MEV Total Evolution · Performance Upgrade!

- Significantly reduces tool vibration.
- Exceptional chip breaking with smooth chip removal.
- Achieves high feed rate with a cutting depth of 1D.

All New V Series End Mills

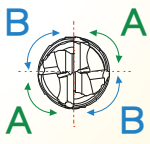
Special design enables high efficiency and heavy cutting, as well as large cutting depth and high feed rate!

General Cutting Steel:
- Carbon Steel
- Alloy Steel
- Hardened Steel(≦55°HRC)
- Cast Iron

"Variable-Pitch & Lead"

High Performance End mills

Suppresses chattering, allowing for outstanding milling performance.



A≠B

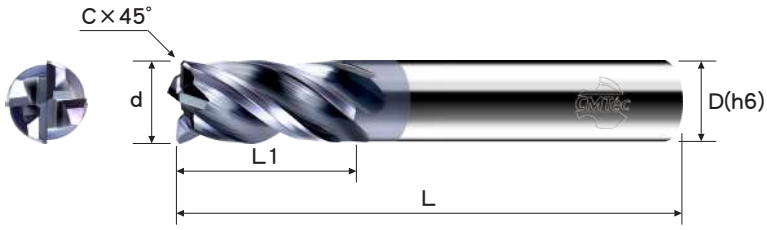
Chattering is decreased with 「Variable-Pitch」.

C≠D

「Variable-Lead」 design stabilizes cutting forces, effectively isolating vibrations.

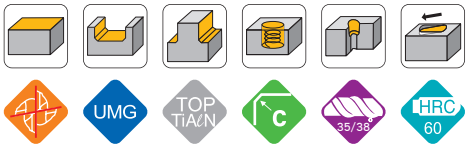
M520 ULTRA CARBIDE END MILLS FOR ALLOY STEEL- High Performance- 4F

· MEV40000A



d	Tolerance
Φ<3	0 ~ -0.02
3≦Φ≦10	-0.01 ~ -0.03
10<Φ	-0.01 ~ -0.04

Bright Finishing	—
Finishing	◎
Semi Finishing	◎
Roughing	◎



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NEW SIZE

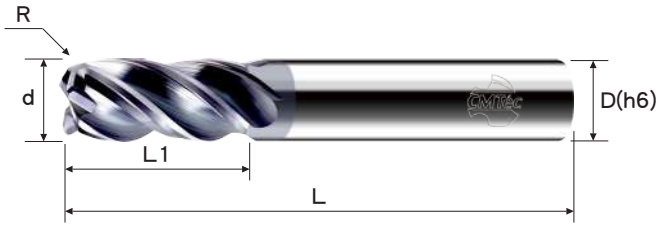
CUT EXAMPLES

d	C(Max)	L1	L	D	F	Coated Order No.
3.0	0.1	6	50	6	4	MEV40300A
4.0	0.2	8	50	6	4	MEV40400A
4.0	0.2	12	50	6	4	MEV40400120CA
5.0	0.2	10	50	6	4	MEV40500A
6.0	0.2	12	50	6	4	MEV40600A
6.0	0.2	18	50	6	4	MEV40600180CA
8.0	0.3	16	60	8	4	MEV40800A
8.0	0.3	24	60	8	4	MEV40800240CA
10.0	0.3	20	75	10	4	MEV41000A
10.0	0.3	30	75	10	4	MEV41000300CA
12.0	0.4	24	75	12	4	MEV41200A
12.0	0.4	36	75	12	4	MEV41200360CA

Cutting Condition P.570 Technical Data P.622

M520 ULTRA CARBIDE END MILLS FOR ALLOY STEEL- Corner Radius- High Performance- 4F

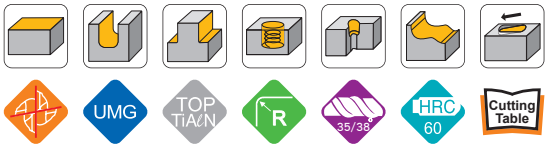
· MEVC4000000A



d	Tolerance
Φ<3	0 ~ -0.02
3≦Φ≦10	-0.01 ~ -0.03
10<Φ	-0.01 ~ -0.04

R	Tolerance
R	±0.02

Bright Finishing	—
Finishing	◎
Semi Finishing	◎
Roughing	◎



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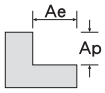
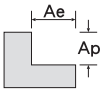
d	R	L1	L	D	F	Coated Order No.
3.0	0.2R	8	50	6	4	MEVC4030002A
3.0	0.5R	8	50	6	4	MEVC4030005A
4.0	0.2R	11	50	6	4	MEVC4040002A
4.0	0.5R	11	50	6	4	MEVC4040005A
4.0	1.0R	11	50	6	4	MEVC4040010A
5.0	0.2R	13	50	6	4	MEVC4050002A
5.0	0.5R	13	50	6	4	MEVC4050005A
5.0	1.0R	13	50	6	4	MEVC4050010A
6.0	0.3R	13	50	6	4	MEVC4060003A
6.0	0.5R	13	50	6	4	MEVC4060005A
6.0	1.0R	13	50	6	4	MEVC4060010A
8.0	0.3R	19	60	8	4	MEVC4080003A
8.0	0.5R	19	60	8	4	MEVC4080005A
8.0	1.0R	19	60	8	4	MEVC4080010A
8.0	1.5R	19	60	8	4	MEVC4080015A
8.0	2.0R	19	60	8	4	MEVC4080020A
10.0	0.3R	22	75	10	4	MEVC4100003A
10.0	0.5R	22	75	10	4	MEVC4100005A
10.0	1.0R	22	75	10	4	MEVC4100010A
10.0	1.5R	22	75	10	4	MEVC4100015A
10.0	2.0R	22	75	10	4	MEVC4100020A
10.0	3.0R	22	75	10	4	MEVC4100030A
12.0	0.5R	26	75	12	4	MEVC4120005A
12.0	1.0R	26	75	12	4	MEVC4120010A
12.0	1.5R	26	75	12	4	MEVC4120015A
12.0	2.0R	26	75	12	4	MEVC4120020A
12.0	3.0R	26	75	12	4	MEVC4120030A
16.0	1.0R	35	100	16	4	MEVC4160010A
16.0	1.5R	35	100	16	4	MEVC4160015A
16.0	2.0R	35	100	16	4	MEVC4160020A
16.0	3.0R	35	100	16	4	MEVC4160030A
20.0	1.0R	40	100	20	4	MEVC4200010A
20.0	1.5R	40	100	20	4	MEVC4200015A
20.0	2.0R	40	100	20	4	MEVC4200020A
20.0	3.0R	40	100	20	4	MEVC4200030A

Cutting Condition P.570 Technical Data P.622

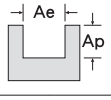
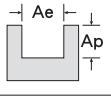
Table 70

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

Side Milling

Material	Carbon Steels		Alloy Steels		Alloy Steels		Hardened Steels	
Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SCM,SKT,SKD		SKT,SKD	
Hardness	HRC<20		HRC20~30		HRC30~45		HRC45~55	
Vc	110m/min		90m/min		75m/min		70m/min	
Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
3mm	11,670	770	9,550	580	7,960	430	7,430	380
4mm	8,750	840	7,160	680	5,970	470	5,570	440
5mm	7,000	910	5,730	730	4,770	500	4,450	460
6mm	5,830	1,120	4,770	840	3,980	620	3,710	480
8mm	4,370	1,080	3,580	770	2,980	570	2,780	470
10mm	3,500	1,010	2,860	730	2,380	500	2,220	440
12mm	2,910	980	2,380	700	1,990	500	1,850	420
16mm	2,180	840	1,790	650	1,490	440	1,390	350
20mm	1,750	680	1,430	520	1,190	410	1,110	320
25mm	1,400	610	1,140	470	955	370	890	270
Cutting Amount (mm)	Ap≦1.5D Ae≦0.2D						Ap≦1.5D Ae≦0.05D	

Slot Milling

Material	Carbon Steels		Alloy Steels		Alloy Steels		Hardened Steels	
Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SCM,SKT,SKD		SKT,SKD	
Hardness	HRC<20		HRC20~30		HRC30~45		HRC45~55	
Vc	95m/min		75m/min		70m/min		60m/min	
Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
3mm	10,080	510	7,960	480	7,430	360	6,360	310
4mm	7,560	510	5,970	540	5,570	360	4,770	340
5mm	6,050	510	4,770	530	4,450	380	3,820	370
6mm	5,040	520	3,980	440	3,710	400	3,180	380
8mm	3,780	420	2,980	390	2,780	390	2,380	360
10mm	3,020	410	2,380	380	2,220	340	1,910	320
12mm	2,520	390	1,990	330	1,850	320	1,590	300
16mm	1,890	380	1,490	300	1,390	260	1,190	250
20mm	1,510	330	1,190	270	1,110	250	955	230
25mm	1,210	320	950	250	890	220	760	160
Cutting Amount (mm)	Ap≦1D Ap(MAX)=12mm						Ap≦0.2D	

※ Cutting Formula：S = Vc × 1000 / D / π (3.14)　　F = fz × Z × S

1. When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.