INDUSTRIAL

Solid Carbide 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
1/8"	60"	.0031"	60"	110"	.0062"	110"	60"	.0031"	60"	60"	.0031"	60"
1/4"	60"	.0031"	60"	110"	.0062"	110"	60"	.0031"	60"	60"	.0031"	60"
3/8"	110"	.0061"	110"	220"	.0122"	220"	110"	.0061"	110"	110"	.0061"	110"
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
1/8"	40"	.0011"	20"	80"	.0022"	40"	40"	.0011"	20"	40"	.0011"	20"
5/32"	60"	.0017"	30"	110"	.0031"	55"	60"	.0017"	30"	60"	.0017"	30"
3/16"	80"	.0022"	40"	160"	.0044"	80"	80"	.0022"	40"	80"	.0022"	40"
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"

*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.

Tool Reference #'s

1 Flute	Dia.
46036	1/4"
46038	3/8"
46137	1/8"
46139	1/8"
46140	1/4"
46158	1/2"
46159	1/2"
46160	1/2"

2 Flute	Dia.
46035	1/2"
46037	1/4"
46170	1/4"
46170-LH	1/4"
46171	3/8"
46172	3/8"
46173	3/8"
46174	3/8"
46176	1/8"
46178	3/8"
46180	1/8"
46181	3/16"
46182	1/2"
46183	5/32"
46186	1/2"
46188	1/2"
46188-LH	1/2"
46189	1/2"
46190	1/2"
46190-LH	1/2"
46191	1/2"

3 Flute	Dia.
46010	3/8"
46011	3/8"
46012	1/2"
46013	1/2"
46014	1/2"