

## Carbon Graphite and Carbon Fiber Panel CNC Cutting Solid Carbide Router Bits Speed and Feed Chart

Material	Type of Cut	Spindle Speed SFM*	Chip Load Per Tooth				
			#46260 1/8" (0.125)	#46262 3/16" (0.1875)	#46264/46265 1/4" (0.250)	#46266 3/8" (0.375)	#46267/46268 1/2" (0.500)
Aramid Fiber, Carbon Fiber (AFRP, CFRP)	Slot	400	0.0025"	0.0080"	0.0050"	0.0080"	0.0120"
	Profile	500	0.0025"	0.0080"	0.0050"	0.0080"	0.0120"
	Finishing	825	0.0055"	0.0050"	0.1100"	0.0200"	0.0250"
Fiberglass (GFRP)	Slot	320	0.0025"	0.0080"	0.0045"	0.0080"	0.0120"
	Profile	400	0.0025"	0.0080"	0.0045"	0.0080"	0.0120"
	Finishing	660	0.0055"	0.0050"	0.1150"	0.0200"	0.0250"
Carbon, Graphite	Slot	480	0.0030"	0.0090"	0.0060"	0.0120"	0.0150"
	Profile	600	0.0030"	0.0090"	0.0060"	0.0120"	0.0150"
	Finishing	990	0.0065"	0.019"	0.0135"	0.0260"	0.0340"
Plastic	Slot	800	0.0030"	0.0090"	0.0060"	0.0120"	0.0150"
	Profile	1000	0.0030"	0.0090"	0.0060"	0.0120"	0.0150"
	Finishing	1650	0.0065"	0.019"	0.0135"	0.0260"	0.0340"
Machineable Ceramic Machineable Glass MACOR®	Slot	40	0.0015"	0.0035"	0.0025"	0.0045"	0.0060"
	Profile	50	0.0015"	0.0035"	0.0025"	0.0045"	0.0060"
	Finishing	85	0.0025"	0.008"	0.0055"	0.0100"	0.0135"

**SFM\*** Surface feet per minute

Simple Machining Calculations:

To find **RPM**:  $SFM \times 3.82 / \text{diameter of tool}$

To find **SFM**:  $0.262 \times \text{diameter of tool} \times \text{RPM}$

To find **Feed Rate**:  $\text{RPM} \times \text{\# of flutes} \times \text{chip load}$

**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%