Amana Tool®

INDUSTRIAL

SPEKTRA™ EXTREME TOOL LIFE COATING

Spektra TM Extreme Tool Life Coated 2D/3D Carving CNC Solid Carbide Router Bits

Operating RPM: 18,000/ **Depth of Cut:** 1 x Tool Diameter

2 Flute Ball Nose

	1/4" (0.250")		Tool Reference #'s	
	IPM* (Based on 18,000 RPM)	Chip Load Per Tooth	46294-K	1/4" Dia.
Plastic, Acrylic, Plexiglas®	140"- 210"	0.004"-0.006"		
Wood, MDF, Sign-Foam	250"- 320"	0.007"-0.009"		

2 Flute Flat Bottom

	1/4" (0.250")		Tool Reference #'s	
	IPM*	Chip Load Per Tooth (Based on 18,000 RPM)	46577-K	1/4" Dia.
			46587-K	1/4" Dia.
Plastic, Acrylic, Plexiglas®	180"- 250"	0.005"-0.007"		
Wood, MDF, Sign-Foam	215"- 290"	0.006"-0.008"		

3 Flute Ball Nose

	1/32" (0.031") - 1.5mm		3mm - 1/8" (0.125")		Tool Reference #'s	
	IPM*	Chip Load Per Tooth (Based on 18,000 RPM)	IPM*	Chip Load Per Tooth (Based on 18,000 RPM)	46280-K	1/32" Dia.
					46284-K	1/8" Dia.
Plastic, Acrylic, Plexiglas®	50"- 100"	0.0009"-0.0018"	50"- 100"	0.0009"-0.0018"	46286-K	1/8" Dia.
Wood, MDF, Sign-Foam	80"- 100"	0.0015"-0.0025"	80"- 100"	0.0015"-0.0025"	46286-K-M	3mm Dia.
					46288-K	1/8" Dia.
					46295-K	1/8" Dia.
					46418-K-M	0.5mm Dia.
					46420-K-M	1.5mm Dia.

3 Flute Flat Bottom

	1/16" (0.0625")		Tool Reference #'s	
	IPM*	Chip Load Per Tooth (Based on 18,000 RPM)	46290-K	1/16" Dia.
			46486-K	1/16" Dia.
Plastic, Acrylic, Plexiglas®	25"- 30"	0.00037"-0.00045"		
Wood, MDF, Sign-Foam	35"- 45"	0.0005"-0.00065"		

4 Flute Ball Nose & Flat Bottom

	1/16" (0.0625") / 1.5mm		1/8" (0.125") / 3mm		Tool Reference #'s	
	IPM*	Chip Load Per Tooth (Based on 18,000 RPM)	IPM*	Chip Load Per Tooth (Based on 18,000 RPM)	46282-K	1/16" Dia.
					46292-K	1/8" Dia.
Plastic, Acrylic, Plexiglas®	25"- 30"	0.00037"-0.00045"	25"- 30"	0.00037"-0.00045"	46292-SK	1/8" Dia.
Wood, MDF, Sign-Foam	35"- 45"	0.0005"-0.00065"	35"- 45"	0.0005"-0.00065"	46586-K	1/8" Dia.
					46588-K	1/8" Dia.
					48422-K	1.5mm Dia.
					48424-K	3mm Dia.

3 Flute Extra Long Ball Nose & Flat Bottom

	1/4" (0.250")		Tool Reference #'s	
	IPM*	Chip Load Per Tooth (Based on 18,000 RPM)	46490-K	1/4" Dia.
Plastic, Acrylic, Plexiglas®	135"- 190"	0.0025"-0.0035"		
Wood, MDF, Sign-Foam	215"- 320"	0.004"-0.009"		

IPM* Inches per minute

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 =** RPM x # of flutes x chip load
To find **Chip Load =** $\frac{\text{IPM}}{\text{RPM x \# of flutes}}$

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

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