Amana Tool®

INDUSTRIAL

Solid Carbide Spiral Ball Nose Router Bits

Operating RPM: 18,000

Chip Load Per Tooth

Material	#46385 1/8 (0.125)	#46389 3/16" (0.1875)	#46379 1/4" (0.250)	46451 1/4" (0.250)	#46381 3/8" (0.375)	#46383 1/2" (0.500)	46459 1/2" (0.500)
MDF	0.005" - 0.007"	0.006" - 0.008"	0.006" - 0.008"	0.005" - 0.007"	0.007" - 0.009"	0.008" - 0.010"	0.007" - 0.009"
Hard Wood	0.003" - 0.005"	0.004" - 0.006"	0.005" - 0.007"	0.004" - 0.006"	0.006" - 0.008"	0.007" - 0.009"	0.006" - 0.008"
Soft Wood	0.005" - 0.007"	0.006" - 0.008"	0.007" - 0.009"	0.006" - 0.008"	0.008" - 0.010"	0.009" - 0.011"	0.008" - 0.010"
Aluminum	0.002" - 0.004"	0.003" - 0.005"	0.004" - 0.006"	0.003" - 0.005"	0.006" - 0.008"	0.010" - 0.012"	0.009" - 0.011"
Solid Surface	0.003" - 0.005"	0.004" - 0.006"	0.004" - 0.006"	0.003" - 0.005"	0.004" - 0.006"	0.006" - 0.008"	0.005" - 0.007"
Plastic	0.003" - 0.005"	0.004" - 0.006"	0.004" - 0.006"	0.003" - 0.005"	0.004" - 0.006"	0.006" - 0.008"	0.005" - 0.007"

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%

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.