SpeTool

ROUTER BITS

2/3 Flute Aluminum Router Bit

CNC Operating Spindle Speed: 12,000 RPM / Depth of Cut: 1 x Tool Diameter †

2-Flute			
Aluminum /Copper /Brass	0.0008	30	1/32"
	0.0015	50	1/16"
	0.002	70	1/8"
	0.004	140	1/4"
	0.006	210	3/8"
	0.008	280	1/2"
3-Flute			
Aluminum /Copper /Brass	0.0008	40	1/32"
	0.0015	80	1/16"
	0.002	100	1/8"
	0.004	210	1/4"
	0.005	270	5/16"
	0.006	320	3/8"
	0.008	430	1/2"

Tool Reference #' s	
2-Flute	Cut Dia.
A02001	1/4"
A03002	1/8"
A03001	1/16"
3-Flute	
A01001	1/2"
A02002 A02005 A02009 A02010 A02011	1/4"
A03004	1/8"
A04001	3/8"
A03003	1/16"
A02003 A02004 A02007 A05001 A05002 A05003	5/16"

*IPM Inches per minute

*Depth of cutting: 2xD Reduce feed rate by 30%

3xD Reduce feed rate by 50%

Simple machining calculations: Feed rate=chipload per tooth * number of tooth * RPM

*This chart is a recommended starting point for regular flute length;
It does not warranty against tool break, consult your machine's owners manual for bit capacities and recommended feed rate

*Always start your test with a lower feed rate

*Make overhang of tool as short as possible in condition on non-interference

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ROUTER BITS

4 Flute Solid Carbide Metal Router Bit

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

	Slotting		Roughing		Finishing		4-Flute
Iron	0.0001	7	0.0001	7	0.00015	10	1/32"
	0.00024	15	0.00027	20	0.00042	30	1/16"
	0.00048	35	0.00055	40	0.00078	55	1/8"
	0.00096	70	0.00108	75	0.00145	100	1/4"
	0.0012	80	0.00135	100	0.00182	130	5/16"
	0.00145	100	0.00153	110	0.00211	150	3/8"
	0.00193	140	0.0021	150	0.00285	200	1/2"
Steel	0.0001	7	0.0001	7	0.00015	10	1/32"
	0.00022	15	0.00025	18	0.0004	28	1/16"
	0.00044	32	0.00051	38	0.00072	50	1/8"
	0.00088	65	0.00098	70	0.00138	100	1/4"
	0.00112	80	0.0012	85	0.00165	120	5/16"
	0.00138	100	0.00148	105	0.00198	140	3/8"
	0.00186	130	0.00198	140	0.00269	195	1/2"
Stanless	0.0001	7	0.0001	7	0.00015	10	1/32"
	0.00024	15	0.00027	20	0.00042	30	1/16"
	0.00048	35	0.00055	40	0.00078	55	1/8"
	0.00096	70	0.00108	75	0.00145	100	1/4"
	0.0012	85	0.00135	100	0.00182	130	5/16"
	0.00145	100	0.00153	110	0.00211	150	3/8"
	0.00193	140	0.0021	150	0.00285	200	1/2"

Tool Reference #' s	
4-Flute	Cut Dia.
M01001	1/2"
M02005 M02006 M02007	1/4"
M03003 M03011	1/8"
M03009	1/16"
M05004	5/16"
M03010	1/32"

	Radial	Axial	Chipload	For metal router bit
Slotting	100%	100%	100%	≤3x
	100%	50%	80%	5x
	100%	47%	60%	8x
Roughing	100%	100%	100%	≤3x
	90%	75%	80%	5x
	80%	60%	60%	8x
Finishing	100%	100%	100%	≤3x
	100%	100%	85%	5x
	65%	100%	70%	8x

*IPM Inches per minute

*Depth of cutting: 2xD Reduce feed rate by 30%

3xD Reduce feed rate by 50%

Simple machining calculations: Feed rate=chipload per tooth * number of tooth * RPM

*This chart is a recommended starting point for regular flute length;
It does not warranty against tool break, consult your machine's owners manual for bit capacities and recommended feed rate

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ROUTER BITS

2 Flute Solid Carbide Metal Router Bit

CNC Operating Spindle Speed: 12,000 RPM / Depth of Cut: 1 x Tool Diameter †

	Slotting		Roughing		2-Flute
Iron	0.0001	4	0.0001	4	1/32"
	0.00024	10	0.00027	10	1/16"
	0.00048	18	0.00055	20	1/8"
	0.00096	35	0.00108	40	1/4"
	0.0012	45	0.00135	50	5/16"
	0.00145	40	0.00153	55	3/8"
	0.00193	70	0.0021	75	1/2"
Steel	0.0001	4	0.0001	4	1/32"
	0.00022	8	0.00025	10	1/16"
	0.00044	15	0.00051	18	1/8"
	0.00088	30	0.00098	35	1/4"
	0.00112	40	0.0012	43	5/16"
	0.00138	50	0.00148	55	3/8"
	0.00186	60	0.00198	65	1/2"
Stanless	0.0001	4	0.0001	4	1/32"
	0.00024	10	0.00027	10	1/16"
	0.00048	18	0.00055	20	1/8"
	0.00096	35	0.00108	40	1/4"
	0.0012	45	0.00135	50	5/16"
	0.00145	40	0.00153	55	3/8"
	0.00193	70	0.0021	75	1/2"

Tool Reference #' s		
2-Flute		Cut Dia.
M02001 M02003	M02002 M02004	1/4"
M03001 M03008		1/8"
M04001 M04002		3/8"
M03004 M03006		1/16"
M05001 M05003	M05002	5/16"
M03007	M03005	1/32"
M03002		3/32"

	Radial	Axial	Chipload	For metal router bit
Slotting	100%	100%	100%	≤3x
	100%	50%	80%	5x
	100%	47%	60%	8x
Roughing	100%	100%	100%	≤3x
	90%	75%	80%	5x
	80%	60%	60%	8x
Finishing	100%	100%	100%	≤3x
	100%	100%	85%	5x
	65%	100%	70%	8x

*IPM Inches per minute

***Depth of cutting**: 2xD Reduce feed rate by 30%

3xD Reduce feed rate by 50%

Simple machining calculations: Feed rate=chipload per tooth * number of tooth * **RPM**

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