Amana Tool®

INDUSTRIAL

Mirror FINISH

Solid Carbide Plastic Cutting Spiral
Single 'O' Flute Router Bits

Diameter	IPM at 18,000 RPM (Inches Per Minute)	Spindle Speed SFM (Surface Feet Per Minute)	Chip Load Per Tooth
1/16" (0.0625)	35 - 70	500 - 1,200	0.002" - 0.004"
2mm	35 - 70	500 - 1,200	0.002" - 0.004"
3/32" (0.0938)	55 - 90	500 - 1,200	0.003" - 0.005"
3mm	70 - 110	500 - 1,200	0.004" - 0.006"
1/8" (0.125)	70 - 110	500 - 1,200	0.004" - 0.006"
5/32" (0.1563)	110 - 145	500 - 1,200	0.006" - 0.008"
4mm	110 - 145	500 - 1,200	0.006" - 0.008"
3/16" (0.1875)	110 - 145	500 - 1,200	0.006" - 0.008"
5mm	110 - 145	500 - 1,200	0.006" - 0.008"
6mm	145 - 220	500 - 1,200	0.008" - 0.012"
1/4" (0.250)	145 - 220	500 - 1,200	0.008" - 0.012"
9/32" (0.2813)	145 - 220	500 - 1,200	0.008" - 0.012"
5/16" (0.3125)	160 - 235	500 - 1,200	0.009" - 0.013"
8mm	160 - 235	500 - 1,200	0.009" - 0.013"
21/64" (0.3281)	180 - 250	500 - 1,200	0.010" - 0.014"
11/32" (0.3438)	180 - 250	500 - 1,200	0.010" - 0.014"
9mm	200 - 290	500 - 1,200	0.011" - 0.016"
3/8" (0.375)	200 - 290	500 - 1,200	0.011" - 0.016"
10mm	200 - 290	500 - 1,200	0.011" - 0.016"
12mm	270 - 360	500 - 1,200	0.015" - 0.020"
1/2" (0.500)	270 - 360	500 - 1,200	0.015" - 0.020"

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%

Tool Reference #'s		
Up-Cut	Down-Cut	Dia.
51403	—	1/4"
51404	51504	1/4"
51405	51505	1/4"
51407	51507	1/4"
51409	—	1/4"
51410	51510	1/8"
51411	51511	1/8"
51412	51512	3/16"
51413	51513	1/4"
51414	51514	3/8"
51415	51515	1/16"
51416	—	1/8"
51417	51517	3/16"
51418	—	3/16"
51419	—	1/4"
51421	51524	1/4"
51423	—	3/16"
51424	—	7/32"
51425	—	1/4"
51426	51509	3/8"
51427	—	3/8"
51428	—	1/2"
51429	—	3/8"
51441	—	1/16"
51442	—	3/16"
51443	—	1/8"
51444	—	1/4"
51445	—	1/8"
51446	—	1/8"
51447	51516	5/32"
51448	51518	3/16"
51449	—	3/16"
51453	—	1/8"
51491	—	3mm
51493	—	5mm
51495	—	6mm
51497	—	6mm
51499	—	6mm
—	51519	1/4"
—	51526	3mm
—	51527	6mm
51634	—	2mm
51636	—	4mm
51638	—	6mm
51644	—	1/2"

Disclaimer: These values are based on test results using 18,000 RPM. Your results may vary. It is important to understand that these values are only recommendations.