

**Solid Carbide and Carbide Tipped 18°, 30°, 45°, 60° & 90° Degree V-Groove Router Bits**  
 Operating RPM: 18,000 / Depth of Cut: 1 x Tool Diameter

Material	1 Flute						2 Flute			
	18°		30°		45°		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**	Feed Rate IPM*	Chip Load Per Tooth IPR**	Feed Rate IPM*	Chip Load Per Tooth IPR**
Soft Wood	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	90"	0.003"	90"	0.003"
Hard Wood	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	90"	0.003"	90"	0.003"
Soft Plastic	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	90"	0.003"	90"	0.003"
Hard Plastic	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	90"	0.003"	90"	0.003"
Aluminum	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	N/A	N/A	N/A	N/A
Solid Surface	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	50" - 130"	0.003" - 0.007"	N/A	N/A	N/A	N/A

**IPR\*** Inches per revolution

**IPM\*\*** Inches per minute

**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)

Tool Reference #'s				
18° Solid Carbide 1 Flute	30° Solid Carbide 1 Flute	45° Solid Carbide 1 Flute	60° Carbide Tipped 2 Flute	90° Carbide Tipped 2 Flute
45783	45771	45623	45707	45701