



## 2 Flute Solid Carbide V-Groove Engraving 15°, 60° & 90° Degree Router Bits

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

Material	15°		60°		90°	
	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"	0.003" - 0.007"
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"

**IPM\*** Inches per minute

**IPR\*\*** Inches per revolution

Tool Reference #'s		
15°	60°	90°
—	40780	—
45627	—	—
45628	45635	—
45780	45636	45637
—	45782	—
—	59400	—

**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

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

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