

**V7 STEEL**



- For machine mild steels, cast irons, tool steels, and low hardened steels up to HRc 40.

**V7 INOX**

- For machining Stainless steel, Titanium, Inconel and steel alloys under HRc40

**YG-1 CO., LTD.**

**HEAD OFFICE**

68, Cheongcheon-Dong, Bupyeong-Gu, Incheon, Korea

PHONE : +82-32-526-0909, FAX : +82-32-526-4373

<http://www.yg1.kr>

E-mail: [yg1@yg1.kr](mailto:yg1@yg1.kr)

Tool specifications are subject to change without notice.

**V7 Mill**  
SOLID CARBIDE END MILLS



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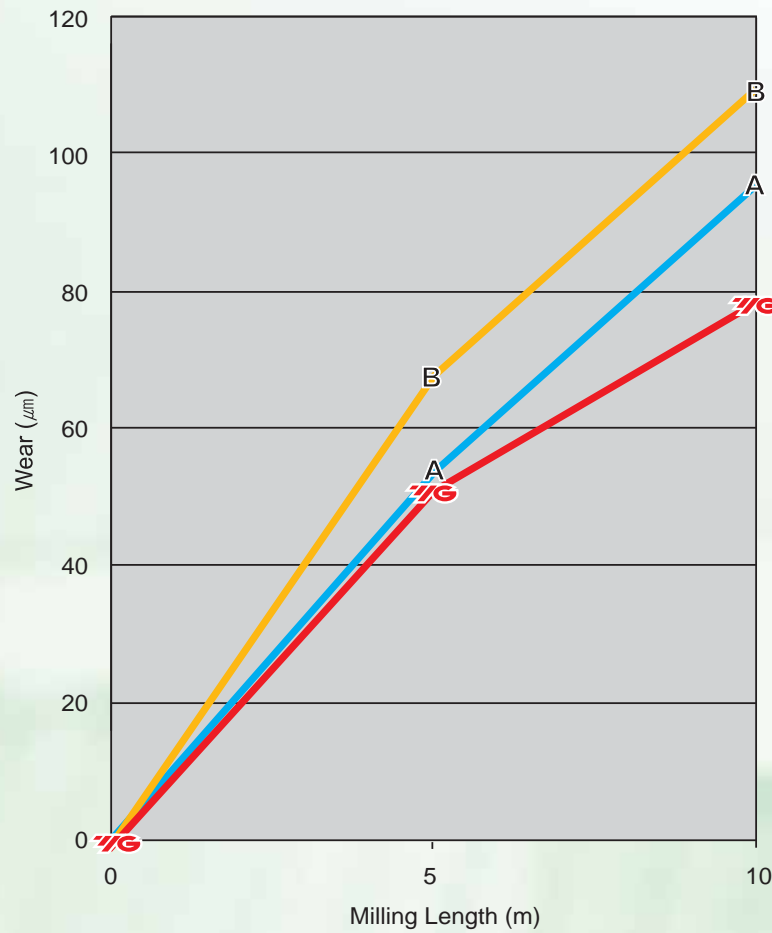
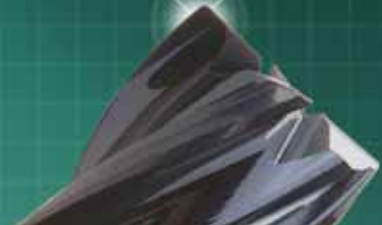




# V7 STEEL CASE STUDY



# V7Mill STEEL & INOX SELECTION GUIDE



YG-1 V7 STEEL  
 A Competitor A  
 B Competitor B

### CUTTING CONDITION

**Tools:** V7 Steel 4Flute End Mill  
**Size:**  $\varnothing 12 \times \varnothing 12 \times 26 \times 83$   
**Work Material:** SKD61 (HRC30)  
**Cutting Speed:** 139 m/min.  
**R.P.M:** 3688 rev./min.  
**Feed:** 689.7 mm/min.  
**Milling Method:** Down & Side Cutting  
**Milling Depth:** Axial : 18 mm  
                     Radial : 6 mm  
**Coolant:** Wet Cut (4.5%)  
**Overhang:** 40 mm  
**Machine:** Machining Center

**YG-1 V7 STEEL**  
(Total Milling length 10m)



**Competitor A**  
(Total Milling length 10m)



**Competitor B**  
(Total Milling length 10m)



◎:Excellent ○:Good

ITEM	MODEL	DESCRIPTION	Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels	PAGE	
			~HB225	HB225~352	HRC30~50	HRC50~55	HRC55~						
V7 STEEL	EMD42 EMD43	CARBIDE, 4 FLUTE MULTIPLE HELIX SHORT LENGTH	◎	◎	◎	○			○		○	4	
	EMD44 EMD45	CARBIDE, 4 FLUTE MULTIPLE HELIX SHORT LENGTH CORNER RADIUS	◎	◎	◎	○			○		○	5	
	EMD38 EMD39	CARBIDE, 4 FLUTE MULTIPLE HELIX LONG LENGTH	◎	◎	◎	○			○		○	6	
	EMD40 EMD41	CARBIDE, 4 FLUTE MULTIPLE HELIX LONG LENGTH CORNER RADIUS	◎	◎	◎	○			○		○	7	
	EME05 EME06	CARBIDE, 4 FLUTE MULTIPLE HELIX with EXTENDED NECK	◎	◎	◎	○			○		○	8	
	EME33 EME34	CARBIDE, 4 FLUTE MULTIPLE HELIX with EXTENDED NECK CORNER RADIUS	◎	◎	◎	○			○		○	9	
V7 INOX	EMB41 EMB42	CARBIDE, 4 FLUTE SHORT LENGTH	○	◎	○				○		◎	◎	11
	EMB43 EMB44	CARBIDE, 4 FLUTE SHORT LENGTH CORNER RADIUS	○	◎	○				○		◎	◎	12
	EMB14 EMB39	CARBIDE, 4 FLUTE LONG LENGTH	○	◎	○				○		◎	◎	13
	EMB15 EMB40	CARBIDE, 4 FLUTE LONG LENGTH CORNER RADIUS	○	◎	○				○		◎	◎	14
	EMC84 EMC85	CARBIDE, 4 FLUTE with EXTENDED NECK	○	◎	○				○		◎	◎	15
	EME31 EME32	CARBIDE, 4 FLUTE with EXTENDED NECK CORNER RADIUS	○	◎	○				○		◎	◎	16
	EMB74 EMB75	CARBIDE, 4 FLUTE LONG LENGTH BALL NOSE	○	◎	○				○		◎	◎	17
	EMB72 EMB73	CARBIDE, 5 FLUTE LONG LENGTH	○	◎	○				○		◎	◎	18

**CARBIDE, 4 FLUTE MULTIPLE HELIX SHORT LENGTH**

- ▶ Special flute geometry and multiple helix eliminate vibrations
- ▶ Designed to machine mild steels, cast irons, tool steels, and low hardened steels up to HRc 40.
- ▶ Excellent work piece finishes.
- ▶ Higher speeds, deeper cuts, and higher metal removal rates.



**CARBIDE, 4 FLUTE MULTIPLE HELIX SHORT LENGTH CORNER RADIUS**

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Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT				
EMD42030	EMD43030	3.0	6	5	50
EMD42040	EMD43040	4.0	6	8	54
EMD42050	EMD43050	5.0	6	9	54
EMD42060	EMD43060	6.0	6	10	54
EMD42080	EMD43080	8.0	8	12	58
EMD42100	EMD43100	10.0	10	14	66
EMD42120	EMD43120	12.0	12	16	73
EMD42140	EMD43140	14.0	14	18	75
EMD42160	EMD43160	16.0	16	22	82
EMD42180	EMD43180	18.0	18	24	84
EMD42200	EMD43200	20.0	20	26	92

Unit : mm

EDP No.		Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT					
EMD44030	EMD45030	RO.3	3.0	6	5	50
EMD44040	EMD45040	RO.3	4.0	6	8	54
EMD44050	EMD45050	RO.3	5.0	6	9	54
EMD44060	EMD45060	RO.4	6.0	6	10	54
EMD44080	EMD45080	RO.4	8.0	8	12	58
EMD44100	EMD45100	RO.4	10.0	10	14	66
EMD44120	EMD45120	RO.6	12.0	12	16	73
EMD44140	EMD45140	RO.6	14.0	14	18	75
EMD44160	EMD45160	RO.8	16.0	16	22	82
EMD44180	EMD45180	RO.8	18.0	18	24	84
EMD44200	EMD45200	RO.8	20.0	20	26	92

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

**CARBIDE, 4 FLUTE MULTIPLE HELIX LONG LENGTH**

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**CARBIDE, 4 FLUTE MULTIPLE HELIX LONG LENGTH CORNER RADIUS**

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Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT				
EMD38030	EMD39030	3.0	6	8	57
EMD38040	EMD39040	4.0	6	11	57
EMD38050	EMD39050	5.0	6	13	57
EMD38060	EMD39060	6.0	6	13	57
EMD38080	EMD39080	8.0	8	19	63
EMD38100	EMD39100	10.0	10	22	72
EMD38120	EMD39120	12.0	12	26	83
EMD38140	EMD39140	14.0	14	26	83
EMD38160	EMD39160	16.0	16	32	92
EMD38180	EMD39180	18.0	18	32	92
EMD38200	EMD39200	20.0	20	38	104
EMD38250	EMD39250	25.0	25	38	104

Unit : mm

EDP No.		Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT					
EMD40030	EMD41030	RO.3	3.0	6	8	57
EMD40040	EMD41040	RO.3	4.0	6	11	57
EMD40050	EMD41050	RO.3	5.0	6	13	57
EMD40060	EMD41060	RO.4	6.0	6	13	57
EMD40080	EMD41080	RO.4	8.0	8	19	63
EMD40100	EMD41100	RO.4	10.0	10	22	72
EMD40120	EMD41120	RO.6	12.0	12	26	83
EMD40140	EMD41140	RO.6	14.0	14	26	83
EMD40160	EMD41160	RO.8	16.0	16	32	92
EMD40180	EMD41180	RO.8	18.0	18	32	92
EMD40200	EMD41200	RO.8	20.0	20	38	104
EMD40250	EMD41250	RO.8	25.0	25	38	104

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

EME05 SERIES / PLAIN SHANK

EME06 SERIES / FLAT SHANK

EME33 SERIES / PLAIN SHANK

EME34 SERIES / FLAT SHANK

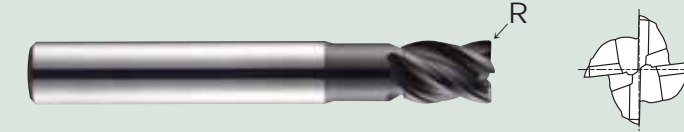
## CARBIDE, 4 FLUTE MULTIPLE HELIX WITH EXTENDED NECK

- ▶ Special flute geometry and multiple helix eliminate vibrations
- ▶ Designed to machine mild steels, cast irons, tool steels, and low hardened steels up to HRc 40.
- ▶ Excellent work piece finishes.
- ▶ Higher speeds, deeper cuts, and higher metal removal rates.



## CARBIDE, 4 FLUTE MULTIPLE HELIX WITH EXTENDED NECK CORNER RADIUS

- ▶ Special flute geometry and multiple helix eliminate vibrations
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- ▶ Higher speeds, deeper cuts, and higher metal removal rates.



Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
PLAIN	FLAT						
EME05030	EME06030	3.0	6	7	12	54	2.7
EME05913	EME06913	3.0	6	7	17	57	2.7
EME05040	EME06040	4.0	6	8	15	57	3.7
EME05914	EME06914	4.0	6	8	22	63	3.7
EME05050	EME06050	5.0	6	10	17	57	4.7
EME05915	EME06915	5.0	6	10	27	67	4.7
EME05060	EME06060	6.0	6	10	15	57	5.5
EME05901	EME06901	6.0	6	10	20	62	5.5
EME05902	EME06902	6.0	6	10	32	74	5.5
EME05080	EME06080	8.0	8	12	20	63	7.5
EME05903	EME06903	8.0	8	12	30	73	7.5
EME05904	EME06904	8.0	8	12	46	90	7.5
EME05100	EME06100	10.0	10	14	25	72	9.2
EME05905	EME06905	10.0	10	14	35	82	9.2
EME05906	EME06906	10.0	10	14	55	102	9.2
EME05120	EME06120	12.0	12	16	30	83	11
EME05907	EME06907	12.0	12	16	40	93	11
EME05908	EME06908	12.0	12	16	64	117	11
EME05160	EME06160	16.0	16	22	38	92	15
EME05909	EME06909	16.0	16	22	55	109	15
EME05910	EME06910	16.0	16	22	87	141	15
EME05200	EME06200	20.0	20	26	50	104	19
EME05911	EME06911	20.0	20	26	70	124	19
EME05912	EME06912	20.0	20	26	110	164	19

Unit : mm

EDP No.		Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
PLAIN	FLAT							
EME33030	EME34030	R0.3	3.0	6	7	12	54	2.7
EME33901	EME34901	R0.3	3.0	6	7	17	57	2.7
EME33040	EME34040	R0.3	4.0	6	8	15	57	3.7
EME33902	EME34902	R0.3	4.0	6	8	22	63	3.7
EME33050	EME34050	R0.3	5.0	6	10	17	57	4.7
EME33903	EME34903	R0.3	5.0	6	10	27	67	4.7
EME33060	EME34060	R0.5	6.0	6	10	15	57	5.5
EME33904	EME34904	R0.5	6.0	6	10	20	62	5.5
EME33905	EME34905	R0.5	6.0	6	10	32	74	5.5
EME33080	EME34080	R0.5	8.0	8	12	20	63	7.5
EME33906	EME34906	R0.5	8.0	8	12	30	73	7.5
EME33907	EME34907	R0.5	8.0	8	12	46	90	7.5
EME33100	EME34100	R0.5	10.0	10	14	25	72	9.2
EME33908	EME34908	R0.5	10.0	10	14	35	82	9.2
EME33909	EME34909	R0.5	10.0	10	14	55	102	9.2
EME33120	EME34120	R0.7	12.0	12	16	30	83	11
EME33910	EME34910	R0.7	12.0	12	16	40	93	11
EME33911	EME34911	R0.7	12.0	12	16	64	117	11
EME33160	EME34160	R1.0	16.0	16	22	38	92	15
EME33912	EME34912	R1.0	16.0	16	22	55	109	15
EME33913	EME34913	R1.0	16.0	16	22	87	141	15
EME33200	EME34200	R1.0	20.0	20	26	50	104	19
EME33914	EME34914	R1.0	20.0	20	26	70	124	19
EME33915	EME34915	R1.0	20.0	20	26	110	164	19

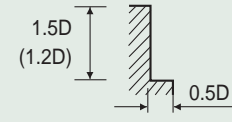
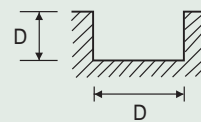
Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6



V7 STEEL, 4 FLUTE

MATERIAL	ALLOY STEELS CAST IRON				ALLOY STEELS CAST IRON			
	- HB 300				HB 300 ~ HB 380			
STRENGTH	~ 1000N/mm <sup>2</sup>				1000 ~ 1300N/mm <sup>2</sup>			
DIAMETER	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
3.0	13475	275	125	0.005	9430	190	90	0.005
4.0	10105	330	125	0.008	7070	230	90	0.008
5.0	8085	370	125	0.011	5660	260	90	0.011
6.0	6735	435	125	0.016	4715	305	90	0.016
8.0	5050	555	125	0.027	3535	385	90	0.027
10.0	4455	690	140	0.039	3115	480	100	0.039
12.0	3710	695	140	0.047	2600	485	100	0.047
14.0	3180	620	140	0.049	2225	435	100	0.049
16.0	2785	590	140	0.053	1950	410	100	0.053
18.0	2475	585	140	0.059	1730	410	100	0.059
20.0	2225	580	140	0.065	1560	405	100	0.065
25.0	1780	450	140	0.063	1245	315	100	0.063



\* ( ) : Short length Type

1.2 x D Axial cutting depth should be applied for Short length series DIA over 8mm

RPM = rev./min.  
FEED = mm/min.

CARBIDE, 4 FLUTE SHORT LENGTH

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed to mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material under HRC 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



Unit : mm

EDP No.		Mill Diameter	Shank Diameter h6	Length of Cut	Overall Length
PLAIN	FLAT				
EMB41030	EMB42030	3.0	6	7	54
EMB41040	EMB42040	4.0	6	8	54
EMB41050	EMB42050	5.0	6	10	54
EMB41060	EMB42060	6.0	6	10	54
EMB41080	EMB42080	8.0	8	12	58
EMB41100	EMB42100	10.0	10	14	66
EMB41120	EMB42120	12.0	12	16	73
EMB41140	EMB42140	14.0	14	18	75
EMB41160	EMB42160	16.0	16	22	82
EMB41180	EMB42180	18.0	18	24	84
EMB41200	EMB42200	20.0	20	26	92

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0--0.03	h6

**CARBIDE, 4 FLUTE SHORT LENGTH CORNER RADIUS**

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed to mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material under HRc 40
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**CARBIDE, 4 FLUTE LONG LENGTH**

- ▶ Special flute geometry eliminates vibrations
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Unit : mm

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R		h6		
EMB43030	EMB44030	RO.25~RO.38	3.0	6	7	54
EMB43040	EMB44040	RO.25~RO.38	4.0	6	8	54
EMB43050	EMB44050	RO.25~RO.38	5.0	6	10	54
EMB43060	EMB44060	RO.38~RO.51	6.0	6	10	54
EMB43080	EMB44080	RO.38~RO.51	8.0	8	12	58
EMB43100	EMB44100	RO.38~RO.51	10.0	10	14	66
EMB43120	EMB44120	RO.64~RO.76	12.0	12	16	73
EMB43140	EMB44140	RO.64~RO.76	14.0	14	18	75
EMB43160	EMB44160	RO.89~R1.02	16.0	16	22	82
EMB43180	EMB44180	RO.89~R1.02	18.0	18	24	84
EMB43200	EMB44200	RO.89~R1.02	20.0	20	26	92

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		h6		
EMB14030	EMB39030	3.0	6	8	57
EMB14040	EMB39040	4.0	6	11	57
EMB14050	EMB39050	5.0	6	13	57
EMB14060	EMB39060	6.0	6	13	57
EMB14080	EMB39080	8.0	8	19	63
EMB14100	EMB39100	10.0	10	22	72
EMB14120	EMB39120	12.0	12	26	83
EMB14140	EMB39140	14.0	14	26	83
EMB14160	EMB39160	16.0	16	32	92
EMB14180	EMB39180	18.0	18	32	92
EMB14200	EMB39200	20.0	20	38	104
EMB14250	EMB39250	25.0	25	38	104

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

**CARBIDE, 4 FLUTE LONG LENGTH CORNER RADIUS**

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed to mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material under HRc 40
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**CARBIDE, 4 FLUTE WITH EXTENDED NECK**

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- ▶ Designed to mild steels, stainless steels, cast iron, tool steels, titanium alloys, prehardened steels and low hardness materials under HRc 40
- ▶ Excellent work piece finishes
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Unit : mm

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R		h6		
EMB15030	EMB40030	RO.25~RO.38	3.0	6	8	57
EMB15040	EMB40040	RO.25~RO.38	4.0	6	11	57
EMB15050	EMB40050	RO.25~RO.38	5.0	6	13	57
EMB15060	EMB40060	RO.38~RO.51	6.0	6	13	57
EMB15080	EMB40080	RO.38~RO.51	8.0	8	19	63
EMB15100	EMB40100	RO.38~RO.51	10.0	10	22	72
EMB15120	EMB40120	RO.64~RO.76	12.0	12	26	83
EMB15140	EMB40140	RO.64~RO.76	14.0	14	26	83
EMB15160	EMB40160	RO.89~R1.02	16.0	16	32	92
EMB15180	EMB40180	RO.89~R1.02	18.0	18	32	92
EMB15200	EMB40200	RO.89~R1.02	20.0	20	38	104
EMB15250	EMB40250	RO.89~R1.02	25.0	25	38	104

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
PLAIN	FLAT						
EMC84030	EMC85030	3.0	6	7	12	54	2.7
EMC84913	EMC85913	3.0	6	7	17	57	2.7
EMC84040	EMC85040	4.0	6	8	15	57	3.7
EMC84914	EMC85914	4.0	6	8	22	63	3.7
EMC84050	EMC85050	5.0	6	10	17	57	4.7
EMC84915	EMC85915	5.0	6	10	27	67	4.7
EMC84060	EMC85060	6.0	6	10	15	57	5.5
EMC84901	EMC85901	6.0	6	10	20	62	5.5
EMC84902	EMC85902	6.0	6	10	32	74	5.5
EMC84080	EMC85080	8.0	8	12	20	63	7.5
EMC84903	EMC85903	8.0	8	12	30	73	7.5
EMC84904	EMC85904	8.0	8	12	46	90	7.5
EMC84100	EMC85100	10.0	10	14	25	72	9.2
EMC84905	EMC85905	10.0	10	14	35	82	9.2
EMC84906	EMC85906	10.0	10	14	55	102	9.2
EMC84120	EMC85120	12.0	12	16	30	83	11
EMC84907	EMC85907	12.0	12	16	40	93	11
EMC84908	EMC85908	12.0	12	16	64	117	11
EMC84160	EMC85160	16.0	16	22	38	92	15
EMC84909	EMC85909	16.0	16	22	55	109	15
EMC84910	EMC85910	16.0	16	22	87	141	15
EMC84200	EMC85200	20.0	20	26	50	104	19
EMC84911	EMC85911	20.0	20	26	70	124	19
EMC84912	EMC85912	20.0	20	26	110	164	19

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6



**CARBIDE, 4 FLUTE WITH EXTENDED NECK CORNER RADIUS**

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed to mild steels, stainless steels, cast iron, tool steels, titanium alloys, prehardened steels and low hardness materials under HRC 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



**CARBIDE, 4 FLUTE LONG LENGTH BALL NOSE**

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed to mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material under HRC 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



Unit : mm

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
PLAIN	FLAT	R						
EME31030	EME32030	RO.3	3.0	6	7	12	54	2.7
EME31901	EME32901	RO.3	3.0	6	7	17	57	2.7
EME31040	EME32040	RO.3	4.0	6	8	15	57	3.7
EME31902	EME32902	RO.3	4.0	6	8	22	63	3.7
EME31050	EME32050	RO.3	5.0	6	10	17	57	4.7
EME31903	EME32903	RO.3	5.0	6	10	27	67	4.7
EME31060	EME32060	RO.5	6.0	6	10	15	57	5.5
EME31904	EME32904	RO.5	6.0	6	10	20	62	5.5
EME31905	EME32905	RO.5	6.0	6	10	32	74	5.5
EME31080	EME32080	RO.5	8.0	8	12	20	63	7.5
EME31906	EME32906	RO.5	8.0	8	12	30	73	7.5
EME31907	EME32907	RO.5	8.0	8	12	46	90	7.5
EME31100	EME32100	RO.5	10.0	10	14	25	72	9.2
EME31908	EME32908	RO.5	10.0	10	14	35	82	9.2
EME31909	EME32909	RO.5	10.0	10	14	55	102	9.2
EME31120	EME32120	RO.7	12.0	12	16	30	83	11
EME31910	EME32910	RO.7	12.0	12	16	40	93	11
EME31911	EME32911	RO.7	12.0	12	16	64	117	11
EME31160	EME32160	R1.0	16.0	16	22	38	92	15
EME31912	EME32912	R1.0	16.0	16	22	55	109	15
EME31913	EME32913	R1.0	16.0	16	22	87	141	15
EME31200	EME32200	R1.0	20.0	20	26	50	104	19
EME31914	EME32914	R1.0	20.0	20	26	70	124	19
EME31915	EME32915	R1.0	20.0	20	26	110	164	19

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R (±0.01)		h6		
EMB74030	EMB75030	R1.5	3.0	6	8	57
EMB74040	EMB75040	R2.0	4.0	6	11	57
EMB74050	EMB75050	R2.5	5.0	6	13	57
EMB74060	EMB75060	R3.0	6.0	6	13	57
EMB74080	EMB75080	R4.0	8.0	8	19	63
EMB74100	EMB75100	R5.0	10.0	10	22	72
EMB74120	EMB75120	R6.0	12.0	12	26	83
EMB74160	EMB75160	R8.0	16.0	16	32	92
EMB74200	EMB75200	R10.0	20.0	20	38	104
EMB74250	EMB75250	R12.5	25.0	25	38	104

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

**CARBIDE, 5 FLUTE LONG LENGTH**

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed to mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material under HRC 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates

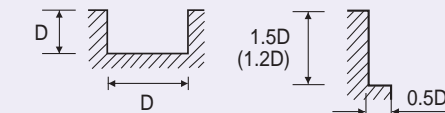


Unit : mm

EDP No.		Mill Diameter	Shank Diameter h6	Length of Cut	Overall Length
PLAIN	FLAT				
EMB72060	EMB73060	6.0	6	13	57
EMB72080	EMB73080	8.0	8	19	63
EMB72100	EMB73100	10.0	10	22	72
EMB72120	EMB73120	12.0	12	26	83
EMB72140	EMB73140	14.0	14	26	83
EMB72160	EMB73160	16.0	16	32	92
EMB72180	EMB73180	18.0	18	32	92
EMB72200	EMB73200	20.0	20	38	104
EMB72250	EMB73250	25.0	25	38	104

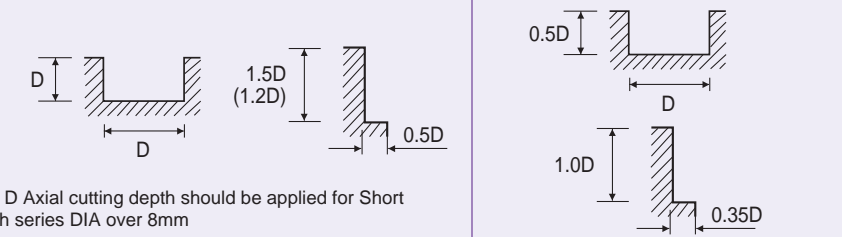
**V7 INOX, 4 FLUTE**

MATERIAL	ALLOY STEELS CAST IRON				STAINLESS STEELS 300SERIES				STAINLESS STEELS 400SERIES			
HARDNESS	~HB230				HRC30 ~ HRC45							
STRENGTH	~1000N/mm <sup>2</sup>				1000 ~ 1500N/mm <sup>2</sup>							
DIAMETER	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
3.0	13475	275	125	0.005	10185	195	95	0.005	14260	205	135	0.004
4.0	10105	330	125	0.008	7600	250	95	0.008	14260	255	180	0.004
5.0	8085	370	125	0.011	6110	310	95	0.013	8655	310	135	0.009
6.0	6735	435	125	0.016	5095	360	95	0.018	7130	360	135	0.013
8.0	5050	555	125	0.027	3820	435	95	0.028	5345	465	135	0.022
10.0	4455	690	140	0.039	3055	590	95	0.048	4275	585	135	0.034
12.0	3710	695	140	0.047	2545	565	95	0.056	3565	565	135	0.040
14.0	3180	620	140	0.049	2180	520	95	0.060	3055	520	135	0.043
16.0	2785	590	140	0.053	1910	480	95	0.063	2670	480	135	0.045
18.0	2475	585	140	0.059	1695	475	95	0.070	2375	475	135	0.050
20.0	2225	580	140	0.065	1525	470	95	0.077	2140	470	135	0.055
25.0	1780	450	140	0.063	1215	380	95	0.078	1710	380	135	0.056



1.2 x D Axial cutting depth should be applied for Short length series DIA over 8mm

MATERIAL	TITANIUM				INCONEL			
HARDNESS								
STRENGTH								
DIAMETER	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
3.0	10185	205	95	0.005	2715	55	25	0.005
4.0	7600	255	95	0.008	2005	55	25	0.007
5.0	6110	310	95	0.013	1630	80	25	0.012
6.0	5095	360	95	0.018	1355	95	25	0.018
8.0	3280	465	80	0.035	1015	125	25	0.031
10.0	3055	585	95	0.048	815	155	25	0.048
12.0	2545	565	95	0.056	675	150	25	0.056
14.0	2180	520	95	0.060	580	140	25	0.060
16.0	1910	480	95	0.063	505	130	25	0.064
18.0	1695	475	95	0.070	450	125	25	0.069
20.0	1525	470	95	0.077	405	125	25	0.077
25.0	1215	380	95	0.078	320	110	25	0.086



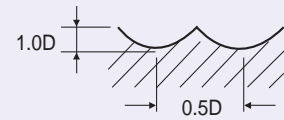
1.2 x D Axial cutting depth should be applied for Short length series DIA over 8mm

RPM = rev./min.  
FEED = mm/min.

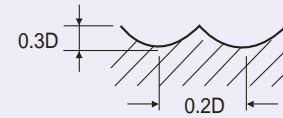
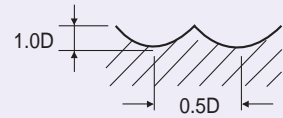
Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

**V7 INOX, 4 FLUTE BALL**

MATERIAL	ALLOY STEELS CAST IRON				STAINLESS STEELS 300SERIES				STAINLESS STEELS 400SERIES			
HARDNESS	-HB230											
STRENGTH	~1000N/mm <sup>2</sup>											
DIAMETER	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
3.0	14324	1430	135	0.025	8220	650	75	0.020	7420	440	70	0.015
4.0	10740	1070	135	0.025	6160	490	75	0.020	5570	330	70	0.015
5.0	8590	1030	135	0.030	4930	490	75	0.025	4450	440	70	0.025
6.0	7460	1140	140	0.038	4110	670	75	0.041	3710	440	70	0.030
8.0	5370	1280	135	0.060	3080	550	75	0.045	2780	440	70	0.040
10.0	4290	1030	135	0.060	2460	490	75	0.050	2220	400	70	0.045
12.0	3580	1000	135	0.070	2050	450	75	0.055	1850	370	70	0.050
16.0	2680	800	135	0.075	1540	370	75	0.060	1390	300	70	0.054
18.0	2380	760	135	0.080	1370	350	75	0.064	1230	290	70	0.059
20.0	2140	770	135	0.090	1230	320	75	0.065	1110	260	70	0.059
25.0	1710	680	135	0.099	980	270	75	0.069	890	210	70	0.059



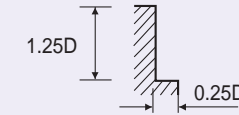
MATERIAL	TITANIUM				INCONEL			
HARDNESS								
STRENGTH								
DIAMETER	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
3.0	5830	280	55	0.012	3180	140	30	0.011
4.0	4370	210	55	0.012	2380	100	30	0.011
5.0	3500	210	55	0.015	1910	80	30	0.010
6.0	2910	230	55	0.020	1590	100	30	0.016
8.0	2180	260	55	0.030	1190	120	30	0.025
10.0	1750	210	55	0.030	950	100	30	0.026
12.0	1450	230	55	0.040	790	120	30	0.038
16.0	1090	190	55	0.044	590	110	30	0.047
18.0	970	190	55	0.049	530	110	30	0.052
20.0	870	210	55	0.060	470	100	30	0.053
25.0	700	190	55	0.068	380	80	30	0.053



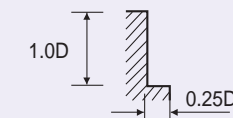
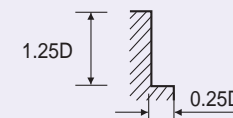
RPM = rev./min.  
FEED = mm/min.

**V7 INOX, 5 FLUTE**

MATERIAL	ALLOY STEELS CAST IRON				STAINLESS STEELS 300SERIES				STAINLESS STEELS 400SERIES			
HARDNESS	-HB230											
STRENGTH	~1000N/mm <sup>2</sup>											
DIAMETER	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
6.0	7270	1240	135	0.034	6060	920	115	0.030	5660	860	105	0.030
8.0	5450	1040	135	0.038	4540	720	115	0.032	4240	670	105	0.032
10.0	4360	1100	135	0.050	3630	690	115	0.038	3390	640	105	0.038
12.0	3630	1150	135	0.063	3030	960	115	0.063	3830	820	145	0.043
14.0	3110	1080	135	0.069	2600	850	115	0.065	2420	770	105	0.064
16.0	2720	1040	135	0.076	2270	780	115	0.069	2120	720	105	0.068
20.0	2180	970	135	0.089	1810	690	115	0.076	1690	640	105	0.076



MATERIAL	TITANIUM				INCONEL			
HARDNESS								
STRENGTH								
DIAMETER	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
6.0	4440	670	85	0.030	1450	120	25	0.017
8.0	3330	520	85	0.031	1090	110	25	0.020
10.0	2660	500	85	0.038	870	110	25	0.025
12.0	2220	560	85	0.050	720	130	25	0.036
14.0	1900	540	85	0.057	620	140	25	0.045
16.0	1660	520	85	0.063	540	130	25	0.048
20.0	1330	500	85	0.075	430	130	25	0.060



RPM = rev./min.  
FEED = mm/min.



V7 Mill STEEL  
INOX

V7 Mill STEEL  
INOX