



30° V-Tips
7 Sizes Available



60° V-Tips
7 Sizes Available



90° V-Tips
4 Sizes Available

For Cutting

- Acrylic Stone
- Aluminum, Brass & Copper
- Carbon Fiber
- Corian
- Hard Wood
- HDPE
- King Starboard®/
Marine Building Material
- Laminated Materials
- MDF
- PCB Board
- Phenolic
- Plastics & Plexiglas®
- Poly
(Methyl Methacrylate)
(PMMA)
- Soft Wood
- Solid Surface
- Veneers

inch/min		Feed variations RPM (inch/min)						
cutting diameter (Inch)		0.005	0.010	0.020	0.030	0.040	0.060	0.090
rotation speed (RPM)								
6000		19	47	94	142			
7000		22	55	110				
8000		25	63	126				
9000		28	71	142				
10000		31	79	157				
11000		35	87					
12000		38	94					
13000		41	102					
14000		44	110					
15000		47	118					
16000		50	126					
17000		54	134					
18000		57	142					
19000		60	150					
20000		63						
21000		66						
22000		69						
23000		72						
24000		76						
25000		79						
26000		82						
27000		85						
28000		88						

mm/min		Feed variations RPM (mm/min)						
cutting diameter (mm)		0.1	0.25	0.5	0.75	1	1.5	2.25
rotation speed (RPM)								
6000		480	1200	2400	3600			
7000		560	1400	2800				
8000		640	1600	3200				
9000		720	1800	3600				
10000		800	2000	4000				
11000		880	2200					
12000		960	2400					
13000		1040	2600					
14000		1120	2800					
15000		1200	3000					
16000		1280	3200					
17000		1360	3400					
18000		1440	3600					
19000		1520	3800					
20000		1600						
21000		1680						
22000		1760						
23000		1840						
24000		1920						
25000		2000						
26000		2080						
27000		2160						
28000		2240						

Simple Machining Calculations:

To find **RPM**: (SFM x 3.82) / diameter of tool

To find **SFM**: 0.262 x diameter of tool x RPM

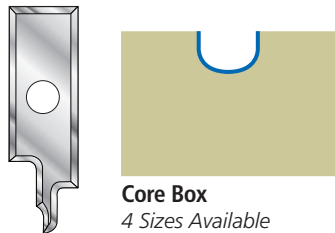
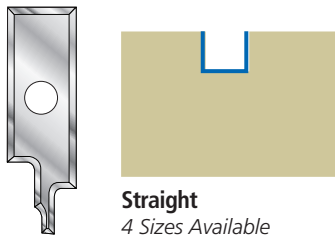
To find **Feed Rate**: RPM x # of flutes x chip load

To find **Chip Load**: IPM / (RPM x # of Flutes)

Depth of Cut:

- 1 x D Use recommended chip load
- 2 x D Reduce chip load by 25%
- 3 x D Reduce chip load by 50%

Straight & Core Box RPM & Feed Rate Chart



inch/min

Cutting depth up to	1/8"	3/16"	1/4"	5/16"
Rotation speed RPM				
6000	24	31	35	43
7000	28	36	41	50
8000	31	41	47	57
9000	35	46	53	64
10000	39	51	59	71
11000	43	56	65	78
12000	47	61	71	85
13000	51	67	77	92
14000	55	72	83	99
15000	59	77	89	106
16000	63	82	94	113
17000	67	87	100	120
18000	71	92	106	128
19000	75	97	112	135
20000	79	102	118	142
21000	83	107	124	149
22000	87	113	130	156
23000	91	118	136	163
24000	94	123	142	170
25000	98	128	148	177
26000	102	133	154	184
27000	106	138	159	191
28000	110	143	165	198

mm/min

Cutting depth up to	3.2mm	4.76mm	6.35mm	7.93mm
Rotation speed RPM				
6000	600	780	900	1080
7000	700	910	1050	1260
8000	800	1040	1200	1440
9000	900	1170	1350	1620
10000	1000	1300	1500	1800
11000	1100	1430	1650	1980
12000	1200	1560	1800	2160
13000	1300	1690	1950	2340
14000	1400	1820	2100	2520
15000	1500	1950	2250	2700
16000	1600	2080	2400	2880
17000	1700	2210	2550	3060
18000	1800	2340	2700	3240
19000	1900	2470	2850	3420
20000	2000	2600	3000	3600
21000	2100	2730	3150	3780
22000	2200	2860	3300	3960
23000	2300	2990	3450	4140
24000	2400	3120	3600	4320
25000	2500	3250	3750	4500
26000	2600	3380	3900	4680
27000	2700	3510	4050	4860
28000	2800	3640	4200	5040

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Simple Machining Calculations:

To find **RPM**: (SFM x 3.82) / diameter of tool

To find **SFM**: 0.262 x diameter of tool x RPM

To find **Feed Rate**: RPM x # of flutes x chip load

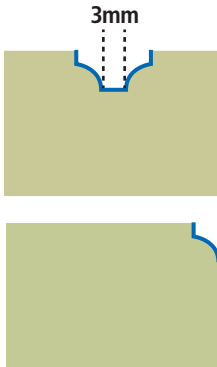
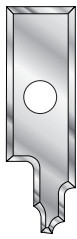
To find **Chip Load**: IPM / (RPM x # of Flutes)

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To order replacement parts: www.amanatool.com/ingroove -or- Call 800-445-0077

1 Flute Bead Groove & Corner Round & Point Round Over

RPM & Feed Rate Chart



Bead Groove & Corner Round
3 Sizes Available



Point Round Over
1 Size Available

For Cutting

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- Carbon Fiber
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inch/min

Cutting depth up to	1/8"	3/16"	1/4"	5/16"
Rotation speed RPM				
6000	59	52	47	43
7000	69	61	55	50
8000	79	69	63	57
9000	89	78	71	64
10000	98	87	79	71
11000	108	95	87	78
12000	118	104	94	85
13000	128	113	102	92
14000	138	121	110	99
15000	148	130	118	106
16000	157	139	126	113
17000	167	147	134	120
18000	177	156	142	128
19000	187	165	150	135
20000	197	173	157	142
21000	207	182	165	149
22000	217	191	173	156
23000	226	199	181	163
24000	236	208	189	170
25000	246	217	197	177
26000	256	225	205	184
27000	266	234	213	191
28000	276	243	220	198

mm/min

Cutting depth up to	3.2mm	4.76mm	6.35mm	7.93mm
Rotation speed RPM				
6000	1500	1320	1200	1080
7000	1750	1540	1400	1260
8000	2000	1760	1600	1440
9000	2250	1980	1800	1620
10000	2500	2200	2000	1800
11000	2750	2420	2200	1980
12000	3000	2640	2400	2160
13000	3250	2860	2600	2340
14000	3500	3080	2800	2520
15000	3750	3300	3000	2700
16000	4000	3520	3200	2880
17000	4250	3740	3400	3060
18000	4500	3960	3600	3240
19000	4750	4180	3800	3420
20000	5000	4400	4000	3600
21000	5250	4620	4200	3780
22000	5500	4840	4400	3960
23000	5750	5060	4600	4140
24000	6000	5280	4800	4320
25000	6250	5500	5000	4500
26000	6500	5720	5200	4680
27000	6750	5940	5400	4860
28000	7000	6160	5600	5040

Simple Machining Calculations:

To find **RPM**: (SFM x 3.82) / diameter of tool

To find **SFM**: 0.262 x diameter of tool x RPM

To find **Feed Rate**: RPM x # of flutes x chip load

To find **Chip Load**: IPM / (RPM x # of Flutes)