

Solid Carbide Mortise Compression Spiral Router Bits

CNC Operating Spindle Speed: 18,000 RPM / Depth of Cut: 1 x Tool Diameter †

1 Flute

Diameter	Wood			MDF/Laminate			Plywood			Plastic		
	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down
1/4"	60"	.0031"	60"	110"	.0062"	110"	60"	.0031"	60"	60"	.0031"	60"
1/2"	140"	.0077"	140"	280"	.0153"	280"	170"	.0092"	170"	220"	.0123"	220"

2 Flute

Diameter	Wood			MDF/Laminate			Plywood			Plastic		
	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down
1/4"	110"	.0031"	55"	220"	.0061"	110"	110"	.0031"	55"	110"	.0031"	55"
3/8"	200"	.0056"	100"	400"	.0111"	200"	200"	.0056"	100"	200"	.0056"	100"
1/2"	280"	.0077"	140"	400"	.0111"	200"	280"	.0077"	140"	280"	.0077"	140"

3 Flute

Diameter	Wood			MDF/Laminate			Plywood			Plastic		
	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down
3/8"	300"	.0056"	100"	400"	.0074"	133"	300"	.0056"	100"	300"	.0056"	100"
1/2"	350"	.0065"	117"	450"	.0080"	150"	350"	.0065"	117"	350"	.0065"	117"

4 Flute

Diameter	Wood			MDF/Laminate			Plywood			Plastic		
	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down	Feed Rate IPM *	Chip Load Per Tooth	Ramp Down
1/2"	550"	.0077"	130"	600"	.0082"	150"	550"	.0077"	130"	550"	.0077"	130"

*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 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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Tool Reference #'s	
1 Flute	Dia.
46393	1/4"
46397	1/2"
2 Flute	Dia.
46350	1/4"
46021	1/4"
46352	3/8"
46354	1/2"
46356	1/2"
46360	1/2"
46367	3/8"
46395	3/8"
3 Flute	Dia.
46020	3/8"
46022	1/2"
46024	1/2"
4 Flute	Dia.
46026	1/2"
46028	1/2"