



V7 STEEL **NEW**
- For machining Mild Steels, Cast Irons, Tool Steels,
and Low Hardened Steels up to HRc40

V7 INOX
- For machining Stainless Steel, Titanium, Inconel
and Steel Alloys up to HRc40

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V7 Mill
SOLID CARBIDE END MILLS

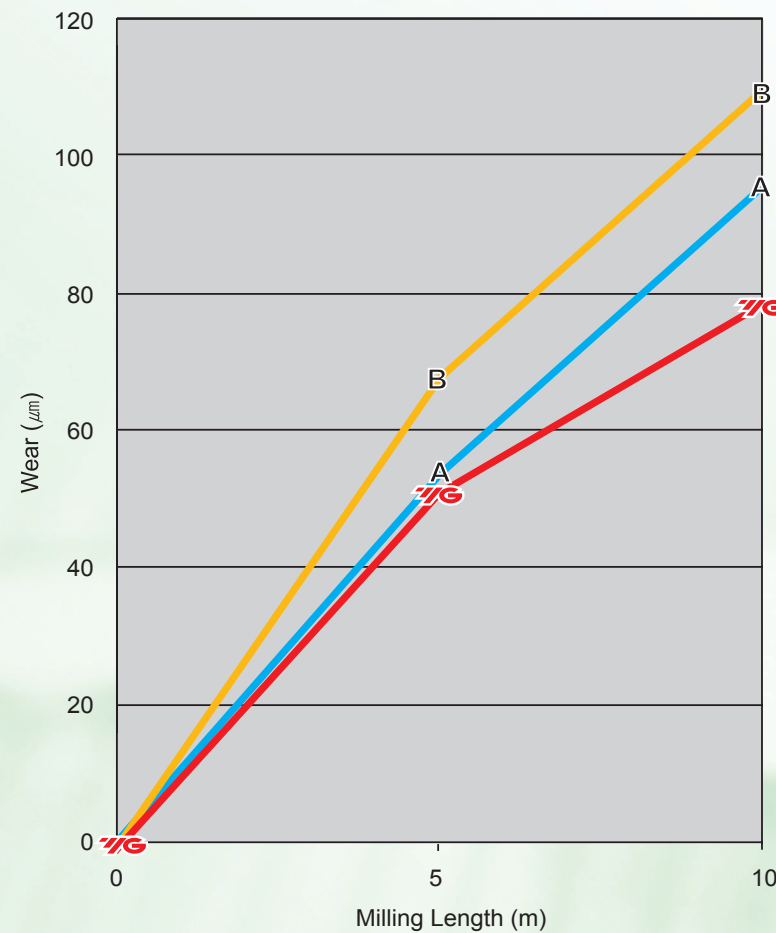
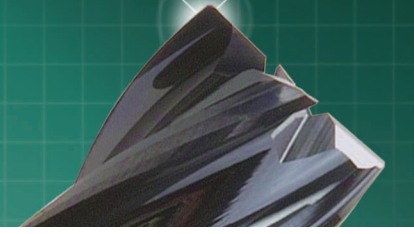
NEW
V7 STEEL
- For machining Mild Steels, Cast Irons, Tool Steels,
and Low Hardened Steels up to HRc40
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V7 STEEL CASE STUDY

V7Mill STEEL & INOX SELECTION GUIDE



YG-1 V7 STEEL
 Competitor A
 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
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	HB225~325	HRC30~40	HRC40~45	HRC45~55				
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
	EMD46 EMD47	CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR LENGTH	⊙	⊙	⊙	○			○	○	8
	EMD48 EMD49	CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR LENGTH 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
	EMB74 EMB75	CARBIDE, 4 FLUTE LONG LENGTH BALL NOSE	⊙	○	○			○		⊙	15
	EMB72 EMB73	CARBIDE, 5 FLUTE LONG LENGTH	⊙	○	○			○		⊙	16
	EMB12 EMB37	CARBIDE, 4 FLUTE REGULAR LENGTH	⊙	○	○			○		⊙	17
	EMB13 EMB38	CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS	⊙	○	○			○		⊙	18
	EMB78 EMB79	CARBIDE, 4 FLUTE REGULAR LENGTH BALL NOSE	⊙	○	○			○		⊙	19
	EMB76 EMB77	CARBIDE, 5 FLUTE REGULAR LENGTH	⊙	○	○			○		⊙	20

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

- ▶ 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.
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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

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

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

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			~HB225	HB225~325				
◎	◎	◎	○	○		○		○

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			~HB225	HB225~325				
◎	◎	◎	○	○		○		○

CARBIDE, 4 FLUTE MULTIPLE HELIX LONG 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 LONG LENGTH CORNER RADIUS

- ▶ 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.
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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

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

Unit : mm

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R				
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

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			HRc40~45	HRc45~55				
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55				
◎	◎	◎	○			○		○

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			HRc40~45	HRc45~55				
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55				
◎	◎	◎	○			○		○

CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR 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 REGULAR LENGTH CORNER RADIUS

- ▶ 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.
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Unit : inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT				
EMD46008	-	1/8	1/8	3/8	1-1/2
EMD46010	-	5/32	3/16	7/16	2
EMD46012	-	3/16	3/16	7/16	2
EMD46014	-	7/32	1/4	7/16	2-1/2
EMD46016	-	1/4	1/4	1/2	2-1/2
EMD46018	-	9/32	5/16	5/8	2-1/2
EMD46020	-	5/16	5/16	13/16	2-1/2
EMD46022	EMD47022	11/32	3/8	13/16	2-1/2
EMD46024	EMD47024	3/8	3/8	7/8	2-1/2
EMD46026	EMD47026	13/32	7/16	15/16	2-3/4
EMD46028	EMD47028	7/16	7/16	1	2-3/4
EMD46030	EMD47030	15/32	1/2	1	3
EMD46032	EMD47032	1/2	1/2	1	3
EMD46036	EMD47036	9/16	9/16	1-1/8	3-1/2
EMD46040	EMD47040	5/8	5/8	1-1/4	3-1/2
EMD46048	EMD47048	3/4	3/4	1-1/2	4
EMD46064	EMD47064	1	1	1-1/2	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance(inch)
0 ~ -.0012	0 ~ -.0003

Unit : inch

EDP No.		Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT					
EMD48008	-	R.010	1/8	1/8	3/8	1-1/2
EMD48012	-	R.010	3/16	3/16	7/16	2
EMD48016	-	R.015	1/4	1/4	1/2	2-1/2
EMD48020	-	R.015	5/16	5/16	13/16	2-1/2
EMD48024	EMD49024	R.015	3/8	3/8	7/8	2-1/2
EMD48028	EMD49028	R.015	7/16	7/16	1	2-3/4
EMD48032	EMD49032	R.025	1/2	1/2	1	3
EMD48036	EMD49036	R.025	9/16	9/16	1-1/8	3-1/2
EMD48040	EMD49040	R.035	5/8	5/8	1-1/4	3-1/2
EMD48048	EMD49048	R.035	3/4	3/4	1-1/2	4
EMD48064	EMD49064	R.035	1	1	1-1/2	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance(inch)
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

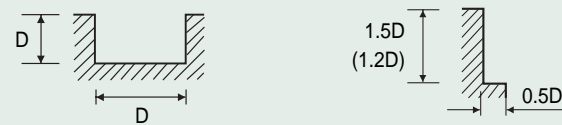
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			HRc40~45	HRc45~55				
~HB225	HB225~325	HRc30~40	○	○		○		○

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			HRc40~45	HRc45~55				
◎	◎	◎	○			○		○

V7 STEEL, 4 FLUTE

MATERIAL	ALLOY STEELS CAST IRON		ALLOY STEELS CAST IRON	
HARDNESS	~ HB 300		HB 300 ~ HB 380	
STRENGTH	~ 1000N/mm ²		1000 ~ 1300N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED
3.0	13475	275	9430	190
4.0	10105	330	7070	230
5.0	8085	370	5660	260
6.0	6735	435	4715	305
8.0	5050	555	3535	385
10.0	4455	690	3115	480
12.0	3710	695	2600	485
14.0	3180	620	2225	435
16.0	2785	590	1950	410
18.0	2475	585	1730	410
20.0	2225	580	1560	405
25.0	1780	450	1245	315

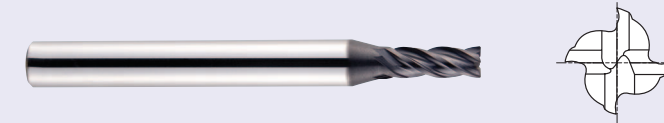


1.2 x D Axial cutting depth should be applied for Short length series DIA over 8mm

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

CARBIDE, 4 FLUTE SHORT LENGTH

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- ▶ Designed to mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material up to HRc 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



Unit : mm

EDP No.		Mill Diameter	Shank Diameter	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

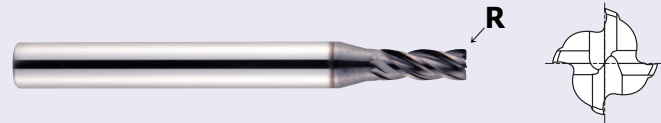
Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55				
◎	○	○			○		◎	◎

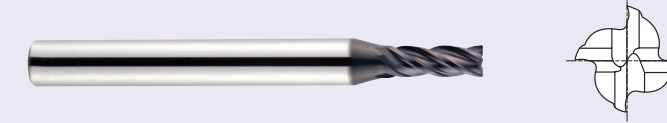
CARBIDE, 4 FLUTE SHORT LENGTH CORNER RADIUS

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed to mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material up to 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				
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

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

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT				
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

◎ : Excellent ○ : Good

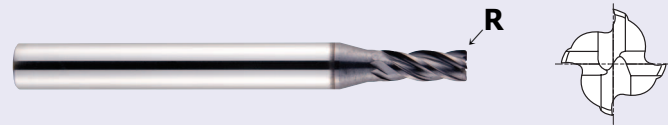
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			~HB225	HB225~325				
◎	○	○			○		◎	◎

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			~HB225	HB225~325				
◎	○	○			○		◎	◎

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 up to 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 up to 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	Overall Length
PLAIN	FLAT	R				
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

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

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R (±0.01)				
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

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			~HB225	HB225~325				
◎	○	○			○		◎	◎

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			~HB225	HB225~325				
◎	○	○			○		◎	◎

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 up to HRC 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



CARBIDE, 4 FLUTE REGULAR LENGTH

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



Unit : mm

EDP No.		Mill Diameter	Shank Diameter	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

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

Unit : inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT				
EMB12008	-	1/8	1/8	3/8	1-1/2
EMB12010	-	5/32	3/16	7/16	2
EMB12012	-	3/16	3/16	7/16	2
EMB12014	-	7/32	1/4	7/16	2-1/2
EMB12016	-	1/4	1/4	1/2	2-1/2
EMB12018	-	9/32	5/16	5/8	2-1/2
EMB12020	-	5/16	5/16	13/16	2-1/2
EMB12022	EMB37022	11/32	3/8	13/16	2-1/2
EMB12024	EMB37024	3/8	3/8	7/8	2-1/2
EMB12026	EMB37026	13/32	7/16	15/16	2-3/4
EMB12028	EMB37028	7/16	7/16	1	2-3/4
EMB12030	EMB37030	15/32	1/2	1	3
EMB12032	EMB37032	1/2	1/2	1	3
EMB12036	EMB37036	9/16	9/16	1-1/8	3-1/2
EMB12040	EMB37040	5/8	5/8	1-1/4	3-1/2
EMB12048	EMB37048	3/4	3/4	1-1/2	4
EMB12064	EMB37064	1	1	1-1/2	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0~-0.0012	h6

◎ : Excellent ○ : Good

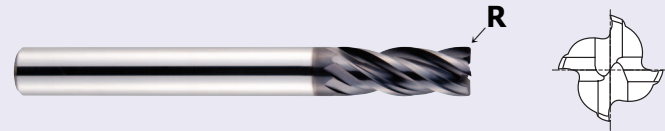
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			HRC40~45	HRC45~55				
~HB225	HB225~325	HRC30~40						
◎	○	○			○		◎	◎

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			HRC40~45	HRC45~55				
~HB225	HB225~325	HRC30~40						
◎	○	○			○		◎	◎

CARBIDE, 4 FLUTE REGULAR 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 up to HRC 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



CARBIDE, 4 FLUTE REGULAR 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 up to HRC 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



Unit : inch

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R				
EMB13008	-	R.010~R.015	1/8	1/8	3/8	1-1/2
EMB13012	-	R.010~R.015	3/16	3/16	7/16	2
EMB13016	-	R.015~R.020	1/4	1/4	1/2	2-1/2
EMB13020	-	R.015~R.020	5/16	5/16	13/16	2-1/2
EMB13024	EMB38024	R.015~R.020	3/8	3/8	7/8	2-1/2
EMB13028	EMB38028	R.015~R.020	7/16	7/16	1	2-3/4
EMB13032	EMB38032	R.025~R.030	1/2	1/2	1	3
EMB13036	EMB38036	R.025~R.030	9/16	9/16	1-1/8	3-1/2
EMB13040	EMB38040	R.035~R.040	5/8	5/8	1-1/4	3-1/2
EMB13048	EMB38048	R.035~R.040	3/4	3/4	1-1/2	4
EMB13064	EMB38064	R.035~R.040	1	1	1-1/2	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0~- .0012	h6

Unit : inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R (±.0004")				
EMB78008	-	R1/16	1/8	1/8	3/8	1-1/2
EMB78010	-	R5/64	5/32	3/16	7/16	2
EMB78012	-	R3/32	3/16	3/16	7/16	2
EMB78016	-	R1/8	1/4	1/4	1/2	2-1/2
EMB78020	-	R5/32	5/16	5/16	13/16	2-1/2
EMB78024	EMB79024	R3/16	3/8	3/8	7/8	2-1/2
EMB78032	EMB79032	R1/4	1/2	1/2	1	3
EMB78040	EMB79040	R5/16	5/8	5/8	1-1/4	3-1/2
EMB78048	EMB79048	R3/8	3/4	3/4	1-1/2	4
EMB78064	EMB79064	R1/2	1	1	1-1/2	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0~- .0012	h6

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			~HB225	HB225~325				
◎	○	○			○		◎	◎

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
			~HB225	HB225~325				
◎	○	○			○		◎	◎

CARBIDE, 5 FLUTE REGULAR LENGTH

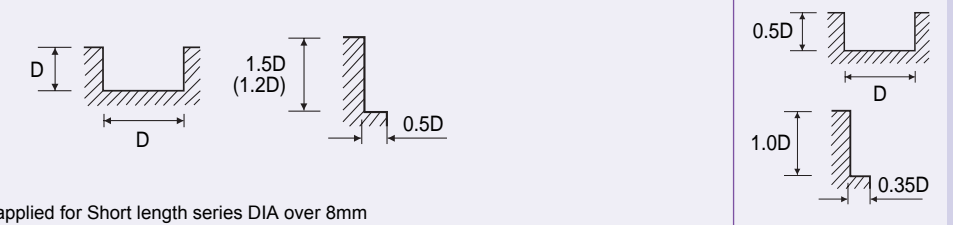
- ▶ Special flute geometry eliminates vibrations
- ▶ Designed to mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material up to HRC 40
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



P.22

V7 INOX, 4 FLUTE

MATERIAL	ALLOY STEELS CAST IRON		STAINLESS STEELS 300SERIES		STAINLESS STEELS 400SERIES		TITANIUM		INCONEL	
HARDNESS	~HB 230									
STRENGTH	~1000N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3.0	13475	275	10185	195	14260	205	10185	205	2715	55
4.0	10105	330	7600	250	14260	255	7600	255	2005	55
5.0	8085	370	6110	310	8655	310	6110	310	1630	80
6.0	6735	435	5095	360	7130	360	5095	360	1355	95
8.0	5050	555	3820	435	5345	465	3280	465	1015	125
10.0	4455	690	3055	590	4275	585	3055	585	815	155
12.0	3710	695	2545	565	3565	565	2545	565	675	150
14.0	3180	620	2180	520	3055	520	2180	520	580	140
16.0	2785	590	1910	480	2670	480	1910	480	505	130
18.0	2475	585	1695	475	2375	475	1695	475	450	125
20.0	2225	580	1525	470	2140	470	1525	470	405	125
25.0	1780	450	1215	380	1710	380	1215	380	320	110



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

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

Unit : inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT				
EMB76016	-	1/4	1/4	1/2	2-1/2
EMB76020	-	5/16	5/16	13/16	2-1/2
EMB76024	EMB77024	3/8	3/8	7/8	2-1/2
EMB76032	EMB77032	1/2	1/2	1	3
EMB76036	EMB77036	9/16	9/16	1-1/8	3-1/2
EMB76040	EMB77040	5/8	5/8	1-1/4	3-1/2
EMB76048	EMB77048	3/4	3/4	1-1/2	4
EMB76064	EMB77064	1	1	1-1/2	4

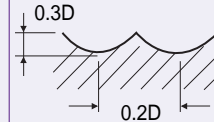
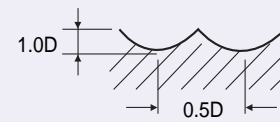
Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0~- .0012	h6

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Inconel	Cast Iron	Titanium	Stainless Steels
~HB225	HB225~325	HRC30~40	HRC40~45	HRC45~55				
◎	○	○			○		◎	◎

V7 INOX, 4 FLUTE BALL

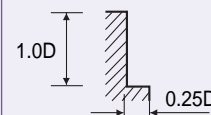
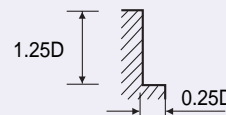
MATERIAL	ALLOY STEELS CAST IRON		STAINLESS STEELS 300SERIES		STAINLESS STEELS 400SERIES		TITANIUM		INCONEL	
HARDNESS	~HB 230									
STRENGTH	~1000N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R1.5 × 3.0	14324	1430	8220	650	7420	440	5830	280	3180	140
R2.0 × 4.0	10740	1070	6160	490	5570	330	4370	210	2380	100
R2.5 × 5.0	8590	1030	4930	490	4450	440	3500	210	1910	80
R3.0 × 6.0	7460	1140	4110	670	3710	440	2910	230	1590	100
R4.0 × 8.0	5370	1280	3080	550	2780	440	2180	260	1190	120
R5.0 × 10.0	4290	1030	2460	490	2220	400	1750	210	950	100
R6.0 × 12.0	3580	1000	2050	450	1850	370	1450	230	790	120
R8.0 × 16.0	2680	800	1540	370	1390	300	1090	190	590	110
R9.0 × 18.0	2380	760	1370	350	1230	290	970	190	530	110
R10.0 × 20.0	2140	770	1230	320	1110	260	870	210	470	100
R12.5 × 25.0	1710	680	980	270	890	210	700	190	380	80



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

V7 INOX, 5 FLUTE

MATERIAL	ALLOY STEELS CAST IRON		STAINLESS STEELS 300SERIES		STAINLESS STEELS 400SERIES		TITANIUM		INCONEL	
HARDNESS	~HB 230									
STRENGTH	~1000N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6.0	7270	1240	6060	920	5660	860	4440	670	1450	120
8.0	5450	1040	4540	720	4240	670	3330	520	1090	110
10.0	4360	1100	3630	690	3390	640	2660	500	870	110
12.0	3630	1150	3030	960	3830	820	2220	560	720	130
14.0	3110	1080	2600	850	2420	770	1900	540	620	140
16.0	2720	1040	2270	780	2120	720	1660	520	540	130
18.0	2420	1000	2020	710	1880	670	1480	510	480	130
20.0	2180	970	1810	690	1690	640	1330	500	430	130
25.0	1740	880	1450	640	1350	600	1060	470	340	130



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