

**V7 STEEL**



- For machining all steel and cast iron alloys up to HRc40.

**V7 INOX**

- For machining Stainless Steel, Titanium, Inconel and Mild steel alloys.

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**V7 Mill**  
SOLID CARBIDE END MILLS

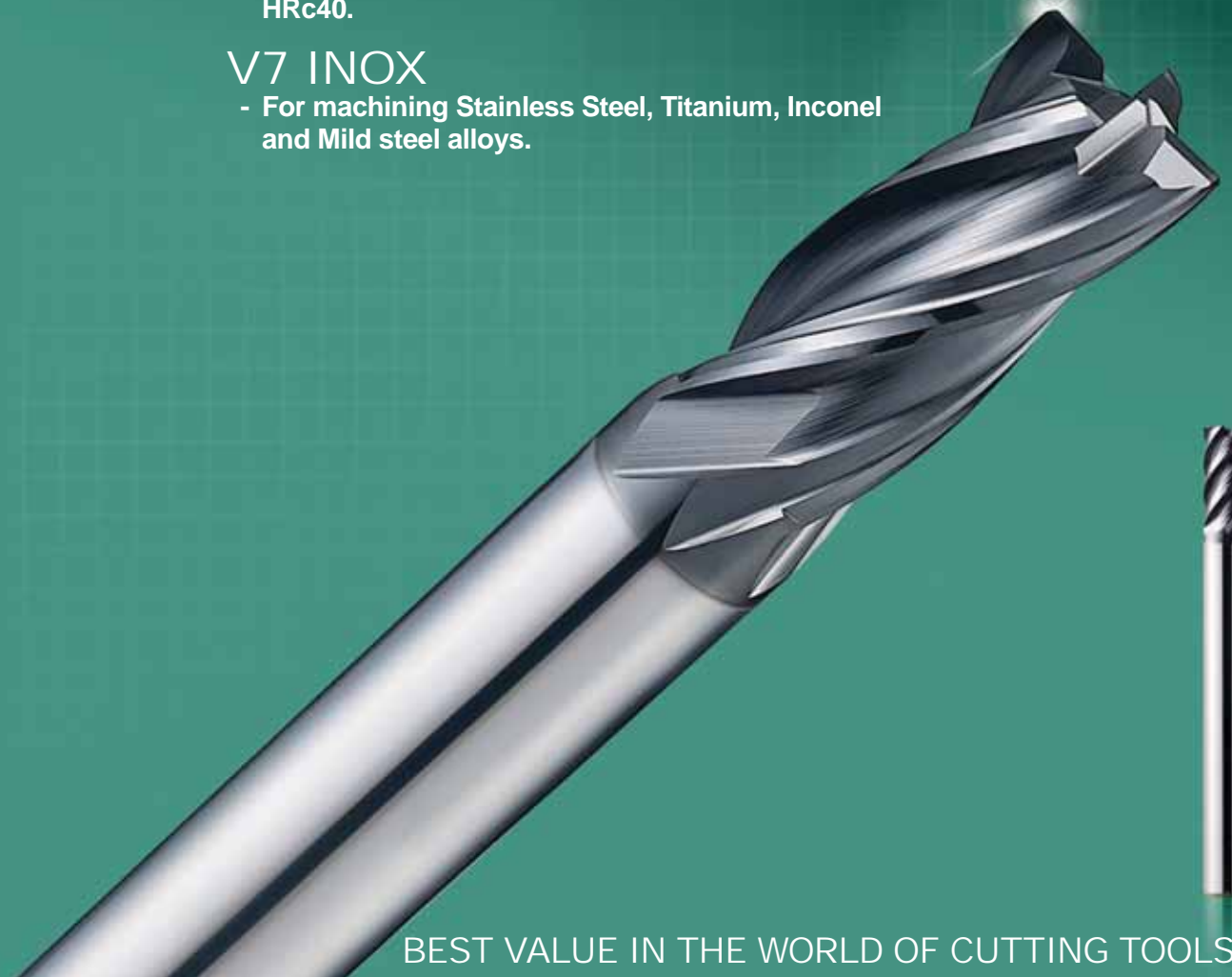


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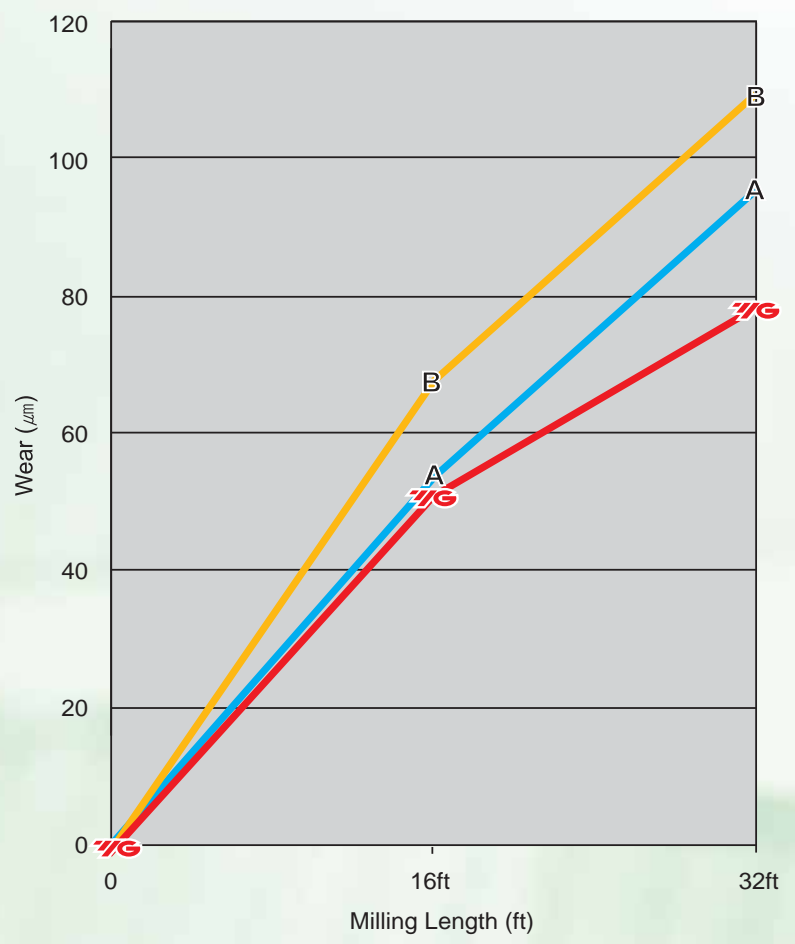
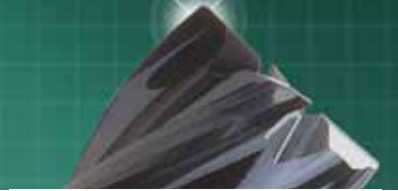


BEST VALUE IN THE WORLD OF CUTTING TOOLS

**NEW**

# 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:** H13 (HRc30)  
**Cutting Speed:** 139 m/min.  
**R.P.M:** 3688 rev./min.  
**Feed:** 27.153 inch/min.  
**Milling Method:** Down & Side Cutting  
**Milling Depth:** Axial : 0.71"  
 Radial : 0.23"  
**Coolant:** Wet Cut (4.5%)  
**Overhang:** 1.57"  
**Machine:** Machining Center

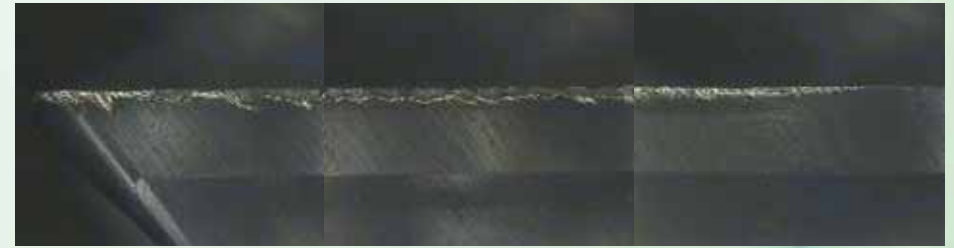
**YG-1 V7 STEEL**  
(Total Milling length 32ft)



**Competitor A**  
(Total Milling length 32ft)



**Competitor B**  
(Total Milling length 32ft)



●:Excellent    ○:Good  
 ★:USA STOCK    ●:Call for availability

ITEM	MODEL	DESCRIPTION	Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Cast Iron	Titanium	Stainless Steels	STOCK	PAGE	
			~HRc20	HRc20-30	HRc30-40	HRc40-50						
<b>V7 STEEL</b>	EMD56 EMD57	CARBIDE, 4 FLUTE MULTIPLE HELIX STUB LENGTH	●	●	●	○	○			★	4	
	EMD58 EMD59	CARBIDE, 4 FLUTE MULTIPLE HELIX STUB LENGTH CORNER RADIUS	●	●	●	○	○			★	5	
	EMD46 EMD47	CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR LENGTH	●	●	●	○	○			★	6	
	EMD48 EMD49	CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR LENGTH CORNER RADIUS	●	●	●	○	○			★	7	
	EMD42 EMD43	CARBIDE, 4 FLUTE MULTIPLE HELIX SHORT LENGTH	●	●	●	○	○			○	8	
	EMD44 EMD45	CARBIDE, 4 FLUTE MULTIPLE HELIX SHORT LENGTH CORNER RADIUS	●	●	●	○	○			○	9	
	EMD38 EMD39	CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR LENGTH	●	●	●	○	○			○	10	
	EMD40 EMD41	CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR LENGTH CORNER RADIUS	●	●	●	○	○			○	11	
	<b>V7 INOX</b>	EMC75 EMD60	CARBIDE, 4 FLUTE STUB LENGTH	●	○	○			●	●	★	13
		EMC76 EMD61	CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS	●	○	○			●	●	★	14
		EMB12 EMB37	CARBIDE, 4 FLUTE REGULAR LENGTH	●	○	○			●	●	★	15
EMB13 EMB38		CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS	●	○	○			●	●	★	16	
EMB20		CARBIDE, 4 FLUTE EXTENDED LENGTH, LONG REACH	●	○	○			●	●	★	17	
EMB78 EMB79		CARBIDE, 4 FLUTE REGULAR LENGTH BALL NOSE	●	○	○			●	●	★	18	
EMB76 EMB77		CARBIDE, 5 FLUTE REGULAR LENGTH	●	○	○			●	●	★	19	
EMB41 EMB42		CARBIDE, 4 FLUTE SHORT LENGTH	●	○	○			●	●	○	20	
EMB43 EMB44		CARBIDE, 4 FLUTE SHORT LENGTH CORNER RADIUS	●	○	○			●	●	○	21	
EMB14 EMB39		CARBIDE, 4 FLUTE REGULAR LENGTH	●	○	○			●	●	★	22	
EMB15 EMB40		CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS	●	○	○			●	●	★	23	
EMB74 EMB75		CARBIDE, 4 FLUTE REGULAR LENGTH BALL NOSE	●	○	○			●	●	○	24	
EMB72 EMB73		CARBIDE, 5 FLUTE REGULAR LENGTH	●	○	○			●	●	○	25	

# YIG V7 Mill / STEEL

EMD56 SERIES / PLAIN SHANK

EMD57 SERIES / FLAT SHANK

# YIG V7 Mill / STEEL

EMD58 SERIES / PLAIN SHANK

EMD59 SERIES / FLAT SHANK

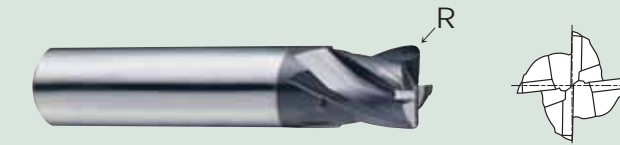
## CARBIDE, 4 FLUTE MULTIPLE HELIX STUB LENGTH

- ▶ Special flute geometry and multiple helix eliminate vibrations
- ▶ Designed for 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 STUB LENGTH CORNER RADIUS

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Unit : inch

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	Fractional	Decimal			
EMD56008	-	1/8	.1250	1/8	1/8	1-1/2
EMD56010	-	5/32	.1562	3/16	3/16	2
EMD56012	-	3/16	.1875	3/16	3/16	2
EMD56014	-	7/32	.2188	1/4	1/4	2
EMD56016	-	1/4	.2500	1/4	1/4	2
EMD56020	-	5/16	.3125	5/16	5/16	2
-	EMD57024	3/8	.3750	3/8	3/8	2
-	EMD57028	7/16	.4375	7/16	7/16	2-1/2
-	EMD57032	1/2	.5000	1/2	1/2	2-1/2
-	EMD57040	5/8	.6250	5/8	5/8	3
-	EMD57048	3/4	.7500	3/4	3/4	3
-	EMD57064	1	1	1	1	4

\* Shanks 3/8" and over come standard with Flats.

Unit : inch

EDP No.		Corner Radius	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		R	Fractional			
EMD58008	-	R.010	1/8	.1250	1/8	1/8	1-1/2
EMD58010	-	R.010	5/32	.1562	3/16	3/16	2
EMD58012	-	R.010	3/16	.1875	3/16	3/16	2
EMD58014	-	R.015	7/32	.2188	1/4	1/4	2
EMD58016	-	R.015	1/4	.2500	1/4	1/4	2
EMD58020	-	R.015	5/16	.3125	5/16	5/16	2
-	EMD59024	R.015	3/8	.3750	3/8	3/8	2
-	EMD59028	R.015	7/16	.4375	7/16	7/16	2-1/2
-	EMD59032	R.025	1/2	.5000	1/2	1/2	2-1/2
-	EMD59040	R.035	5/8	.6250	5/8	5/8	3
-	EMD59048	R.035	3/4	.7500	3/4	3/4	3
-	EMD59064	R.035	1	1	1	1	4

\* Shanks 3/8" and over come standard with Flats.

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

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

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

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Unit : inch

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	Fractional	Decimal			
EMD46008	-	1/8	.1250	1/8	3/8	1-1/2
EMD46010	-	5/32	.1562	3/16	7/16	2
EMD46012	-	3/16	.1875	3/16	7/16	2
EMD46014	-	7/32	.2188	1/4	7/16	2-1/2
EMD46016	-	1/4	.2500	1/4	1/2	2-1/2
EMD46018	-	9/32	.2812	5/16	5/8	2-1/2
EMD46020	-	5/16	.3125	5/16	13/16	2-1/2
EMD46022	EMD47022	11/32	.3438	3/8	13/16	2-1/2
EMD46024	EMD47024	3/8	.3750	3/8	7/8	2-1/2
EMD46026	EMD47026	13/32	.4062	7/16	15/16	2-3/4
EMD46028	EMD47028	7/16	.4375	7/16	1	2-3/4
EMD46030	EMD47030	15/32	.4688	1/2	1	3
EMD46032	EMD47032	1/2	.5000	1/2	1	3
EMD46036	EMD47036	9/16	.5625	9/16	1-1/8	3-1/2
EMD46040	EMD47040	5/8	.6250	5/8	1-1/4	3-1/2
EMD46048	EMD47048	3/4	.7500	3/4	1-1/2	4
EMD46064	EMD47064	1	1	1	1-1/2	4

\* Shanks 3/8" and over come standard with Flats.

Unit : inch

EDP No.		Corner Radius R	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		Fractional	Decimal			
EMD48008	-	R.010	1/8	.1250	1/8	3/8	1-1/2
EMD48012	-	R.010	3/16	.1875	3/16	7/16	2
EMD48016	-	R.015	1/4	.2500	1/4	1/2	2-1/2
EMD48020	-	R.015	5/16	.3125	5/16	13/16	2-1/2
EMD48024	EMD49024	R.015	3/8	.3750	3/8	7/8	2-1/2
EMD48028	EMD49028	R.015	7/16	.4375	7/16	1	2-3/4
EMD48032	EMD49032	R.025	1/2	.5000	1/2	1	3
EMD48036	EMD49036	R.025	9/16	.5625	9/16	1-1/8	3-1/2
EMD48040	EMD49040	R.035	5/8	.6250	5/8	1-1/4	3-1/2
EMD48048	EMD49048	R.035	3/4	.7500	3/4	1-1/2	4
EMD48064	EMD49064	R.035	1	1	1	1-1/2	4

\* Shanks 3/8" and over come standard with Flats.

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

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

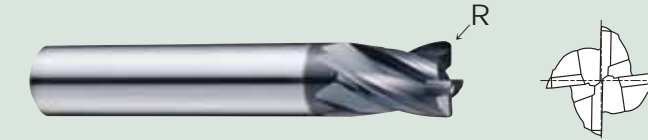
**CARBIDE, 4 FLUTE MULTIPLE HELIX SHORT LENGTH**

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**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	mm	inch			
EMD42030	EMD43030	3.0	.1181	6	5	50
EMD42040	EMD43040	4.0	.1575	6	8	54
EMD42050	EMD43050	5.0	.1969	6	9	54
EMD42060	EMD43060	6.0	.2362	6	10	54
EMD42080	EMD43080	8.0	.3150	8	12	58
EMD42100	EMD43100	10.0	.3937	10	14	66
EMD42120	EMD43120	12.0	.4724	12	16	73
EMD42140	EMD43140	14.0	.5512	14	18	75
EMD42160	EMD43160	16.0	.6299	16	22	82
EMD42180	EMD43180	18.0	.7087	18	24	84
EMD42200	EMD43200	20.0	.7874	20	26	92

Unit : mm

EDP No.		Corner Radius R	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		mm	inch			
EMD44030	EMD45030	RO.3	3.0	.1181	6	5	50
EMD44040	EMD45040	RO.3	4.0	.1575	6	8	54
EMD44050	EMD45050	RO.3	5.0	.1969	6	9	54
EMD44060	EMD45060	RO.4	6.0	.2362	6	10	54
EMD44080	EMD45080	RO.4	8.0	.3150	8	12	58
EMD44100	EMD45100	RO.4	10.0	.3937	10	14	66
EMD44120	EMD45120	RO.6	12.0	.4724	12	16	73
EMD44140	EMD45140	RO.6	14.0	.5512	14	18	75
EMD44160	EMD45160	RO.8	16.0	.6299	16	22	82
EMD44180	EMD45180	RO.8	18.0	.7087	18	24	84
EMD44200	EMD45200	RO.8	20.0	.7874	20	26	92

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

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

EMD38 SERIES / PLAIN SHANK

EMD39 SERIES / FLAT SHANK

EMD40 SERIES / PLAIN SHANK

EMD41 SERIES / FLAT SHANK

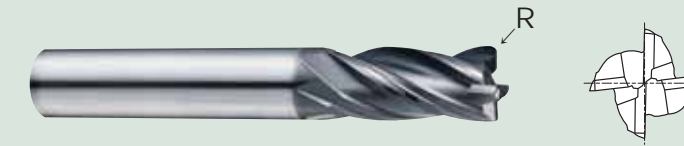
**CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR LENGTH**

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- ▶ Designed for machine mild steels, cast irons, tool steels, and low hardened steels up to HRc 40.
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- ▶ Higher speeds, deeper cuts, and higher metal removal rates.



**CARBIDE, 4 FLUTE MULTIPLE HELIX REGULAR LENGTH CORNER**

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Unit : mm

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	mm	inch			
EMD38030	EMD39030	3.0	.1181	6	8	57
EMD38040	EMD39040	4.0	.1575	6	11	57
EMD38050	EMD39050	5.0	.1969	6	13	57
EMD38060	EMD39060	6.0	.2362	6	13	57
EMD38080	EMD39080	8.0	.3150	8	19	63
EMD38100	EMD39100	10.0	.3937	10	22	72
EMD38120	EMD39120	12.0	.4724	12	26	83
EMD38140	EMD39140	14.0	.5512	14	26	83
EMD38160	EMD39160	16.0	.6299	16	32	92
EMD38180	EMD39180	18.0	.7087	18	32	92
EMD38200	EMD39200	20.0	.7874	20	38	104
EMD38250	EMD39250	25.0	.9800	25	38	104

Unit : mm

EDP No.		Corner Radius	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		R	mm			
EMD40030	EMD41030	RO.3	3.0	.1181	6	8	57
EMD40040	EMD41040	RO.3	4.0	.1575	6	11	57
EMD40050	EMD41050	RO.3	5.0	.1969	6	13	57
EMD40060	EMD41060	RO.4	6.0	.2362	6	13	57
EMD40080	EMD41080	RO.4	8.0	.3150	8	19	63
EMD40100	EMD41100	RO.4	10.0	.3937	10	22	72
EMD40120	EMD41120	RO.6	12.0	.4724	12	26	83
EMD40140	EMD41140	RO.6	14.0	.5512	14	26	83
EMD40160	EMD41160	RO.8	16.0	.6299	16	32	92
EMD40180	EMD41180	RO.8	18.0	.7087	18	32	92
EMD40200	EMD41200	RO.8	20.0	.7874	20	38	104
EMD40250	EMD41250	RO.8	25.0	.9800	25	38	104

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

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

**V7 STEEL, 4 FLUTE**

MATERIAL	ALLOY STEELS CAST IRON		ALLOY STEELS CAST IRON	
HARDNESS	~ HRC 30		HRC 30 ~ HRC 40	
STRENGTH	~ 1000N/mm <sup>2</sup>		1000 ~ 1300N/mm <sup>2</sup>	
DIAMETER	RPM	FEED	RPM	FEED
1/8	12735	10.23	8910	7.07
3/16	8490	10.91	5940	7.61
1/4	6370	11.46	4460	8.06
5/16	5100	12.95	3560	9.08
3/8	4245	18.35	2970	12.73
7/16	4010	24.45	2800	17.01
1/2	3500	25.85	2460	18.04
9/16	3110	26.01	2180	18.08
5/8	2800	26.11	1960	18.30
3/4	2340	23.96	1640	16.74
1	1755	17.44	1230	12.21



\* ( ) : Short length Type  
\* [ ] : Stub length Type

\* 1.2 x D Axial cutting depth should be applied for Short length series DIA over 5/16mm  
\* 0.6 x D Axial cutting depth should be applied for Stub length series.

RPM = rev./min.  
FEED = inch/min.

**CARBIDE, 4 FLUTE STUB LENGTH**

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



Unit : inch

EDP No.	Mill Diameter		Shank Diameter	Length of Cut	Overall Length	
	PLAIN	FLAT				Fractional
EMC75008	-		1/8	.1250	1/8	1-1/2
EMC75010	-		5/32	.1562	3/16	2
EMC75012	-		3/16	.1875	3/16	2
EMC75014	-		7/32	.2188	1/4	2
EMC75016	-		1/4	.2500	1/4	2
EMC75020	-		5/16	.3125	5/16	2
-		EMD60024	3/8	.3750	3/8	2
-		EMD60028	7/16	.4375	7/16	2-1/2
-		EMD60032	1/2	.5000	1/2	2-1/2
-		EMD60040	5/8	.6250	5/8	3
-		EMD60048	3/4	.7500	3/4	3
-		EMD60064	1	1	1	4

\* Shanks 3/8" and over come standard with Flats.

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

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

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- ▶ Excellent work piece finishes
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P.26

**CARBIDE, 4 FLUTE REGULAR LENGTH**

- ▶ Special flute geometry eliminates vibrations
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P.26

Unit : inch

EDP No.		Corner Radius R	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		Fractional	Decimal			
EMC76008	-	R.015	1/8	.1250	1/8	1/8	1-1/2
EMC76010	-	R.015	5/32	.1562	3/16	3/16	2
EMC76012	-	R.015	3/16	.1875	3/16	3/16	2
EMC76014	-	R.020	7/32	.2188	1/4	1/4	2
EMC76016	-	R.020	1/4	.2500	1/4	1/4	2
EMC76020	-	R.020	5/16	.3125	5/16	5/16	2
-	EMD61024	R.020	3/8	.3750	3/8	3/8	2
-	EMD61028	R.020	7/16	.4375	7/16	7/16	2-1/2
-	EMD61032	R.030	1/2	.5000	1/2	1/2	2-1/2
-	EMD61040	R.040	5/8	.6250	5/8	5/8	3
-	EMD61048	R.040	3/4	.7500	3/4	3/4	3
-	EMD61064	R.040	1	1	1	1	4

\* Shanks 3/8" and over come standard with Flats.

Unit : inch

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	Fractional	Decimal			
EMB12008	-	1/8	.1250	1/8	3/8	1-1/2
EMB12010	-	5/32	.1562	3/16	7/16	2
EMB12012	-	3/16	.1875	3/16	7/16	2
EMB12014	-	7/32	.2188	1/4	7/16	2-1/2
EMB12016	-	1/4	.2500	1/4	1/2	2-1/2
EMB12018	-	9/32	.2812	5/16	5/8	2-1/2
EMB12020	-	5/16	.3125	5/16	13/16	2-1/2
EMB12022	-	11/32	.3438	3/8	13/16	2-1/2
-	EMB37024	3/8	.3750	3/8	7/8	2-1/2
-	EMB37026	13/32	.4062	7/16	15/16	2-3/4
-	EMB37028	7/16	.4375	7/16	1	2-3/4
-	EMB37030	15/32	.4688	1/2	1	3
-	EMB37032	1/2	.5000	1/2	1	3
-	EMB37036	9/16	.5625	9/16	1-1/8	3-1/2
-	EMB37040	5/8	.6250	5/8	1-1/4	3-1/2
-	EMB37048	3/4	.7500	3/4	1-1/2	4
-	EMB37064	1	1	1	1-1/2	4

\* Shanks 3/8" and over come standard with Flats.

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
±.0012	h6

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



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

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



**CARBIDE, 4 FLUTE EXTENDED LENGTH, LONG REACH**

- ▶ Higher speeds, deeper cuts and metal removal rates.
- ▶ Improved surface finishes
- ▶ New "NANO" AITIN coating



Unit : inch

EDP No.		Corner Radius R	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		Fractional	Decimal			
EMB13008	-	R.015	1/8	.1250	1/8	3/8	1-1/2
EMB13012	-	R.015	3/16	.1875	3/16	7/16	2
EMB13016	-	R.020	1/4	.2500	1/4	1/2	2-1/2
EMB13020	-	R.020	5/16	.3125	5/16	13/16	2-1/2
-	EMB38024	R.020	3/8	.3750	3/8	7/8	2-1/2
-	EMB38028	R.020	7/16	.4375	7/16	1	2-3/4
-	EMB38032	R.030	1/2	.5000	1/2	1	3
-	EMB38036	R.030	9/16	.5625	9/16	1-1/8	3-1/2
-	EMB38040	R.040	5/8	.6250	5/8	1-1/4	3-1/2
-	EMB38048	R.040	3/4	.7500	3/4	1-1/2	4
-	EMB38064	R.040	1	1	1	1-1/2	4

\* Shanks 3/8" and over come standard with Flats.

Unit : inch

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Reach Length	Overall Length
PLAIN	FLAT	Fractional	Decimal				
EMB20160	-	1/4	.2500	1/4	3/8	1-1/4	4
-	EMB20240	3/8	.3750	3/8	1/2	1-7/8	4
-	EMB20320	1/2	.5000	1/2	5/8	2-1/4	4
-	EMB20400	5/8	.6250	5/8	3/4	2-1/4	4-1/8
-	EMB20401	5/8	.6250	5/8	3/4	3-1/4	5
-	EMB20480	3/4	.7500	3/4	1	2-1/4	4-1/4
-	EMB20481	3/4	.7500	3/4	1	3-1/4	5-1/2
-	EMB20640	1	1	1	1-1/8	2-1/4	4-1/2
-	EMB20641	1	1	1	1-1/8	3-1/4	5-1/2
-	EMB20642	1	1	1	1-1/8	4-1/4	6-1/2

\* Shanks 3/8" and over come standard with Flats.

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
±.0012	h6

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

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

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



**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
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



Unit : inch

EDP No.		Radius of Ball Nose R (±.0004")	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		Fractional	Decimal			
EMB78008	-	R1/16	1/8	.1250	1/8	3/8	1-1/2
EMB78010	-	R5/64	5/32	.1562	3/16	7/16	2
EMB78012	-	R3/32	3/16	.1875	3/16	7/16	2
EMB78016	-	R1/8	1/4	.2500	1/4	1/2	2-1/2
EMB78020	-	R5/32	5/16	.3125	5/16	13/16	2-1/2
-	EMB79024	R3/16	3/8	.3750	3/8	7/8	2-1/2
-	EMB79032	R1/4	1/2	.5000	1/2	1	3
-	EMB79040	R5/16	5/8	.6250	5/8	1-1/4	3-1/2
-	EMB79048	R3/8	3/4	.7500	3/4	1-1/2	4
-	EMB79064	R1/2	1	1	1	1-1/2	4

\*Shanks 3/8" and over come standard with Flats.

Unit : inch

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	Fractional	Decimal			
EMB76016	-	1/4	.2500	1/4	1/2	2-1/2
EMB76020	-	5/16	.3125	5/16	13/16	2-1/2
-	EMB77024	3/8	.3750	3/8	7/8	2-1/2
-	EMB77032	1/2	.5000	1/2	1	3
-	EMB77036	9/16	.5625	9/16	1-1/8	3-1/2
-	EMB77040	5/8	.6250	5/8	1-1/4	3-1/2
-	EMB77048	3/4	.7500	3/4	1-1/2	4
-	EMB77064	1	1	1	1-1/2	4

\* Shanks 3/8" and over come standard with Flats.

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

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

**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
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



**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
- ▶ 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	mm	inch			
EMB41030	EMB42030	3.0	.1181	6	7	54
EMB41040	EMB42040	4.0	.1575	6	8	54
EMB41050	EMB42050	5.0	.1969	6	10	54
EMB41060	EMB42060	6.0	.2362	6	10	54
EMB41080	EMB42080	8.0	.3150	8	12	58
EMB41100	EMB42100	10.0	.3937	10	14	66
EMB41120	EMB42120	12.0	.4724	12	16	73
EMB41140	EMB42140	14.0	.5512	14	18	75
EMB41160	EMB42160	16.0	.6299	16	22	82
EMB41180	EMB42180	18.0	.7087	18	24	84
EMB41200	EMB42200	20.0	.7874	20	26	92

Unit : mm

EDP No.		Corner Radius R	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		mm	inch			
EMB43030	EMB44030	RO.3	3.0	.1181	6	7	54
EMB43040	EMB44040	RO.3	4.0	.1575	6	8	54
EMB43050	EMB44050	RO.3	5.0	.1969	6	10	54
EMB43060	EMB44060	RO.5	6.0	.2362	6	10	54
EMB43080	EMB44080	RO.5	8.0	.3150	8	12	58
EMB43100	EMB44100	RO.5	10.0	.3937	10	14	66
EMB43120	EMB44120	RO.7	12.0	.4724	12	16	73
EMB43140	EMB44140	RO.7	14.0	.5512	14	18	75
EMB43160	EMB44160	R1.0	16.0	.6299	16	22	82
EMB43180	EMB44180	R1.0	18.0	.7087	18	24	84
EMB43200	EMB44200	R1.0	20.0	.7874	20	26	92

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

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
±0.030	h6

**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
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



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**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
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



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Unit : mm

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	mm	inch			
EMB14030	-	3.0	.1181	6	8	57
EMB14040	-	4.0	.1575	6	11	57
EMB14050	-	5.0	.1969	6	13	57
EMB14060	-	6.0	.2362	6	13	57
EMB14080	-	8.0	.3150	8	19	63
EMB14100	-	10.0	.3937	10	22	72
-	EMB39120	12.0	.4724	12	26	83
-	EMB39140	14.0	.5512	14	26	83
-	EMB39160	16.0	.6299	16	32	92
-	EMB39180	18.0	.7087	18	32	92
-	EMB39200	20.0	.7874	20	38	104
-	EMB39250	25.0	.9800	25	38	104

Unit : mm

EDP No.		Corner Radius	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R	mm	inch			
EMB15030	-	RO.3	3.0	.1181	6	8	57
EMB15040	-	RO.3	4.0	.1575	6	11	57
EMB15050	-	RO.3	5.0	.1969	6	13	57
EMB15060	-	RO.5	6.0	.2362	6	13	57
EMB15080	-	RO.5	8.0	.3150	8	19	63
EMB15100	-	RO.5	10.0	.3937	10	22	72
-	EMB40120	RO.7	12.0	.4724	12	26	83
-	EMB40140	RO.7	14.0	.5512	14	26	83
-	EMB40160	R1.0	16.0	.6299	16	32	92
-	EMB40180	R1.0	18.0	.7087	18	32	92
-	EMB40200	R1.0	20.0	.7874	20	38	104
-	EMB40250	R1.0	25.0	.9800	25	38	104

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

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
±0.030	h6

**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
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



**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
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates



Unit : mm

EDP No.		Radius of Ball Nose R (±0.01)	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT		mm	inch			
EMB74030	EMB75030	R1.5	3.0	.1181	6	8	57
EMB74040	EMB75040	R2.0	4.0	.1575	6	11	57
EMB74050	EMB75050	R2.5	5.0	.1969	6	13	57
EMB74060	EMB75060	R3.0	6.0	.2362	6	13	57
EMB74080	EMB75080	R4.0	8.0	.3150	8	19	63
EMB74100	EMB75100	R5.0	10.0	.3937	10	22	72
EMB74120	EMB75120	R6.0	12.0	.4724	12	26	83
EMB74160	EMB75160	R8.0	16.0	.6299	16	32	92
EMB74200	EMB75200	R10.0	20.0	.7874	20	38	104
EMB74250	EMB75250	R12.5	25.0	.9800	25	38	104

Unit : mm

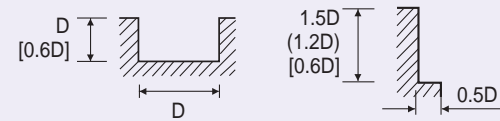
EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	mm	inch			
EMB72060	EMB73060	6.0	.2362	6	13	57
EMB72080	EMB73080	8.0	.3150	8	19	63
EMB72100	EMB73100	10.0	.3937	10	22	72
EMB72120	EMB73120	12.0	.4724	12	26	83
EMB72140	EMB73140	14.0	.5512	14	26	83
EMB72160	EMB73160	16.0	.6299	16	32	92
EMB72180	EMB73180	18.0	.7087	18	32	92
EMB72200	EMB73200	20.0	.7874	20	38	104
EMB72250	EMB73250	25.0	.9800	25	38	104

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

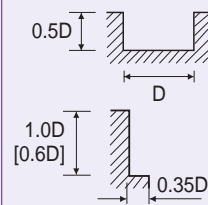
Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0~-.0012	h6

**V7 INOX, 4 FLUTE**

MATERIAL	ALLOY STEELS CAST IRON		STAINLESS STEELS 300SERIES		STAINLESS STEELS 400SERIES		TITANIUM		INCONEL	
HARDNESS	~HRc 20									
STRENGTH	~1000N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1/8	12735	10.23	9625	7.25	13475	7.63	8320	7.63	2565	2.05
3/16	8490	10.91	6385	8.27	12000	8.43	5550	8.43	1685	1.82
1/4	6370	11.46	4810	9.60	6815	9.60	4160	9.61	1285	2.48
5/16	5100	12.95	3850	10.71	5390	10.71	3330	10.71	1025	2.83
3/8	4245	18.35	3210	15.38	4490	15.38	2770	15.38	855	4.13
7/16	4010	24.45	2750	20.90	3850	20.90	2380	20.73	735	5.49
1/2	3500	25.85	2400	21.02	3370	21.02	2080	21.02	640	5.58
9/16	3110	26.01	2140	21.16	2990	21.16	1850	21.16	570	5.73
5/8	2800	26.11	1925	21.20	2700	21.20	1660	21.20	510	5.58
3/4	2340	23.96	1600	19.43	2250	19.43	1390	19.43	425	5.17
1	1755	17.44	1200	14.73	1685	15.11	1040	15.11	315	4.26



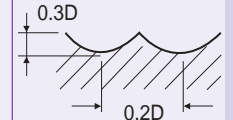
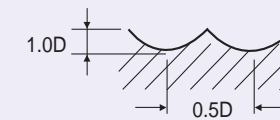
\* 1.2 x D Axial cutting depth should be applied for Short length series DIA over 5/16mm  
 \* 0.6 x D Axial cutting depth should be applied for Stub length series.



RPM = rev./min.  
FEED = inch/min.

**V7 INOX, 4 FLUTE BALL**

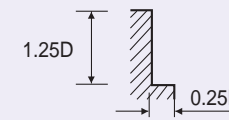
MATERIAL	ALLOY STEELS CAST IRON		STAINLESS STEELS 300SERIES		STAINLESS STEELS 400SERIES		TITANIUM		INCONEL	
HARDNESS	~HRc 20									
STRENGTH	~1000N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1/8	13530	53.20	7770	24.19	7020	16.38	5510	10.42	3010	5.21
3/16	9020	42.59	5180	20.27	4680	18.21	3680	8.69	2010	3.31
1/4	6770	40.71	3880	24.93	3510	16.38	2760	8.58	1500	3.73
5/16	5410	50.80	3110	21.85	2810	17.49	2210	10.36	1200	4.77
3/8	4510	42.64	2590	20.31	2340	16.60	1840	8.69	1000	4.16
7/16	3870	39.54	2220	18.30	2010	15.01	1580	8.64	860	4.35
1/2	3380	37.21	1940	16.79	1750	13.82	1380	8.61	750	4.49
9/16	3010	34.21	1730	15.63	1560	12.77	1230	8.03	670	4.45
5/8	2710	31.82	1550	14.70	1400	11.93	1100	7.57	600	4.41
3/4	2260	31.95	1290	13.27	1170	10.79	920	8.74	500	4.20
1	1690	26.49	970	10.73	880	8.15	690	7.37	380	3.12



RPM = rev./min.  
FEED = inch/min.

**V7 INOX, 5 FLUTE**

MATERIAL	ALLOY STEELS CAST IRON		STAINLESS STEELS 300SERIES		STAINLESS STEELS 400SERIES		TITANIUM		INCONEL	
HARDNESS	~HRc 20									
STRENGTH	~1000N/mm <sup>2</sup>									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1/4	6870	46.12	5710	34.16	5310	31.79	4200	24.93	1350	4.41
5/16	5490	41.27	4570	28.55	4250	26.45	3360	20.63	1080	4.30
3/8	4580	45.47	3810	28.51	3540	26.33	2800	20.70	900	4.49
7/16	3920	43.96	3270	32.59	3040	23.93	2400	20.78	770	4.67
1/2	3430	42.83	2860	35.65	2660	22.14	2100	20.84	680	4.81
9/16	3050	41.73	2540	32.69	2360	29.58	1860	20.87	600	5.35
5/8	2750	41.35	2290	30.92	2130	28.42	1680	20.70	540	5.13
3/4	2290	39.63	1900	28.59	1770	26.41	1400	20.70	450	5.37
1	1720	34.19	1430	24.83	1330	23.24	1050	18.31	340	5.10



RPM = rev./min.  
FEED = inch/min.