

V-GROOVE & SIGNMAKING ROUTER BIT

FEED&SPEED CHART

Depth of cut: 1xCutting diameter

TIP WIDTH (INCH)	MATERIAL	RPM	CHIPLOAD	FEED RATE (INCH/MIN)	STEP DOWN (INCH)	STEP OVER (INCH)
0.005	MDF/Laminate	18,000	0.007	126	0.005	0.001 ~ 0.002
	Softwood	18,000	0.005	90		
	Hardwood	18,000	0.003	54		
	Plastic	18,000	0.006	108		
0.015	MDF/Laminate	18,000	0.007	126	0.015	0.003 ~ 0.006
	Softwood	18,000	0.005	90		
	Hardwood	18,000	0.003	54		
	Plastic	18,000	0.006	108		

	MATERIAL	RPM	CHIPLOAD	FEED RATE (INCH/MIN)
CARBIDE V BIT	MDF/Laminate	18,000	0.005	360
	Softwood	18,000	0.002	144
	Hardwood	18,000	0.002	144
	Plastic	18,000	0.002	144

	MATERIAL	RPM	CHIPLOAD	FEED RATE (INCH/MIN)
CARBIDE TIP V BIT	MDF/Laminate	18,000	0.005	180
	Softwood	18,000	0.002	72
	Hardwood	18,000	0.002	72
	Plastic	18,000	0.002	72

- Adjusting Feed and Speed for Bit Diameter: The feed rate in the table above are based a cutting depth that is equal to or less than the bit's diameter.
 - 1 x cutting diameter, Use recommended feed rate
 - 2 x cutting diameter, Reduce feed rate by 30%
 - 3 x cutting diameter, Reduce feed rate by 50%
- Simple machining calculations:
 - Feed rate=RPM x # of flutes x chipload
- Due to the extremely small diameters involved, bits are not guaranteed against breakage.
- Please excercise caution to the accurate calculations of all feed and speed rates
- Always start test the bits with a lower feed rate
- Make overhang of bits as short as possible in condition on non-interference