



Solid Carbide Spektra™ Extreme Tool Life Coated
Solid Carbide Plastic Cutting Spiral Single 'O' Flute Router Bits
Operating RPM: 18,000 / 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
1/32" (0.03125)	35 - 70	500 - 1,200	0.002" - 0.004"
1/16" (0.0625)	35 - 70	500 - 1,200	0.002" - 0.004"
1/8" (0.125)	70 - 110	500 - 1,200	0.004" - 0.006"
3/16" (0.1875)	110 - 145	500 - 1,200	0.006" - 0.008"
1/4" (0.250)	145 - 220	500 - 1,200	0.008" - 0.012"
3/8" (0.375)	200 - 290	500 - 1,200	0.011" - 0.016"
1/2" (0.500)	270 - 360	500 - 1,200	0.015" - 0.020"

Tool Reference #'s		
Up-Cut	Down-Cut	Dia.
51404-K	51504-K	1/4"
51405-K	51505-K	1/4"
51407-K	51507-K	1/4"
51410-K	51510-K	1/8"
51411-K	51511-K	1/8"
51412-K	—	3/16"
51413-K	51513-K	1/4"
51414-K	—	3/8"
51415-K	51515-K	1/16"
51416-K	—	1/8"
51417-K	51517-K	3/16"
51418-K	—	3/16"
51419-K	—	1/4"
51421-K	51524-K	1/4"
51425-K	—	1/4"
51427-K	—	3/8"
51428-K	—	1/2"
51437-K	—	1/8"
51441-K	—	1/16"
51442-K	—	3/16"
51444-K	—	1/4"
51445-K	—	1/8"
51446-K	—	1/8"
51646-K	—	1/4"
51649-K	—	1/32"

† **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%

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

Disclaimer: It is important to understand that these values are only recommendations.

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