

# CARBIDE

## END MILLS

General milling operation

Slotting, Side cutting, Machining die cavity

Suitable for most of materials

普通铣刀，用于开槽，侧铣，模具等多种材料的加工。





# CARBIDE END MILLS

## SELECTION GUIDE

E5401



2 FLUTE, STANDARD  
2刃, 标准(普通)铣刀

E 186

E5553  
E5410



3 FLUTE, SHORT LENGTH, THROW AWAY  
3刃, 短, 舍弃式铣刀

E 188

E5882



3 FLUTE, 42° HELIX, LONG, ROUGHING FOR ALUMINUM, TIALN COATED  
3刃 35度螺旋角, 圆弧角 不锈钢用

E 189

E5423



3 FLUTE, 45° HELIX  
3刃, 45度螺旋角

E 192

E5402



4 FLUTE, STANDARD  
4刃, 标准(普通)铣刀

E 195

E5414



2 FLUTE, BALL NOSE  
2刃, 球头

E 197

E5634  
E5524



4 FLUTE, SHORT LENGTH, BALL NOSE  
4刃, 短, 球头

E 199

E5742  
E5711



3 FLUTE, LONG LENGTH, ROUGHING for ALUMINUM  
3刃, 加长, 铝加工用, 螺纹铣刀

E 201

E5400

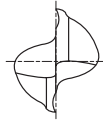
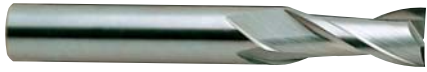


CARBIDE DRILL MILLS  
硬质合金 钻铣刀

E 203

CARBIDE

## 2 FLUTE, STANDARD 2刃, 标准(普通)铣刀



MG



► This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is the same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

这种微粒硬质合金具有优秀的耐磨性也有与普通硬质合金一样的韧性和刚性。能够做高速切削。适于切削硬的合金钢，铸钢，冷铸件，可锻铸铁CrNi-钢，铜合金，铜，硅含量大的铝和耐磨塑料。

### ● PLAIN SHANK

### ● E5401 Series

Unit : mm

EDP No. PLAIN	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
E5401004	0.4	3	1	38
E5401005	0.5	3	1.5	38
E5401006	0.6	3	1.5	38
E5401007	0.7	3	1.5	38
E5401008	0.8	3	2	38
E5401009	0.9	3	2	38
E5401010	1.0	4	3	40
E5401910	1.0	6	3	40
E5401014	1.4	4	5	40
E5401015	1.5	4	5	40
E5401915	1.5	6	5	40
E5401020	2.0	4	6	40
E5401920	2.0	6	6	40
E5401025	2.5	4	8	40
E5401925	2.5	6	8	40
E5401030	3.0	6	8	45
E5401035	3.5	6	10	45
E5401040	4.0	6	11	45
E5401045	4.5	6	11	45
E5401050	5.0	6	13	50
E5401055	5.5	6	13	50
E5401060	6.0	6	13	50
E5401065	6.5	8	16	60
E5401070	7.0	8	16	60
E5401080	8.0	8	19	60
E5401090	9.0	10	19	70
E5401100	10.0	10	22	70
E5401110	11.0	12	22	75
E5401120	12.0	12	26	75
E5401140	14.0	14	26	75
E5401160	16.0	16	25	75
E5401180	18.0	18	32	100
E5401200	20.0	20	32	100

► TiCN-Coating & TiAlN-Coating is available on your request.

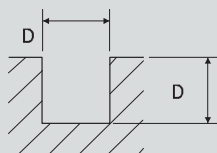
MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 - 0,03	h6



## 2 FLUTE, FINISH - SLOTTING 2刃 开槽

### ● E5401

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~ HRC20		HRC20-HRC30		HRC30-HRC40									
STRENGTH	500 ~800N/mm <sup>2</sup>		800 ~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5500	80	4800	70	4000	55	8000	65	6500	150	16000	320	12000	240
3	3700	90	3200	80	2600	60	5300	65	4200	150	11000	320	8000	240
4	2800	90	2400	80	2000	60	4000	65	3200	150	8000	320	6000	240
5	2200	90	1900	80	1600	60	3200	65	2500	150	6400	320	4800	240
6	1800	90	1600	80	1300	60	2600	65	2100	180	5300	340	4000	260
8	1400	90	1200	80	1000	60	2000	65	1600	190	4000	340	3000	260
10	1100	90	950	80	800	60	1600	65	1300	200	3200	340	2400	260
12	900	90	800	80	660	60	1300	65	1000	210	2600	340	2000	260
14	800	90	700	80	570	60	1100	65	900	220	2300	340	1700	260
16	700	100	600	85	500	75	1000	75	800	225	2000	340	1500	260
20	550	100	480	85	400	75	800	80	640	240	1600	340	1200	260



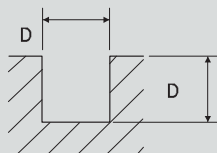
RPM=REVOLUTION PER MIN.  
Feed=mm / min



## 2 FLUTE, FINISH, TiCN-COATED, SLOTTING 2刃, TiCN涂层 开槽

### ● EG401

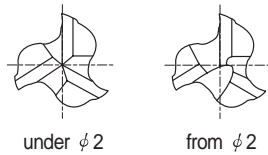
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~HRC20		HRC20-HRC30		HRC30-HRC40									
STRENGTH	500 ~800N/mm <sup>2</sup>		800 ~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	7200	100	6200	90	5200	70	10000	85	8500	200	20000	420	15000	310
3	4800	120	4200	105	3400	80	6900	85	5500	200	14000	420	10000	310
4	3640	120	3100	105	2600	80	5200	85	4200	200	10000	420	8000	310
5	2860	120	2500	105	2000	80	4200	85	3300	200	8300	420	6200	310
6	2400	120	2000	105	1700	80	3400	85	2700	230	6900	440	5200	340
8	1800	120	1500	105	1300	80	2600	85	2000	250	5200	440	4000	340
10	1400	120	1200	105	1000	80	2000	85	1700	260	4200	440	3100	340
12	1200	120	1000	105	860	80	1700	85	1300	270	3400	440	2600	340
14	1000	120	900	105	740	80	1400	85	1200	280	3000	440	2200	340
16	900	130	800	110	650	100	1300	100	1000	290	2600	440	2000	340
20	720	130	620	110	520	100	1000	100	830	310	2000	440	1560	340



RPM=REVOLUTION PER MIN. Feed=mm / min

CARBIDE

## 3 FLUTE, THROW AWAY 3刃, 舍弃式铣刀



p.E190, 191

► This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is the same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

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### ● FLAT SHANK      ● E5553 Series      ● E5410 Series

Unit : mm

EDP No. FLAT	MILL DIAMETER	SHANK DIAMETER h10	LENGTH OF CUT	OVERALL LENGTH
E5553005	0.5	●3	1.5	38
E5553006	0.6	●3	1.5	38
E5553008	0.8	●3	2	38
E5553010	1.0	●3	2	38
E5553012	1.2	●3	2	38
E5553015	1.5	●3	2	38
E5553018	1.8	●3	2	38
E5410020	2.0	6	4	35
E5410025	2.5	6	5	36
E5410030	3.0	6	5	36
E5410035	3.5	6	6	37
E5410040	4.0	6	7	38
E5410045	4.5	6	8	38
E5410050	5.0	6	8	39
E5410055	5.5	6	8	39
E5410957	5.75	6	8	39
E5410060	6.0	6	8	39
E5410967	6.75	8	10	42
E5410070	7.0	8	10	42
E5410977	7.75	8	10	42
E5410080	8.0	8	11	43
E5410087	8.7	10	11	48
E5410090	9.0	10	11	48
E5410097	9.7	10	11	48
E5410100	10.0	10	13	50
E5410120	12.0	12	15	55
E5410140	14.0	14	15	58
E5410160	16.0	16	18	62
E5410180	18.0	18	20	70
E5410200	20.0	20	22	75

● WITH PLAIN SHANK

► TiCN-Coating &amp; TiAlN-Coating is available on your request.

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 - 0,03	h6



## 3 FLUTE, 35° HELIX, CORNER RADIUS FOR STAINLESS STEELS 3刃 35度螺旋角, 圆弧角 不锈钢用



► #1 Choice for slotting, ramping & pocket work on stainless, monel & other alloys up to HRC35.

#1 选择用于铣槽, 斜面和型腔 加工不锈钢, 普通硬质合金.

● PLAIN SHANK

● E5882 Series

Unit : mm

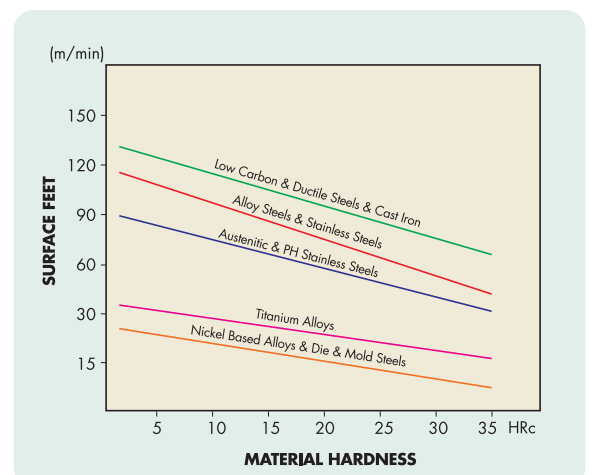
EDP No. PLAIN	CORNER RADIUS R	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
E5882030	0.20 ~ 0.25	3.0	3	4	38
E5882040	0.20 ~ 0.25	4.0	6	5	54
E5882050	0.20 ~ 0.25	5.0	6	6	54
E5882060	0.40 ~ 0.50	6.0	6	7	54
E5882080	0.40 ~ 0.50	8.0	8	9	58
E5882100	0.40 ~ 0.50	10.0	10	11	66
E5882120	0.75 ~ 0.85	12.0	12	12	73
E5882160	0.75 ~ 0.85	16.0	16	16	82
E5882200	0.75 ~ 0.85	20.0	20	20	92

► TiCN-Coating & TiAlN-Coating is available on your request.

FEED CHART

MILL DIAMETER(MM)	3	5	6	8	10	12	16	20
FEED(mm)/TOOTH	0.008 ~ 0.015	0.010 ~ 0.050	0.025 ~ 0.065	0.040 ~ 0.075	0.040 ~ 0.090	0.050 ~ 0.100	0.065 ~ 0.130	0.075 ~ 0.150

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 - 0.03	h6

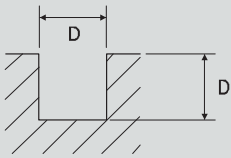




3 FLUTE, FINISH - SLOTTING  
3刃 开槽

●E5553, E5410

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER. BRASS NON-FERROUS METALS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40									
STRENGTH	500 ~800N/mm <sup>2</sup>		800 ~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5500	70	4800	60	4000	50	8000	55	6500	140	16000	290	12000	220
3	3700	80	3200	75	2600	55	5300	55	4200	140	11000	300	8000	220
4	2800	80	2400	75	2000	55	4000	55	3200	130	8000	290	6000	220
5	2200	80	1900	70	1600	55	3200	55	2500	135	6400	290	4800	220
6	1800	80	1600	70	1300	55	2600	60	2100	160	5300	305	4000	240
8	1400	80	1200	70	1000	55	2000	60	1600	170	4000	310	3000	230
10	1100	80	950	70	800	55	1600	60	1300	180	3200	305	2400	230
12	900	80	800	70	660	55	1300	60	1000	190	2600	300	2000	230
14	800	80	700	70	570	55	1100	60	900	200	2300	300	1700	230
16	700	90	600	75	500	65	1000	70	800	200	2000	300	1500	230
20	550	90	480	75	400	65	800	70	640	215	1600	300	1200	230



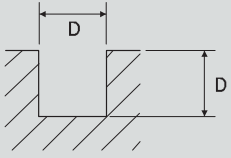
RPM=REVOLUTION PER MIN.  
Feed=mm / min



3 FLUTE, FINISH, TiCN-COATED-SLOTTING  
3刃, TiCN涂层 开槽

●EG553, EG410

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER. BRASS NON-FERROUS METALS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40									
STRENGTH	500 ~800N/mm <sup>2</sup>		800 ~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	7200	90	6200	80	5200	65	10000	70	8500	180	20000	380	15000	280
3	4800	105	4200	100	3400	70	6900	70	5500	180	14000	390	10000	280
4	3640	105	3100	100	2600	70	5200	70	4200	170	10000	380	8000	280
5	2860	105	2500	90	2000	70	4200	70	3300	180	8300	380	6200	280
6	2400	105	2000	90	1700	70	3400	80	2700	210	6900	400	5200	310
8	1800	105	1500	90	1300	70	2600	80	2000	220	5200	400	4000	300
10	1400	105	1200	90	1000	70	2000	80	1700	230	4200	400	3100	300
12	1200	105	1000	90	860	70	1700	80	1300	250	3400	390	2600	300
14	1000	105	900	90	740	70	1400	80	1200	260	3000	390	2200	300
16	900	120	800	100	650	85	1300	90	1000	260	2600	390	2000	300
20	720	120	620	100	520	85	1000	90	830	280	2000	390	1560	300



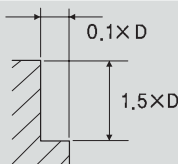
RPM=REVOLUTION PER MIN. Feed=mm / min



## 3 FLUTE, FINISH - SIDE CUTTING 3刃 侧铣

● E5553, E5410

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~Hrc20		Hrc20~Hrc30		Hrc30~Hrc40									
STRENGTH	500 ~800N/mm <sup>2</sup>		800 ~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5500	180	4800	160	4000	120	8000	140	6500	330	16000	720	12000	540
3	3700	200	3200	170	2600	130	5300	140	4200	330	11000	690	8000	530
4	2800	200	2400	180	2000	130	4000	140	3200	340	8000	720	6000	540
5	2200	200	1900	180	1600	130	3200	140	2500	340	6400	710	4800	530
6	1800	200	1600	180	1300	130	2600	150	2100	400	5300	760	4000	580
8	1400	200	1200	180	1000	130	2000	150	1600	430	4000	760	3000	580
10	1100	200	950	180	800	130	1600	150	1300	450	3200	760	2400	580
12	900	200	800	180	660	130	1300	150	1000	470	2600	760	2000	580
14	800	200	700	180	570	130	1100	150	900	490	2300	760	1700	580
16	700	220	600	190	500	160	1000	170	800	510	2000	760	1500	580
20	550	220	480	190	400	160	800	180	640	540	1600	760	1200	580



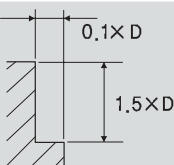
RPM=REVOLUTION PER MIN.  
Feed=mm / min



## 3 FLUTE, FINISH, TiCN-COATED-SIDE CUTTING 3刃, TiCN涂层 侧铣

● EG553, EG410

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~Hrc20		Hrc20~Hrc30		Hrc30~Hrc40									
STRENGTH	500 ~800N/mm <sup>2</sup>		800 ~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	7200	230	6200	210	5200	160	10000	180	8500	430	20000	940	15000	700
3	4800	260	4200	220	3400	170	6900	180	5500	430	14000	900	10000	690
4	3640	260	3100	230	2600	170	5200	180	4200	440	10000	940	8000	700
5	2860	260	2500	230	2000	170	4200	180	3300	440	8300	920	6200	690
6	2400	260	2000	230	1700	170	3400	200	2700	520	6900	1000	5200	750
8	1800	260	1500	230	1300	170	2600	200	2000	560	5200	1000	4000	750
10	1400	260	1200	230	1000	170	2000	200	1700	580	4200	1000	3100	750
12	1200	260	1000	230	860	170	1700	200	1300	610	3400	1000	2600	750
14	1000	260	900	230	740	170	1400	200	1200	640	3000	1000	2200	750
16	900	280	800	250	650	210	1300	220	1000	660	2600	1000	2000	750
20	720	280	620	250	520	210	1000	230	830	700	2000	1000	1560	750



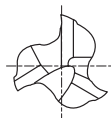
RPM=REVOLUTION PER MIN. Feed=mm / min



CARBIDE

3 FLUTE, HELIX 45P

3刃, 45度螺旋角



► This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is the same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

这种微粒硬质合金具有优秀的耐磨性也有与普通硬质合金一样的韧性和刚性。能够做高速切削。适于切削硬的合金钢，铸钢，冷铸件，可锻铸铁CrNi-钢，铜合金，铜，硅含量大的铝和耐磨塑料。

## ● PLAIN SHANK

## ● E5423 Series

Unit : mm

EDP No. PLAIN	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
E5423030	3.0	6	8	45
E5423040	4.0	6	11	45
E5423050	5.0	6	13	50
E5423060	6.0	6	13	50
E5423100	10.0	10	22	70
E5423120	12.0	12	26	75
E5423140	14.0	14	26	75
E5423160	16.0	16	25	75
E5423200	20.0	20	32	100

► TiCN-Coating & TiAlN-Coating is available on your request.

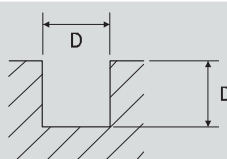
MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 - 0,03	h6



3 FLUTE, FINISH, 45P HELIX - SLOTTING  
3刃, 45度螺旋角 开槽

● E5423

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~HRc30		HRc30~HRc40							
STRENGTH	~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>							
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	1600	95	1300	65	2100	220	5300	410	4000	310
8	1200	95	1000	65	1600	230	4000	410	3000	310
10	950	95	800	65	1300	240	3200	410	2400	310
12	800	95	660	65	1000	250	2600	410	2000	310
14	700	95	570	65	900	260	2300	410	1700	310
16	600	100	500	80	800	270	2000	410	1500	310
20	480	100	400	80	640	290	1600	410	1200	310



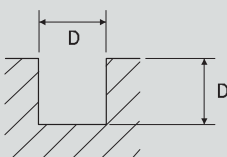
RPM=REVOLUTION PER MIN.  
Feed=mm / min



3 FLUTE, FINISH, 45° HELIX, TiCN-COATED-SLOTTING  
3刃, TiCN涂层, 45度螺旋角, 开槽

● EG423

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~HRc30		HRc30~HRc40							
STRENGTH	~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>							
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	2000	125	1700	85	2700	280	6900	530	5200	400
8	1560	125	1300	85	2000	300	5200	530	3900	400
10	1240	125	1000	85	1700	310	4200	530	3100	400
12	1000	125	860	85	1300	330	3400	530	2600	400
14	900	125	740	85	1200	340	3000	530	2200	400
16	800	130	650	100	1000	350	2600	530	2000	400
20	620	130	520	100	830	380	2000	530	1560	400



RPM=REVOLUTION PER MIN.  
Feed=mm / min

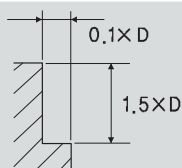
**CARBIDE**

### 3 FLUTE, FINISH, 45° HELIX - SIDE CUTTING

### 3刃, 45度螺旋角 侧铣

## ●E5423

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~HRc30		HRc30~HRc40							
STRENGTH	~1000N/mm <sup>2</sup>		1000~1300N/mm <sup>2</sup>							
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	1600	190	1300	130	2100	440	5300	820	4000	620
8	1200	190	1000	130	1600	460	4000	820	3000	620
10	950	190	800	130	1300	480	3200	820	2400	620
12	800	190	660	130	1000	500	2600	820	2000	620
14	700	190	570	130	900	520	2300	820	1700	620
16	600	200	500	160	800	540	2000	820	1500	620
20	480	200	400	160	640	580	1600	820	1200	620



RPM=REVOLUTION PER MIN.  
Feed=mm / min

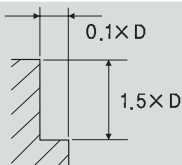
**CARBIDE**

### 3 FLUTE, FINISH, 45° HELIX, TiCN-COATED-SIDE CUTTING

### 3刃, TiCN涂层, 45度螺旋角, 侧铣

## ●EG423

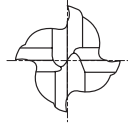
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~HRc30		HRc30~HRc40							
STRENGTH	~1000N/mm <sup>2</sup>		1000~1300N/mm <sup>2</sup>							
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	2000	250	1700	170	2700	570	6900	1000	5200	800
8	1560	250	1300	170	2000	600	5200	1000	3900	800
10	1240	250	1000	170	1700	620	4200	1000	3100	800
12	1000	250	860	170	1300	650	3400	1000	2600	800
14	900	250	740	170	1200	680	3000	1000	2200	800
16	800	260	650	210	1000	700	2600	1000	2000	800
20	620	260	520	210	830	750	2000	1000	1560	800



RPM=REVOLUTION PER MIN.  
Feed=mm / min



4 FLUTE, STANDARD  
4刃, 标准(普通)铣刀



► This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is the same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

这种微粒硬质合金具有优秀的耐磨性也有与普通硬质合金一样的韧性和刚性。能够做高速切削，适于切削硬的合金钢，铸钢，冷铸件，可锻铸铁CrNi-钢，铜合金，铜，硅含量大的铝和耐磨塑料。

● PLAIN SHANK

● E5402 Series

Unit : mm

EDP No. PLAIN	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
E5402015	1.5	4	5	40
E5402020	2.0	4	6	40
E5402025	2.5	4	8	40
E5402030	3.0	6	8	45
E5402035	3.5	6	10	45
E5402040	4.0	6	11	45
E5402045	4.5	6	11	45
E5402050	5.0	6	13	50
E5402055	5.5	6	13	50
E5402060	6.0	6	13	50
E5402070	7.0	8	16	60
E5402080	8.0	8	19	60
E5402090	9.0	10	19	70
E5402100	10.0	10	22	70
E5402110	11.0	12	22	75
E5402120	12.0	12	26	75
E5402140	14.0	14	26	75
E5402160	16.0	16	25	75
E5402180	18.0	18	32	100
E5402200	20.0	20	32	100

► TiCN-Coating & TiAlN-Coating is available on your request.

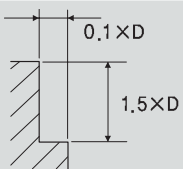
MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 - 0,03	h6



4 FLUTE, FINISH - SIDE CUTTING  
4刃, 侧铣

●E5402

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER. BRASS NON-FERROUS METALS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40									
STRENGTH	500 ~ 800N/mm <sup>2</sup>		800 ~ 1000N/mm <sup>2</sup>		1000 ~ 1300N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5500	240	4800	210	4000	160	8000	200	6500	450	16000	960	12000	720
3	3700	270	3200	240	2600	180	5300	200	4200	450	11000	960	8000	720
4	2800	270	2400	240	2000	180	4000	200	3200	450	8000	960	6000	720
5	2200	270	1900	240	1600	180	3200	200	2500	450	6400	960	4800	720
6	1800	270	1600	240	1300	180	2600	200	2100	540	5300	1020	4000	780
8	1400	270	1200	240	1000	180	2000	200	1600	570	4000	1020	3000	780
10	1100	270	950	240	800	180	1600	200	1300	600	3200	1020	2400	780
12	900	270	800	240	660	180	1300	200	1000	630	2600	1020	2000	780
14	800	270	700	240	570	180	1100	200	900	660	2300	1020	1700	780
16	700	300	600	260	500	220	1000	225	800	680	2000	1020	1500	780
20	550	300	480	260	400	220	800	240	640	720	1600	1020	1200	780



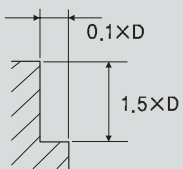
RPM=REVOLUTION PER MIN.  
Feed=mm / min



4 FLUTE, FINISH, TiCN-COATED-SIDE CUTTING  
4刃, TiCN涂层 侧铣

●EG402

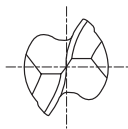
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER. BRASS NON-FERROUS METALS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40									
STRENGTH	500 ~ 800N/mm <sup>2</sup>		800 ~ 1000N/mm <sup>2</sup>		1000 ~ 1300N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	7200	310	6200	270	5200	210	10000	260	8500	580	20000	1200	15000	940
3	4800	350	4200	310	3400	230	6900	260	5500	580	14000	1200	10000	940
4	3640	350	3100	310	2600	230	5200	260	4200	580	10000	1200	8000	940
5	2860	350	2500	310	2000	230	4200	260	3300	580	8300	1200	6200	940
6	2400	350	2000	310	1700	230	3400	260	2700	700	6900	1300	5200	1000
8	1800	350	1500	310	1300	230	2600	260	2000	740	5200	1300	4000	1000
10	1400	350	1200	310	1000	230	2000	260	1700	780	4200	1300	3100	1000
12	1200	350	1000	310	860	230	1700	260	1300	820	3400	1300	2600	1000
14	1000	350	900	310	740	230	1400	260	1200	860	3000	1300	2200	1000
16	900	390	800	340	650	290	1300	290	1000	880	2600	1300	2000	1000
20	720	390	620	340	520	290	1000	310	830	940	2000	1300	1560	1000



RPM=REVOLUTION PER MIN.  
Feed=mm / min



## 2 FLUTE, BALL NOSE 2刃, 球头



► This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is the same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

这种微粒硬质合金具有优秀的耐磨性也有与普通硬质合金一样的韧性和刚性。能够做高速切削。适于切削硬的合金钢，铸钢，冷铸件，可锻铸铁CrNi-钢，铜合金，铜，硅含量大的铝和耐磨塑料。

### ● PLAIN SHANK

### ● E5414 Series

Unit : mm

EDP No. PLAIN	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
E5414004	0.4	3	0.8	50
E5414006	0.6	3	1.2	50
E5414008	0.8	3	1.6	50
E5414901	1.0	6	3	50
E5414902	2.0	6	6	50
E5414030	3.0	6	8	60
E5414040	4.0	6	11	70
E5414050	5.0	6	13	80
E5414060	6.0	6	13	80
E5414070	7.0	8	16	90
E5414080	8.0	8	19	90
E5414090	9.0	10	19	100
E5414100	10.0	10	22	100
E5414120	12.0	12	26	110
E5414140	14.0	14	26	120
E5414160	16.0	16	30	120
E5414200	20.0	20	38	130
E5414250	25.0	25	50	150

► TiCN-Coating & TiAlN-Coating is available on your request.

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 - 0,03	h6

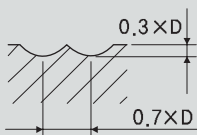
CARBIDE

## 2 FLUTE, BALL NOSE

### 2刃, 球头

## ●E5414

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS	
HARDNESS	~HRc30		HRc30~HRc40					
STRENGTH	~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R 1.0 × 2.0	5200	90	4400	45	7300	150	21500	280
R 1.5 × 3.0	3500	100	2900	45	4900	160	14300	280
R 2.0 × 4.0	2600	100	2100	45	3600	200	10900	280
R 2.5 × 5.0	2100	105	1700	45	2900	230	8800	330
R 3.0 × 6.0	1700	100	1430	45	2400	250	7260	330
R 4.0 × 8.0	1270	95	1100	45	1800	320	5500	380
R 5.0 × 10.0	1000	95	870	45	1430	320	4300	380
R 6.0 × 12.0	870	85	730	45	1200	320	3600	440
R 7.0 × 14.0	750	85	620	45	1000	325	3000	440
R 8.0 × 16.0	650	85	540	45	920	325	2700	380
R 9.0 × 18.0	580	85	480	45	810	325	2400	380
R 10.0 × 20.0	500	85	430	45	730	290	2100	380



RPM=REVOLUTION PER MIN.  
Feed=mm / min

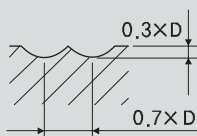
CARBIDE

## 2 FLUTE, BALL NOSE, TiCN-COATED

### 2刃, TiCN涂层, 球头

## ●EG414

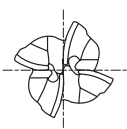
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS	
HARDNESS	~HRc30		HRc30~HRc40					
STRENGTH	~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R 1.0 × 2.0	6760	120	5700	60	9500	200	28000	360
R 1.5 × 3.0	4500	130	3800	60	6400	210	18600	360
R 2.0 × 4.0	3400	130	2700	60	4700	260	14000	360
R 2.5 × 5.0	2700	135	2200	60	3800	300	11000	430
R 3.0 × 6.0	2200	130	1860	60	3100	330	9400	430
R 4.0 × 8.0	1600	120	1400	60	2300	420	7200	490
R 5.0 × 10.0	1300	120	1100	60	1860	420	5600	490
R 6.0 × 12.0	1100	110	950	60	1600	420	4700	570
R 7.0 × 14.0	980	110	800	60	1300	420	3900	570
R 8.0 × 16.0	850	110	700	60	1200	420	3500	490
R 9.0 × 18.0	750	110	620	60	1000	420	3100	490
R 10.0 × 20.0	650	110	560	60	950	380	2700	490



RPM=REVOLUTION PER MIN.  
Feed=mm / min



## 4 FLUTE, SHORT LENGTH, BALL NOSE 4刃, 短, 球头



► This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is the same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

这种微粒硬质合金具有优秀的耐磨性也有与普通硬质合金一样的韧性和刚性。能够做高速切削，适于切削硬的合金钢，铸钢，冷铸件，可锻铸铁CrNi-钢，铜合金，铜，硅含量大的铝和耐磨塑料。

● **PLAIN SHANK**

● **E5634 Series**

● **FLAT SHANK**

● **E5524 Series**

Unit : mm

EDP No.		MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
PLAIN	FLAT				
E5634020	E5524020	2.0	6	4	48
E5634030	E5524030	3.0	6	4	48
E5634040	E5524040	4.0	6	6	50
E5634050	E5524050	5.0	6	7	51
E5634060	E5524060	6.0	6	7	51
E5634080	E5524080	8.0	8	9	59
E5634100	E5524100	10.0	10	10	60
E5634120	E5524120	12.0	12	14	71
E5634140	E5524140	14.0	14	14	71
E5634160	E5524160	16.0	16	16	76
E5634180	E5524180	18.0	18	18	76
E5634200	E5524200	20.0	20	20	82

► TiCN-Coating & TiAlN-Coating is available on your request.

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 - 0,03	h6



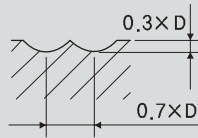
CARBIDE

## 4 FLUTE, BALL NOSE

### 4刃, 短, 球头

●E5634, E5524

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS	
HARDNESS	~HRC30		HRC30~HRC40					
STRENGTH	~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R 1.0 × 2.0	5200	140	4400	70	7300	150	21500	420
R 1.5 × 3.0	3500	150	2900	70	4900	160	14300	420
R 2.0 × 4.0	2600	150	2100	70	3600	200	10900	420
R 2.5 × 5.0	2100	160	1700	70	2900	230	8800	500
R 3.0 × 6.0	1700	150	1430	70	2400	250	7260	500
R 4.0 × 8.0	1270	140	1100	70	1800	320	5500	570
R 5.0 × 10.0	1000	140	870	70	1430	320	4300	570
R 6.0 × 12.0	870	130	730	70	1200	320	3600	660
R 7.0 × 14.0	750	130	620	70	1000	325	3000	660
R 8.0 × 16.0	650	130	540	70	920	325	2700	570
R 9.0 × 18.0	580	130	480	70	810	325	2400	570
R 10.0 × 20.0	500	130	430	70	730	290	2100	570



RPM=REVOLUTION PER MIN.  
Feed=mm / min

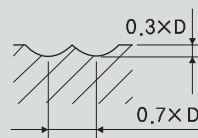
CARBIDE

## 4 FLUTE, BALL NOSE, TiCN-COATED

### 4刃, TiCN涂层, 球头

●EG634, EG524

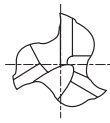
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS	
HARDNESS	~HRC30		HRC30~HRC40					
STRENGTH	~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R 1.0 × 2.0	6760	180	5700	90	9500	300	28000	550
R 1.5 × 3.0	4500	200	3800	90	6400	310	18600	550
R 2.0 × 4.0	3400	200	2700	90	4700	390	14000	550
R 2.5 × 5.0	2700	210	2200	90	3800	450	11000	650
R 3.0 × 6.0	2200	200	1860	90	3100	490	9400	650
R 4.0 × 8.0	1600	180	1400	90	2300	620	7200	740
R 5.0 × 10.0	1300	180	1100	90	1860	620	5600	740
R 6.0 × 12.0	1100	170	950	90	1600	620	4700	860
R 7.0 × 14.0	980	170	800	90	1300	640	3900	860
R 8.0 × 16.0	850	170	700	90	1200	640	3500	740
R 9.0 × 18.0	750	170	620	90	1000	640	3100	740
R 10.0 × 20.0	650	170	560	90	950	570	2700	740



RPM=REVOLUTION PER MIN.  
Feed=mm / min



3 FLUTE, LONG LENGTH, ROUGHING FOR ALUMINUM  
3刃, 加长, 铝加工用, 螺纹铣刀



- ▶ This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is the same as normal carbide. Designed for machining aluminum and other non-ferrous materials.  
这种微粒硬质合金具有优秀的耐磨性也有与普通硬质合金一样的韧性和刚性。设计用于加工铝及其它有色金属材料。
- ▶ Superior chip removal.  
较高的切除率

● PLAIN SHANK

● E5742 Series

● FLAT SHANK

● E5711 Series

Unit : mm

EDP No.		MILL DIAMETER h10	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
PLAIN	FLAT				
E5742060	E5711060	6.0	6	16	57
E5742070	E5711070	7.0	8	16	63
E5742080	E5711080	8.0	8	16	63
E5742090	E5711090	9.0	10	19	72
E5742100	E5711100	10.0	10	22	72
E5742120	E5711120	12.0	12	26	83
E5742140	E5711140	14.0	14	26	83
E5742160	E5711160	16.0	16	32	92
E5742180	E5711180	18.0	18	32	92
E5742200	E5711200	20.0	20	38	104
E5742250	E5711250	25.0	25	45	121

▶ TiCN-Coating & TiAlN-Coating is available on your request.

Tolerances according to DIN 7160 & 7161

Tolerance range in $\mu\text{m}$					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
<b>h10</b>	0 - 40	0 - 48	0 - 58	0 - 70	0 - 84
<b>h6</b>	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13

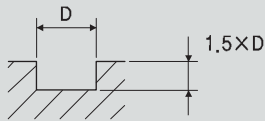
$\mu\text{m} = 1/1000\text{mm}$



3 FLUTE, ROUGHING FOR ALUMINUM  
3刃, 加长, 铝加工用, 螺纹铣刀

●E5742, E5711

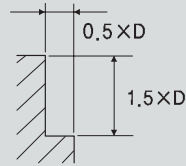
MATERIAL	ALUMINUM NON-FERROUS METALS	
DIAMETER	RPM	FEED
6	10500	800
8	8000	700
10	6500	750
12	5250	800
16	4000	800
20	3200	800



<SLOTING>

●E5742, E5711

MATERIAL	ALUMINUM NON-FERROUS METALS	
DIAMETER	RPM	FEED
6	10500	800
8	8000	700
10	6500	750
12	5250	800
16	4000	800
20	3200	800



<SIDE CUTTING>

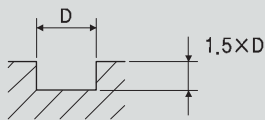
RPM=REVOLUTION PER MIN.  
Feed=mm / min



3 FLUTE, ROUGHING FOR ALUMINUM, TiCN-COATED  
3刃, TiCN涂层, 加长

●EG742, EG711

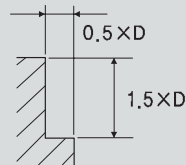
MATERIAL	ALUMINUM NON-FERROUS METALS	
DIAMETER	RPM	FEED
6	13500	1050
8	10500	900
10	8500	950
12	6800	1050
16	5200	1050
20	4200	1050



<SLOTING>

●EG742, EG711

MATERIAL	ALUMINUM NON-FERROUS METALS	
DIAMETER	RPM	FEED
6	13500	1050
8	10500	900
10	8500	950
12	6800	1050
16	5200	1050
20	4200	1050



<SIDE CUTTING>

RPM=REVOLUTION PER MIN.  
Feed=mm / min



# CARBIDE DRILL MILLS

## 硬质合金钻头



- ▶ Lots of drilling and milling operations are not presently done with the standard end mill  
目前许多钻削与铣削作业不是用标准的铣刀完成
- ▶ Among the many vertical milling machine operations the Drill Mill performs : Drilling, slotting, NC Milling Drilling & Slotting, Profile Milling, Chamfering.  
数控钻铣和铣槽, 仿形铣, 倒角加工

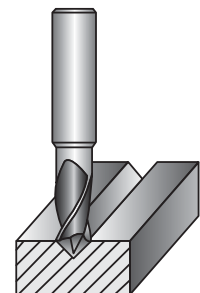
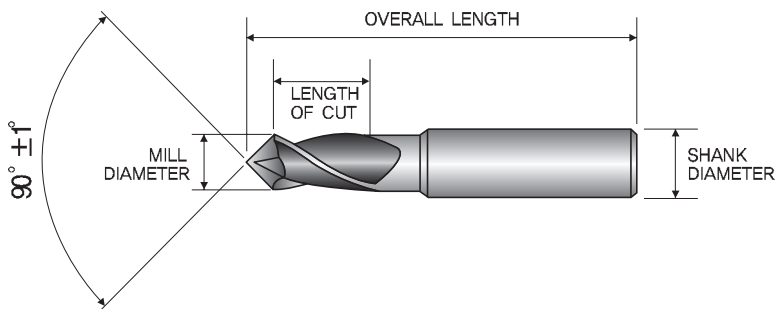
### ● PLAIN SHANK

### ● E5400 Series

Unit : mm

EDP No. PLAIN	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
E5400030	3.0	4	6	50
E5400040	4.0	5	8	50
E5400050	5.0	6	10	50
E5400060	6.0	8	12	60
E5400080	8.0	10	16	70
E5400100	10.0	12	18	70
E5400120	12.0	12	20	70
E5400140	14.0	14	24	80
E5400160	16.0	16	26	80
E5400200	20.0	20	32	100

▶ TiCN-Coating & TiAlN-Coating is available on your request.



### Tolerances according to DIN 7160 & 7161

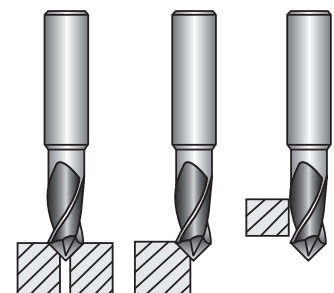
Tolerance range in $\mu\text{m}$					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
<b>h9</b>	0 - 25	0 - 30	0 - 36	0 - 43	0 - 52
<b>d9</b>	- 20 - 45	- 30 - 60	- 40 - 76	- 50 - 93	- 65 - 117
<b>h6</b>	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13

※ MILL DIAMETER TOLERANCE

$\phi 3 \sim \phi 10 = h9$

$\phi 12 \sim \phi 20 = d9$

$\mu\text{m} = 1/1000\text{mm}$



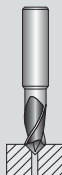
CARBIDE

## 2FLUTE, FINISH, CHAMFERING

### 2刃, 倒角

## ●E5400

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		ALUMINUM ALLOYS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40					
STRENGTH	500~800N/mm <sup>2</sup>		800~1000N/mm <sup>2</sup>		1000~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3	4400	220	3500	160	3000	140	2400	100	11000	550
4	3600	220	3000	160	2500	140	2000	100	9000	580
5	2860	230	2400	170	2000	140	1760	105	6900	620
6	2300	240	2000	170	1600	140	1400	105	5600	640
8	1760	250	1540	180	1200	145	1000	110	4400	660
10	1500	250	1300	190	1100	145	870	110	4000	680
12	1300	260	1100	200	900	150	730	115	3500	700
16	1000	250	950	200	700	160	550	120	2750	740
20	950	260	750	210	600	160	530	130	2200	770



RPM=REVOLUTION PER MIN.  
Feed=mm / min

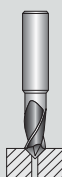
CARBIDE

## 2 FLUTE, FINISH, CHAMFERING, TiCN-COATED

### 2刃, 倒角加工, TiCN涂层

## ●EG400

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		ALUMINUM ALLOYS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40					
STRENGTH	500~800N/mm <sup>2</sup>		800~1000N/mm <sup>2</sup>		1000~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3	5700	280	4500	210	4000	180	3100	130	14000	720
4	4700	280	4000	210	3300	180	2600	130	11000	750
5	3700	300	3100	220	2600	180	2300	135	9000	810
6	3000	310	2600	220	2000	180	1800	135	7300	830
8	2300	330	2000	230	1600	190	1300	145	5700	860
10	2000	330	1700	250	1400	190	1100	145	5200	880
12	1700	340	1400	260	1200	200	950	150	4500	900
16	1300	330	1200	260	900	210	700	155	3600	960
20	1200	340	1000	270	800	210	690	170	2900	1000



RPM=REVOLUTION PER MIN.  
Feed=mm / min



## 2FLUTE, FINISH, CHAMFERING & SIDE CUTTING

### 2刃, 倒角加工, 侧铣, TiCN涂层

#### ● E5400

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		ALUMINUM ALLOYS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40					
STRENGTH	500 ~800N/mm <sup>2</sup>		800 ~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3	5900	95	3900	65	3300	50	2400	40	14000	230
4	4800	95	3200	65	2800	50	2000	40	12000	240
5	3800	100	2500	65	2200	55	1760	45	9500	250
6	3000	110	2000	70	1800	60	1400	50	7700	300
8	2300	115	1540	75	1300	65	1100	55	5800	350
10	2000	120	1300	80	1200	65	1000	55	5100	380
12	1760	130	1100	90	1000	70	840	60	4400	400
16	1300	140	900	90	770	70	660	60	3300	330
20	1100	140	700	90	600	70	440	60	2640	340



RPM=REVOLUTION PER MIN.  
Feed=mm / min



## 2FLUTE, FINISH, CHAMFERING & SIDE CUTTING

### 2刃, 倒角加工, 侧铣, TiCN涂层

#### ● EG400

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		ALUMINUM ALLOYS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40					
STRENGTH	500 ~800N/mm <sup>2</sup>		800 ~1000N/mm <sup>2</sup>		1000 ~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3	7600	120	5000	85	4300	65	3100	50	18000	300
4	6200	120	4200	85	3600	65	2600	50	16000	310
5	5000	130	3300	85	2900	70	2300	60	13000	330
6	4000	140	2600	90	2300	80	1800	65	10000	390
8	3000	150	2000	100	1700	85	1400	70	7500	450
10	2600	160	1700	105	1600	85	1300	70	6600	490
12	2300	170	1400	120	1300	90	1100	80	5700	520
16	1700	180	1200	120	1000	90	860	80	4300	430
20	1400	180	900	120	800	90	570	80	3400	440



RPM=REVOLUTION PER MIN.  
Feed=mm / min

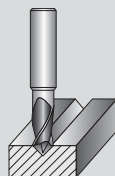
CARBIDE

## 2FLUTE, FINISH, V-GROOVING

### 2刃, V加工

## ●E5400

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		ALUMINUM ALLOYS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40					
STRENGTH	500~800N/mm <sup>2</sup>		800~1000N/mm <sup>2</sup>		1000~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3	5900	60	4000	30	3300	25	2400	20	14000	220
4	4800	60	3300	30	2800	25	2000	20	11800	230
5	3800	60	2500	30	2200	25	1760	20	9500	240
6	3000	60	2000	30	1800	30	1400	20	7700	250
8	2300	65	1540	35	1300	35	1100	20	5800	260
10	2000	65	1300	35	1200	35	1000	20	5000	260
12	1760	65	1000	40	1000	35	840	20	4400	260
16	1400	65	900	40	770	35	660	25	3300	270
20	1100	65	700	40	600	35	440	25	2600	270



RPM=REVOLUTION PER MIN.  
Feed=mm / min

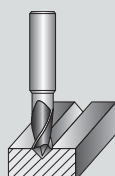
CARBIDE

## 2 FLUTE, FINISH, V-GROOVING, TiCN-COATED

### 2刃, V加工, TiCN涂层

## ●EG400

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		ALUMINUM ALLOYS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40					
STRENGTH	500~800N/mm <sup>2</sup>		800~1000N/mm <sup>2</sup>		1000~1300N/mm <sup>2</sup>					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3	7600	80	5000	40	4300	30	3100	25	18000	290
4	6200	80	4300	40	3600	30	2600	25	15000	300
5	5000	80	3300	40	2900	30	2300	25	12000	310
6	4000	80	2600	40	2300	40	1800	25	10000	330
8	3000	85	2000	45	1700	45	1400	25	7500	340
10	2600	85	1700	45	1600	45	1300	25	6500	340
12	2300	85	1300	50	1300	45	1100	25	5700	340
16	1800	85	1200	50	1000	45	860	30	4300	350
20	1400	85	900	50	800	45	570	30	3400	350



RPM=REVOLUTION PER MIN.  
Feed=mm / min

