  
90%

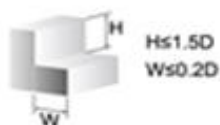
Dia  
0.6µm



### Recommended cutting condition for DED

MATERIAL	Aluminum 1070		Aluminum alloy 2014 / 4032 / 5052 / 6061 / 7075		Aluminum alloy AC85	
	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
2	37000	2400(950)	16000	1000(380)	20000	1300(500)
3	35000	2400(1050)	14000	1000(500)	18000	1300(600)
4	26000	2400(1200)	11000	1000(600)	13000	1300(720)
5	21000	2400(1200)	9000	1000(600)	10000	1300(720)
6	17000	2400(1200)	7000	1000(600)	9000	1300(720)
8	13000	2400(1200)	5500	1000(700)	7000	1300(880)
10	11000	2400(1400)	7000	1000(700)	5500	1300(880)
12	8800	2400(1400)	3600	1000(880)	4500	1300(880)
16	6500	2400(1200)	3000	1000(600)	3500	1300(1000)
20	5300	2400(1200)	2200	1000(600)	2500	1300(700)

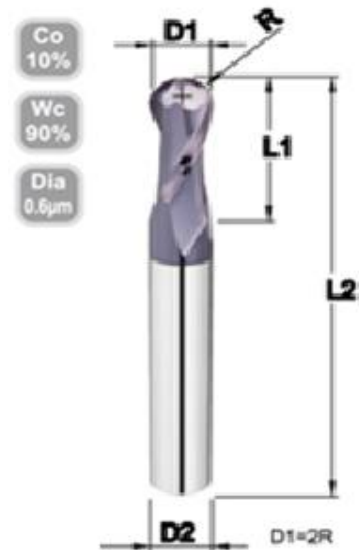
DEPTH  
OF CUT



## Фреза VHM радиусная, 2-х перьевая

Kodas	R, mm	L1, mm	L2, mm	D2, mm	eur/pcs
BA0104	0,5	2	50	4	9,04
BA0154	0,75	3	50	4	9,04
BA0204	1,0	4	50	4	9,04
BA0254	1,25	5	50	4	9,04
BA0304	1,5	6	50	4	9,04
BA0354	1,75	7	50	4	9,04
BA0404	2,0	8	50	4	9,04
BA0456	2,25	9	50	6	11,30
BA0506	2,5	10	50	6	11,30
BA0556	2,75	11	50	6	11,30
BA0606	3,0	12	50	6	11,30
BA0708	3,5	14	60	8	19,58
BA0808	4,0	16	60	8	19,58
BA0910	4,5	18	75	10	32,38
BA1010	5,0	20	75	10	32,38
BA1212	6,0	24	75	12	42,92
BA1616	8,0	32	100	16	100,15
BA2020	10,0	40	100	20	150,60

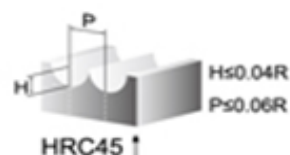
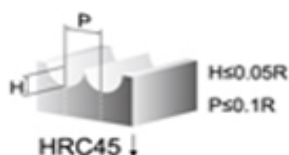
# BA



### Recommended cutting condition for BA

MATERIAL	Carbon Steels . Alloy Steels S45C, FC, FCD, SCM, S50C, SKS...		Alloy Steels . Tool Steels SCr, SNCM, SKD11, SKD61, NAK80...		Hardened Steels SKD11	
	~HRC30		~HRC50		~HRC60	
RADIUS	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
R0.5	45000	800	35000	600	20000	200
R1	23000	800	18000	600	10000	200
R1.5	16000	1000	12000	600	6500	200
R2	12000	1000	9500	700	5000	300
R3	8000	1100	6000	700	3500	300
R4	6000	1200	5000	800	2500	350
R5	5000	1100	4000	800	2000	350
R6	4000	1000	3000	700	1500	300
R8	3000	1000	2000	700	1000	300

DEPTH OF CUT



## Фреза VHM радиусная, 4-х перьевая

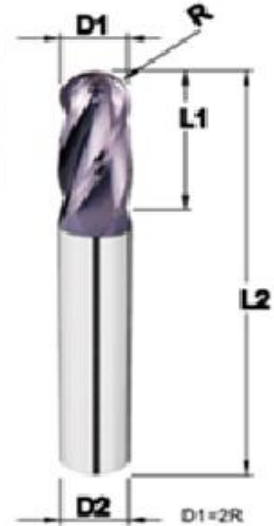
Kodas	R, mm	L1, mm	L2, mm	D2, mm	eur/pcs
BB0104	0,5	2	50	4	9,04
BB0154	0,75	3	50	4	9,04
BB0204	1,0	4	50	4	9,04
BB0254	1,25	5	50	4	9,04
BB0304	1,5	6	50	4	9,04
BB0404	2,00	8	50	4	9,04
BB0506	2,5	10	50	6	12,05
BB0606	3,00	12	50	6	12,05
BB0808	4,0	16	60	8	19,58
BB1010	5,00	20	75	10	32,38
BB1212	6,0	24	75	12	42,92

# BB

Co  
10%

Wc  
90%

Dia  
0.6µm



4 Flutes

30°

HRC  
55

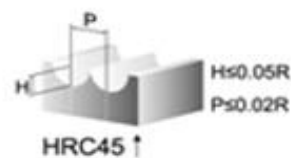
TiAlN

Profiling

### Recommended cutting condition for BB

MATERIAL	Carbon Steels . Alloy Steels S45C , FC , FCD , SCM , S50C , SKS...		Alloy Steels . Tool Steels Scr , SNCM , SKD11 , SKD61 , NAK80...		Hardened Steels SKD11	
	-HRC30		-HRC50		-HRC60	
RADIUS	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min
R2	12000	1200	9500	900	5000	400
R3	8000	1400	6000	900	3500	500
R4	6000	1600	5000	1000	2500	600
R5	5000	1400	4000	1000	2000	600
R6	4000	1200	3000	900	1500	500
R8	3000	1200	2500	900	1000	500
R10	2500	1000	2000	600	900	300

DEPTH  
OF CUT



# Фреза VHM для центральной обработки, 4-х перьевая

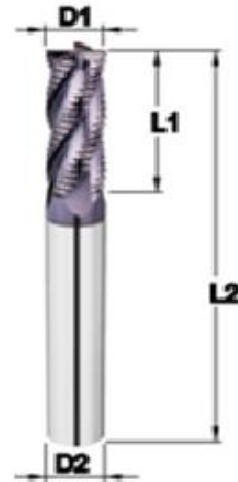
Kodas	D1, mm	L1, mm	L2, mm	D2, mm	eur/pcs
EGA0606	6,0	16	50	6	22,59
EGA0808	8,0	20	60	8	31,63
EGA1010	10,0	25	75	10	45,18
EGA1212	12,0	30	75	12	56,48
EGA1616	16,0	40	100	16	157,38
EGA2020	20,0	45	100	20	224,40

# EGA

Co  
10%

Wc  
90%

Dia  
0.6µm



## Recommended cutting condition for EGA

MATERIAL	Carbon Steels . Alloy Steels		Alloy Steels . Tool Steels		Hardened Steels		
	S45C , FC , FCD , SCM , S50C , SKS...		SCr , SNCM , SKD11 , SKD61 , NAK80...		SKD11		
HARDNESS	-HRC30		-HRC50		-HRC60		
DIAMETER	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	SPEED (mm <sup>-1</sup> )	FEED mm / min	
Side Milling	6	5500	550	3000	310	1150	120
	8	4600	550	2500	310	920	120
	10	3700	550	2000	310	730	120
	12	3000	500	1700	310	600	120
	16	2300	520	1200	310	460	120

DEPTH OF CUT



Grooving	6	4400	440	2400	250	920	100
	8	3600	440	2000	250	730	100
	10	3000	440	1600	250	580	100
	12	2400	440	1350	250	480	100
	16	1800	440	960	250	370	100

DEPTH OF CUT

