

10 Flute Carbon Graphite and Carbon Fiber Panel CNC Cutting Solid Carbide Router Bits

Depth of Cut: 1 x Tool Diameter †

Material	Type of Cut	Spindle Speed SFM*	#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)	
			Feed Rate IPM** / RPM	Chip Load Per Tooth	Feed Rate IPM** / RPM	Chip Load Per Tooth	Feed Rate IPM** / RPM	Chip Load Per Tooth	Feed Rate IPM** / RPM	Chip Load Per Tooth	Feed Rate IPM** / RPM	Chip Load Per Tooth
Aramid Fiber, Carbon Fiber (AFRP, CFRP)	Slot	400	18" / 12,200	0.002"	16" / 8,100	0.002"	18" / 6,100	0.003"	21" / 4,000	0.005"	24" / 3,000	0.008"
	Profile	500	32" / 15,200	0.002"	20" / 10,100	0.002"	23" / 7,600	0.003"	26" / 5,000	0.005"	30" / 3,800	0.008"
	Finishing	600	37" / 18,300	0.002"	25" / 12,200	0.002"	28" / 9,100	0.003"	31" / 6,100	0.005"	37" / 4,500	0.008"
Fiberglass (GFRP)	Slot	300	28" / 9,100	0.003"	18" / 6,100	0.003"	23" / 4,500	0.005"	22" / 3,000	0.007"	21" / 2,200	0.009"
	Profile	400	36" / 12,200	0.003"	25" / 8,100	0.003"	31" / 6,100	0.005"	29" / 4,000	0.007"	27" / 3,000	0.009"
	Finishing	600	55" / 18,300	0.003"	37" / 12,200	0.003"	46" / 9,100	0.005"	43" / 6,100	0.007"	41" / 4,500	0.009"
Carbon, Graphite	Slot	500	46" / 15,200	0.003"	31" / 10,100	0.003"	38" / 7,600	0.005"	36" / 5,000	0.007"	34" / 3,800	0.009"
	Profile	600	55" / 18,300	0.003"	37" / 12,200	0.003"	46" / 9,100	0.005"	43" / 6,100	0.007"	41" / 4,500	0.009"
	Finishing	800	74" / 24,400	0.003"	50" / 16,200	0.003"	61" / 12,200	0.005"	57" / 8,100	0.007"	55" / 6,100	0.009"
Plastic	Slot	500	46" / 15,200	0.003"	31" / 10,100	0.003"	38" / 7,600	0.005"	36" / 5,000	0.007"	34" / 3,800	0.009"
	Profile	700	64" / 21,300	0.003"	43" / 14,200	0.003"	55" / 10,600	0.005"	50" / 7,100	0.007"	48" / 5,300	0.009"
	Finishing	900	82" / 27,500	0.003"	55" / 18,300	0.003"	69" / 13,700	0.005"	64" / 9,100	0.007"	62" / 6,800	0.009"
Machineable Ceramic	Slot	40	2" / 1,200	0.002"	2" / 800	0.002"	1.8" / 600	0.003"	2" / 400	0.005"	2.4" / 300	0.008"
Machineable Glass	Profile	50	3" / 1,500	0.002"	3" / 1,000	0.002"	2.4" / 760	0.003"	2.5" / 500	0.005"	3.2" / 380	0.008"
MACOR®	Finishing	85	5" / 2,500	0.002"	5" / 1,700	0.002"	4" / 1,200	0.003"	4.5" / 860	0.005"	5" / 650	0.008"

* SFM Surface feet per minute

** 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)

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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