

Solid Carbide Aluminum Cutting Spiral 'O' Flute Router Bits Speed and Feed Chart

Diameter	Spindle Speed		Chip Load
	IPM (Inches Per Minute)	SFM (Surface Feet Per Minute)	
1/16" (0.0625)	30 - 70	600 - 800	0.002" - 0.004"
2mm	30 - 70	600 - 800	0.002" - 0.004"
3/32" (0.0938)	35 - 70	600 - 800	0.002" - 0.004"
3mm	35 - 70	600 - 800	0.002" - 0.004"
1/8" (0.125)	110 - 140	600 - 800	0.002" - 0.004"
5/32" (0.1563)	110 - 140	600 - 800	0.002" - 0.004"
4mm	110 - 140	600 - 800	0.002" - 0.004"
3/16" (0.1875)	145 - 180	600 - 800	0.003" - 0.006"
5mm	145 - 180	600 - 800	0.003" - 0.006"
6mm	145 - 180	600 - 800	0.003" - 0.006"
1/4" (0.250)	145 - 180	600 - 800	0.003" - 0.006"
9/32" (0.2813)	180 - 220	600 - 800	0.003" - 0.006"
5/16" (0.3125)	180 - 220	600 - 800	0.003" - 0.006"
8mm	180 - 220	600 - 800	0.003" - 0.006"
21/64" (0.3281)	180 - 220	600 - 800	0.004" - 0.008"
11/32" (0.3438)	200 - 235	600 - 800	0.004" - 0.008"
9mm	200 - 235	600 - 800	0.004" - 0.008"
3/8" (0.375)	200 - 235	600 - 800	0.004" - 0.008"
10mm	200 - 235	600 - 800	0.004" - 0.008"
12mm	200 - 235	600 - 800	0.004" - 0.008"
1/2" (0.250)	200 - 235	600 - 800	0.004" - 0.008"

Tool Reference #'s		
Up-Cut	Down-Cut	Dia.
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	—	1/16"
51471	—	1/8"
51472	—	3/32"
51473	—	5/32"
51474	—	1/8"
51475	—	3/16"
51476	—	1/4"
51477	—	3/16"
51478	—	3/16"
51479	—	1/4"
51481	—	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

Operating RPM: 18,000

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

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%