



Solid Carbide Aluminum Cutting Spiral Single 'O' Flute Router Bits

Depth of Cut: 1 x Tool Diameter †

Diameter	IPM at	Spindle Speed	Chip Load
	18,000 RPM (Inches Per Minute)	SFM (Surface Feet Per Minute)	Per Tooth
1/16" (0.0625)	35" - 70"	600 - 1,000	0.002" - 0.004"
2mm	35" - 70"	600 - 1,000	0.002" - 0.004"
3/32" (0.0938)	35" - 70"	600 - 1,000	0.002" - 0.004"
3mm	35" - 70"	600 - 1,000	0.002" - 0.004"
1/8" (0.125)	35" - 70"	600 - 1,000	0.002" - 0.004"
5/32" (0.1563)	35" - 70"	600 - 1,000	0.002" - 0.004"
4mm	35" - 70"	600 - 1,000	0.002" - 0.004"
3/16" (0.1875)	55" - 110"	600 - 1,000	0.003" - 0.006"
5mm	55" - 110"	600 - 1,000	0.003" - 0.006"
6mm	55" - 110"	600 - 1,000	0.003" - 0.006"
1/4" (0.250)	55" - 110"	600 - 1,000	0.003" - 0.006"
9/32" (0.2813)	55" - 110"	600 - 1,000	0.003" - 0.006"
5/16" (0.3125)	55" - 110"	600 - 1,000	0.003" - 0.006"
8mm	70" - 145"	600 - 1,000	0.004" - 0.008"
21/64" (0.3281)	70" - 145"	600 - 1,000	0.004" - 0.008"
11/32" (0.3438)	70" - 145"	600 - 1,000	0.004" - 0.008"
9mm	70 - 145	600 - 1,000	0.004" - 0.008"
3/8" (0.375)	70" - 145"	600 - 1,000	0.004" - 0.008"
10mm	70" - 145"	600 - 1,000	0.004" - 0.008"
12mm	110" - 180"	600 - 1,000	0.006" - 0.010"
1/2" (0.500)	145" - 215"	600 - 1,000	0.008" - 0.012"

Tool Reference #'s		
Up-Cut	Down-Cut	Dia.
51370	—	1.5mm
51371	—	3mm
51373	—	1/8"
51374	—	3/16"
51375	—	3/16"
51377	—	1/4"
51378	—	3/8"
51379	—	1/2"
51401	—	1/4"
51402	51502	1/4"
51406	51506	1/8"
51408	51508	3/16"
51409	—	1/4"
51451	—	9/32"
51454	51503	1/8"
51455	—	21/64"
51456	—	3/16"
51457	—	11/32"
51458	—	1/4"
51459	51501	1/8"
51470	51770	1/16"
51471	51771	1/8"
—	51772	1/8"
51472	—	3/32"
51473	—	5/32"
51474	—	1/8"
51475	—	3/16"
51476	—	1/4"
51477	51773	3/16"
51478	—	3/16"
51479	—	1/4"
—	51774	1/4"
51480	51775	1/4"
51481	51776	1/4"
51482	—	1/8"
51483	—	5/16"
51484	—	3/8"
51485	—	3/8"
51486	—	1/8"
51487	—	1/2"
51489	—	1/2"
51490	—	3mm
51492	—	4mm
51494	—	5mm
51496	—	6mm
51498	—	8mm
51642	—	5/16
51643	—	3/8
51644	—	1/2
57300	—	2mm
57301	—	2.5mm
57302	—	3mm
57303	—	4mm
57304	—	6mm
57306	—	10mm
—	57307	3mm
—	57308	6mm

† 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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