ZrN Coated Solid Carbide Aluminum Cutting Spiral
'O' Flute Ball Nose Router Bits
CNC Operating Spindle Speed: 18,000 RPM / **Depth of Cut:** 1 x Tool Diameter †

Diameter	IPM at 18,000 RPM (Inches Per Minute)	Spindle Speed SFM (Surface Feet Per Minute)	Chip Load Per Tooth
1/8" (0.125)	35" - 70"	600 - 1,000	0.002" - 0.004"
3/16" (0.1875)	55" - 110"	600 - 1,000	0.003" - 0.006"
1/4" (0.250)	55" - 110"	600 - 1,000	0.003" - 0.006"

Tool Reference #'s		
Up-Cut	Down-Cut	Dia.
51876-Z	—	1/8"
51878-Z	—	3/16"
51880-Z	—	1/4"
51882-Z	—	1/4"

† Depth of Cut: 1 x D Use recommended feed rate
2 x D Reduce feed rate by 25%
3 x D Reduce feed rate by 50%

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 IPM:** RPM x # of flutes x chip load
To find **Chip Load:** Feed Rate IPM / (RPM x # of flutes)
To find **Ramp Down:** Feed Rate IPM / # of flutes