



**Solid Carbide Spektra™ Extreme Tool Life Coated 15°, 30° & 45° Degree
Single Flute Engraving Router Bits**

CNC Operating Spindle Speed: 18,000 RPM / Depth of Cut: 1 x Tool Diameter

Material	(Tip Width) 0.005" 15°		(Tip Width) 0.005" - 0.030" 30°		(Tip Width) 0.042" 45°	
	Feed Rate IPM*	Chip Load Per Tooth IPR**	Feed Rate IPM*	Chip Load Per Tooth IPR**	Feed Rate IPM*	Chip Load Per Tooth IPR**
	Soft Wood	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"	50" - 125"
Hard Wood	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"
Soft Plastic	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"
Hard Plastic	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"
Solid Surface	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"	50" - 125"	0.003" - 0.007"

Tool Reference #'s		
15°	30°	45°
45611-K	—	—
—	45620-K	—
—	—	45622-K
—	45630-K	—
—	45771-K	—
—	45773-K	—
—	—	45623-K
—	45774-K	—

IPM* Inches per minute

IPR** Inches per revolution

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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