MasterCut Tool Corp.

Solid Carbide Router Tooling

Imperial and Metric

World Class Manufacturer of Rotary Cutting Tools

EXCLUSIVE MAP® TECHNOLOGY

Manufactured in the U.S.A.
Distributed Around the Globe

Legend

The cube icons shown below indicate the preferred material use for each tool group. You will find them displayed in the upper right corner of each tool group header.

General Wood Products	GW	Soft Wood Products	SW	Hard Wood Products	HW
Soft Plastics	SP	Phenolics and Hard Plastics	HP	Solid Surface	SS
Aluminum	AL	Fiberglass	FG	Composites & Laminates	C&L

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Coatings

Coatings 7

Descriptions below indicate Fractional / Imperial tools *unless* prefixed with *mm* for metric tools.

OFX Single Flute 'O' Flute Xtreme Routers

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
Upcut 'O' Flute Xtreme Single Flute Crescent End. 8	●	●	●	●	●	●				●
mm Upcut 'O' Flute Xtreme Single Flute Crescent End 8	●	●	●	●	●	●				●
Downcut 'O' Flute Xtreme Single Flute Crescent End 9	●	●	●	●	●	●				●
mm Downcut 'O' Flute Xtreme Single Flute Crescent End. 9	●	●	●	●	●	●				●

Single Flute Routers

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
'V' Flute Straight Cut Crescent End. 10	●	●	●	●						
'O' Flute Straight Cut Crescent End. 10					●	●				
mm 'O' Flute Straight Cut Crescent End 10					●	●				
'O' Flute Straight Cut with Edge Rounding Crescent End 11	●	●	●	●						
'O' Flute Spiral Cut with Edge Rounding Crescent End 11	●	●	●	●						
'O' Flute Upcut Spiral Crescent End 12					●				●	
mm 'O' Flute Upcut Spiral Crescent End 12					●				●	
'O' Flute Downcut Spiral Crescent End 13					●				●	

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Single Flute Routers *Cont.*

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
mm '0' Flute Downcut Spiral Crescent End 13					●				●	
'0' Flute Upcut Spiral Crescent End 14						●			●	
mm '0' Flute Upcut Spiral Crescent End 14						●			●	
'0' Flute Downcut Spiral Crescent End 15						●			●	
mm '0' Flute Downcut Spiral Crescent End 15						●			●	
'0' Flute Upcut Spiral Crescent End 16	●	●	●	●						
mm '0' Flute Upcut Spiral Crescent End 16	●	●	●	●						
'0' Flute Downcut Spiral Crescent End 17	●	●	●	●						
mm '0' Flute Downcut Spiral Crescent End. 17	●	●	●	●						
Upcut Spiral Endmill End 18						●				●
mm Upcut Spiral Endmill End 18						●				●
Downcut Spiral Endmill End. 18						●				●
mm Downcut Spiral Endmill End 18						●				●
Upcut Spiral Endmill End 19	●				●					
Downcut Spiral Endmill End. 19	●				●					
Veining Bit Endmill End 20	●	●	●	●						
Compression Spiral Endmill End. 20	●	●	●	●						
mm Compression Spiral Endmill End. 20	●	●	●	●						
Ball Compression Spiral Endmill End 21	●	●	●	●						
Mortise Compression Endmill End. 21	●	●	●	●						
mm Mortise Compression Endmill End. 21	●	●	●	●						
Compression High Wear Endmill End 22	●	●	●	●					●	

Two Flute Routers

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
Straight Cut Endmill End 22	●	●	●	●						
mm Straight Cut Endmill End 22	●	●	●	●						
Straight Cut Plunge Fishtail End. 23	●					●				
mm Straight Cut Plunge Fishtail End 23	●					●				
Straight Cut Endmill End 24						●				

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Two Flute Routers *Cont.*

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
Straight 'V' Flute with Edge Rounding 25	●	●	●	●	●	●				
mm Straight 'V' Flute with Edge Rounding. 25	●	●	●	●	●	●				
Shear 'V' Bottom 90° Point 26	●	●	●	●						
'0' Flute Straight Cut with Edge Rounding 26	●	●	●	●	●	●				
mm '0' Straight Cut Flute with Edge Rounding. 26	●	●	●	●	●	●				
'0' Flute Straight Cut Endmill End 27					●					
mm '0' Flute Straight Cut Endmill End 27					●					
'0' Flute Straight Cut Fishtail End 27						●				
Upcut Spiral Plunge Fishtail End 28	●	●	●	●						
mm Upcut Spiral Plunge Fishtail End 28	●	●	●	●						
Downcut Spiral Fishtail End 29	●	●	●	●						
mm Downcut Spiral Fishtail End 29	●	●	●	●						
Upcut Spiral High Impact Fishtail End 30	●	●	●	●						
Downcut Spiral High Impact Fishtail End 30	●	●	●	●						
Upcut Spiral Endmill End 31						●				●
mm Upcut Spiral Endmill End 31						●				●
Downcut Spiral Endmill End. 32						●				●
mm Downcut Spiral Endmill End 32						●				●
'0' Flute Upcut Slow Spiral Endmill End 33						●				●
mm '0' Flute Upcut Slow Spiral Endmill End. 33						●				●
'0' Flute Downcut Slow Spiral Endmill End. 33						●				●
mm '0' Flute Downcut Slow Spiral Endmill End 33						●				●
Upcut Slow Helix Endmill End 34	●	●	●	●						
Downcut Slow Helix Endmill End 34	●	●	●	●						
Upcut Spiral Chipbreaker Endmill End 35	●	●	●	●						
mm Upcut Spiral Chipbreaker Endmill End. 35	●	●	●	●						
Downcut Spiral Chipbreaker Endmill End 36	●	●	●	●						
mm Downcut Spiral Chipbreaker Endmill End 36	●	●	●	●						
Upcut Spiral Chipbreaker High Impact Endmill End 36	●	●	●	●						

Table of Contents

Two Flute Routers *Cont.*

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
Downcut Spiral Chipbreaker High Impact Endmill End 37	●	●	●	●						
Compression Endmill End 37	●	●	●	●						
mm Compression Endmill End 37	●	●	●	●						
Mortise Compression High Wear Endmill End 38	●	●	●	●						
Mortise Compression Endmill End 38	●	●	●	●						
mm Mortise Compression Endmill End 38	●	●	●	●						
Chipbreaker Compression Endmill End 39	●	●	●	●						
mm Chipbreaker Compression Endmill End 39	●	●	●	●						
Ball Round Bottom 3° Slow Helix, Ball End 39	●	●	●	●						
Straight Rout and Chamfer Endmill End 40					●	●				
Upcut Bottom Surface 40	●	●	●	●						
mm Upcut Bottom Surface 40	●	●	●	●						

Three Flute Routers

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
Straight Flute Endmill End 41	●	●	●	●						
Upcut Spiral Endmill End 41	●	●	●	●		●				
mm Upcut Spiral Endmill End 41	●	●	●	●		●				
Downcut Spiral Endmill End. 42	●	●	●	●		●				
mm Downcut Spiral Endmill End 42	●	●	●	●		●				
Upcut Slow Spiral Endmill End 42					●	●				
mm Upcut Slow Spiral Endmill End 43					●	●				
Downcut Slow Spiral Finisher, Endmill End 43					●	●				
mm Downcut Slow Spiral Endmill End 43					●	●				
Upcut Slow Helix Ripper Endmill End 44	●	●	●	●	●	●				
mm Upcut Slow Helix Ripper Endmill End 44	●	●	●	●	●	●				
Downcut Slow Helix Ripper Endmill End. 44	●	●	●	●	●	●				
mm Downcut Slow Helix Ripper Endmill End 44	●	●	●	●	●	●				
Upcut High Helix Ripper Endmill End 45	●	●	●	●	●	●				
mm Upcut High Helix Ripper Endmill End 45	●	●	●	●	●	●				
Downcut High Helix Ripper Endmill End 45	●	●	●	●	●	●				

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Three Flute Routers *Cont.*

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
mm Downcut High Helix Ripper Endmill End 45	●	●	●	●	●	●				
Upcut Spiral Ripper High Impact Endmill End 46	●	●	●	●	●	●				
Downcut Spiral Ripper High Impact Endmill End. 46	●	●	●	●	●	●				
Upcut Lock Mortise Endmill End. 47	●	●	●	●						
mm Upcut Lock Mortise Endmill End 47	●	●	●	●						
Upcut Spiral Chipbreaker Finisher Endmill End. 47	●	●	●	●						
mm Upcut Spiral Chipbreaker Finisher Endmill End 47	●	●	●	●						
Downcut Spiral Chipbreaker Finisher Endmill End. 48	●	●	●	●						
mm Downcut Spiral Chipbreaker Finisher Endmill cut. . . . 48	●	●	●	●						
Upcut Phenolic Endmill End. 48						●	●			
Downcut Phenolic Endmill End 49						●	●			
Compression Endmill End 49	●	●	●	●						
mm Compression Endmill End 49	●	●	●	●						
Compression High Wear Endmill End 50	●	●	●	●						
Mortise Compression Endmill End. 50	●	●	●	●						

Four Flute Routers

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
Upcut Spiral Endmill End 51						●				
Downcut Spiral Endmill End. 51						●				
Upcut Spiral Endmill End 52								●		
Downcut Spiral Endmill End. 52								●		
Upcut Combination Spiral High Velocity Endmill End 52	●	●	●	●						
Downcut Combination Spiral High Velocity Endmill End. . . . 53	●	●	●	●						
Combination Compression Endmill End 53	●	●	●	●						
Compression Endmill End 54	●	●	●	●						
Mortise Compression Endmill End. 54	●	●	●	●						
Laminate Trimmers Flush and Bevel Round End 54							●			
5 Flute Upcut/2 Flute Downcut Aramid Endmill End 55							●	●		

Fiberglass Router

	Softwood	Hardwood	MDF	Plywood	Soft Plastics	Hard Plastics	Composites	Fiberglass	Solid Surface	Aluminum
Fiberglass Routers 55								●		

Technical and Purchasing Information

Technical Information for Routers. 56
Terms and Conditions. 67

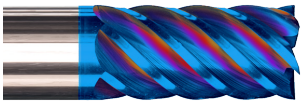
Coatings

PowerT (Titanium Nitride, TiN) ***(append -2)****
Color: Gold
Vickers Hardness: approximately 2,300 Vickers
General purpose, entry level over uncoated carbide

PowerC (Titanium Carbon Nitride, TiCN) ***(append -3)****
Color: ranges from slight violet to brown-gray
Vickers Hardness: approximately 3,000 Vickers
Used on ferrous, non-ferrous and non-magnetic stainless steel
Good abrasion resistance, low heat resistance, for applications requiring low RPMs and high thrust

PowerA (Aluminum Titanium Nitride, AlTiN) ***(append -1)****
Color: Dark Gray
Vickers Hardness: approximately 3,600 Vickers
Nickel Alloys, Stainless Steel, Hardened Steels, Tool Steels, Cast Iron
An excellent broad spectrum grade. May be run in dry or minimum quantity lubrication applications, where heat can be a problem. Also handles light chip loads very well

PowerZ (Zirconium Nitride, ZrN) ***(append -4)****
Color: dull Gold
Vickers Hardness: approximately 2,800 Vickers
Outstanding on aluminum, including high silica aluminum. Can also be used on cast iron, stainless steels, titanium

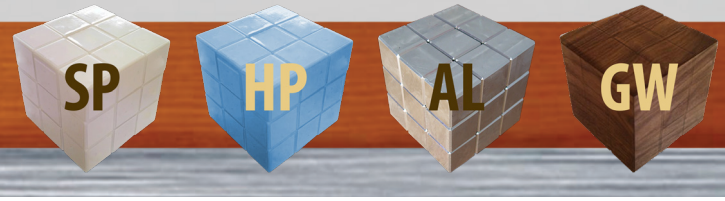


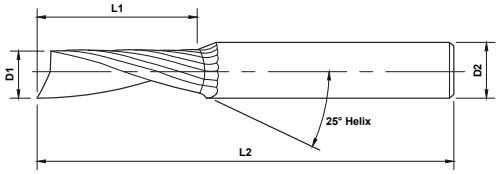
PowerN (nACo) nano-composite (nc-AlTiN)/(a-Si^3N^4) ***(append -5)****
Color: varying shades of blue-gray; blue-based color dissipates immediately upon use.
Vickers Hardness: approximately 4,500 Vickers
Outstanding performance in superalloys, hard material machining, high heat applications and best when used with very rigid setup.

PowerNR (nACRo) nano-composite (nc-AlCrN/a-Si^3N^4)*(append -8)****
Color: gray
Vickers Hardness: 4,000 Vickers
Outstanding in high heat applications, better resistance to shock and chipping than nACo, for tough, aggressive cutting applications.

Single Flute Upcut 'O' Flute Xtreme

Crescent End





Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Crescent
Helix Angle: 25°

Soft & Hard Plastics, Aluminum and General Wood

OFX

Our OFX line stands for 'O' Flute Xtreme and it's a tool option that you should seriously consider.
OFX routers combine premium submicron carbide, a quicker helix, and a highly polished flute that guarantees you a sharper cutting edge, and enhanced flute lubricity for both superior chip evacuation and resistance to 'Built Up Edge' in a broad range of applications. The OFX series is available in a variety of coatings: PowerA, PowerDLC, PowerT, PowerZ, and now PowerN (See Page 7 for details)

823-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/16	1/4	1/8	2	823-002
1/8	1/4	1/8	2	823-004
1/8	1/4	1/4	2	823-006
1/8	1/2	1/8	2	823-008
1/8	1/2	1/4	2	823-010
5/32	9/16	1/4	2	823-012
3/16	3/8	3/16	2	823-014
3/16	5/8	3/16	2	823-016
3/16	3/8	1/4	2	823-018

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/16	1/2	1/4	2	823-020
3/16	5/8	1/4	2	823-022
7/32	3/4	1/4	2-1/2	823-024
1/4	5/8	1/4	2	823-026
1/4	3/4	1/4	2-1/2	823-028
1/4	1-1/4	1/4	3	823-030
3/8	1-1/8	3/8	3	823-032
1/2	1	1/2	3	823-034
1/2	2	1/2	4	823-036

Append -5 for PowerN or -4 for PowerZ Performance Coating to the Part ID

923-0 Metric

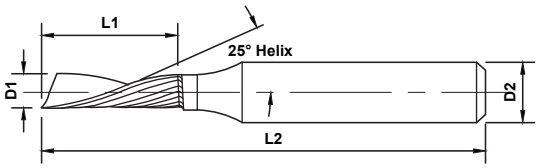
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3	6	3	50	923-002
3	12	3	50	923-004
5	10	5	50	923-006
3	6	6	50	923-008
3	12	6	50	923-010
4	14	6	50	923-012
5	10	6	50	923-014

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5	16	6	50	923-016
3	12	6	63	923-018
4	12	6	63	923-020
6	19	6	63	923-022
6	30	6	75	923-024
8	25	8	63	923-028
8	38	8	75	923-030

Append -5 for PowerN Performance Coating to the Part ID

Single Flute Downcut 'O' Flute Xtreme

Crescent End



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Crescent
Helix Angle: 25°

Soft & Hard Plastics, Aluminum and General Wood

For even greater performance, specify PowerN coating

- **High nano-hardness increases hardness 2-1/2 X's**
- **An outstanding heat and oxidation barrier**
- **Ultra thin coating helps retain a super sharp edge**

823-1 Fractional

OD D1	LOC L1	SHK D2	OAL L2	Part ID
1/16	1/4	1/8	2	823-102
1/8	1/4	1/8	2	823-104
1/8	1/4	1/4	2	823-106
1/8	1/2	1/8	2	823-108
1/8	1/2	1/4	2	823-110
5/32	9/16	1/4	2	823-112
3/16	3/8	3/16	2	823-114
3/16	5/8	3/16	2	823-116
3/16	3/8	1/4	2	823-118

OD D1	LOC L1	SHK D2	OAL L2	Part ID
3/16	1/2	1/4	2	823-120
3/16	5/8	1/4	2	823-122
7/32	3/4	1/4	2-1/2	823-124
1/4	5/8	1/4	2	823-126
1/4	3/4	1/4	2-1/2	823-128
1/4	1-1/4	1/4	3	823-130
3/8	1-1/8	3/8	3	823-132
1/2	1	1/2	3	823-134
1/2	2	1/2	4	823-136

Append -5 for PowerN or -4 for PowerZ Performance Coating to the Part ID

923-1 Metric

OD D1	LOC L1	SHK D2	OAL L2	Part ID
3	6	3	50	923-102
3	12	3	50	923-104
5	10	5	50	923-106
3	6	6	50	923-108
3	12	6	50	923-110
4	14	6	50	923-112
5	10	6	50	923-114
5	16	6	50	923-116

OD D1	LOC L1	SHK D2	OAL L2	Part ID
3	12	6	63	923-118
4	12	6	63	923-120
6	19	6	63	923-122
6	30	6	75	923-124
8	25	8	63	923-128
10	28	10	75	923-126
8	38	8	75	923-130

Append -5 for PowerN Performance Coating to the Part ID

PowerN is Mastercut's nACo formulation Performance Coating

Color	Nanohardness up to [GPa]	Thickness [µm]	Friction (fretting) coeff.	Max. usage temp. [°C]
Violet-blue	41	1-4	0.45	1200

Email: sales@mastercuttool.com
www.mastercuttool.com

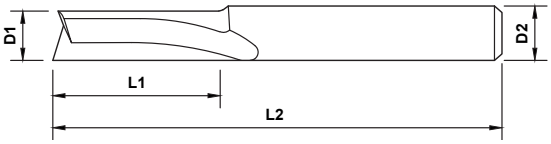
MasterCut Tool Corp.

Single 'V' Flute Straight Cut

Crescent End

GW

General Wood



Finish-Top: Good
Finish-Bottom: Good
End Point Type: Crescent

800-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	800-002
3/16	3/4	1/4	2	800-004
1/4	7/8	1/4	2-1/2	800-006
1/4	1	1/4	2-1/2	800-008

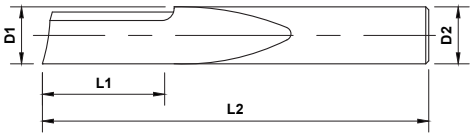
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5/16	1-1/8	5/16	3	800-010
3/8	1-1/8	3/8	3	800-012
1/2	1-1/8	1/2	3	800-014

Single 'O' Flute Straight Cut

Crescent End

SP HP

Soft & Hard Plastics



Finish-Top: Good
Finish-Bottom: Good
End Point Type:Crescent

800-1 Fractional

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
1/8	1/2	1/8	2	800-102	
1/8	5/8	1/8	3	800-104	
1/8	5/16	1/4	2	800-106	
1/8	1/2	1/4	2	800-108	
1/8	1/2	1/4	2	800-110	*
1/8	5/8	1/4	4	800-112	
5/32	9/16	1/4	2	800-114	
3/16	5/8	3/16	2-1/2	800-116	
3/16	3/8	1/4	2	800-118	
3/16	5/8	1/4	2	800-120	
3/16	5/8	1/4	2	800-122	*
3/16	1	1/4	4	800-124	
7/32	5/8	1/4	2-1/2	800-126	
1/4	3/8	1/4	2-1/2	800-128	

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
1/4	3/4	1/4	2-1/2	800-130	
1/4	3/4	1/4	2-1/2	800-132	*
1/4	3/4	1/4	3-1/2	800-134	
1/4	3/4	1/4	3-1/2	800-136	*
1/4	1-1/4	1/4	4	800-138	
1/4	1	1/4	2-1/2	800-140	
1/4	1	1/4	3-1/4	800-142	
3/8	5/8	3/8	2-1/2	800-144	
3/8	7/8	3/8	2-1/2	800-146	
3/8	1-5/8	3/8	6	800-148	
1/2	1-5/8	1/2	4	800-150	
1/2	2-1/8	1/2	6	800-152	
1/2	1	1/2	3	800-154	

LH * indicates Lefthand Cut

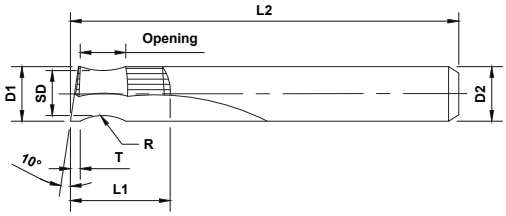
900-1 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
4	16	6	64	900-102
5	20	6	64	900-104
6	25	6	64	900-106
8	25	8	64	900-108
10	35	10	88	900-110
12	35	12	88	900-112

Single 'O' Flute Straight Cut

Edge Rounding Crescent End

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Crescent
Helix Angle: 0°

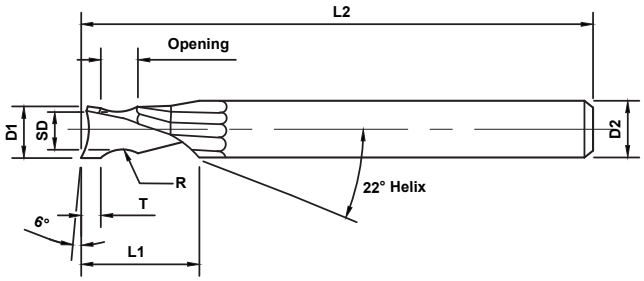
800-3 Fractional

OD	LOC	SHK	OAL	Opening	Radius	Small Diameter	Tip to Radius	
D1	L1	D2	L2		R	SD	T	Part ID
1/4	3/8	1/4	2-1/2	5/32	1/8	.195	1/16	800-302
1/4	3/8	1/4	2-1/2	7/32	3/16	.180	1/16	800-304
1/4	3/8	1/4	2-1/2	9/32	1/4	.163	1/16	800-306

Single 'O' Flute Spiral Cut

Edge Rounding Crescent End

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Crescent
Helix Angle: 22°

800-4 Fractional

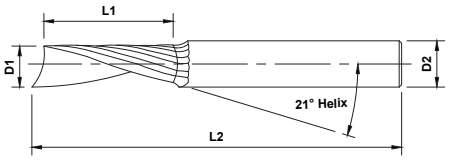
OD	LOC	SHK	OAL	Opening	Radius	Small Diameter	Tip to Radius	
D1	L1	D2	L2		R	SD	T	Part ID
1/4	3/8	1/4	2-1/2	5/32	1/8	.195	1/16	800-402
1/4	3/8	1/4	2-1/2	7/32	3/16	.180	1/16	800-404
1/4	3/8	1/4	2-1/2	9/32	1/4	.163	1/16	800-406

Single 'O' Flute Upcut Spiral

Crescent End

SS SP

Solid Surface & Soft Plastic



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Crescent
Helix Angle: 21°

801-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/16	1/4	1/8	2	801-002
1/16	1/4	1/4	2	801-004
1/8	1/4	1/8	2	801-006
1/8	1/4	1/4	2	801-008
1/8	1/2	1/8	2	801-010
1/8	1/2	1/4	2	801-012
5/32	9/16	1/4	2	801-014
3/16	3/8	3/16	2	801-016

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/16	3/8	1/4	2	801-020
3/16	5/8	1/4	2	801-022
7/32	3/4	1/4	2-1/2	801-024
1/4	3/8	1/4	2	801-026
1/4	3/4	1/4	2-1/2	801-028
1/4	1-1/4	1/4	3	801-030
3/8	1-1/8	3/8	3	801-032

901-0 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
2	8	2	50	901-002
2	8	6	64	901-004
2.5	8	2.5	50	901-006
2.5	8	6	64	901-008
3	8	3	50	901-010
3	8	6	64	901-012
3	12	3	64	901-014
3	12	6	64	901-016
4	8	4	64	901-018
4	12	4	64	901-020
4	20	4	64	901-022
4	20	6	64	901-024
4	30	4	64	901-026

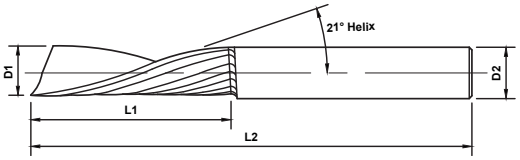
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5	16	5	64	901-028
5	16	6	64	901-030
5	30	5	64	901-032
6	8	6	64	901-034
6	12	6	64	901-036
6	20	6	64	901-038
6	30	6	76	901-040
6	38	6	76	901-042
8	25	8	64	901-044
8	38	8	76	901-046
10	30	10	76	901-048
10	35	10	76	901-050

Single 'O' Flute Downcut Spiral

Crescent End

SS SP

Solid Surface & Soft Plastic



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point Type: Crescent
Helix Angle: 21°

801-1 Fractional

OD D1	LOC L1	SHK D2	OAL L2	Part ID
1/8	1/2	1/8	2	801-110
1/8	1/2	1/4	2	801-112
5/32	9/16	1/4	2	801-114
3/16	3/8	3/16	2	801-116
3/16	5/8	3/16	2	801-118
3/16	3/8	1/4	2	801-120
3/16	5/8	1/4	2	801-122
7/32	3/4	1/4	2-1/2	801-124
1/4	3/8	1/4	2	801-126

OD D1	LOC L1	SHK D2	OAL L2	Part ID
1/4	3/4	1/4	2-1/2	801-128
1/4	1-1/4	1/4	3	801-130
3/8	1-1/8	3/8	3	801-132
1/8	1/2	1/8	1-1/2	801-134
3/16	1/2	3/16	2	801-136
3/16	1/2	1/4	2	801-138
1/4	3/8	1/4	2-1/2	801-140
1/2	1-5/8	1/2	3-1/2	801-142
1/2	1	1/2	3	801-144

901-2 Metric

OD D1	LOC L1	SHK D2	OAL L2	Part ID
2	8	6	64	901-204
2.5	8	2.5	50	901-206
2.5	8	6	64	901-208
3	8	3	50	901-210
3	8	6	64	901-212
3	12	3	64	901-214
3	12	6	64	901-216
4	8	4	64	901-218
4	12	4	64	901-220
4	20	4	64	901-222
4	20	6	64	901-224
4	30	4	64	901-226

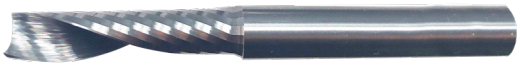
OD D1	LOC L1	SHK D2	OAL L2	Part ID
5	16	5	64	901-228
5	16	6	64	901-230
5	30	5	64	901-232
6	8	6	64	901-234
6	12	6	64	901-236
6	20	6	64	901-238
6	30	6	76	901-240
6	38	6	76	901-242
8	25	8	64	901-244
8	38	8	76	901-246
10	30	10	76	901-248
10	35	10	76	901-250

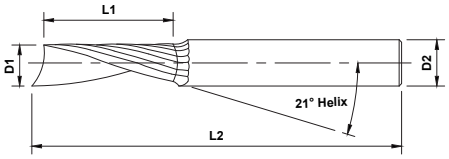
Single 'O' Flute Upcut Spiral

Crescent End

SS HP

Solid Surface & Hard Plastic





Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Crescent
Helix Angle: 21°

801-3 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/16	1/4	1/8	2	801-302
1/16	1/4	1/4	2	801-304
1/8	1/4	1/8	2	801-306
1/8	1/2	1/8	2	801-308
1/8	1/4	1/4	2	801-310
1/8	1/2	1/4	2	801-312
5/32	9/16	1/4	2	801-314
3/16	3/8	3/16	2	801-316

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/16	5/8	3/16	2	801-318
3/16	3/8	1/4	2	801-320
3/16	5/8	1/4	2	801-322
7/32	3/4	1/4	2-1/2	801-324
1/4	3/8	1/4	2	801-326
1/4	3/4	1/4	2-1/2	801-328
1/4	1-1/4	1/4	3	801-330
3/8	1-1/8	3/8	3	801-332

901-3 Metric

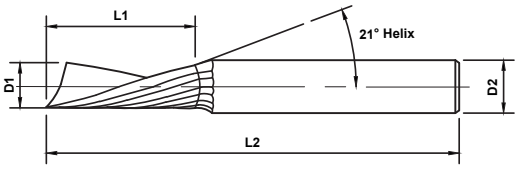
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
2	8	2	50	901-302
2	8	6	64	901-304
2.5	8	2.5	50	901-306
2.5	8	6	64	901-308
3	8	3	50	901-310
3	8	6	64	901-312
3	12	3	64	901-314
3	12	6	64	901-316
4	8	4	64	901-318
4	12	4	64	901-320
4	20	4	64	901-322
4	20	6	64	901-324
4	30	4	64	901-326

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5	16	5	64	901-328
5	16	6	64	901-330
5	30	5	64	901-332
6	8	6	64	901-334
6	12	6	64	901-336
6	20	6	64	901-338
6	30	6	76	901-340
6	38	6	76	901-342
8	25	8	64	901-344
8	38	8	76	901-346
10	30	10	76	901-348
10	35	10	76	901-350

Single 'O' Flute Downcut Spiral

Crescent End

Solid Surface & Hard Plastic



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point Type: Crescent
Helix Angle: 21°

801-4 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/8	2	801-408
1/8	1/2	1/4	2	801-412
5/32	9/16	1/4	2	801-414
3/16	5/8	3/16	2	801-418
3/16	3/8	1/4	2	801-420

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/16	5/8	1/4	2	801-422
7/32	3/4	1/4	2-1/2	801-424
1/4	3/4	1/4	2-1/2	801-428
1/4	1-1/4	1/4	3	801-430
3/8	1-1/8	3/8	3	801-432

901-4 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
2.5	8	6	64	901-408
3	8	3	50	901-410
3	8	6	64	901-412
3	12	3	64	901-414
3	12	6	64	901-416
4	8	4	64	901-418
4	12	4	64	901-420
4	20	4	64	901-422
4	20	6	64	901-424
4	30	4	64	901-426
5	16	5	64	901-428

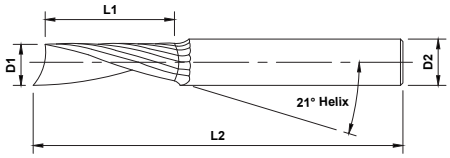
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5	16	6	64	901-430
5	30	5	64	901-432
6	8	6	64	901-434
6	12	6	64	901-436
6	20	6	64	901-438
6	30	6	76	901-440
6	38	6	76	901-442
8	25	8	64	901-444
8	38	8	76	901-446
10	30	10	76	901-448
10	35	10	76	901-450

Single 'O' Flute Upcut Spiral

Crescent End

GW

General Wood



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Crescent
Helix Angle: 21°

801-5 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/4	1/8	1-1/2	801-502
1/8	1/4	1/4	2	801-504
1/8	1/2	1/4	2	801-506
3/16	3/8	3/16	1-1/2	801-508
3/16	3/8	1/4	2	801-510
3/16	5/8	1/4	2	801-512
1/4	3/8	1/4	2	801-514

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/4	1/4	2-1/2	801-516
1/4	1-1/4	1/4	3	801-518
3/8	3/4	3/8	3	801-520
3/8	1-1/8	3/8	3	801-522
5/16	3/4	1/2	3	801-524
21/64	3/4	1/2	3	801-526

901-5 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
2	6	2	50	901-502
2	6	6	64	901-504
2.5	6	2.5	50	901-506
2.5	6	6	64	901-508
3	8	3	50	901-510
3	8	6	64	901-512
3	12	3	64	901-514
3	12	6	64	901-516
4	8	4	64	901-518
4	12	4	64	901-520
4	20	4	64	901-522
4	20	6	64	901-524
4	30	4	64	901-526
5	16	5	64	901-528
5	16	6	64	901-530

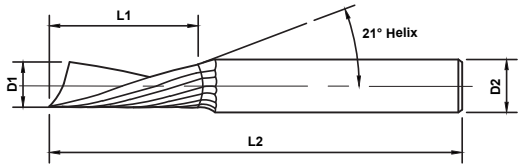
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5	30	5	64	901-532
6	8	6	64	901-534
6	12	6	64	901-536
6	20	6	64	901-538
6	30	6	76	901-540
6	38	6	76	901-542
8	25	8	64	901-544
8	38	8	76	901-546
10	30	10	76	901-548
6	20	6	100	901-550
8	20	8	100	901-552
10	25	10	120	901-554
12	38	12	76	901-556
12	25	12	120	901-558

Single 'O' Flute Downcut Spiral

Crescent End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point Type: Crescent
Helix Angle: 21°

801-6 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/4	1/8	1-1/2	801-602
1/8	1/4	1/4	2	801-604
1/8	1/2	1/4	2	801-606
3/16	3/8	3/16	1-1/2	801-608
3/16	3/8	1/4	2	801-610
3/16	5/8	1/4	2	801-612
1/4	3/8	1/4	2	801-614

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/4	1/4	2-1/2	801-616
1/4	1-1/4	1/4	3	801-618
3/8	3/4	3/8	3	801-620
3/8	1-1/8	3/8	3	801-622
5/16	3/4	1/2	3	801-624
21/64	3/4	1/2	3	801-626

901-6 Metric

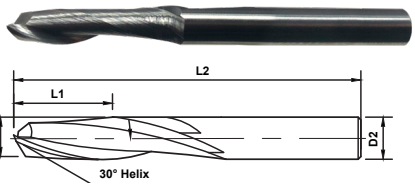
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
2	6	2	50	901-602
2	6	6	64	901-604
2.5	6	2.5	50	901-606
2.5	6	6	64	901-608
3	8	3	50	901-610
3	8	6	64	901-612
3	12	3	64	901-614
3	12	6	64	901-616
4	8	4	64	901-618
4	12	4	64	901-620
4	20	4	64	901-622
4	20	6	64	901-624

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
4	30	4	64	901-626
5	16	5	64	901-628
5	16	6	64	901-630
5	30	5	64	901-632
6	8	6	64	901-634
6	12	6	64	901-636
6	20	6	64	901-638
6	30	6	76	901-640
6	38	6	76	901-642
8	25	8	64	901-644
8	38	8	76	901-646
10	30	10	76	901-648

Single Flute Upcut Spiral

Endmill End

Hard Plastic & Aluminum



Finish-Top: Inferior •Finish-Bottom: Excellent
End Point Type: Endmill • Helix Angle: 30°

802-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	802-002
5/32	9/16	1/4	2	802-004
3/16	5/8	1/4	2	802-006
7/32	5/8	1/4	2-1/2	802-008
1/4	3/4	1/4	2-1/2	802-010

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
9/32	3/4	3/8	2-1/2	802-012
5/16	13/16	3/8	2-1/2	802-014
3/8	7/8	3/8	2-1/2	802-016
7/16	1	1/2	3	802-018
1/2	1	1/2	3	802-020

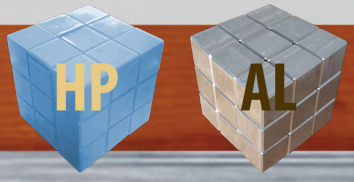
902-0 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
4	16	6	64	902-002
5	20	6	64	902-004

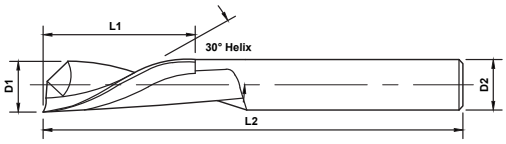
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
6	25	6	64	902-006
8	25	8	64	902-008

Single Flute Downcut Spiral

Endmill End



Hard Plastics & Aluminum



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point Type: Endmill • Helix Angle: 30°

802-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	802-102
1/4	3/4	1/4	2-1/2	802-110

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5/16	13/16	3/8	2-1/2	802-114
3/8	7/8	3/8	2-1/2	802-116

902-1 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
4	16	6	64	902-102
5	20	6	64	902-104

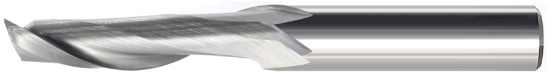
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
6	25	6	64	902-106
8	25	8	64	902-108

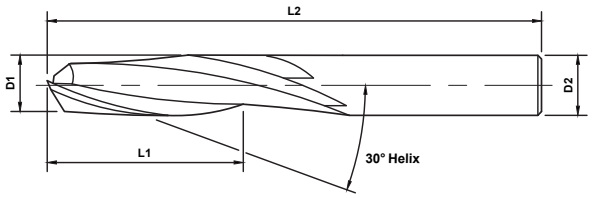
Single Flute Upcut Spiral

Endmill End

SW SP

Soft Wood and Soft Plastics





Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Endmill
Helix Angle: 30°

802-3 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	802-302
3/16	3/4	1/4	2	802-304
1/4	7/8	1/4	2-1/2	802-306
1/4	1	1/4	2-1/2	802-308

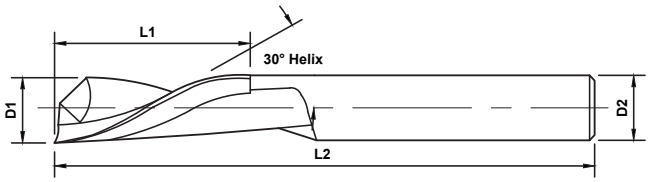
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5/16	1-1/8	5/16	3	802-310
3/8	1-1/8	3/8	3	802-312
1/2	1-1/8	1/2	3	802-314

Single Flute Downcut Spiral

Endmill End

SW SP

Soft Wood and Soft Plastics



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point Type: Endmill
Helix Angle: 30°

802-4 Fractional

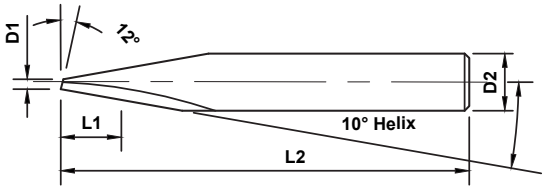
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	802-402
3/16	3/4	1/4	2	802-404
1/4	7/8	1/4	2-1/2	802-406
1/4	1	1/4	2-1/2	802-408

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5/16	1-1/8	5/16	3	802-410
3/8	1-1/8	3/8	3	802-412
1/2	1-1/8	1/2	3	802-414

Single Flute Veining Bit

Endmill End

General Wood



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Endmill
Helix Angle: 10°

802-5 Fractional

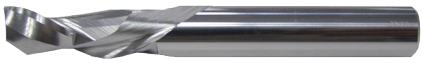
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/16	1/4	1/4	1-1/2	802-502
3/32	1/4	1/4	1-1/2	802-504

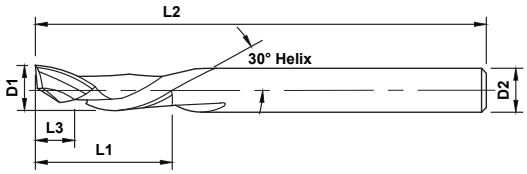
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/4	1/4	1-1/2	802-506

Single Flute Compression Spiral

Endmill End

General Wood





Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Endmill • Helix Angle: 30°

802-6 Fractional

OD	LOC	UPCT	SHK	OAL		LH
D1	L1	L3	D2	L2	Part ID	
1/8	3/8	0.17	1/4	2-1/2	802-602	
3/16	5/8	0.28	1/4	2-1/2	802-604	
1/4	7/8	0.39	1/4	2-1/2	802-606	
3/8	1-1/8	0.50	3/8	3	802-608	
3/8	1-1/8	0.50	3/8	3	802-608L	*
1/2	1	0.44	1/2	3	802-610	

OD	LOC	UPCT	SHK	OAL		LH
D1	L1	L3	D2	L2	Part ID	
1/2	1-1/8	.5	1/2	3	802-612	
1/2	1-3/8	.61	1/2	3-1/2	802-614	
1/2	1-5/8	.71	1/2	3-1/2	802-616	
1/2	1-5/8	.71	1/2	3-1/2	802-618	*
5/8	2-1/4	.99	5/8	4	802-620	
3/4	2	.88	3/4	4	802-622	

LH * indicates Lefthand Cut

902-6 Metric

OD	LOC	Upcut	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
6	25	11	6	64	902-602
8	25	11	8	64	902-604
10	35	15.4	10	76	902-606

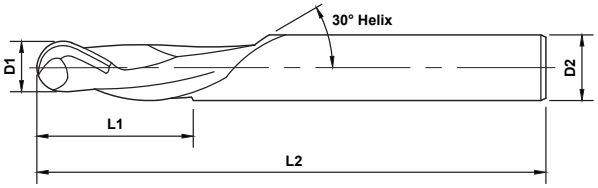
OD	LOC	Upcut	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
12	35	15.4	12	76	902-608
16	55	24.2	16	100	902-610

Single Flute Ball Compression Spiral

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Endmill
Helix Angle: 30°

802-7 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	7/8	1/4	2-1/2	802-702

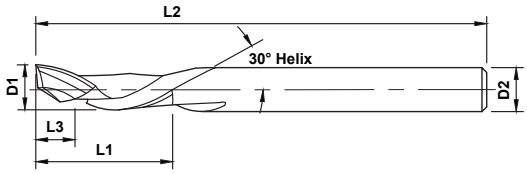
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-1/8	1/2	3	802-704

Single Flute Mortise Compression

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Endmill • Helix Angle: 30°

802-8 Fractional

OD	LOC	Mortise	SHK	OAL		LH
D1	L1	L3	D2	L2	Part ID	
1/4	7/8	.175	1/4	2-1/2	802-802	
3/8	7/8	.188	3/8	3	802-804	
1/2	7/8	.200	1/2	3	802-806	
1/2	7/8	.200	1/2	3	802-808	*
1/2	1-5/8	.200	1/2	3-1/2	802-810	

LH * indicates Lefthand Cut

902-8 Metric

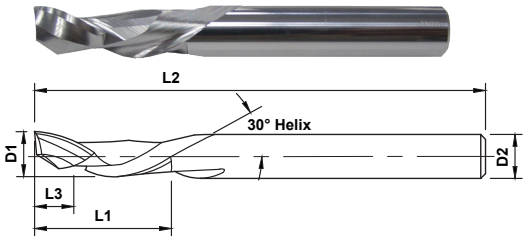
OD	LOC	Mortise	SHK	OAL		LH
D1	L1	L3	D2	L2	Part ID	
6	22	5	6	64	902-802	
8	22	5	8	64	902-804	
10	22	5	10	72	902-806	
12	22	5	12	72	902-808	

Single Flute Compression

High Wear Endmill End

SS GW

Solid Surface & General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Endmill
Helix Angle: 30°

802-9 Fractional for Solid Surfaces

OD	LOC	Upcut	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	1	7/16	1/2	3	802-902

802-9 Fractional for Hardwood

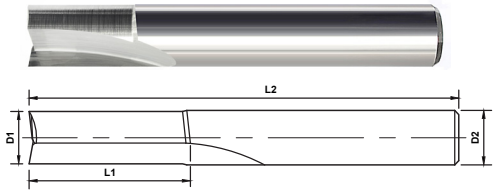
OD	LOC	Upcut	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	1-1/8	1/2	1/2	3	802-904

Two Flute Straight Cut

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Endmill

803-0 Fractional

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
1/8	1/4	1/4	2	803-002	
3/16	3/8	1/4	2	803-004	
3/16	5/8	1/4	2	803-006	
3/16	5/8	1/4	2	803-008	*
3/16	5/8	1/4	4	803-010	
1/4	3/8	1/4	2-1/2	803-012	
1/4	3/4	1/4	2-1/2	803-014	
1/4	3/4	1/4	2-1/2	803-016	*

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
1/4	1-1/4	1/4	4	803-018	
3/8	5/8	3/8	2-1/2	803-020	
3/8	7/8	3/8	2-1/2	803-022	
3/8	7/8	3/8	2-1/2	803-024	*
3/8	1-5/8	3/8	6	803-026	
1/2	1	1/2	3	803-028	
1/2	1	1/2	3	803-030	*

LH * indicates Lefthand Cut

903-0 Metric

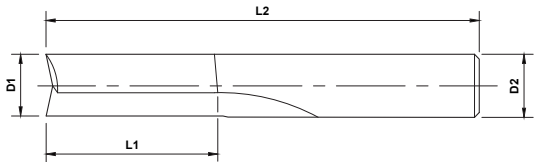
OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
4	16	6	64	903-002	
5	20	6	64	903-004	
6	25	6	64	903-006	

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
8	25	8	76	903-008	
10	35	10	88	903-010	
12	35	12	88	903-012	

Two Flute Straight Cut

Plunge Fishtail

Soft Wood & Hard Plastics



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Plunge (Fishtail)

803-1Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	803-102
5/32	5/8	1/4	2	803-104
3/16	3/4	1/4	2	803-106
7/32	3/4	1/4	2-1/2	803-108
1/4	7/8	1/4	2-1/2	803-110
1/4	1	1/4	2-1/2	803-114
1/4	1-1/8	1/4	3	803-116
9/32	1	5/16	2-1/2	803-118
5/16	1-1/8	5/16	3	803-120
5/16	1-1/8	1/2	3	803-122

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	803-124
3/8	1-1/4	3/8	3	803-126
3/8	1-1/4	1/2	3	803-128
7/16	1	1/2	3	803-130
1/2	1-1/8	1/2	3	803-132
1/2	1-1/4	1/2	3-1/2	803-134
1/2	1-5/8	1/2	3-1/2	803-136
17/32	1-1/8	1/2	3	803-138
5/8	2-1/8	5/8	4	803-140
3/4	1-5/8	3/4	4	803-142

903-1 Metric

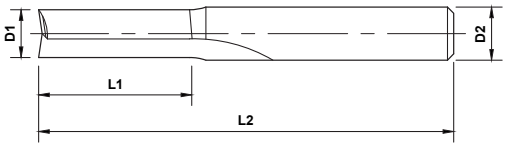
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
4	16	6	64	903-102
5	20	6	64	903-104
6	25	6	64	903-106

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
8	25	8	64	903-108
10	35	10	76	903-110
12	35	12	76	903-112

Two Flute Straight Cut

Endmill End

Hard Plastics



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Endmill

803-2 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	803-202
5/32	9/16	1/4	2	803-204
3/16	5/8	1/4	2	803-206
7/32	5/8	1/4	2-1/2	803-208
1/4	3/4	1/4	2-1/2	803-210
1/4	3/4	1/4	3-1/4	803-212

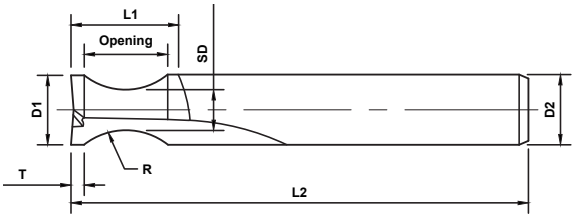
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
9/32	3/4	3/8	2-1/2	803-214
5/16	1-3/16	3/8	2-1/2	803-216
3/8	7/8	3/8	2-1/2	803-218
7/16	1	1/2	3	803-220
1/2	1	1/2	3	803-222

Two Flute Straight 'V' Flute

Edge Rounding

SP HP GW

Soft Plastics, Hard Plastics & General Wood



Designed for rounding the edge of sheets or parts.

803-4 Fractional

OD	LOC	SHK	OAL		Radius	Small Diameter	Tip to Radius	
D1	L1	D2	L2	Opening	R	SD	T	Part ID
3/8	3/8	3/8	2-1/2	5/32	1/8	.320	1/16	803-402
3/8	3/8	3/8	2-1/2	7/32	3/16	.305	1/16	803-404
3/8	3/8	3/8	2-1/2	9/32	1/4	.288	1/16	803-406
3/8	1/2	3/8	2-1/2	13/32	3/8	.255	1/16	803-408
1/2	3/8	1/2	3	5/32	1/8	.445	1/16	803-410
1/2	3/8	1/2	3	7/32	3/16	.430	1/16	803-412
1/2	3/8	1/2	3	9/32	1/4	.413	1/16	803-414
1/2	5/8	1/2	3	17/32	1/2	.347	1/16	803-416

903-4 Metric

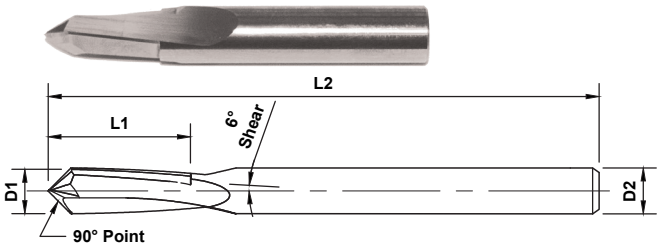
OD	LOC	SHK	OAL		Radius	Small Diameter	Tip to Radius	
D1	L1	D2	L2	Opening	R	SD	T	Part ID
8	12	8	64	9	8	5.21	1.5	903-402
10	14	10	70	11	10	6.68	1.5	903-404
12	16	12	76	13	12	8.18	1.5	903-406

Two Flute Shear 'V' Bottom

90° Point

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: 90° Point

803-5 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/16	5/8	1/4	2	803-502
1/4	3/4	1/4	2	803-504

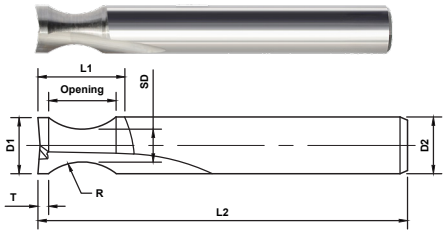
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	3/4	3/8	2-1/2	803-506

Two Flute 'O' Flute Straight Cut

Edge Rounding

SP HP GW

Soft & Hard Plastics & General Wood



Designed for rounding the edge of sheets or parts

803-6 Fractional

OD	LOC	SHK	OAL		Radius	Small Diameter	Tip to Radius	
D1	L1	D2	L2	Opening	R	SD	T	Part ID
1/4	3/8	1/4	2-1/2	5/32	1/8	.195	1/16	803-602
1/4	3/8	1/4	2-1/2	7/32	3/16	.180	1/16	803-604
1/4	3/8	1/4	2-1/2	9/32	1/4	.163	1/16	803-606

903-6 Metric

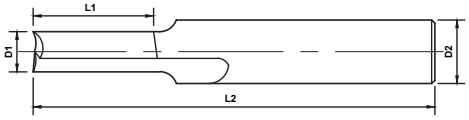
OD	LOC	SHK	OAL		Radius	Small Diameter	Tip to Radius	
D1	L1	D2	L2	Opening	R	SD	T	Part ID
6	10	6	64	4	3	4.47	1.5	903-602
6	10	6	64	5	4	4.24	1.5	903-604
6	10	6	64	6	5	3.96	1.5	903-606
6	10	6	64	7	6	3.73	1.5	903-608

Two Flute 'O' Flute Straight Cut

Fishtail End

SP

Soft Plastic



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point Type: Fishtail

803-7 Fractional

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
1/8	5/16	1/4	2	803-702	
1/8	1/2	1/4	2	803-704	
1/8	5/8	1/4	4	803-706	
3/16	3/8	1/4	2	803-708	
3/16	5/8	1/4	2	803-710	
3/16	1	1/4	4	803-712	
1/4	3/8	1/4	2-1/2	803-714	
1/4	1	1/4	2-1/2	803-716	
1/4	1	1/4	2-1/2	803-718	*

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
1/4	1	1/4	3-1/4	803-720	
1/4	1-1/4	1/4	4	803-722	
3/8	7/8	3/8	2-1/2	803-724	
3/8	1	3/8	4	803-726	
1/2	1	1/2	3	803-728	
1/2	1	1/2	4	803-730	
1/2	1-3/4	1/2	4	803-732	
1/2	2-1/8	1/2	6	803-734	

LH * indicates Lefthand Cut

903-7 Metric

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
4	16	6	64	903-702	
5	20	6	64	903-704	
6	25	6	64	903-706	

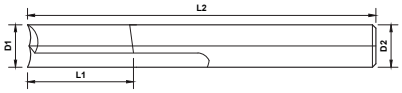
OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
8	25	8	76	903-708	
10	35	10	88	903-710	
12	35	12	88	903-712	

Two Flute 'O' Flute Straight Cut

Fishtail End

HP

Hard Plastic



Finish-Top: Excellent • Finish-Bottom: Excellent • Fishtail End

803-8 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/4	1/4	2	803-802
3/16	3/8	1/4	2	803-804
3/16	5/8	1/4	2	803-806
3/16	5/8	1/4	2	803-808
3/16	5/8	1/4	4	803-810
1/4	3/8	1/4	2-1/2	803-812
1/4	3/4	1/4	2-1/2	803-814
1/4	3/4	1/4	2-1/2	803-816

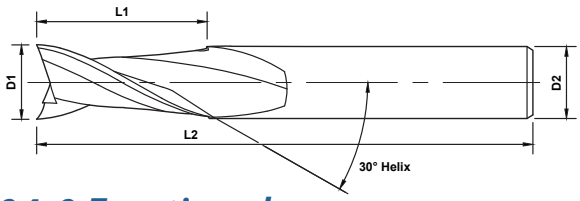
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	1-1/4	1/4	4	803-818
3/8	5/8	3/8	2-1/2	803-820
3/8	7/8	3/8	2-1/2	803-822
3/8	7/8	3/8	2-1/2	803-824
3/8	1-5/8	3/8	6	803-826
1/2	1	1/2	3	803-828
1/2	1	1/2	3	803-830
1/2	2-1/8	1/2	6	803-832

Two Flute Upcut Spiral

Plunge Fishtail

GW

General Wood



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Plunge (Fishtail)
Helix Angle: 30°

804-0 Fractional

OD D1	LOC L1	SHK D2	OAL L2	Part ID	LH
1/8	1/2	1/4	2	804-006	
1/8	1/2	1/4	2	804-008	*
5/32	5/8	1/4	2	804-010	
5/32	1/2	1/4	2-1/2	804-012	
3/16	3/4	3/16	2	804-014	
3/16	3/4	1/4	2	804-016	
3/16	3/4	1/4	2	804-018	*
3/16	3/4	1/4	2-1/2	804-020	
7/32	3/4	1/4	2-1/2	804-022	
7/32	1	1/4	2-1/2	804-024	
1/4	7/8	1/4	2-1/2	804-026	
1/4	1	1/4	2-1/2	804-028	
1/4	1	1/4	2-1/2	804-030	*
1/4	1-1/8	1/4	3	804-032	
9/32	1	5/16	2-1/2	804-034	
5/16	1	5/16	2-1/2	804-036	
5/16	1-1/8	5/16	3	804-038	
5/16	1-1/4	5/16	3	804-040	
5/16	1-1/8	1/2	3	804-042	
5/16	1-1/8	1/2	3	804-044	*
5/16	1-3/4	5/16	4	804-046	

OD D1	LOC L1	SHK D2	OAL L2	Part ID	LH
3/8	1	3/8	2-1/2	804-048	
3/8	1	3/8	3	804-050	
3/8	1-1/8	3/8	3	804-052	
3/8	1-1/4	3/8	3	804-054	
3/8	1-1/4	3/8	3	804-056	*
3/8	1-1/4	1/2	3	804-058	
7/16	1	1/2	3	804-060	
1/2	1-1/8	1/2	3	804-062	
1/2	1-1/4	1/2	3-1/2	804-064	
1/2	1-5/8	1/2	3-1/2	804-066	
1/2	1-5/8	1/2	3-1/2	804-068	*
1/2	2-1/8	1/2	4	804-070	
17/32	1-1/8	1/2	3	804-072	
5/8	1-5/8	5/8	3-1/2	804-074	
5/8	2-1/8	5/8	4	804-076	
5/8	2-1/8	5/8	4	804-078	*
3/4	1-5/8	3/4	4	804-080	
3/4	2-1/8	3/4	4	804-082	
3/4	2-1/8	3/4	4	804-084	*
1	3	1	5	804-086	

LH * indicates Lefthand Cut

904-0 Metric

OD D1	LOC L1	SHK D2	OAL L2	Part ID	LH
4	16	6	64	904-002	
5	20	6	64	904-004	
6	25	6	64	904-006	
8	25	8	64	904-008	
10	35	10	76	904-010	

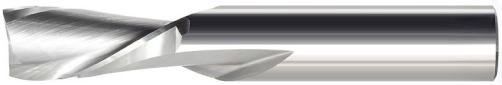
OD D1	LOC L1	SHK D2	OAL L2	Part ID	LH
12	35	12	76	904-012	
14	50	14	88	904-014	
16	55	16	100	904-016	
18	60	18	120	904-018	
20	60	20	120	904-020	

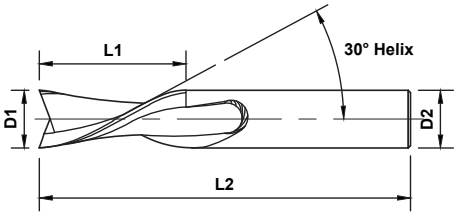
Two Flute Downcut Spiral

Fishtail End

GW

General Wood





Finish-Top: Good
Finish-Bottom: Inferior
End Point Type: Fishtail
Helix Angle: 30°

804-2 Fractional

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
3/32	9/32	1/8	1-1/2	804-202	
1/8	1/2	1/8	2	804-204	
1/8	1/2	1/4	2	804-206	
1/8	1/2	1/4	2	804-208	*
5/32	5/8	1/4	2	804-210	
5/32	1/2	1/4	2-1/2	804-212	
3/16	3/4	3/16	2	804-214	
3/16	3/4	1/4	2	804-216	
3/16	3/4	1/4	2	804-218	*
3/16	3/4	1/4	2-1/2	804-220	
7/32	3/4	1/4	2-1/2	804-222	
7/32	1	1/4	2-1/2	804-224	
1/4	7/8	1/4	2-1/2	804-226	
1/4	1	1/4	2-1/2	804-228	
1/4	1	1/4	2-1/2	804-230	*
1/4	1-1/8	1/4	3	804-232	
9/32	1	5/16	2-1/2	804-234	
5/16	1	5/16	2-1/2	804-236	
5/16	1-1/8	5/16	3	804-238	
5/16	1-1/4	5/16	3	804-240	
5/16	1-1/8	1/2	3	804-242	
5/16	1-1/8	1/2	3	804-244	*

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
5/16	1-3/4	5/16	4	804-246	
3/8	1	3/8	2-1/2	804-248	
3/8	1	3/8	3	804-250	
3/8	1-1/8	3/8	3	804-252	
3/8	1-1/4	3/8	3	804-254	
3/8	1-1/4	3/8	3	804-256	*
3/8	1-1/4	1/2	3	804-258	
7/16	1	1/2	3	804-260	
1/2	1-1/8	1/2	3	804-262	
1/2	1-1/4	1/2	3-1/2	804-264	
1/2	1-5/8	1/2	3-1/2	804-266	
1/2	1-5/8	1/2	3-1/2	804-268	*
1/2	2-1/8	1/2	4	804-270	
17/32	1-1/8	1/2	3	804-272	
5/8	1-5/8	5/8	3-1/2	804-274	
5/8	2-1/8	5/8	4	804-276	
5/8	2-1/8	5/8	4	804-278	*
3/4	1-5/8	3/4	4	804-280	
3/4	2-1/8	3/4	4	804-282	
3/4	2-1/8	3/4	4	804-284	*
1	3	1	6	804-286	

LH * indicates Lefthand Cut

904-2 Metric

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
4	16	6	64	904-202	
5	20	6	64	904-204	
6	25	6	64	904-206	
8	25	8	64	904-208	
10	35	10	76	904-210	

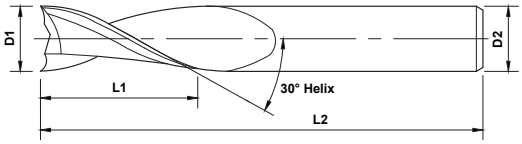
OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
12	35	12	76	904-212	
14	50	14	88	904-214	
16	55	16	100	904-216	
18	60	18	120	904-218	
20	60	20	120	904-220	

Two Flute Upcut Spiral

High Impact Fishtail End

GW

General Wood



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Fishtail • Helix Angle: 30°

804-8 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	7/8	1/4	2-1/2	804-802
3/8	7/8	3/8	3	804-804
3/8	1-1/8	3/8	3	804-806

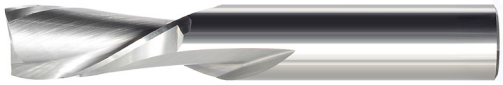
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/4	3/8	3	804-808
1/2	1-1/4	1/2	3	804-810

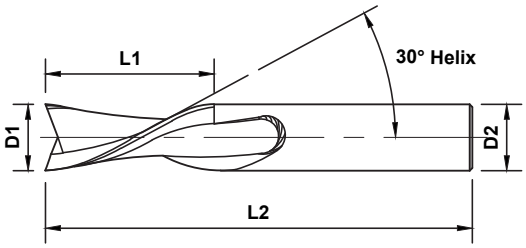
Two Flute Downcut Spiral

High Impact Fishtail End

GW

General Wood





Finish-Top: Excellent
Finish-Bottom: Inferior
End Point Type: Fishtail • Helix Angle: 30°

804-9 Fractional

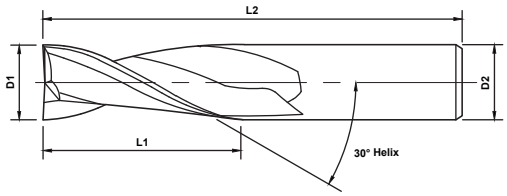
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	7/8	1/4	2-1/2	804-902
3/8	7/8	3/8	3	804-904
3/8	1-1/8	3/8	3	804-906

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/4	3/8	3	804-908
1/2	1-1/4	1/2	3	804-910

Two Flute Upcut Spiral

Endmill End

Hard Plastics and Aluminum



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Endmill
Helix Angle: 30°

805-0 Fractional

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
1/8	1/2	1/4	2	805-002	
5/32	9/16	1/4	2	805-004	
3/16	5/8	1/4	2	805-006	
3/16	5/8	1/4	2	805-008	*
7/32	5/8	1/4	2-1/2	805-010	
1/4	3/4	1/4	2-1/2	805-012	

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
1/4	3/4	1/4	2-1/2	805-014	*
9/32	3/4	3/8	2-1/2	805-016	
5/16	13/16	3/8	2-1/2	805-018	
3/8	7/8	3/8	2-1/2	805-020	
7/16	1	1/2	3	805-022	
1/2	1	1/2	3	805-024	

LH * indicates Lefthand Cut

905-0 Metric

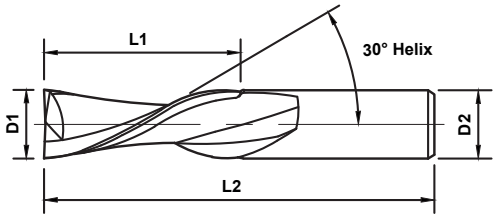
OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
3	12	3	50	905-002	
5	17	5	50	905-004	
8	32	8	70	905-006	
10	32	10	70	905-008	
10	42	10	100	905-010	

OD	LOC	SHK	OAL		LH
D1	L1	D2	L2	Part ID	
4	12	4	50	905-012	
6	17	6	60	905-014	
12	32	12	80	905-016	

Two Flute Downcut Spiral

Endmill End

Hard Plastics and Aluminum



Finish-Top: Good
Finish-Bottom: Inferior
End Point Type: Endmill
Helix Angle: 30°

805-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	805-102
5/32	9/16	1/4	2	805-104
3/16	5/8	1/4	2	805-106
3/16	5/8	1/4	2	805-108
7/32	5/8	1/4	2-1/2	805-110
1/4	3/4	1/4	2-1/2	805-112

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/4	1/4	2-1/2	805-114
9/32	3/4	3/8	2-1/2	805-116
5/16	13/16	3/8	2-1/2	805-118
3/8	7/8	3/8	2-1/2	805-120
7/16	1	1/2	3	805-122
1/2	1	1/2	3	805-124

905-1 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3	12	3	50	905-102
5	17	5	50	905-104
8	32	8	70	905-106
10	32	10	70	905-108

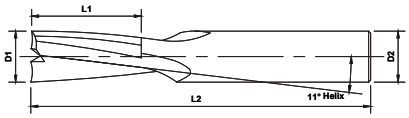
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
10	42	10	100	905-110
4	12	4	50	905-112
6	17	6	60	905-114
12	32	12	80	905-116

Two Flute 'O' Flute Upcut Slow Sprial

HP AL

Endmill End

Hard Plastics and Aluminum



Finish-Top: Inferior
Finish-Bottom: Good
End Point Type: Endmill • Helix Angle: 11°

806-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/8	1/4	2-1/2	806-002
1/4	3/4	1/4	2-1/2	806-004

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1	3/8	3	806-006
1/2	1-1/8	1/2	3-1/2	806-008

906-0 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/8	1/4	2-1/2	806-002
1/4	3/4	1/4	2-1/2	806-004

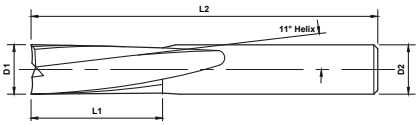
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1	3/8	3	806-006
1/2	1-1/8	1/2	3-1/2	806-008

Two Flute 'O' Flute Downcut Slow Spiral

HP AL

Endmill End

Hard Plastics and Aluminum



Finish-Top: Good
Finish-Bottom: Inferior
End Point Type: Endmill • Helix Angle: 11°

806-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/8	1/4	2-1/2	806-102
1/4	3/4	1/4	2-1/2	806-104

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1	3/8	3	806-106
1/2	1-1/8	1/2	3-1/2	806-108

906-1 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
6	25	6	64	906-102
8	25	8	76	906-104

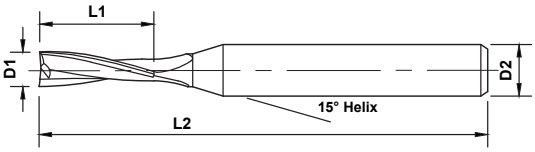
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
10	25	10	76	906-106
12	35	12	88	906-108

Two Flute Upcut Slow Helix

Endmill End

GW

General Wood



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point Type: Endmill
Helix Angle: 15°

807-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	807-002
5/32	5/8	1/4	2-1/2	807-004
3/16	5/8	1/4	2	807-006
7/32	1	1/4	2-1/2	807-008
1/4	3/4	1/4	2-1/2	807-010
1/4	1	1/4	2-1/2	807-012
1/4	1-1/8	1/4	3	807-014

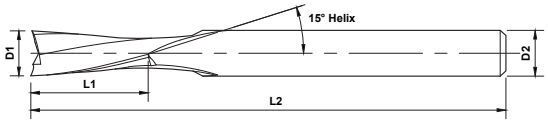
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
9/32	1	5/16	2-1/2	807-016
5/16	1-1/8	1/2	3	807-018
3/8	1	3/8	2-1/2	807-020
3/8	1-1/4	1/2	3	807-022
3/8	1-1/4	3/8	3	807-024
1/2	1-1/4	1/2	3	807-026
1/2	1-5/8	1/2	3-1/2	807-028

Two Flute Downcut Slow Helix

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point Type: Endmill
Helix Angle: 15°

807-1 Fractional

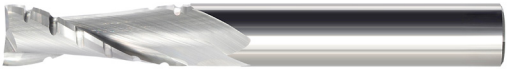
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	807-102
5/32	5/8	1/4	2-1/2	807-104
3/16	5/8	1/4	2	807-106
7/32	1	1/4	2-1/2	807-108
1/4	3/4	1/4	2-1/2	807-110
1/4	1	1/4	2-1/2	807-112
1/4	1-1/8	1/4	3	807-114

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
9/32	1	5/16	2-1/2	807-116
5/16	1-1/8	1/2	3	807-118
3/8	1	3/8	2-1/2	807-120
3/8	1-1/4	1/2	3	807-122
3/8	1-1/4	3/8	3	807-124
1/2	1-1/4	1/2	3	807-126
1/2	1-5/8	1/2	3-1/2	807-128

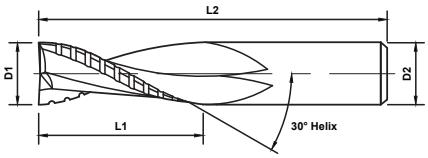
Two Flute Upcut Spiral Chipbreaker

Endmill End

GW



General Wood



Finish-Top: Inferior
Finish-Mid: Superior
Finish-Bottom: Excellent
End Point Type: Endmill
Helix Angle: 30°

809-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	809-002
1/2	1-1/8	1/2	3	809-004
1/2	1-5/8	1/2	3-1/2	809-006
1/2	1-7/8	1/2	3-1/2	809-008

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	2-1/8	1/2	4	809-010
5/8	2-1/8	5/8	4	809-012
3/4	2-1/8	3/4	4	809-014

909-0 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
8	25	8	64	909-002
10	35	10	76	909-004
12	35	12	76	909-006

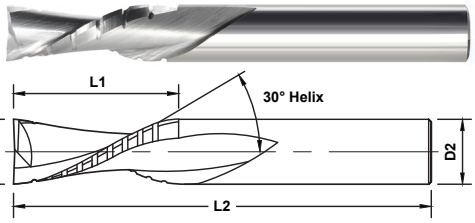
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
16	55	16	100	909-008
18	60	18	120	909-010

Two Flute Downcut Spiral Chipbreaker

Endmill End

GW

General Wood



Finish-Top: Good
Finish-Mid: Superior
Finish-Bottom: Inferior
End Point Type: Endmill
Helix Angle: 30°

809-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	809-102
1/2	1-1/8	1/2	3	809-104
1/2	1-5/8	1/2	3-1/2	809-106
1/2	1-7/8	1/2	3-1/2	809-108

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	2-1/8	1/2	4	809-110
5/8	2-1/8	5/8	4	809-112
3/4	2-1/8	3/4	4	809-114

909-1 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
8	25	8	64	909-102
10	35	10	76	909-104
12	35	12	76	909-106

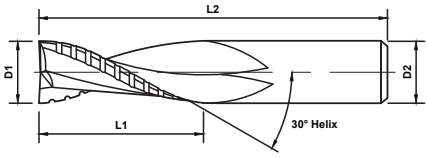
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
16	55	16	100	909-108
18	60	18	120	909-110

Two Flute Upcut Spiral Chipbreaker

High Impact Endmill End

GW

General Wood



Finish-Top: Inferior
Finish-Mid: Superior
Finish-Bottom: Excellent
End Point Type: Endmill
Helix Angle: 30°

809-2 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	809-202
1/2	1-1/8	1/2	3	809-204

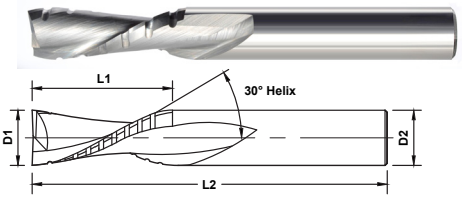
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-5/8	1/2	3-1/2	809-206
1/2	2-1/8	1/2	4	809-208

Two Flute Downcut Spiral Chipbreaker

High Impact Endmill End

GW

General Wood



Finish-Top: Good
Finish-Mid: Superior
Finish-Bottom: Inferior
End Point Type: Endmill • Helix Angle: 30°

809-3 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	809-302
1/2	1-1/8	1/2	3	809-304

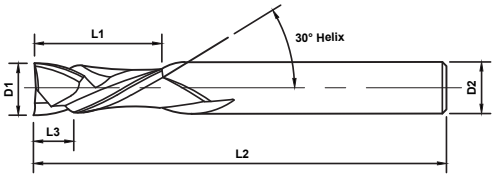
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-5/8	1/2	3-1/2	809-306
1/2	2-1/8	1/2	4	809-308

Two Flute Compression

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

810-0 Fractional

OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
3/8	1-1/8	.495	3/8	3	810-002
1/2	1	.44	1/2	3	810-004
1/2	1-1/8	.495	1/2	3	810-006
1/2	1-3/8	.605	1/2	3-1/2	810-008
1/2	1-5/8	.715	1/2	4	810-010
1/2	1-5/8	.715	1/2	4	810-012
5/8	2-1/4	.99	5/8	5	810-014
3/4	1-7/8	.825	3/4	4	810-016
3/4	2-1/2	1.1	3/4	5	810-018

OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/4	7/8	.385	1/4	2-1/2	810-020
1/2	1-5/16	.578	1/2	3	810-022
3/8	1	.440	1/2	3	810-024
3/8	1-1/8	.495	1/2	3	810-026
1/2	1-5/8	.715	1/2	3-1/2	810-028
1/4	7/8	.275	1/4	2-1/2	810-030
3/8	1-1/4	.55	3/8	3	810-032
3/8	1	.440	1/2	3	810-034

910-0 Metric

OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
6	25	11	6	64	910-002
8	25	11	8	64	910-004
10	35	15.4	10	76	910-006

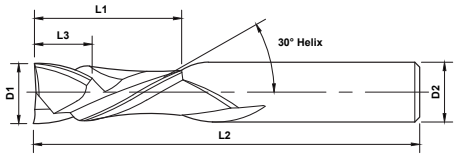
OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
12	35	15.4	12	76	910-008
20	50	22	20	100	910-010

Two Flute Mortise Compression

High Wear Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

810-1 Fractional

OD	LOC	Mortise	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
3/8	7/8	.188	3/8	3	810-102

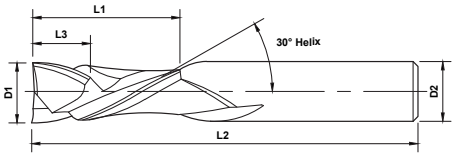
OD	LOC	Mortise	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	7/8	.188	3/8	3	810-104

Two Flute Mortise Compression

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point: Endmill • Helix Angle: 30°

810-2 Fractional

OD	LOC	Mortise	SHK	OAL		LH
D1	L1	L3	D2	L2	Part ID	
1/4	7/8	.188	1/4	2-1/2	810-202	
3/8	7/8	.188	3/8	3	810-204	
1/2	7/8	.200	1/2	3	810-206	
1/2	1-3/8	.200	1/2	3-1/2	810-208	

OD	LOC	Mortise	SHK	OAL		LH
D1	L1	L3	D2	L2	Part ID	
3/8	1-1/8	.188	3/8	3	810-210	
3/8	1-1/8	.188	3/8	3	810-212	*
1/2	1-1/4	1/4	1/2	3	810-214	

910-2 Metric

OD	LOC		SHK	OAL	
D1	L1	L3	D2	L2	Part ID
10	22	5	10	76	910-202

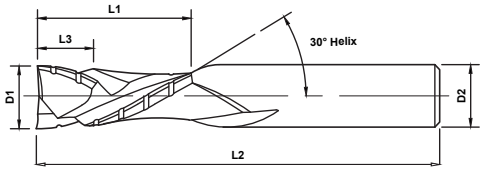
OD	LOC		SHK	OAL	
D1	L1	L3	D2	L2	Part ID
12	22	5	12	76	910-204

Two Flute Chipbreaker Compression

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Mid: Superior
Finish-Bottom: Excellent
End Point: Endmill • Angle: 30°

810-3 Fractional

OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
3/8	7/8	0.385	3/8	3	810-302
3/8	1-1/8	0.495	3/8	3	810-304
1/2	1	0.44	1/2	3	810-306
1/2	1-1/8	0.495	1/2	3	810-308
1/2	1-3/8	0.605	1/2	3-1/2	810-310

OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	1-5/8	0.715	1/2	4	810-312
5/8	2-1/4	0.99	5/8	5	810-314
3/4	1-7/8	0.825	3/4	4	810-316
1/2	7/8	0.385	1/2	3	810-318

910-3 Metric

OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
8	25	11.0	8	64	910-302
10	35	15.4	10	76	910-304

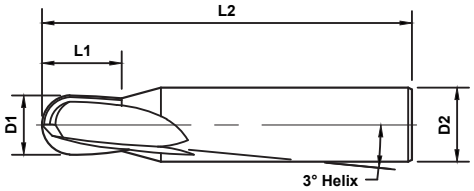
OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
12	35	15.4	12	76	910-306
20	50	22.0	20	100	910-308

Two Flute Ball Round Bottom

3° Slow Helix, Ball End

GW

General Wood



Finish-Top: Superior
Finish-Bottom: Superior
End Point: Ball
Helix Angle: 3°

811-0 Fractional

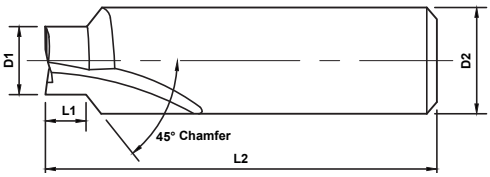
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	3/8	1/4	2	811-002
3/16	5/8	1/4	2	811-004

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/4	1/4	2	811-006
3/8	3/4	3/8	2-1/4	811-008

Two Flute Straight Rout and Chamfer

Endmill End

SP HP



Soft & Hard Plastics

Designed to provide up to a 1/16" top face chamfer and a finished side edge on plastic sheets or parts

811-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/16	3/8	2-1/4	811-102
3/8	3/16	1/2	3	811-104
1/4	1/4	3/8	2-1/4	811-106

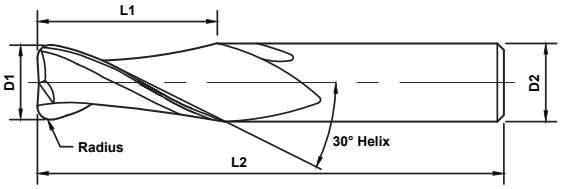
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1/4	1/2	3	811-108
1/4	5/16	3/8	2-1/4	811-110
3/8	5/16	1/2	3	811-112

Two Flute Upcut

Bottom Surface

GW

General Wood



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

811-2 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/4	1/8	2	811-202
1/8	1/4	1/4	2	811-204
1/4	3/8	1/4	2	811-206

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	5/8	3/8	2-1/2	811-208
1/2	7/8	1/2	3	811-210
1/2	7/8	1/2	3	811-212 *

*Square Mill End

911-2 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3	6	3	40	911-202
3	6	6	51	911-204
6	10	6	51	911-206

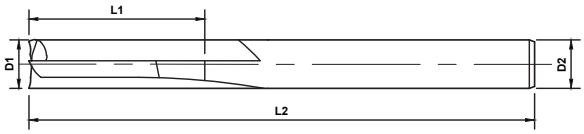
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
8	12	8	64	911-208
12	20	12	76	911-210

Three Flute Straight Flute

Endmill End

GW

General Wood



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point: Endmill

812-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	812-002

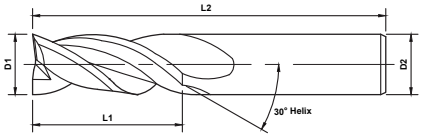
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/4	1/4	2-1/2	812-004

Three Flute Upcut Spiral

Endmill End

HP GW

Hard Plastic and General Wood



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

813-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	813-002
3/16	5/8	1/4	2	813-004
1/4	3/4	1/4	2-1/2	813-006
3/8	1-1/4	3/8	3	813-008

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-1/2	1/2	3-1/2	813-010
1/2	2	1/2	4	813-012
5/8	2	5/8	4	813-014

913-0 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
6	25	6	76	913-002
8	25	8	76	913-004
10	35	10	76	913-006

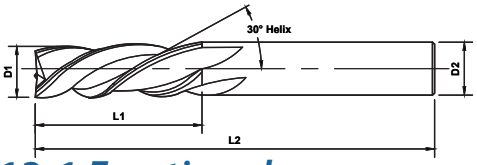
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
12	35	12	88	913-008
16	55	16	120	913-010
18	60	18	120	913-012

Three Flute Downcut Spiral

Endmill End

HP GW

Hard Plastic & General Wood



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point: Endmill • Helix Angle: 30°

813-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	813-102
3/16	5/8	1/4	2	813-104
1/4	3/4	1/4	2-1/2	813-106
3/8	1-1/4	3/8	3	813-108

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-1/2	1/2	3-1/2	813-110
1/2	2	1/2	4	813-112
5/8	2	5/8	4	813-114

913-1 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
6	25	6	76	913-102
8	25	8	76	913-104
10	35	10	76	913-106
12	35	12	88	913-108
16	55	16	120	913-110

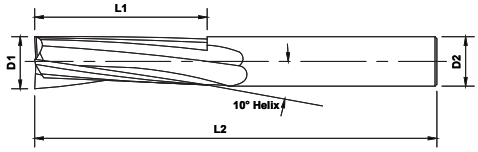
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
18	60	18	120	913-112
3	12	6	64	913-114
5	16	6	64	913-116
6	19	6	76	913-118

Three Flute Upcut Slow Spiral

Endmill End

SP HP

Soft and Hard Plastics



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point: Endmill • Helix Angle: 10°

814-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/8	1/4	3	814-002
1/4	7/8	1/4	3	814-004
3/8	5/8	3/8	3	814-006
3/8	1-1/8	3/8	3	814-008
1/2	1-1/8	1/2	3-1/2	814-010

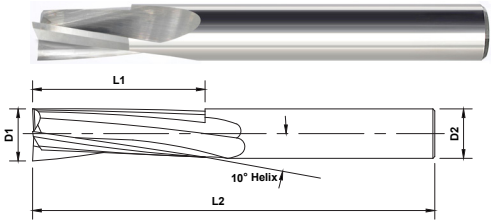
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-5/8	1/2	4	814-012
1/2	2-1/8	1/2	4-1/2	814-014
3/4	1-5/8	3/4	4	814-016
3/4	2-1/8	3/4	5	814-018

Three Flute Upcut Slow Spiral

Endmill End

SP HP

Soft and Hard Plastics



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point: Endmill • Helix Angle: 10°

914-0 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
6	25	6	76	914-002
8	25	8	76	914-004
10	35	10	76	914-006
12	35	12	88	914-008

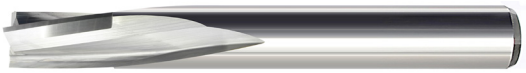
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
14	45	14	110	914-010
16	55	16	120	914-012
18	60	18	120	914-014

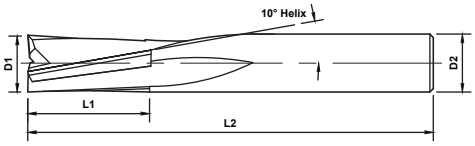
Three Flute Downcut Slow Spiral

Endmill End

SP HP

Soft and Hard Plastics





Finish-Top: Excellent
Finish-Bottom: Inferior
End Point: Endmill • Helix Angle: 10°

814-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/4	3/8	1/4	3	814-102
1/4	7/8	1/4	3	814-104
3/8	5/8	3/8	3	814-106
3/8	1-1/8	3/8	3	814-108
1/2	1-1/8	1/2	3-1/2	814-110

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-5/8	1/2	4	814-112
1/2	2-1/8	1/2	4-1/2	814-114
3/4	1-5/8	3/4	4	814-116
3/4	2-1/8	3/4	5	814-118

914-1 Metric

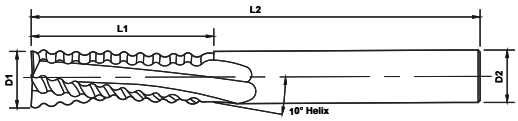
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
6	25	6	76	914-102
8	25	8	76	914-104
10	35	10	76	914-106
12	35	12	88	914-108

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
14	45	14	110	914-110
16	55	16	120	914-112
18	60	18	120	914-114

Three Flute Upcut Slow Helix Ripper

Endmill End

SP HP GW



Soft Plastics, Hard Plastics & General Wood

Finish-Top: Inferior
Finish-Mid: Inferior
Finish-Bottom: Inferior
End Point: Endmill • Helix Angle: 10°

815-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3-1/2	815-002
1/2	1-1/8	1/2	3-1/2	815-004
1/2	1-5/8	1/2	4	815-006
5/8	1-5/8	5/8	4	815-008

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5/8	2-1/8	5/8	5	815-010
3/4	1-5/8	3/4	4	815-012
3/4	2-1/8	3/4	5	815-014

915-0 Metric

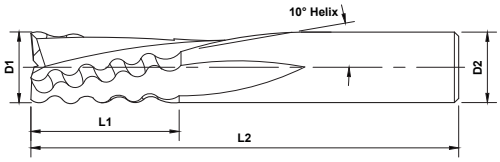
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
12	25	12	76	915-002
16	55	16	120	915-004

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
18	60	18	120	915-006

Three Flute Downcut Slow Helix Ripper

Endmill End

SP HP GW



Soft Plastics, Hard Plastics & General Wood

Finish-Top: Moderate
Finish-Mid: Inferior
Finish-Bottom: Inferior
End Point: Endmill • Helix Angle: 10°

815-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3-1/2	815-102
1/2	1-1/8	1/2	3-1/2	815-104
1/2	1-5/8	1/2	4	815-106
5/8	1-5/8	5/8	4	815-108
5/8	2-1/8	5/8	5	815-110
3/4	1-5/8	3/4	4	815-112
3/4	2-1/8	3/4	5	815-114

915-1 Metric

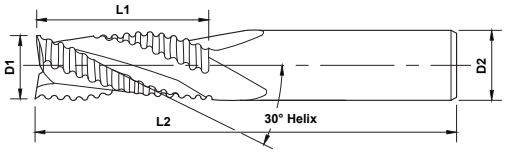
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
12	25	12	76	915-102
18	60	18	120	915-106

Three Flute Upcut High Helix Ripper

Endmill End

SP HP GW

Soft Plastics, Hard Plastics & General Wood



Finish-Top: Inferior
Finish-Mid: Inferior
Finish-Bottom: Moderate
End Point: Endmill • Helix Angle: 30°

815-2 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3-1/2	815-202
1/2	1-1/8	1/2	3-1/2	815-204
1/2	1-5/8	1/2	4	815-206
5/8	1-5/8	5/8	4	815-208
5/8	2-1/2	5/8	5	815-210
3/4	1-5/8	3/4	4	815-212

915-2 Metric

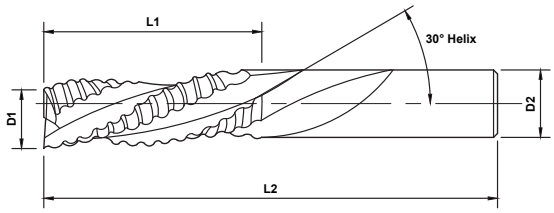
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
16	55	16	120	915-204

Three Flute Downcut High Helix Ripper

Endmill End

SP HP GW

Soft Plastics, Hard Plastics & General Wood



Finish-Top: Moderate
Finish-Mid: Inferior
Finish-Bottom: Inferior
End Point: Endmill
Helix Angle: 30°

815-3 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3-1/2	815-302
1/2	1-1/8	1/2	3-1/2	815-304
1/2	1-5/8	1/2	4	815-306
5/8	1-5/8	5/8	4	815-308
5/8	2-1/8	5/8	5	815-310
3/4	1-5/8	3/4	4	815-312
3/4	2-1/8	3/4	5	815-314

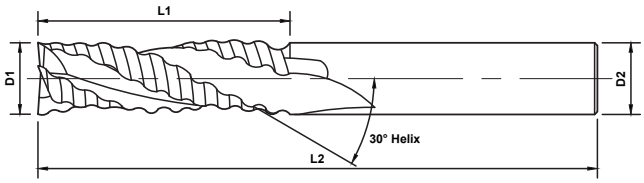
915-3 Metric

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
12	25	12	76	915-302
16	55	16	120	915-304
18	60	18	120	915-306

Three Flute Upcut Spiral Ripper

High Impact Endmill End

SP HP GW



Soft Plastics, Hard Plastics & General Wood

Finish-Top: Inferior
Finish-Mid: Inferior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

815-4 Fractional

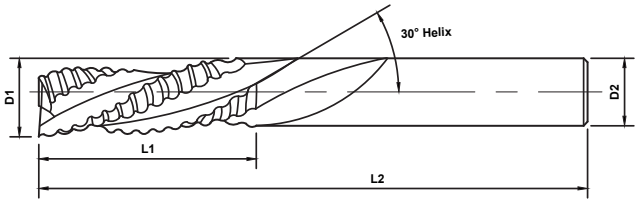
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	815-402
1/2	1-1/8	1/2	3	815-404

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-5/8	1/2	3-1/2	815-406
1/2	2-1/8	1/2	4	815-408

Three Flute Downcut Spiral Ripper

High Impact Endmill End

SP HP GW



Soft Plastics, Hard Plastics & General Wood

Finish-Top: Good
Finish-Mid: Inferior
Finish-Bottom: Inferior
End Point: Endmill
Helix Angle: 30°

815-5 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	815-502
1/2	1-1/8	1/2	3	815-504

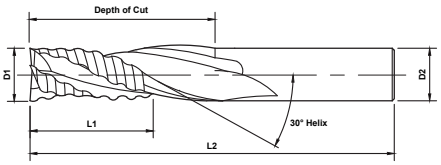
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-5/8	1/2	3-1/2	815-506
1/2	2-1/8	1/2	4	815-508

Three Flute Upcut Lock Mortise

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Mid: Inferior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

815-6 Fractional

OD	LOC	Depth	SHK	OAL	
D1	L1	of Cut	D2	L2	Part ID
5/8	2	4-1/2	5/8	6-1/2	815-602

915-6 Metric

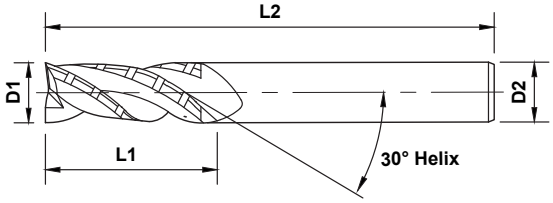
OD	LOC	Depth	SHK	OAL	
D1	L1	of Cut	D2	L2	Part ID
16	50	114	16	1	915-602

Three Flute Upcut Spiral Chipbreaker Finisher

Endmill End

GW

General Wood



Finish-Top: Inferior
Finish-Mid: Superior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

816-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	816-102
1/2	1-1/8	1/2	3	816-104
1/2	1-3/8	1/2	3-1/2	816-106
1/2	1-5/8	1/2	3-1/2	816-108
5/8	1-5/8	5/8	4	816-110
3/4	1-5/8	3/4	4	816-112
3/4	2-1/4	3/4	4	816-114
3/4	3-1/8	3/4	6	816-116

916-1 Metric

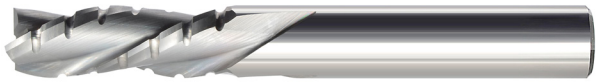
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
8	25	8	64	916-102
10	35	10	76	916-104
12	35	12	76	916-106
16	55	16	100	916-108
18	60	18	120	916-110

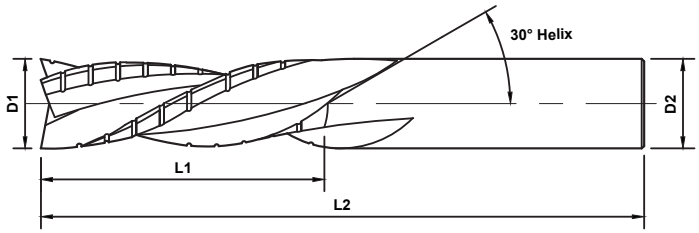
Three Flute Downcut Spiral Chipbreaker Finisher

Endmill End

GW

General Wood





Finish-Top: Excellent
Finish-Mid: Superior
Finish-Bottom: Inferior
End Point: Endmill
Helix Angle: 30°

816-2 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	1-1/8	3/8	3	816-202
1/2	1-1/8	1/2	3	816-204
1/2	1-3/8	1/2	3-1/2	816-206
1/2	1-5/8	1/2	3-1/2	816-208
5/8	1-5/8	5/8	4	816-210
3/4	1-5/8	3/4	4	816-212
3/4	2-1/4	3/4	5	816-214
3/4	3-1/8	3/4	6	816-216

916-2 Metric

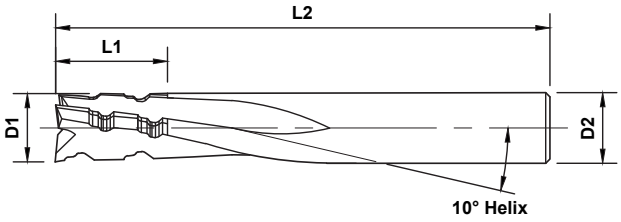
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
8	25	8	64	916-202
10	35	10	76	916-204
12	35	12	76	916-206
16	55	16	100	916-208
18	60	18	120	916-210

Three Flute Upcut Phenolic

Endmill End

HP C&L

Phenolic & Composites



Finish-Top: Inferior
Finish-Mid: Superior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 10°

817-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	7/8	3/8	3	817-002
1/2	1-1/4	1/2	3-1/2	817-004

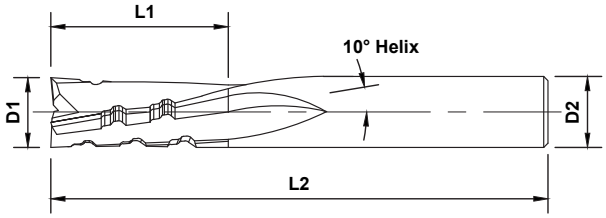
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	2-1/8	1/2	4	817-006

Three Flute Downcut Phenolic

Endmill End

HP C&L

Phenolic & Composites



Finish-Top: Excellent
Finish-Mid: Superior
Finish-Bottom: Inferior
End Point: Endmill
Helix Angle: 10°

817-1 Fractional

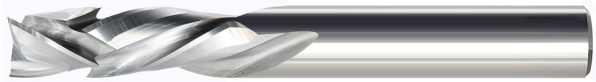
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	7/8	3/8	3	817-102
1/2	1-1/8	1/2	3-1/2	817-104

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	2-1/8	1/2	4	817-106

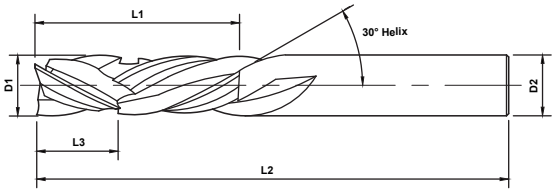
Three Flute Compression

Endmill End

GW



General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

818-0 Fractional

OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
3/8	1-1/8	0.50	3/8	3	818-002
1/2	1-1/8	0.50	1/2	3	818-004
1/2	1-5/8	0.72	1/2	3-1/2	818-006
3/4	2	0.88	3/4	4	818-008

918-0 Metric

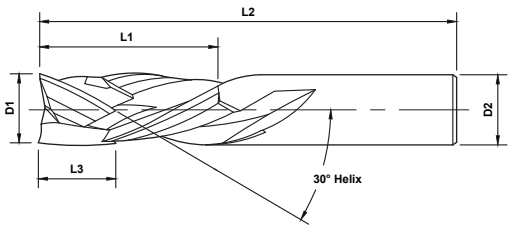
OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
6	25	11.0	6	64	918-002
8	25	11.0	8	64	918-004
10	35	15.4	10	76	918-006
12	35	15.4	12	76	918-008

Three Flute Compression

High Wear Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

818-1 Fractional

OD	LOC	Upcut	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
3/8	7/8	.200	3/8	3	818-102

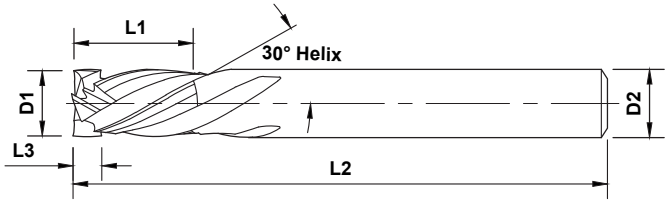
OD	LOC	Upcut	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
3/8	7/8	.358	3/8	3	818-104

Three Flute Mortise Compression

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

818-2 Fractional

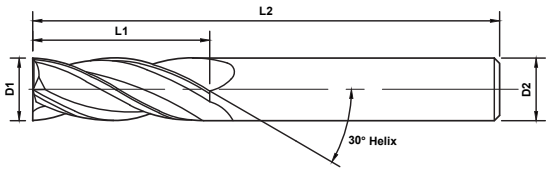
OD	LOC	Mortise	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
3/8	7/8	.200	3/8	3	818-202
1/2	7/8	.200	1/2	3	818-204

OD	LOC	Mortise	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	1-3/8	.200	1/2	3-1/2	818-206
3/4	2	.200	3/4	4	818-208

Four Flute Upcut Spiral

Endmill End

Hard Plastic



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

819-0 Fractional

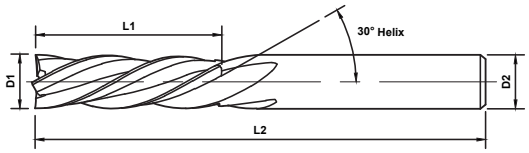
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	819-002
5/32	9/16	1/4	2	819-004

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/16	5/8	1/4	2	819-006
1/4	3/4	1/4	2-1/2	819-008

Four Flute Downcut Spiral

Endmill End

Hard Plastic



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point: Endmill
Helix Angle: 30°

819-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/8	1/2	1/4	2	819-102
5/32	9/16	1/4	2	819-104

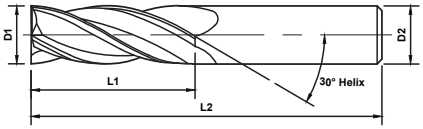
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/16	5/8	1/4	2	819-106
1/4	3/4	1/4	2-1/2	819-108

Four Flute Upcut Spiral

Endmill End

FG

Fiberglass



Finish-Top: Inferior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

819-2 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	5/8	3/8	3	819-202
3/8	1-1/8	3/8	3	819-204

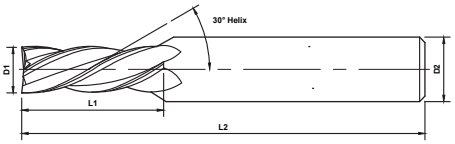
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	5/8	1/2	3-1/2	819-206
1/2	1-1/8	1/2	3-1/2	819-208

Four Flute Downcut Spiral

Endmill End

FG

Fiberglass



Finish-Top: Excellent
Finish-Bottom: Inferior
End Point: Endmill
Helix Angle: 30°

819-3 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
3/8	5/8	3/8	3	819-302
3/8	1-1/8	3/8	3	819-304

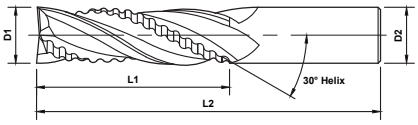
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	5/8	1/2	3-1/2	819-306
1/2	1-1/8	1/2	3-1/2	819-308

Four Flute Upcut Combination Spiral

High Velocity, Endmill End

GW

General Wood



Finish-Top: Inferior
Finish-Mid: Inferior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

820-0 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-1/8	1/2	3-1/2	820-002
1/2	1-5/8	1/2	4	820-004
1/2	2-1/8	1/2	4-1/2	820-006

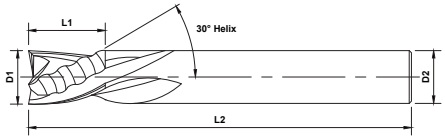
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5/8	2-1/8	5/8	5	820-008
3/4	2-1/8	3/4	5	820-010

Four Flute Downcut Combination Spiral

High Velocity, Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Mid: Inferior
Finish-Bottom: Inferior
End Point: Endmill
Helix Angle: 30°

820-1 Fractional

OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
1/2	1-1/8	1/2	3-1/2	820-102
1/2	1-5/8	1/2	4	820-104
1/2	2-1/8	1/2	4-1/2	820-106

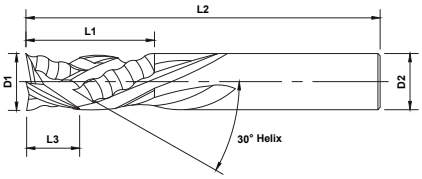
OD	LOC	SHK	OAL	
D1	L1	D2	L2	Part ID
5/8	2-1/8	5/8	5	820-108
3/4	2-1/8	3/4	5	820-110

Four Flute Combination Compression

Endmill End

GW

General Wood



Finish-Top: Excellent
Finish-Mid: Inferior
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

820-2 Fractional

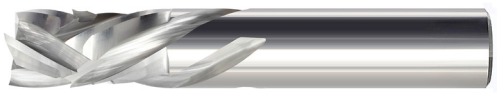
OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	1	0.44	1/2	3	820-202
1/2	1-1/8	0.50	1/2	3	820-204
1/2	1-3/8	0.61	1/2	3-1/2	820-206
1/2	1-5/8	0.72	1/2	4	820-208

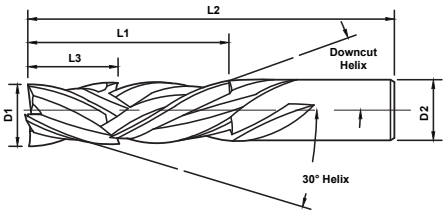
OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
5/8	2-1/4	0.99	5/8	5	820-210
3/4	1-7/8	0.83	3/4	4	820-212
3/4	2-1/2	0.55	3/4	5	820-214

Four Flute Compression

Endmill End

GW





Finish-Top: Excellent
Finish-Bottom: Excellent
End Point: Endmill
Helix Angle: 30°

821-0 Fractional

OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	1	0.44	1/2	3	821-002
1/2	1-1/8	0.50	1/2	3	821-004
1/2	1-3/8	0.61	1/2	3-1/2	821-006
1/2	1-5/8	0.72	1/2	4	821-008

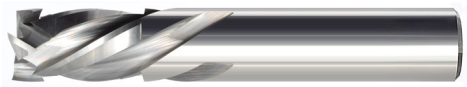
OD	LOC	UPCUT	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
5/8	2-1/4	0.99	5/8	5	821-010
3/4	1-7/8	0.83	3/4	4	821-012
3/4	2-1/2	0.55	3/4	5	821-014

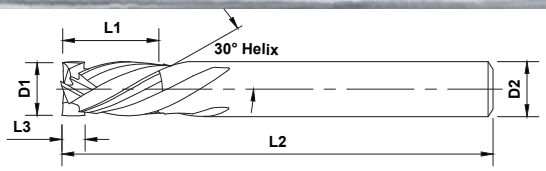
Four Flute Mortise Compression

Endmill End

GW

General Wood





Finish-Top: Excellent • Finish-Bottom: Excellent • End Point: Endmill • Helix Angle: 30°

821-1 Fractional

OD	LOC	Mortise	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	7/8	.200	1/2	3	821-102

OD	LOC	Mortise	SHK	OAL	
D1	L1	L3	D2	L2	Part ID
1/2	1-3/8	.200	1/2	3-1/2	821-104

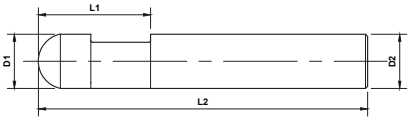
Laminate Trimmers

Flush & Bevel Round End

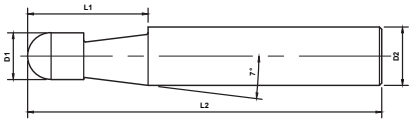
C&L

Composites & Laminates

Flush



7° Bevel



Finish-Top: Good
Finish-Bottom: Good
End Point: Round
Bevel Flush & 7°

822-1 Fractional

OD	LOC	SHK	OAL		
D1	L1	D2	L2	Bevel	Part ID
1/4	3/8	1/4	1-1/2	Flush	822-002
1/4	1/4	1/4	1-1/2	Flush	822-004
.200	1/4	1/4	1-1/2	7°	822-006

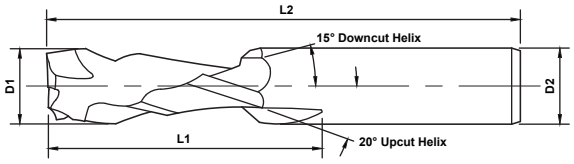
OD	LOC	SHK	OAL		
D1	L1	D2	L2	Bevel	Part ID
1/4	1/4	1/4	1-5/8	7°	822-008
1/4	7/16	1/4	1-5/8	Flush	822-010

Five Flute Upcut / Two Flute Downcut

Aramid Router Endmill End

FG C&L

Fiberglass & Composites



Finish-Top: Good
Finish-Bottom: Good
End Point: Endmill • Helix Angle: Upcut 20°, Downcut 15°

822-1 Fractional

OD D1	LOC L1	SHK D2	OAL L2	Part ID
1/4	3/4	1/4	2-1/2	822-106
3/8	7/8	3/8	2-1/2	822-114

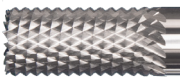
OD D1	LOC L1	SHK D2	OAL L2	Part ID
1/2	1	1/2	3	822-120

Fiberglass Routers

FG

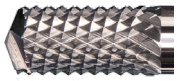
Fiberglass

Plain End, Series FRG-A



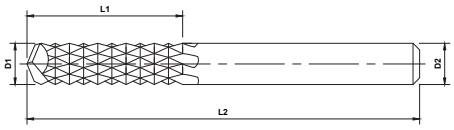
Burend, Series FRG-B

Millend, Series FRG-C



Drillend, Series FRG-D

- High Performance *A*-Gr-SiV submicron grain carbide
- Diamond cut flute pattern
- Effective on laminate and fiberglass materials
- MAP certified quality



For even greater performance, specify PowerN coating

- **High nano-hardness increases hardness 2-1/2 X's**
- **An outstanding heat and oxidation barrier**
- **Ultra thin coating helps retain a super sharp edge**

Append -5 to the part number for PowerN

	OD	LOC	SHK	OAL	End Cut Type			
K	D1	L1	D2	L2	Plain (A)	Burend (B)	Millend (C)	Drillend (D)
✱	1/16	3/16	1/8	1-1/2	FGR1A	FGR1B	FGR1C	FGR1D
✱	3/32	3/8	1/8	1-1/2	FGR1-1A	FGR1-1B	FGR1-1C	FGR1-1D
✱	1/8	1/2	1/8	1-1/2	FGR2A	FGR2B	FGR2C	FGR2D
✱	3/16	5/8	3/16	2	FGR3A	FGR3B	FGR3C	FGR3D
✱	3/16	5/8	1/4	2	FGR4A	FGR4B	FGR4C	FGR4D
✱	1/4	3/4	1/4	2	FGR5A	FGR5B	FGR5C	FGR5D
✱	1/4	3/4	1/4	2-1/2	FGR6A	FGR6B	FGR6C	FGR6D
✱	1/4	1	1/4	2-1/2	FGR6-0A	FGR6-0B	FGR6-0C	FGR6-0D
✱	1/4	3/4	1/4	3	FGR6-1A	FGR6-1B	FGR6-1C	FGR6-1D
✱	1/4	1	1/4	3	FGR6-2A	FGR6-2B	FGR6-2C	FGR6-2D
✱	5/16	1	5/16	2-1/2	FGR7A	FGR7B	FGR7C	FGR7D
✱	3/8	1	3/8	2-1/2	FGR8A	FGR8B	FGR8C	FGR8D
✱	1/2	1	1/2	3	FGR9A	FGR9B	FGR9C	FGR9D

✱ Solid Carbide

Technical Information for Routers

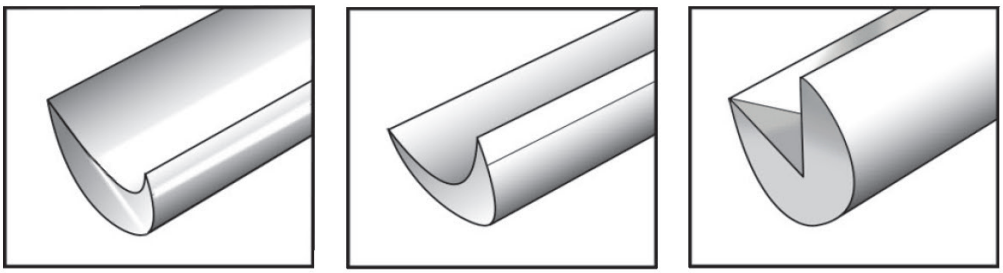
Decimal - Metric Conversion Chart

Size	MM	Decimal Equivalent	Size	MM	Decimal Equivalent	Size	MM	Decimal Equivalent	Size	MM	Decimal Equivalent	Size	MM	Decimal Equivalent
-	0.10	0.004	53	1.51	0.060	-	4.00	0.158	J	7.04	0.277	-	14.00	0.551
-	0.20	0.008	1/16	1.59	0.063	21	4.04	0.159	K	7.14	0.281	9/16	14.29	0.563
-	0.25	0.010	52	1.61	0.064	20	4.09	0.161	9/32	7.14	0.281	37/64	14.68	0.578
-	0.30	0.012	51	1.70	0.067	19	422	.1660	L	7.37	0.290	-	15.00	0.591
80	0.34	0.014	50	1.78	0.070	18	4.31	0.170	M	7.49	0.295	19/32	15.08	0.594
79	0.37	0.015	49	1.85	0.073	11/64	4.37	0.172	19/64	7.54	0.297	39/64	15.48	0.609
1/64	0.40	0.016	48	1.93	0.076	17	4.39	0.173	N	7.67	0.302	5/8	15.88	0.625
78	0.41	0.016	5/64	1.98	0.078	16	4.50	0.177	5/16	7.94	0.313	-	16.00	0.630
77	0.46	0.018	47	1.99	0.079	15	4.57	0.180	-	8.00	0.315	41/64	16,27	0.641
	0.50	0.020	-	2.00	0.079	14	4.62	0.182	0	8.03	0.316	21/32	16.67	0.656
76	0.51	0.020	46	2.06	0.081	13	4.70	0.185	P	8.20	0.323	-	17.00	0.669
75	0.53	0.021	45	2.08	0.082	3/16	4.76	0.188	21/64	8.33	0.328	43/64	17.07	0.672
74	0.57	0.023	44	2.18	0.086	12	4.80	0.189	Q	8.43	0.332	11/16	17.46	0.688
-	0.60	0.024	43	2.26	0.089	11	4.85	0.191	R	8.61	0.339	45/64	17.86	0.703
73	0.61	0.024	42	2.37	0.094	10	4.91	0.194	11/32	8.73	0.344	-	18.00	0.709
72	0.64	0.025	3/32	2.38	0.094	9	4.98	0.196	S	8.84	0.348	23/32	18.26	0.719
71	0.66	0.026	41	2.44	0.096	-	5.00	0.197	-	9.00	0.354	47/64	18.65	0.734
-	0.70	0.028	40	2.50	0.098	8	5.05	0.199	T	9.09	0.358	-	19.00	0.748
70	0.71	0.028	39	2.53	0.100	7	5.11	0.201	23/64	9.13	0.359	3/4	19.05	0.750
69	0.74	0.029	38	2.58	0.102	13/64	5.16	0.203	U	9.35	0.368	49/64	19.45	0.766
	0.75	0.030	37	2.64	0.104	6	5.18	0.204	3/8	9.53	0.375	25/32	19.84	0.781
68	0.79	0.031	36	2.71	0.107	5	5.22	0.206	V	9.56	0.377	-	20.00	0.787
1/32	0.79	0.031	7/64	2.78	0.109	4	5.31	0.209	W	9.80	0.386	51/64	20.24	0.797
-	0.80	0.032	35	2.79	0.110	3	5.41	0.213	25/64	9.92	0.391	13/16	20.64	0.813
67	0.81	0.032	34	2.82	0.111	7/32	5.56	0.219	-	10.00	0.394	-	21.00	0.827
66	0.84	0.033	33	2.87	0.113	2	5.61	0.221	X	10.08	0.397	53/64	21.03	0.828
65	0.89	0.035	32	2.95	0.116	1	5.79	0.228	Y	10.26	0.404	27/32	21.43	0.844
-	0.90	0.035	-	3.00	0.118	A	5.94	0.234	13/32	10.32	0.406	55/64	21.84	0.859
64	0.91	0.036	31	3.05	0.120	15/64	5.95	0.234	Z	10.49	0.413	-	22.00	0.866
63	0.94	0.037	1/8	3.18	0.125	-	6.00	0.236	27/64	10.72	0.422	7/8	22.23	0.875
62	0.97	0.038	30	3.26	0.129	B	6.05	0.238	-	11.00	0.433	57/64	22.62	0.891
61	0.99	0.039	29	3.45	0.136	C	6.15	0.242	7/16	11.11	0.438	-	23.00	0.906
-	1.00	0.039	28	3.57	0.141	D	6.25	0.246	29/64	11.51	0.453	29/32	23.02	0.906
60	1.02	0.040	9/64	3.57	0.141	1/4	6.35	0.250	15/32	11.91	0.469	59/64	23.42	0.922
59	1.04	0.041	27	3.66	0.144	E	6.35	0.250	-	12.00	0.472	15/16	23.81	0.938
58	1.07	0.042	26	3.73	0.147	F	6.53	0.257	31/64	12.30	0.484	-	24.00	0.945
57	1.09	0.043	25	3.80	0.150	G	6.63	0.261	1/2	12.70	0.500	61/64	24.21	0.953
56	1.18	0.047	24	3.86	0.152	17/64	6.75	0.266	-	13.00	0.512	31/32	24.61	0.969
3/64	1.19	0.047	23	3.91	0.154	H	6.76	0.266	33/64	13.10	0.516	-	25.00	0.984
55	1.32	0.052	5/32	3.97	0.156	I	6.91	0.272	17/32	13.49	0.531	63/64	25.00	0.984
54	1.40	0.055	22	3.99	0.157	-	7.00	0.276	35/64	13.89	0.547	1	25.40	1.000

Fluting Specifications

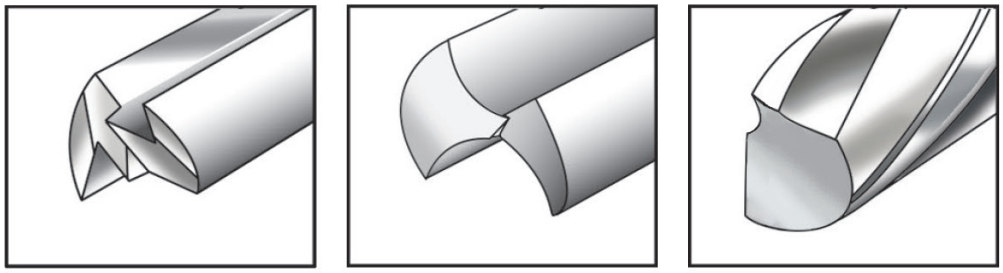
Straight Flute vs. Spiral Routers

Straight flute routers are generally used for routing plastics and other soft materials. They are a great choice for hand feed operations. Spiral flute routers should only be used in automatic feed operations. They are good for use on all materials.



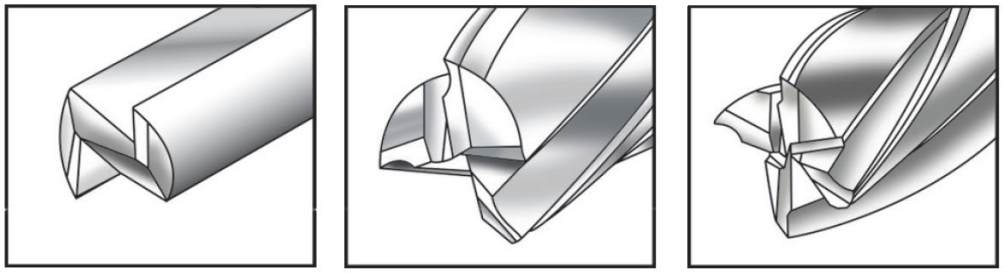
Crescent End

Crescent end are typically found on 1 flute router bits. They are good for both plunging, and flat bottom cutting.



Fishtail End

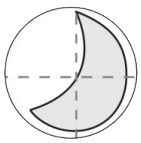
Fishtail, plunge end are the most commonly seen end points in the wood router industry. They are perfect when a rigid plunge point is required.



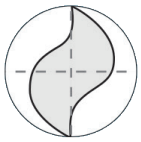
Endmill End

Endmill end are most often found on 3 and 4 flute routers. They are good for achieving smooth finish on a flat bottom surface, and are commonly used in the plastic routing industry.

Flute Features and Geometry

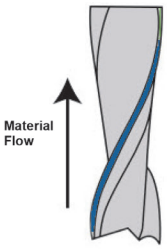


1 Flute routers are a good choice for soft materials. They provide a good finish, and are capable of faster feed rates.



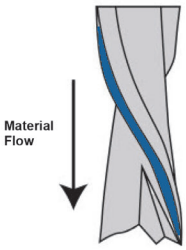
2 Flute routers work well with harder materials, providing an excellent finish to the material.

Multi Flute routers provides an excellent finish on the hardest of materials



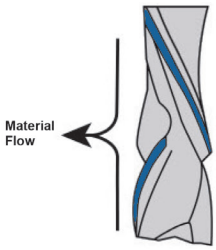
Upcut
Good Bottom Finish

Right hand spiral. Right hand cut. Pulls material toward spindal



Downcut
Good Top Finish

Left hand spiral. Right hand cut. Pushes material away from spindle.



Compression
Good Top and Bottom Finish

Neutralizes Push/Pull Forces

Technical Information for Routers - Softwood

SW Soft Wood									
Series	**823-0, 823-1, 923-0, 923-1**	**802-3, 802-4**	**802-6, 802-8, 902-6, 902-8**	**802-9**	**800-0**	**804-0, 904-0**	**809-2, 809-3**	**810-0, 810-1, 810-2, 910-0, 910-2**	**803-1, 903-1**
Page	**8,9**	**19**	**20, 21**	**22**	**10**	**28**	**36, 37**	**37, 38**	**23**
Diameter	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
1.5mm	0.03-0.08 mm								
1/16"	0.001-0.003"								
3mm	0.05-0.10 mm	0.05-0.11 mm	0.28-0.33 mm		0.20-0.25 mm	0.13-0.18 mm			0.10-0.15 mm
1/8"	0.002-0.004"	0.002-0.005"	0.011-0.013"		0.008-0.010"	0.005-0.007"			0.004-0.006"
6mm	0.10-0.15 mm	0.10-0.16 mm	0.38-0.43 mm		0.25-0.30 mm	0.18-0.23 mm		0.46-0.51 mm	0.015-0.19 mm
1/4"	0.004-0.006"	0.004-0.007"	0.015-0.017"		0.010-0.012"	0.007-0.009"		0.018-0.020"	0.006-0.008"
10mm	0.13-0.18 mm	0.13-0.19 mm	0.43-0.48 mm		0.28-0.33 mm	0.20-0.25 mm	0.60-0.66 mm	0.51-0.56 mm	0.18-0.23 mm
3/8"	0.005-0.007"	0.005-0.008"	0.017-0.019"		0.011-0.013"	0.008-0.010"	0.024-0.026"	0.020-0.022"	0.007-0.009"
12mm	0.18-0.23 mm	0.18-0.24 mm	0.48-0.53 mm	0.48-0.53 mm	0.31-0.36 mm	0.23-0.28 mm	0.66-0.71 mm	0.56-0.61 mm	0.19-0.25 mm
1/2"	0.007-0.009"	0.007-0.010"	0.019-0.021"	0.019-0.021"	0.012-0.014"	0.009-0.011"	0.026-0.028"	0.022-0.024"	0.008-0.010"
16mm			0.53-0.58 mm					0.61-0.66 mm	
5/8"			0.021-0.023"					0.024-0.026"	
20mm								0.66-0.71 mm	0.25-0.31 mm
3/4"								0.026-0.028"	0.010-0.012"

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%. Based on 16,000 RPM

Technical Information for Routers - Hardwood

HW Hard Wood									
Series	**823-0, 823-1, 923-0, 923-1**	**802-3, 802-4**	**802-6, 802-8, 902-6, 902-8**	**802-9**	**800-0**	**804-0, 904-0**	**819-2, 819-3**	**810-0, 810-2 910-0, 910-2**	**810-3**
Page	**8, 9**	**19**	**20, 21**	**22**	**10**	**28**	**52**	**37, 38**	**39**
Diameter	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
1.5mm	0.03-0.08 mm								
1/16"	0.001-0.003"								
3mm	0.05-0.10 mm	0.05-0.11 mm	0.28-0.33 mm		0.20-0.25 mm				
1/8"	0.002-0.004"	0.002-0.005"	0.011-0.013"		0.008-0.010"				
6mm	0.10-0.15 mm	0.10-0.16 mm	0.38-0.43 mm		0.25-0.30 mm	0.12-0.17 mm		0.36-0.40 mm	
1/4"	0.004-0.006"	0.004-0.007"	0.015-0.017"		0.010-0.012"	0.005-0.007"		0.014-0.016"	
10mm	0.13-0.18 mm	0.13-0.19 mm	0.43-0.48 mm		0.28-0.33 mm	0.15-0.20 mm	0.48-0.53 mm	0.40-0.46 mm	0.48-0.53 mm
3/8"	0.005-0.007"	0.005-0.008"	0.017-0.019"		0.011-0.013"	0.006-0.008"	0.019-0.021"	0.016-0.018"	0.019-0.021"
12mm	0.18-0.23 mm	0.18-0.24 mm	0.48-0.53 mm	0.48-0.53 mm	0.31-0.36 mm	0.17-0.22 mm	0.53-0.58 mm	0.46-0.51 mm	0.53-0.58 mm
1/2"	0.007-0.009"	0.007-0.010"	0.019-0.021"	0.019-0.021"	0.012-0.014"	0.007-0.009"	0.021-0.023"	0.018-0.020"	0.021-0.023"
16mm			0.53-0.58 mm					0.51-0.56 mm	0.58-0.64 mm
5/8"			0.021-0.023"					0.020-0.022"	0.023-0.025"
20mm								0.56-0.61 mm	0.64-0.69 mm
3/4"								0.022-0.024"	0.025-0.027"

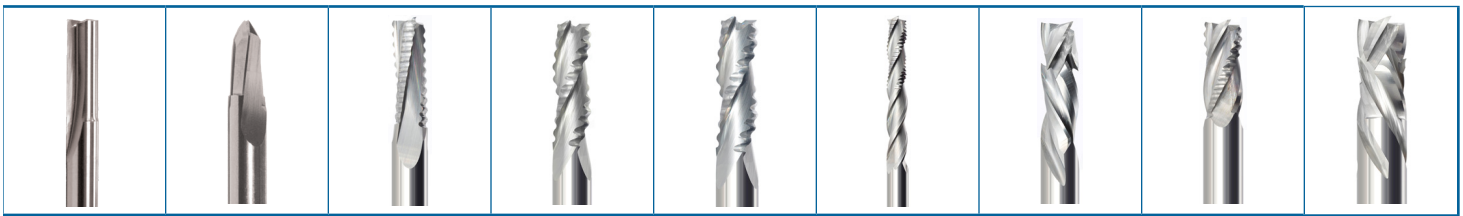
Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%.
Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Chip Load Specifications

803-5	813-0, 813-1, 913-0, 913-1	814-0, 914-0, 814-1, 914-1	815-0, 815-1, 915-0, 915-1	815-2, 915-2, 815-3	815-4, 815-5	815-6, 915-6	816-1, 816-2, 916-1, 916-2	818-0, 918-0, 818-1	820-0, 820-1, 820-2	821-0, 821-1
26	41, 42	42, 43	44	45	46	47	47, 48	47, 48	53, 54	54, 55
1/2xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD
	0.20-0.25 mm									
	0.008-0.010"									
0.05-0.10 mm	0.25-0.30 mm	0.13-0.18 mm								
0.002-0.004"	0.010-0.012"	0.005-0.007"								
	0.30-0.36 mm	0.15-0.20 mm	0.33-0.38 mm	0.40-0.46 mm	0.43-0.48 mm		0.43-0.48 mm	0.48-0.53 mm		
	0.012-0.014"	0.006-0.008"	0.013-0.015"	0.016-0.018"	0.017-0.019"		0.017-0.019"	0.019-0.021"		
	0.36-0.40 mm	0.18-0.23 mm	0.38-0.43 mm	0.45-0.51 mm	0.45-0.51 mm		0.48-0.53 mm	0.53-0.58 mm	0.48-0.53 mm	0.38-0.43 mm
	0.014-0.016"	0.007-0.009"	0.015-0.017"	0.018-0.020"	0.018-0.020"		0.019-0.021"	0.021-0.023"	0.019-0.021"	0.015-0.017"
						0.13-0.18 mm			0.53-0.58 mm	0.43-0.48 mm
						0.005-0.007"			0.021-0.023"	0.017-0.019"
		0.20-0.25 mm	0.48-0.53 mm	0.55-0.61 mm			0.53-0.58 mm		0.58-0.64 mm	0.48-0.53 mm
		0.008-0.010"	0.019-0.021"	0.022-0.024"			0.021-0.023"		0.023-0.025"	0.019-0.021"

Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Chip Load Specifications



803-1, 903-1	803-5	815-0, 815-1, 915-0, 915-1	815-2, 915-2, 815-3	815-4, 815-5	815-6, 915-6	818-0, 918-0, 818-1	820-0	821-0, 821-1
23	26	44	45	46	47	49, 50	53	54, 55
1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD
0.08-0.13 mm								
0.003-0.005"								
0.13-0.17 mm	0.05-0.10 mm							
0.005-0.007"	0.002-0.004"							
0.15-0.20 mm	0.05-0.10 mm	0.33-0.38 mm	0.38-0.43 mm	0.38-0.43 mm		0.48-0.53 mm		
0.006-0.008"	0.002-0.004"	0.013-0.015"	0.015-0.017"	0.015-0.017"		0.019-0.021"		
0.17-0.22 mm		0.36-0.40 mm	0.43-0.48 mm	0.38-0.43 mm		0.53-0.58 mm	0.45-0.50 mm	0.33-0.38 mm
0.007-0.009"		0.014-0.016"	0.017-0.019"	0.015-0.017"		0.021-0.023"	0.018-0.020"	0.013-0.015"
0.20-0.24 mm		0.40-0.46 mm	0.48-0.53 mm		0.12-0.17 mm		0.50-0.55 mm	0.38-0.43 mm
0.008-0.010"		0.016-0.018"	0.019-0.021"		0.005-0.007"		0.020-0.022"	0.015-0.017"
0.23-0.28 mm		0.43-0.48 mm	0.53-0.58 mm	0.48-0.53 mm		0.63-0.68 mm	0.55-0.60 mm	0.40-0.45 mm
0.009-0.011"		0.017-0.019"	0.021-0.023"	0.019-0.021"		0.025-0.027"	0.022-0.024"	0.016-0.018"

Technical Information for Routers - MDF

GW MDF										
Series	**813-0, 813-1, 913-0, 913-1**	**802-3, 802-4**	**802-6, 802-8, 902-6, 902-8**	**802-9**	**800-0**	**804-0, 804-2**	**809-2, 809-3**	**810-0, 810-2 910-0, 910-2**	**810-3**	**803-1, 903-1**
Page	**41, 42**	**19**	**21**	**22**	**10**	**28, 29**	**36, 37**	**37, 38**	**39**	**23**
Diameter	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
1.5mm	0.02-0.07 mm									
1/16"	0.001-0.003"									
3mm	0.05-0.10 mm	0.25-0.30 mm	0.25-0.30 mm		0.17-0.22 mm					0.07-0.12 mm
1/8"	0.002-0.004"	0.010-0.012"	0.010-0.012"		0.007-0.009"					0.003-0.005"
6mm	0.10-0.15 mm	0.30-0.35 mm	0.33-0.38 mm		0.22-0.27 mm	0.12-0.17 mm		0.33-0.38 mm		0.12-0.17 mm
1/4"	0.004-0.006"	0.012-0.014"	0.013-0.015"		0.009-0.011"	0.005-0.007"		0.013-0.015"		0.005-0.007"
10mm	0.12-0.17 mm	0.33-0.38 mm	0.35-0.40 mm		0.25-0.30 mm	0.15-0.20 mm	0.43-0.48 mm	0.35-0.40 mm	0.43-0.48 mm	0.15-0.20 mm
3/8"	0.005-0.007"	0.013-0.015"	0.014-0.016"		0.010-0.012"	0.006-0.008"	0.017-0.019"	0.014-0.016"	0.017-0.019"	0.006-0.008"
12mm		0.35-0.40 mm	0.40-0.45 mm	0.40-0.46 mm	0.27-0.33 mm	0.20-0.25 mm	0.45-0.50 mm	0.40-0.45 mm	0.45-0.50 mm	0.17-0.22 mm
1/2"		0.014-0.016"	0.016-0.018"	0.016-0.018"	0.011-0.013"	0.008-0.010"	0.018-0.020"	0.016-0.018"	0.018-0.020"	0.007-0.009"
16mm						0.25-0.30 mm	0.50-0.56 mm	0.45-0.50 mm	0.50-0.55 mm	
5/8"						0.010-0.012"	0.020-0.022"	0.018-0.020"	0.020-0.022"	
20mm						0.27-0.33 mm	0.58-0.63 mm	0.48-0.53 mm	0.58-0.63 mm	0.22-0.27 mm
3/4"						0.011-0.013"	0.023-0.025"	0.019-0.021"	0.023-0.025"	0.009-0.011"

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%. Based on 16,000 RPM

Technical Information for Routers - Soft Plywood

SW Soft Plywood									
Series	**823-0, 823-1**	**802-6, 802-8, 902-6, 902-8**	**800-0**	**809-0, 809-1**	**809-2, 809-3**	**810-0,810-1,810-2 910-0, 910-2**	**810-3**	**803-1, 903-1**	**803-5**
Page	**8, 9**	**20, 21**	**10**	**35, 36**	**36, 37**	**37, 38**	**39**	**23**	**26**
Diameter	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
1.5mm	0.02-0.07 mm								
1/16"	0.001-0.003"								
3mm	0.05-0.10 mm	0.33-0.38 mm	0.15-0.20 mm					0.07-0.12 mm	
1/8"	0.002-0.004"	0.013-0.015"	0.006-0.008"					0.003-0.005"	
6mm	0.10-0.15 mm	0.38-0.43 mm	0.20-0.25 mm			0.43-0.48 mm		0.12-0.17 mm	0.05-0.10 mm
1/4"	0.004-0.006"	0.015-0.017"	0.008-0.010"			0.017-0.019"		0.005-0.007"	0.002-0.004"
10mm	0.12-0.17 mm	0.40-0.45 mm	0.22-0.27 mm	0.55-0.60 mm	0.55-0.60 mm	0.48-0.53 mm	0.55-0.60 mm	0.15-0.20 mm	0.05-0.10 mm
3/8"	0.005-0.007"	0.016-0.018"	0.009-0.011"	0.022-0.024"	0.022-0.024"	0.019-0.021"	0.022-0.024"	0.006-0.008"	0.002-0.004"
12mm		0.45-0.50 mm	0.25-0.30 mm	0.60-0.66 mm	0.60-0.66 mm	0.53-0.58 mm	0.60-0.66 mm	0.17-0.22 mm	0.07-0.12 mm
1/2"		0.018-0.020"	0.010-0.012"	0.024-0.026"	0.024-0.026"	0.021-0.023"	0.024-0.026"	0.007-0.009"	0.003-0.005"
16mm		0.50-0.55 mm		0.66-0.71 mm		0.58-0.63 mm	0.66-0.71 mm		
5/8"		0.020-0.022"		0.026-0.028"		0.023-0.025"	0.026-0.028"		
20mm		0.55-0.60 mm		0.71-0.76 mm		0.63-0.68 mm	0.71-0.76 mm	0.22-0.27 mm	0.10-0.15 mm
3/4"		0.022-0.024"		0.028-0.030"		0.025-0.027"	0.028-0.030"	0.009-0.011"	0.004-0.006"

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%.
Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Chip Load Specifications

803-5	814-0, 914-0, 814-1, 914-1	815-0, 815-1, 915-0, 915-1	815-2, 915-2, 815-3	815-4, 815-5	815-6, 915-6	816-1, 816-2, 916-1, 916-2	818-0, 918-0, 818-1	820-0, 820-1, 820-2	821-0, 821-1
26	41	42, 43	45	46	47	47, 48	47, 48	53, 54	54, 55
1/2xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD
0.02-0.07 mm	0.10-0.15 mm								
0.001-0.003"	0.004-0.006"								
0.05-0.10 mm	0.12-0.17 mm	0.30-0.35 mm	0.43-0.48 mm	0.43-0.48 mm		0.35-0.40 mm	0.48-0.53 mm		
0.002-0.004"	0.005-0.007"	0.012-0.014"	0.017-0.019"	0.017-0.019"		0.014-0.016"	0.019-0.021"		
0.07-0.12 mm	0.12-0.17 mm	0.33-0.38 mm	0.45-0.50 mm	0.48-0.53 mm		0.40-0.45 mm	0.53-0.58 mm	0.50-0.55 mm	0.35-0.40 mm
0.003-0.005"	0.005-0.007"	0.013-0.015"	0.018-0.020"	0.019-0.021"		0.016-0.018"	0.021-0.023"	0.020-0.022"	0.014-0.016"
		0.35-0.40 mm	0.50-0.55 mm		0.10-0.15 mm	0.43-0.48 mm		0.55-0.60 mm	0.40-0.45 mm
		0.014-0.016"	0.020-0.022"		0.004-0.006"	0.017-0.019"		0.022-0.024"	0.016-0.018"
0.12-0.17 mm	0.15-0.20 mm	0.40-0.45 mm	0.58-0.63 mm			0.48-0.53 mm		0.60-0.66 mm	0.45-0.50 mm
0.005-0.007"	0.006-0.008"	0.016-0.018"	0.023-0.025"			0.019-0.021"		0.024-0.026"	0.018-0.020"

Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Chip Load Specifications

815-0, 815-1, 915-0, 915-1	815-2, 915-2, 815-3	815-4, 815-5	815-6, 915-6	816-1, 816-2, 916-1, 916-2	818-0, 918-0, 818-1	820-0, 820-1, 820-2	821-0, 821-1
42	43	44	45	45, 46	47, 48	51, 52	54, 55
1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD
0.35-0.40 mm	0.43-0.48 mm	0.43-0.48 mm		0.50-0.55 mm	0.48-0.53 mm		
0.014-0.16"	0.017-0.019"	0.017-0.019"		0.020-0.022"	0.019-0.021"		
0.40-0.45 mm	0.48-0.53 mm	0.48-0.53 mm		0.55-0.60 mm	0.53-0.58 mm	0.71-0.76 mm	0.53-0.58 mm
0.016-0.018"	0.019-0.021"	0.019-0.021"		0.022-0.024"	0.021-0.023"	0.028-0.030"	0.021-0.023"
0.45-0.50	0.53-0.58 mm		0.07-0.12 mm	0.60-0.66 mm		0.76-0.81 mm	0.58-0.63 mm
0.018-0.020"	0.021-0.023"		0.003-0.005"	0.024-0.026"		0.030-0.032"	0.023-0.025"
0.50-0.55	0.58-0.63 mm			0.66-0.71 mm		0.81-0.86 mm	0.63-0.68 mm
0.020-0.022"	0.023-0.025"			0.026-0.028"		0.032-0.034"	0.025-0.027"

Technical Information for Routers - Hard Plywood

HW Hard Plywood								
Series	**823-0, 823-1, 923-0, 923-1**	**802-6, 802-8, 902-6, 902-8**	**800-0**	**809-0, 809-1**	**809-2, 809-3**	**810-0, 810-1, 810-2, 910-0, 910-2**	**810-3**	**803-1, 903-1**
Page	**8, 9**	**20, 21**	**10**	**35, 36**	**36, 37**	**37, 38**	**39**	**23**
Diameter	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
1.5mm	0.02-0.07 mm							
1/16"	0.001-0.003"							
3mm	0.05-0.10 mm	0.30-0.45 mm	0.12-0.17 mm					0.07-0.12
1/8"	0.002-0.004"	0.012-0.018"	0.005-0.007"					0.003-0.005"
6mm	0.10-0.15 mm	0.35-0.40 mm	0.17-0.22 mm			0.35-0.40 mm		0.12-0.17 mm
1/4"	0.004-0.006"	0.014-0.016"	0.007-0.009"			0.014-0.016"		0.005-0.007"
10mm	0.12-0.17 mm	0.40-0.45 mm	0.20-0.0.25 mm	0.48-0.53 mm	0.48-0.53 mm	0.40-0.45 mm	0.48-0.53 mm	0.15-0.20 mm
3/8"	0.005-0.007"	0.016-0.018"	0.008-0.010"	0.019-0.021"	0.019-0.021"	0.016-0.018"	0.019-0.021"	0.006-0.008"
12mm		0.45-0.50 mm	0.22-0.27 mm	0.53-0.58 mm	0.53-0.58 mm	0.45-0.50 mm	0.53-0.58 mm	0.17-0.22 mm
1/2"		0.018-0.020"	0.009-0.011"	0.021-0.023"	0.021-0.023"	0.018-0.020"	0.021-0.023"	0.007-0.009"
16mm		0.50-0.55 mm		0.58-0.63 mm		0.50-0.55 mm	0.58-0.63 mm	
5/8"		0.020-0.022"		0.023-0.025"		0.020-0.022"	0.023-0.025"	
20mm		0.55-0.60 mm		0.63-0.68 mm		0.55-0.60 mm	0.63-0.68 mm	0.22-0.27 mm
3/4"		0.022-0.024"		0.025-0.027"		0.022-0.024"	0.025-0.027"	0.009-0.011"

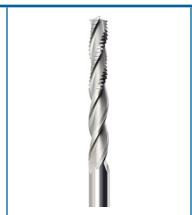
Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%. Based on 16,000 RPM

Technical Information - Laminated Chipboard Chip Load Specifications

GW Laminated Chipboard						
Series	**802-6, 802-8, 902-6, 902-8**	**810-0, 810-1, 810-2 910-0, 910-2**	**810-3**	**818-0, 918-0, 818-1**	**820-2**	**821-0, 821-1**
Page	**20, 21**	**38**	**39**	**49, 50**	**54**	**54, 55**
Diameter	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
1.5mm						
1/16"						
3mm	0.33-0.38 mm					
1/8"	0.013-0.015"					
6mm	0.38-0.43 mm	0.43-0.48 mm				
1/4"	0.015-0.017"	0.017-0.019"				
10mm	0.40-0.45 mm	0.48-0.53 mm	0.55-0.60 mm	0.48-0.53 mm		
3/8"	0.016-0.018"	0.019-0.021"	0.022-0.024"	0.019-0.021"		
12mm	0.45-0.50 mm	0.53-0.58 mm	0.60-0.66 mm	0.53-0.58 mm	0.71-0.76 mm	0.53-0.58 mm
1/2"	0.018-0.020"	0.021-0.023"	0.024-0.026"	0.021-0.023"	0.028-0.030"	0.021-0.023"
16mm	0.48-0.53 mm	0.63-0.68 mm	0.66-0.71 mm		0.76-0.81 mm	0.58-0.63 mm
5/8"	0.019-0.021"	0.025-0.027"	0.026-0.028"		0.030-0.032"	0.023-0.025"
20mm	0.53-0.58 mm	0.68-0.73 mm	0.71-0.76 mm		0.81-0.86 mm	0.63-0.68 mm
3/4"	0.021-0.023"	0.027-0.029"	0.028-0.030"		0.032-0.034"	0.025-0.027"

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%.
Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Chip Load Specifications

							
803-5	**815-0, 815-1, 915-0, 915-1**	**815-2, 915-2, 815-3, 815-4, 815-5**	**815-6, 915-6**	**816-1, 816-2, 916-1, 916-2**	**818-0, 918-0, 818-1**	**820-0, 820-2**	**821-0, 821-1**
26	**44**	**45, 46**	**47**	**47, 48**	**49, 50**	**53, 54**	**54, 55**
1/2xD	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
0.02-0.07 mm							
0.001-0.003"							
0.05-0.10 mm	0.35-0.40 mm	0.43-0.48 mm		0.45-0.50 mm	0.48-0.53 mm		
0.002-0.004"	0.014-0.016"	0.017-0.019"		0.018-0.020"	0.019-0.021"		
0.07-0.12	0.40-0.45 mm	0.48-0.53 mm		0.50-0.55 mm	0.53-0.58 mm	0.68-0.73 mm	1.00-1.04 mm
0.003-0.005"	0.016-0.018"	0.019-0.021"		0.020-0.022"	0.021-0.023"	0.027-0.029"	0.039-0.041"
	0.45-0.50 mm	0.53-0.58 mm	0.07-0.12 mm	0.55-0.63 mm		0.73-0.78 mm	1.09-1.14 mm
	0.018-0.020"	0.021-0.023"	0.003-0.005"	0.022-0.025"		0.029-0.031"	0.043-0.045"
0.12-0.17	0.50-0.55 mm	0.58-0.63 mm		0.60-0.66 mm		0.81-0.86 mm	1.19-1.24 mm
0.005-0.007"	0.020-0.022"	0.023-0.025"		0.024-0.026"		0.032-0.034"	0.047-0.049"

Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Technical Information - Laminated Plywood Chip Load Specifications

GW Laminated Plywood						
	802-6, 802-8, 902-6, 902-8	**810-0, 810-1, 810-2 910-0, 910-2**	**810-3**	**818-0, 918-0, 818-1**	**820-2**	**821-0, 821-1**
Page	**20, 21**	**37, 38**	**39**	**49, 50**	**54**	**54, 55**
Diameter	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
1.5mm						
1/16"						
3mm	0.33-0.38 mm					
1/8"	0.013-0.015"					
6mm	0.38-0.43 mm	0.38-0.43 mm				
1/4"	0.015-0.017"	0.015-0.017"				
10mm	0.40-0.45 mm	0.40-0.45 mm	0.48-0.53 mm	0.48-0.53 mm		
3/8"	0.016-0.018"	0.016-0.018"	0.019-0.021"	0.019-0.021"		
12mm	0.45-0.50 mm	0.45-0.50 mm	0.53-0.58 mm	0.53-0.58 mm	0.68-0.73 mm	0.48-0.53 mm
1/2"	0.018-0.020"	0.018-0.020"	0.021-0.023"	0.021-0.023"	0.027-0.029"	0.019-0.021"
16mm	0.48-0.53 mm	0.48-0.53 mm	0.58-0.63 mm		0.76-0.81 mm	0.53-0.58 mm
5/8"	0.019-0.021"	0.019-0.021"	0.023-0.025"		0.030-0.032"	0.021-0.023"
20mm	0.53-0.58 mm	0.53-0.58 mm	0.63-0.68 mm		0.81-0.86 mm	0.58-0.63 mm
3/4"	0.021-0.023"	0.021-0.023"	0.025-0.027"		0.032-0.034"	0.023-0.025"

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%. Formula: RPM = Feed Rate / (Number of Flutes x Chip Load)
Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Technical Information - Soft Plastics Chip Load Specifications

SP Soft Plaastic							
Series	**823-0, 823-1, 923-0, 923-1**	**800-1, 900-1**	**801-0, 801-1, 901-0, 901-2**	**803-7, 903-7**	**804-0, 804-2**	**811-0**	**815-0 thru 815-6, 915-0 thru 915-6**
Page	**8, 9**	**10**	**12**	**27**	**28, 29**	**39**	**44, 45, 46**
Dia.	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**	
1.5mm	0.05-0.10 mm		0.05-0.10 mm				
1/16"	0.002-0.004"		0.02-0.004"				
3mm	0.10-0.15 mm	0.10-0.15 mm	0.10-0.15 mm	0.13-0.17 mm	0.05-0.10 mm	0.02-0.07 mm	
1/8"	0.004-0.006"	0.004-0.006"	0.004-0.006"	0.005-0.0007"	0.002-0.004"	0.001-0.003"	
6mm	0.20-0.30 mm	0.20-0.30 mm	0.20-0.30 mm	0.17-0.23 mm	0.10-0.20 mm	0.07-0.12 mm	
1/4"	0.008-0.012"	0.008-0.012"	0.008-0.012"	0.007-0.009"	0.004-0.008"	0.003-0.005"	
10mm	0.20-0.30 mm	0.35-0.46 mm	0.20-0.30 mm	0.23-0.28 mm	0.12-0.17 mm	0.10-0.15 mm	0.10-0.15 mm
3/8"	0.008-0.012"	0.014-0.018"	0.008-0.012"	0.009-0.011"	0.005-0.007"	0.004-0.006"	0.004-0.006"
12mm		0.46-0.56 mm	0.25-0.35 mm	0.28-0.33 mm	0.15-0.20 mm	0.12-0.17 mm	0.15-0.20 mm
1/2"		0.018-0.022"	0.010-0.014"	0.011-0.013"	0.006-0.008"	0.005-0.007"	0.006-0.008"
16mm					0.17-0.22 mm		
5/8"					0.007-0.009"		
20mm							
3/4"							

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%. Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Technical Information - Composite Chip Load Specifications

C&L Composites					
Series	**802-1**	**803-0, 803-1, 903-0, 903-1**	**817-0, 817-1**	**819-0, 819-1**	**819-2, 819-3**
Page	**18**	**22, 23**	**48, 49**	**51**	**52**
Diameter	**1xD**	**1xD**	**1xD**	**1xD**	**1xD**
1.5mm					
1/16"					
3mm	0.07-0.12 mm	0.05-0.10 mm		0.05-0.10 mm	
1/8"	0.003-0.005"	0.002-0.004"		0.002-0.004"	
6mm	0.07-0.12 mm	0.07-0.12 mm		0.05-0.10 mm	
1/4"	0.003-0.005"	0.003-0.005"		0.002-0.004"	
10mm	0.10-0.15 mm	0.10-0.15 mm	0.05-0.25 mm	0.07-0.15 mm	0.17-0.22 mm
3/8"	0.004-0.006"	0.004-0.006"	0.002-0.010"	0.003-0.006"	0.007-0.009"
12mm	0.12-0.0.17 mm	0.12-0.17 mm mm	0.05-0.25 mm	0.18-0.23 mm	0.20-0.25 mm
1/2"	0.005-0.007"	0.005-0.007"	0.002-0.010"	0.007-0.009"	0.008-0.010"
16mm					
5/8"					
20mm					
3/4"					

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%. Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Technical Information - Hard Plastics Chip Load Specifications

Hard Plastic	823-0, 823-1, 923-0, 923-1	800-1, 900-1	801-3, 901-3	803-7, 903-7	803-0, 903-0	814-0, 814-1, 914-0, 914-1	815-0 thru 815-6, 915-0 thru 915-6
Page	8, 9	10	14	27	22	42, 43	44, 45, 46
Dia.	1xD	1xD	1xD	1xD			
1.5mm	0.05-0.10 mm		0.05-0.10 mm				
1/16"	0.002-0.004"		0.02-0.004"				
3mm	0.15-0.20 mm	0.08-0.13 mm	0.15-0.20 mm	0.13-0.18 mm			
1/8"	0.006-0.008"	0.003-0.005"	0.006-0.008"	0.005-0.007"			
6mm	0.25-0.30 mm	0.18-0.28 mm	0.25-0.30 mm	0.18-0.23 mm	0.15-0.20 mm	0.10-0.15 mm	
1/4"	0.010-0.012"	0.007-0.011"	0.010-0.012"	0.007-0.009"	0.006-0.008"	0.004-0.006"	
10mm	0.25-0.30 mm	0.33-0.43 mm	0.25-0.30 mm	0.23-0.28 mm	0.18-0.23 mm	0.10-0.15 mm	0.10-0.15 mm
3/8"	0.010-0.012"	0.013-0.017"	0.010-0.012"	0.009-0.011"	0.007-0.009"	.0004-0.006"	0.004-0.006"
12mm		0.43-0.53 mm	0.30-0.40 mm	0.28-0.33 mm	0.20-0.25 mm	0.15-0.25 mm	0.15-0.20 mm
1/2"		0.017-0.021"	0.012-0.016"	0.011-0.013"	0.008-0.010"	0.006-0.010"	0.006-0.008"
16mm							
5/8"							
20mm						0.30-0.40 mm	
3/4"						0.012-0.016"	

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%. Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Technical Information - Solid Surface Chip Load Specifications

Solid Surface	823-0, 823-1, 923-0, 923-1	801-0, 801-1, 901-2	801-3, 801-4, 901-3, 801-4	800-3, 800-4	804-0, 904-0	805-0, 805-1, 905-0, 905-1	803-0, 803-1, 903-0, 903-1	803-5	814-0, 814-1, 914-0, 914-1
Page	8, 9	12	14, 15	11	28	31, 32	22, 23	26	42, 43
Diameter	1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD	
1.5mm	0.05-0.10 mm	0.05-0.07 mm	0.05-0.07 mm						
1/16"	0.002-0.004"	0.002-0.003"	0.002-0.003"						
3mm	0.15-0.20 mm	0.05-0.10 mm	0.05-0.10 mm		0.05-0.10 mm	0.08-0.15 mm	0.05-0.10 mm		
1/8"	0.006-0.008"	0.002-0.004"	0.002-0.004"		0.002-0.004"	0.003-0.006"	0.002-0.004"		
6mm	0.25-0.30 mm	0.15-0.25 mm	0.15-0.25 mm	0.05-0.10 mm	0.07-0.12 mm	0.10-0.15 mm	0.07-0.12 mm	0.07-00.15 mm	0.05-0.10 mm
1/4"	0.010-0.012"	0.006-0.010"	0.006-0.010"	0.002-0.004"	0.003-0.005"	0.004-0.006"	0.003-0.005"	0.003-0.006"	0.002-0.004"
10mm	0.25-0.30 mm	0.15-0.25 mm	0.15-0.25 mm		0.10-0.15 mm	0.20-0.25 mm	0.10-0.15 mm	0.07-0.15 mm	0.05-0.15 mm
3/8"	0.010-0.012"	0.006-0.010"	0.006-0.010"		0.004-0.006"	0.008-0.010"	0.004-0.006"	0.003-0.006"	0.002-0.006"
12mm					0.12-0.17 mm	0.30-0.35 mm	0.12-0.17 mm		0.05-0.15 mm
1/2"					0.005-0.007"	0.012-0.014"	0.005-0.007"		0.002-0.006"
16mm					0.15-0.20 mm				0.10-0.20 mm
5/8"					0.006-0.008"				0.004-0.008"
20mm					0.17-0.22 mm				
3/4"					0.007-0.009"				

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%. Formula: RPM = Feed Rate / (Number of Flutes x Chip Load)
Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

Technical Information - Aluminum Chip Load Specifications

Aluminum			
Series	**823-0, 823-1, 923-0, 923-1**	**802-1, 902-1**	**805-0, 905-0**
Page	**8, 9**	**18**	**31**
Diameter	**1xD**	**1xD**	**1xD**
1.5mm	0.05-0.10		
1/16"	0.002-0.004"		
3mm	0.05-0.10	0.15-0.20	0.07-0.12
1/8"	0.002-0.004"	0.006-0.008"	0.003-0.005"
6mm	0.07-0.15	0.17-0.22	0.10-0.15
1/4"	0.003-0.006"	0.007-0.009"	0.004-0.006"
10mm	0.10-0.20	0.20-0.25	0.15-0.20
3/8"	0.004-0.008"	0.008-0.010"	0.006-0.008"
12mm	0.12-0.22	0.22-0.27	0.25-0.30
1/2"	0.005-0.009"	0.009-0.011"	0.010-0.012"
16mm			
5/8"			
20mm			
3/4"			

Depth of Cut: 1 x D Use suggested chip load. • 2 x D Decrease chip load by 25%. • 3 x D Decrease chip load by 50%.
Formula: RPM = Feed Rate / (Number of Flutes x Chip Load) • Feed Rate = RPM x Number of Flutes x Chip Load • Chip Load = Feed rate / (RPM x Number of Flutes)

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