

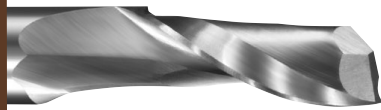


VORTEX
TOOL COMPANY INC.



**MADE IN THE
U S A**

Series 800 & 900 Single Flute Finishing Spirals



Upcut - Series 800

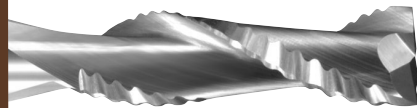


Downcut - Series 900

Single edge tools are used when slower feed rates (100-300 inches per minute) are mandated by the application. The open flute geometry is excellent for chip evacuation and helps reduce heat build up. Designed to cut wood or wood composites.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
830	930	1/4	7/8	1/4	2 1/2
835	935	5/16	7/8	3/8	3
840	940	3/8	1 1/4	3/8	3
850	950	1/2	1 1/4	1/2	3

Series 1000 & 1100 Two Flute Roughing Spirals



Upcut - Series 1000



Downcut - Series 1100

Roughing tools are designed for high feed rates on CNC routers. These tools are used when surface finish is not important in dense materials such as hardwoods and plywoods. Roughing tools are very successful in CNC applications where this bit makes the first cut, followed by a second cut using a profile type tool. This tool will produce a “rippled” edge cut and is extremely quiet and smooth cutting, even in heavy cuts and high feed rates. Avoid using this tool at lower feed rates which generate chip loads under .005”.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
1040	1140	3/8	1 1/4	3/8	3
1040L	--	3/8	1 1/4	3/8	3
1050	1150	1/2	1 1/4	1/2	3 1/2
1050L	--	1/2	1 1/4	1/2	3 1/2
1055	1155	1/2	1 1/2	1/2	3 1/2
1055L	--	1/2	1 1/2	1/2	3 1/2
1060	1160	1/2	1 3/4	1/2	3 1/2
--	1160L	1/2	1 3/4	1/2	3 1/2
1065	1165	1/2	2 1/8	1/2	4
1065L	--	1/2	2 1/8	1/2	4
1070	1170	5/8	2 1/8	5/8	4
1070L	--	5/8	2 1/8	5/8	4
1080	1180	3/4	2 1/2	3/4	5

L= Left Hand Rotation



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Series 1200

Two Flute Upcut Finishing Spirals

Two flute finishing tools are used when a smooth edge cut is required and is a popular tool design for most routing applications. The helical cutting edge reduces material contact while in the cut. These tools are used for cutting materials where no special considerations are needed. The upcut spiral will provide a smooth bottom finish, while “augering” the chips upward.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
1204	--	1/16	1/4	1/8	1 1/2
1206	--	5mm	20mm	6mm	64mm
1208	--	6mm	25mm	6mm	64mm
1210	1210L	1/8	1/2	1/4	2
1212*	--	1/8	7/8	1/4	2 1/2
1215	--	5/32	9/16	1/4	2
1220	1220L	3/16	5/8	1/4	2
1225*	--	3/16	7/8	1/4	2 1/2
1222	--	8mm	25mm	8mm	64mm
1228	--	7/32	3/4	1/4	2 1/2
1230	1230L	1/4	7/8	1/4	2 1/2
1232*	1232L*	1/4	1 1/4	1/4	3
1234	--	9/32	1	5/16	2 1/2
1235	--	5/16	1 1/8	5/16	3
1238	--	3/8	1	3/8	3
1240	1240L	3/8	1 1/4	3/8	3
1245	1245L	3/8	1 1/4	1/2	3 1/2
1249	1249L	7/16	1	1/2	3
1250	1250L	1/2	1 1/4	1/2	3 1/2
1251	--	1/2	7/8	1/2	3
1255	--	1/2	1 1/2	1/2	3 1/2
1255B	--	1/2	1 1/2	1/2	3 1/2
1260	--	1/2	1 3/4	1/2	3 1/2
1260B	--	1/2	1 3/4	1/2	4
1265	1265L	1/2	2 1/8	1/2	4
1270	1270L	5/8	2 1/8	5/8	4
1280	--	3/4	2 1/2	3/4	5
1282	--	3/4	1 5/8	3/4	4
1285*	1285L*	3/4	3 1/2	3/4	6

L= Left Hand Rotation

* = Not guaranteed against breakage due to extreme cutting edge length

B = Flush Trim Bearing Bit

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Series 1300 Two Flute Downcut Finishing Spirals

Downcut tools are used when the down shearing effect of the tool is preferred. This tool will produce a clean top edge of a dado type or groove type cut or simply a thru cut where the bottom edge quality is not important. These tools will direct chip flow downward while helping hold parts onto the table or pod. When nest cutting the tool path remains packed with chips which helps preserve maximum vacuum. Never plunge straight down with downcut tooling as this may cause fire or breakage.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
1306	--	5mm	20mm	6mm	64mm
1308	--	6mm	25mm	6mm	64mm
1310	1310L	1/8	1/2	1/4	2
1312*	--	1/8	7/8	1/4	2 1/2
1315	--	5/32	9/16	1/4	2
1320	1320L	3/16	5/8	1/4	2
1325*	--	3/16	7/8	1/4	2 1/2
1322	--	8mm	25mm	8mm	64mm
1328	--	7/32	3/4	1/4	2 1/2
1330	1330L	1/4	7/8	1/4	2 1/2
1332*	--	1/4	1 1/4	1/4	3
1334	--	9/32 (7.1mm)	1	5/16	2 1/2
1335	--	5/16	1 1/8	5/16	3
1338	--	3/8	1	3/8	3
1340	1340L	3/8	1 1/4	3/8	3
1345	1345L	3/8	1 1/4	1/2	3 1/2
1349	--	7/16	1	1/2	3
1350	1350L	1/2	1 1/4	1/2	3 1/2
1351	--	1/2	7/8	1/2	3
1355	1355L	1/2	1 1/2	1/2	3 1/2
1360	1360L	1/2	1 3/4	1/2	3 1/2
1365	1365L	1/2	2 1/8	1/2	4
1370	1370L	5/8	2 1/8	5/8	4
1380	1380L	3/4	2 1/2	3/4	5
1382	--	3/4	1 5/8	3/4	4
1385*	--	3/4	3 1/2	3/4	6

L= Left Hand Rotation

* = Not guaranteed against breakage due to extreme cutting edge length

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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**Series 1300XP -
Downcut
“Xtreme Performance”**

Series 1300XP Two Flute “Xtreme Performance” Downcut Finishing Spirals

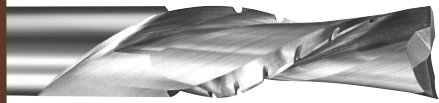
These tools have been specifically designed for difficult to cut materials where tool life is a problem. These tools will produce a clean top edge of a dado type or groove type cut or simply a thru cut where the bottom edge cut quality is not important.

PART #	CED	CEL	SHK DIA	OAL
1330XP	1/4	7/8	1/4	2 1/2
1340XP	3/8	7/8	3/8	3
1340LXP	3/8	7/8	3/8	3
1350XP	1/2	7/8	1/2	3

L= Left Hand Rotation



Upcut - Series 1400



Downcut - Series 1500

Series 1400 & 1500 Two Flute Chipbreaker Spirals

Chipbreaker cutting edges “break” the chips into even smaller pieces reducing power consumption and vibration. Chipbreakers are staggered on each flute to produce a smooth cut, but may leave visual lines in some situations. Chipbreaker tools are recommended for hardwoods, plywoods, and dense materials where higher feed rates are required.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
1440	1540	3/8	1 1/4	3/8	3
--	1540L	3/8	1 1/4	3/8	3
1450	1550	1/2	1 1/4	1/2	3 1/2
1455	1555	1/2	1 1/2	1/2	3 1/2
1460	1560	1/2	1 3/4	1/2	3 1/2
1465	1565	1/2	2 1/8	1/2	4
1470	1570	5/8	2 1/8	5/8	4
1470L	--	5/8	2 1/8	5/8	4
1480	1580	3/4	2 1/2	3/4	5

L= Left Hand Rotation

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Series 1600 & 1700 Three Flute Roughing Spirals



Upcut - Series 1600



Downcut - Series 1700

Three flute tools are designed for high feed rates on CNC routers and are used when surface finish is not important in dense materials such as hardwoods and plywoods. These tools are very successful in CNC applications where this bit makes the first cut, followed by a second cut using a profile type tool. This tool will produce a “rippled” edge cut and is extremely quiet and smooth cutting, even in heavy cuts and high feed rates.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
1638	--	3/8	1	3/8	2 1/2
1640	1740	3/8	1 1/4	3/8	3
1650	1750	1/2	1 1/4	1/2	3 1/2
--	1750L	1/2	1 1/4	1/2	3 1/2
1660	1760	1/2	1 3/4	1/2	3 1/2
1670	1770	5/8	2 1/8	5/8	4
1680	1780	3/4	2 1/2	3/4	5
1680L	--	3/4	2 1/2	3/4	5
1685*	1785*	3/4	3 1/2	3/4	6

Castle “Face Frame Pocket Bit - #1638



Upcut - Series 1800



Downcut - Series 1900

Series 1800 & 1900 Three Flute Finishing Spirals

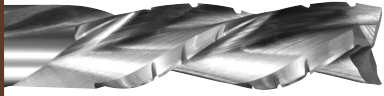
Finishing tools are used when an extremely smooth edge cut is required. The three flute design provides a better finish than a two flute tool at the same feed rate. Three flute tools are used for cutting natural woods and man-made wood composites. Some users experience greater tool life with a three flute tool as compared to a two flute tool.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
1830	1930	1/4	7/8	1/4	2 1/2
--	1930L	1/4	7/8	1/4	2 1/2
1840	1940	3/8	1 1/4	3/8	3
1840L	1940L	3/8	1 1/4	3/8	3
1850	1950	1/2	1 1/4	1/2	3 1/2
--	1950L	1/2	1 1/4	1/2	3 1/2
1860	1960	1/2	1 3/4	1/2	3 1/2
1860L	1960L	1/2	1 3/4	1/2	3 1/2
1865	1965	1/2	2 1/8	1/2	4
1870	1970	5/8	2 1/8	5/8	4
--	1970L	5/8	2 1/8	5/8	4
1880	1980	3/4	2 1/2	3/4	5
1880L	1980L	3/4	2 1/2	3/4	5
1882	1982	3/4	1 5/8	3/4	4
1885*	1985*	3/4	3 1/2	3/4	6
--	1985L*	3/4	3 1/2	3/4	6

L= Left Hand Rotation * = Not guaranteed against breakage due to extreme cutting edge length



Upcut - Series 2000



Downcut - Series 2100

Series 2000 & 2100 Three Flute Chipbreaker Spirals

Chipbreaker cutting edges “break” the chips into smaller pieces reducing power consumption and vibration. Chipbreakers are staggered on each flute to produce a smooth edge cut, but may leave visual lines when used with router spindles in poor condition. Chipbreaker tools are recommended for hardwoods, plywoods and dense materials.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
2040	2140	3/8	1 1/4	3/8	3
--	2140L	3/8	1 1/4	3/8	3
2050	2150	1/2	1 1/4	1/2	3 1/2
2060	2160	1/2	1 3/4	1/2	3 1/2
2060L	--	1/2	1 3/4	1/2	3 1/2
2065	2165	1/2	2 1/8	1/2	4
2070	2170	5/8	2 1/8	5/8	4
2070L	--	5/8	2 1/8	5/8	4
2080	2180	3/4	2 1/2	3/4	5

L= Left Hand Rotation



Series 2200 Two Flute Upcut Ballnose Spirals

These bits have been geometrically designed to cut cleaner than ballnose end mills and have point geometry specifically designed to cut wood or plastics. A series of tapered ballnose spirals have been designed for carving machines like Legacy. Used for 3D modeling and carving, fluting, or for routing slots with rounded bottoms or rounded inside corners.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
2204	--	1/16	1/4	1/8	1 1/2
2210	--	1/8	1/2	1/8	1 1/2
2230	2230L	1/4	7/8	1/4	2 1/2
2235*	--	1/4	1 1/2	1/4	4
2240	--	3/8	1 1/4	3/8	3
2243*	--	3/8	1 1/2	3/8	4
2250	2250L	1/2	1 1/4	1/2	3 1/2
2255	--	1/2	1 1/2	1/2	3 1/2
2258	--	1/2	1 1/2	1/2	5
2265	--	1/2	2 1/8	1/2	4
2270	--	5/8	2 1/8	5/8	4
2280	--	3/4	2 1/2	3/4	5
2282	--	3/4	1 1/2	3/4	4
2285*	--	3/4	3 1/2	3/4	6

L= Left Hand Rotation

* = Not guaranteed against breakage due to extreme cutting edge length



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Series 2200 Tapered Ballnose Spirals

A series of tapered ballnose spirals have been designed for Carving Machines like Legacy. Used for 3D modeling and carving, fluting, or for routing slots with rounded bottoms or rounded inside corners. These tools offer added strength with the the ability to still produce fine detailed carving.

PART #	CED	CEL	SHK DIA	OAL
2205	1/4to 1/16	1 1/2	1/4	3
2215	1/4to 1/8	1 1/2	1/4	3
2245	1/2to 1/4	1 1/2	1/2	3 1/2
2260	1/2to 3/8	1 1/2	1/2	3 1/2



Two Flute Finishing Pass-by



Three Flute Finishing Pass-by



Three Flute Roughing Pass-by

Series 2300

Pass-by/Deep Pocket Mortise Upcut

Pass-by router bits have a long overall length and a reduced diameter between the end of the cutting edge and the shank of the bit. This bit design is well suited for deep pocket mortise cuts and step cutting through thick materials. Available in two or three flutes in roughing or finishing geometries.

PART #	CED	CEL	SHK DIA	OAL	DEPTH OF CUT	#/FLUTES GEOMETRY
2305	1/8	1/2	1/4	3	1	2 Finish
2310	3/8	1	3/8	4	2.625	2 Finish
2320	1/2	1 1/4	1/2	5	3.5	2 Finish
2325	1/2	1 1/2	1/2	6	4.5	2 Finish
2340	5/8	1 1/2	5/8	6	4.5	2 Finish
2345	3/4	1 1/2	3/4	5	3.5	2 Finish
2350	3/4	1 1/2	3/4	6	4.5	2 Finish
2360	3/8	1	3/8	4	2.625	3 Finish
2365	1/2	1 1/4	1/2	5	3.5	3 Finish
2370	1/2	1 1/2	1/2	6	4.5	3 Finish
2375	5/8	1 1/2	5/8	6	4.5	3 Finish
2380	3/4	1 1/2	3/4	5	3.5	3 Finish
2385	3/4	1 1/2	3/4	6	4.5	3 Finish
2373R	1/2	1 1/2	1/2	6	4.5	3 Rough
2377R	5/8	2	5/8	6	4.5	3 Rough
2387R	3/4	2	3/4	6	4.5	3 Rough

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Upcut - Series 2400



Downcut - Series 2500

Series 2400 & 2500 Four Flute "Tornado" Spirals

This award winning tool design combines a roughing and finishing tool into one tool. It achieves never before attained feed rates. The flute geometry features a larger flute preceding the roughing edges which allows it to take a bigger bite! Following close behind are finishing edges which produce a clean cut. Not recommended to operate under 600 inches per minute.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
2442	2542	3/8	1 1/4	3/8	3
2442L	2542L	3/8	1 1/4	3/8	3
2450	2550	1/2	1 1/4	1/2	3
2455	2555	1/2	1 1/2	1/2	3 1/2
2460	2560	1/2	1 3/4	1/2	3 1/2
2465	2565	1/2	2 1/8	1/2	4
2480	2580	3/4	2 1/2	3/4	5
2480L	--	3/4	2 1/2	3/4	5

L= Left Hand Rotation



Upcut - Series 2600



Eccentric Spindles #2680

Series 2600 Solid Carbide Spiral Omecc Dovetail Bits

Designed for Omecc dovetail machines, these solid carbide dovetail bits are extremely quiet and smooth cutting. They are manufactured with upshear or downshear geometry, designed with a 10 degree cutting angle, and are available in right or left hand rotations. The newest addition to this dovetail line is a single flute upcut dovetail bit designed for Omecc machines with Eccentric spindles.

UPCUT PART #	DOWNCUT PART #	CED	DEPTH OF CUT	SHK DIA	OAL
2620	--	14mm	.354" (9mm)	14mm w/flat	60mm
2620L	--	14mm	.354" (9mm)	14mm w/flat	60mm
2630	2660	14mm	.394" (10mm)	14mm w/flat	60mm
2630L	2660L	14mm	.394" (10mm)	14mm w/flat	60mm
2640	2670	14mm	.622"	14mm w/flat	60mm
2640L	2670L	14mm	.622"	14mm w/flat	60mm
2680*	--	14mm	.394" (10mm)	12mm	60mm

L= Left Hand Rotation

* = Designed for Machines with Eccentric Spindles



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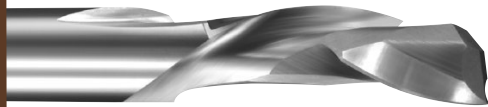


Series 2900 Two Flute Roughing Compression Spiral

This style of compression bit is manufactured exclusively for hard to cut materials. This tool is used in hogging applications where the compression geometry of the bit helps break up the cut and neutralizes the force of the bit with both upshear and downshear rotation. Can be used in solid woods, wood composites and any difficult to cut materials. This tool will produce a rippled edge cut.

PART #	CED	CEL	SHK DIA	OAL
2930	3/8	1 1/8	3/8	3
2985 (m)	3/8	7/8	3/8	3
2935	1/2	1	1/2	3
2989 (m)	1/2	1	1/2	3
2952	1/2	1 3/8	1/2	3 1/2
2960	1/2	1 3/4	1/2	3 1/2
2980	3/4	2	3/4	4
2980L	3/4	2	3/4	4

L= Left Hand Rotation (m) = 1/4" upcut for mortise cuts or thin materials



Series 3000 Single Edge Compression Spiral

Compression spirals are used extensively for cutting double sided laminates. These tools can also be used on natural woods where edge fuzzing is a problem with standard spiral tools. The single edge design allows for feed rates up to 450 inches per minute. This tool will leave a clean top and bottom edge cut.

PART #	CED	CEL	SHK DIA	OAL
3010	1/4	7/8	1/4	2 1/2
3010L	1/4	7/8	1/4	2 1/2
3030	3/8	1 1/8	3/8	3
3030L	3/8	1 1/8	3/8	3
3035	1/2	1	1/2	3
3052	1/2	1 3/8	1/2	3 1/2
3052L	1/2	1 3/8	1/2	3 1/2
3060	1/2	1 3/4	1/2	3 1/2
3070	5/8	2	5/8	4
3080	3/4	2	3/4	4

L= Left Hand Rotation
 CED = Cutting Edge Diameter
 CEL = Cutting Edge Length
 SHK DIA = Shank Diameter
 OAL = Overall Length



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The "Viper" **Series 3100**
Two Flute Compression Spiral

Compression means the upcut and downcut spiral flutes compress the material being cut preventing chipping or fuzzing on the top and bottom of the cut. Our unique flute geometry allows the "Viper" to cut faster and longer than other compression spirals on the market today. It also allows for extended sharpening life with excellent performance throughout the tool's useful life. Compression spirals are used extensively for cutting double sided laminates (melamine, vinyl, high pressure laminates, painted board, etc.). This series of compression spirals is not recommended for cutting materials thinner than 5/8".

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
3108	--	6mm	25mm	6mm	64mm
3122	--	8mm	28mm	8mm	64mm
3145	--	10mm	35mm	10mm	76mm
3155	--	12mm	35mm	12mm	76mm
3110	3110L	1/4	7/8	1/4	3
3130	3130L	3/8	1 1/8	3/8	3
3135	3135L	1/2	1	1/2	3
3152	3152L	1/2	1 3/8	1/2	3 1/2
3160	3160L	1/2	1 3/4	1/2	3 1/2
3162	3162L	1/2	2	1/2	4
3170	3170L	5/8	2	5/8	4
3179	--	3/4	1 5/8	3/4	4
3180	3180L	3/4	2	3/4	4
3183	3183L	3/4	2 1/2	3/4	5



The "Viper" **Series 3100M**
Two Flute Mortise Compression Spiral

This series of compression spirals is designed for doing mortise cuts or cutting material 5/8" thick or less. Designed with a 1/4" upcut or less preventing chipping and fuzzing on top and bottom of the material being cut. "Mortise cuts" are grooves cut in the material usually at a depth equal to or slightly less than the diameter of the tool.

* - Indicates 3/16" upcut for 1/4" groove cuts or 1/4" material thicknesses.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
3112*	--	1/4	7/8	1/4	3
3115*	3115L*	1/4	5/8	1/4	2 1/2
3120	--	8mm	25mm	8mm	64mm
3184*	--	3/8	7/8	3/8	3
3185	3185L	3/8	7/8	3/8	3
3187*	--	1/2	1	1/2	3
3189	3189L	1/2	1	1/2	3
3188	--	1/2	1 1/4	1/2	3 1/2
3190	3190L	1/2	1 5/8	1/2	3 1/2
3168	3168L	9/16	1	1/2	3
3193	--	5/8	2	5/8	4
3198	--	3/4	1 1/2	3/4	4



Standard Upcut Length



Mortise Upcut Length (m)

Series 3100XP_T Two Flute “Xtreme Performance” Compression Spirals

“XP” - which stands for Xtreme Performance - are specifically manufactured to provide maximum tool life in melamine, high pressure laminated particle board and MDF materials. Users can expect 3-5 times more tool life as compared to standard compression spiral geometry. The compression geometry will provide a chip free edge on both sides of the material being cut.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
3130XP	3130LXP	3/8	1 1/8	3/8	3
3184XP (m*)	--	3/8	7/8	3/8	3
3185XP (m)	3185LXP (m)	3/8	7/8	3/8	3
3135XP	--	1/2	1	1/2	3
3187XP (m*)	--	1/2	1	1/2	3
3189XP (m)	--	1/2	1	1/2	3
3150XP (m)	--	1/2	1 3/8	1/2	3 1/2
3152XP	--	1/2	1 3/8	1/2	3 1/2
3158XP	3158LXP	1/2	1 5/8	1/2	3 1/2
3179XP	--	3/4	1 5/8	3/4	4
3180XP	--	3/4	2	3/4	4

(m*) = 3/16” upcut length for 1/4” material or dado cuts

(m) = 1/4” upcut for mortise cuts or thin materials



Mortise Upcut Length (m)

Series 3200XP Three Flute “Xtreme Performance” Compression Spirals

Our three flute “Xtreme Performance” series will provide the same tool life as our two flute XP series, however, the three flute design allows for faster feed rates. This series of tools will provide a chip free edge on both sides of the material being cut. Designed for today’s high speed routers.

PART #	CED	CEL	SHK DIA	OAL
3284XP (m*)	3/8	7/8	3/8	3
3285XP (m)	3/8	7/8	3/8	3
3289XP (m)	1/2	1	1/2	3
3252XP	1/2	1 3/8	1/2	3 1/2

(m*) = 3/16” upcut length for 1/4” material or dado cuts

(m) = 1/4” upcut for mortise cuts or thin materials



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Series 3200 Three Flute Compression Spirals

Standard Upcut Length

One of our more popular tool designs. The three flute compression spiral allows for faster feed rates and excellent finishes on both sides of the material being cut. Designed for today's high speed routers.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
3230	--	3/8	1 1/8	3/8	3
3284(m*)	--	3/8	7/8	3/8	3
3285(m)	3285L(m)	3/8	7/8	3/8	3
3235	3235L	1/2	1	1/2	3
3287(m*)	--	1/2	1	1/2	3
3289(m)	3289L(m)	1/2	1	1/2	3
3252	3252L	1/2	1 3/8	1/2	3 1/2
3290(m)	--	1/2	1 5/8	1/2	3 1/2
3260	--	1/2	1 3/4	1/2	3 1/2
3270	--	5/8	2	5/8	4
3280	3280L	3/4	2	3/4	4

(m*) = 3/16" upcut for 1/4" material or dado cuts

(m) = 1/4" upcut for mortise cuts or thin materials



Series 3200C Three Flute Compression Spiral with Chipbreakers

Standard Upcut Length

Three flute compression design with the addition of chipbreakers which reduce fuzzing and scaling on plywoods and hardwoods while allowing for higher feed rates.

PART #	CED	CEL	SHK DIA	OAL
3230C	3/8	1 1/8	3/8	3
3285C (m)	3/8	7/8	3/8	3
3235C	1/2	1	1/2	3
3289C (m)	1/2	1	1/2	3
3252C	1/2	1 3/8	1/2	3 1/2
3280C	3/4	2	3/4	4

(m) = 1/4" upcut for mortise cuts or thin materials

Please note: Tools with an (m) have chipbreakers ground in downcut flutes only

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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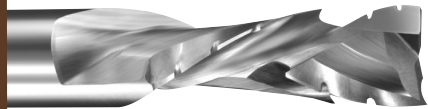
Series 3300 Four Flute Compression Spiral

Standard Upcut Length

Four flutes up and four flutes down! These tools were manufactured for users who want to run at extremely high feed rates. Compression spirals are used extensively for cutting double sided laminates (melamine, vinyl, high pressure laminate, painted board, etc).

PART #	CED	CEL	SHK DIA	OAL
3335	1/2	1	1/2	3
3389 (m)	1/2	1	1/2	3
3352	1/2	1 3/8	1/2	3 1/2
3390 (m)	1/2	1 5/8	1/2	3 1/2
3360	1/2	1 3/4	1/2	3 1/2
3380	3/4	2	3/4	4

(m) = 1/4" upcut for mortise cuts or thin materials



Series 3400 Two Flute Compression Spiral with Chipbreakers

Standard Upcut Length

The "Viper Plus" incorporates the compression spiral design with chipbreakers ground in the cutting edge. The chipbreakers are staggered to produce a clean edge cut. Recommended for hardwoods and plywoods (such as baltic birch) where edge fuzzing or scaling is a problem.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
3422	--	8mm	27mm	8mm	64mm
3430	--	3/8	1 1/8	3/8	3
3485 (m)	--	3/8	7/8	3/8	3
3445	--	10mm	30mm	10mm	76mm
3455	--	12mm	35mm	12mm	88mm
3435	--	1/2	1	1/2	3
3489 (m)	--	1/2	1	1/2	3
3452	--	1/2	1 3/8	1/2	3 1/2
3460	--	1/2	1 3/4	1/2	3 1/2
3470	--	5/8	2	5/8	4
3480	3480L	3/4	2	3/4	4
3483	3483L	3/4	2 1/2	3/4	5

(m) = 1/4" upcut for mortise cuts or thin materials

Please note: Tools with an (m) have chipbreakers ground in downcut flutes only

CEd = Cutting Edge Diameter

CEl = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Series 3400XP Two Flute “Xtreme Performance” Compression Spiral w/chipbreakers

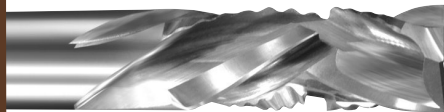
“XP” - which stands for Xtreme Performance - are specifically designed to provide as much as 3-5 times more tool life than standard compression geometry. The chipbreaker design allows for free cutting action in solid wood and plywood materials.

PART #	CED	CEL	SHK DIA	OAL
3430XP	3/8	1 1/8	3/8	3
3485XP (m)	3/8	7/8	3/8	3
3435XP	1/2	1	1/2	3
3487XP (m*)	1/2	1	1/2	3
3489XP (m)	1/2	1	1/2	3
3452XP	1/2	1 3/8	1/2	3 1/2

(m*) = 3/16” upcut for 1/4” material or dado cuts

(m) = 1/4” upcut for mortise cuts or thin materials

Please note: Tools with an (m) or (m*) have chipbreakers ground in downcut flutes only



Series 3500 Four Flute “Tornado” Compression

Another Industry First!! The Vortex “Tornado” roughing/finishing tool is the fastest cutting router bit in the world. If you have the machine to do it, we’ve got the tool. With increased feed speeds (as much as 3500 IPM), this tool will provide a clean cut on double sided materials such as melamine and formica laminated particle board.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
3535	--	1/2	1	1/2	3
3589 (m)	--	1/2	1	1/2	3
3552	3552L	1/2	1 3/8	1/2	3 1/2
3560	--	1/2	1 3/4	1/2	3 1/2
3570	--	5/8	2	5/8	4
3580	3580L	3/4	2	3/4	4
3583	--	3/4	2 1/2	3/4	5

(m) = 1/4” upcut for mortise cuts or thin materials

CED = Cutting Edge Diameter

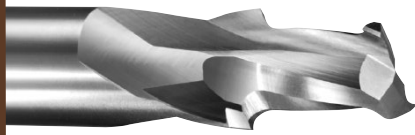
CEL = Cutting Edge Length

SHK DIA = Shank Diameter

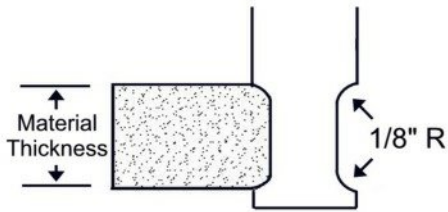
OAL = Overall Length



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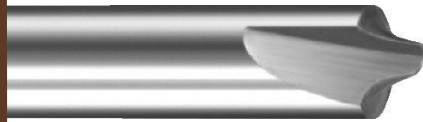


Series 3600 Two Flute Eased Edge Profile Spiral



This solid carbide two flute upcut double eased edge profile bit will provide extremely clean finishes in shallow profiles with a maximum depth of 1/8". Specially manufactured and designed for the furniture industry. Can be used in all types of wood materials.

PART #	SM DIA	SHK DIA	OAL	RADIUS	OPENING	MATERIAL THICKNESS
3640	1/2	3/4	4	1/8	0.531	1/2
3650	1/2	3/4	4	1/8	0.656	5/8
3660	1/2	3/4	4	1/8	0.781	3/4
3670	1/2	3/4	4	1/8	1.045	1
3680	1/2	3/4	4	1/8	1.156	1 1/8



Solid Carbide Veining Bits
3710 - 3730

Series 3700 Solid Carbide Veining Bits

Solid carbide veining bits are designed to make decorative cuts in a wide variety of materials. Tools are end cutting so they can plunge and be used to groove material while rounding the top edges of the slot.

PART #	SMALL DIA	RADIUS	SHK DIA	OAL
3710	.094	.125	1/4	2
3720	.094	.187	1/4	2
3730	.125	.250	3/8	3



Solid Carbide Engraving Bits
3731 - 3745

New Solid Carbide Engraving Bits

These half round engraving tools offer a wide range of tip sizes and angles to accommodate many engraving styles.

PART #	TIP DIAMETER	ANGLE	SHK DIA	OAL
3731	.020	30°	1/4	2
3733	.040	30°	1/4	2
3735	.060	30°	1/4	2
3740	.020	60°	1/4	2
3743	.040	60°	1/4	2
3745	.060	60°	1/4	2

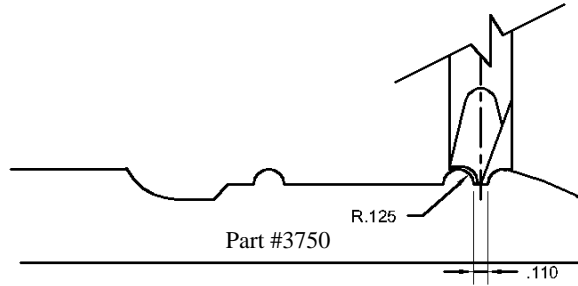




Series 3700 Solid Carbide Beading Bits

Beading bits are designed to cut decorative beads in a wide variety of materials.

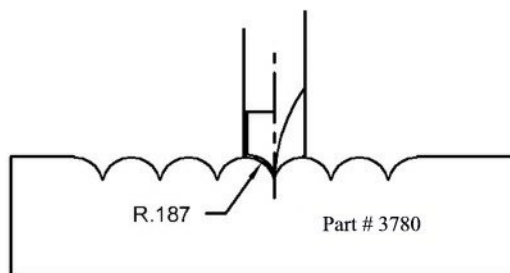
PART #	SMALL DIA	RADIUS	SHK DIA	OAL
3750	.110	.125	1/2	3
3760	.110	.187	1/2	3
3770	.110	.250	1/2	3



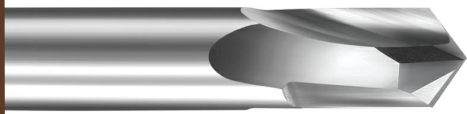
Solid Carbide Point Cutting Round Overs

Point cutting round over bits are used for decorative trimming and lettering.

PART #	RADIUS	SHANK DIA	OAL
3775	.125	3/8	3
3780	.187	3/8	3
3785	.250	1/2	3



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Series 3800 Solid Carbide V-Point Bits

90° Angle Shown

These tools are designed for v-grooving or beveling of natural wood, wood composites, laminated and veneered materials, plastics or solid surface. They are available in 60 and 90 degree angles and are manufactured with slight shear angle for chip removal.

PART #	DIAMETER	ANGLE	CEL	SHK DIA	OAL
3830	1/4	60°	1/2	1/4	3
3835	1/4	90°	1/2	1/4	3
3840	3/8	60°	5/8	3/8	3
3845	3/8	90°	5/8	3/8	3
3850	1/2	60°	5/8	1/2	3
3855	1/2	90°	5/8	1/2	3
3860	6mm	60°	12mm	6mm	64mm
3865	6mm	90°	12mm	6mm	64mm
3870	12mm	60°	16mm	12mm	76mm
3875	12mm	90°	16mm	12mm	76mm



New Solid Carbide V-Point Bits with flat

Designed for cutting aluminum/plastic sandwich materials like Alucobond, Dibond, etc. with a 90 degree angle and flat bottom.

PART #	LARGE DIAMETER	SMALL DIAMETER	ANGLE	DEPTH OF CUT	SHK DIA	OAL
3880	1/2	.090	90°	13/64	1/2	3



Series 3900 Solid Carbide Compression Door Bit

This door bit is favored by customers cutting lock set and light openings on wood veneered and wood core doors using a CNC, point to point, or KVAL machine. This tool is designed to cleanly cut the top and bottom edge on all common wood door cores; from particle core, stave core, LVL core and even mineral core doors. Not for use in Steel Doors.

PART #	CED	CEL	SHK DIA	OAL
3950	1/2	2 1/2	1/2	5 1/2

Upcut length 1.250"



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Series 4000 Double Edge Straight Flute Wood Rout

Straight flute tools combine the rigidity of solid carbide tooling with traditional straight flute geometry. A popular tool design for general purpose routing. Used when you don't want the axial force or thrust of an upcut or downcut spiral.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
4010	--	1/8	1/2	1/4	2
4020	4020L	3/16	3/4	1/4	2
4030	--	1/4	7/8	1/4	2 1/2
4033	4033L	1/4	1 1/8	1/4	3
4037	--	3/8	1	3/8	3
4040	4040L	3/8	1 1/4	3/8	3
4047	--	1/2	1	1/2	3
4050	--	1/2	1 1/4	1/2	3
4070	--	5/8	2 1/8	5/8	4
4080	--	3/4	2 1/8	3/4	4



Series 4100 Solid Carbide High Helix Foam Bits

These tools have been specifically designed for cutting low density foam materials at high feed rates. This series of tools is recommended for "closed cell" foam applications. These tools have an open flute geometry and high helix angle that "augers out" material. Other sizes available upon request.

PART #	CED	CEL	SHK DIA	OAL
4135*	1/4	2	1/4	4
4140	3/8	1 1/2	3/8	3
4160	1/2	1 3/4	1/2	3 1/2
4165	1/2	2 1/4	1/2	4
4185*	3/4	3 1/4	3/4	6

* = Not guaranteed against breakage due to extreme cutting edge length

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

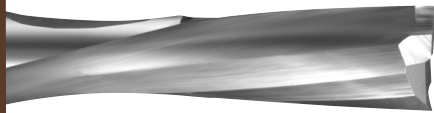
OAL = Overall Length



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Upcut - Series 4200



Downcut - Series 4300

Series 4200 & 4300 Two Flute Low Helix Finishers

Our double edge low helix spirals are recommended for cutting hard plastics, such as acrylics and phenolics. The lower helix angle produces less “lifting” and “fluttering” on plastic materials. Tools are extremely sharp, producing very clean edges that require little secondary work. These bits also provide great finishes in hardwoods and is recommended for “open cell” foam applications.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
4220	4320	3/16	5/8	1/4	2 1/2
4230	4330	1/4	3/8	1/4	3
4230L	--	1/4	3/8	1/4	3
4233	4333	1/4	3/4	1/4	3
4235	4335	5/16	1	5/16	3
4240	4340	3/8	1	3/8	3
4245	4345	1/2	1	1/2	3 & 3 1/2
4250	4350	1/2	1 1/4	1/2	3 1/2
--	4350L	1/2	1 1/4	1/2	3 1/2
4260	4360	1/2	1 3/4	1/2	4
4260L	--	1/2	1 3/4	1/2	4
4280	4380	3/4	2 1/2	3/4	5 & 6

L= Left Hand Rotation



Upcut - Series 4400



Downcut - Series 4500

Series 4400 & 4500 Three Flute Low Helix Finishers

The combination of the low helix angle and flute geometry make these tools razor sharp. They are recommended as a super finishing tool for acrylic, phenolic, UHMW, solid surface and dense hardwoods. The three flute geometry provides faster feed rate capabilities, while producing ultra smooth finishes.

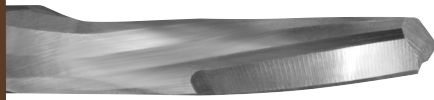
UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
4430	4530	1/4	3/8	1/4	3
4433	4533	1/4	3/4	1/4	3
4435	4535	5/16	1	5/16	3
4438	4538	3/8	5/8	3/8	3
4440	4540	3/8	1	3/8	3
4445	4545	1/2	1	1/2	3 & 3 1/2
4450	4550	1/2	1 1/4	1/2	3 1/2
4460	4560	1/2	1 3/4	1/2	4
4460L	4560L	1/2	1 3/4	1/2	4
4480	4580	3/4	2 1/2	3/4	5 & 6

L= Left Hand Rotation

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Upcut - Series 4600



Downcut - Series 4700

Series 4600 & 4700 Single Edge Low Helix Spirals

The single edge low helix spiral is well suited for cutting softer grades of plastic. This tool combines the aggressive action of single flute geometry with the advantages of low helix geometry to provide a fast, clean cutting tool. Use where chip re-welding is a problem.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
4630	4730	1/4	3/8	1/4	3
4633	4733	1/4	3/4	1/4	3
4640	4740	3/8	1	3/8	3



Upcut - Series 5000

Series 5000 & 5100 Two Flute "Low Helix" Roughers

Roughing tools are designed for high feed rates on CNC routers and are used when surface finish is not important in dense materials such as hardwoods, particle board, and plywood. The low helix design of these tools is a less aggressive version of Series 1000/1100 and 1600/1700. They will produce less "lifting and fluttering" of the material. These tools will produce a rippled edge cut and are extremely quiet and smooth cutting even in heavy cuts and high feed rates.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
5050	5150	1/2	1 1/4	1/2	3 1/2
5060	5160	1/2	1 3/4	1/2	3 1/2 & 4
5080	5180	3/4	2 1/2	3/4	5 & 6



Upcut - Series 5200

Series 5200 & 5300 Three Flute "Low Helix" Roughers

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
5240	5340	3/8	1	3/8	3
5250	5350	1/2	1 1/4	1/2	3 1/2
5260	5360	1/2	1 3/4	1/2	3 1/2 & 4
5280	5380	3/4	2 1/2	3/4	5 & 6

CED = Cutting Edge Diameter
CEL = Cutting Edge Length
SHK DIA = Shank Diameter
OAL - Overall Length



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Series 5400

Single Edge “O” Flute Straight

“O” flute tools create the perfect curled chip that allows softer plastic to be cut without chip re-welding. Ideally suited for plastic materials that form curled chips as opposed to fractured chips. The straight flute design does not import “up” or “down” forces into the part being routed. Therefore, ideally suited for irregularly shaped parts not capable of being thoroughly held in place by vacuum or fixturing.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
5404	--	1/16	1/4	1/8	1 1/2
5409	--	1/8	1/4	1/4	2
5410	5410L	1/8	1/2	1/4	2
5412*	--	1/8	5/8	1/4	4
5415	5415L	5/32	5/8	1/4	2
5418	--	3/16	3/8	1/4	2
5420	5420L	3/16	5/8	1/4	2
5422*	5422L*	3/16	1	1/4	4
5430	--	1/4	3/8	1/4	2 1/2
5433	5433L	1/4	3/4	1/4	2 1/2
5434	--	1/4	1	1/4	2 1/2
5435	--	1/4	3/4	1/4	3 1/4
5437	--	1/4	1 1/4	1/4	3 1/4
5440	--	1/4	1	1/4	4
5443	--	3/8	1 1/4	3/8	3
5453	5453L	1/2	1 1/4	1/2	3
5454	5454L	1/2	1 3/4	1/2	4
5460	5460L	3mm	8mm	6mm	64mm
5470	5470L	4mm	16mm	6mm	64mm
5475	5475L	5mm	20mm	6mm	64mm
5480	5480L	6mm	25mm	6mm	64mm
5485	--	8mm	25mm	8mm	64mm
5490	--	10mm	30mm	10mm	76mm

L= Left Hand Rotation

* = Not guaranteed against breakage due to extreme cutting edge length

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Series 5500

Double Edge "O" Flute Straight

The double edge "O" flute offers the same cutting characteristics as the single edge "O" flute design, but can provide additional tool life in some materials. Two cutting edges reduce chip loads and produce a stronger cross section. Generally performs better in slightly harder plastics.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
5509	--	1/8	1/4	1/4	2
5510	5510L	1/8	1/2	1/4	2
5512*	--	1/8	5/8	1/4	4
5518	--	3/16	3/8	1/4	2
5520	--	3/16	5/8	1/4	2
5522*	--	3/16	1	1/4	4
5530	--	1/4	3/8	1/4	2 1/2
5533	5533L	1/4	3/4	1/4	2 1/2
5534	5534L	1/4	1	1/4	2 1/2
5535	--	1/4	3/4	1/4	3 1/4
5537	5537L	1/4	1 1/4	1/4	3 1/4
5540	5540L	1/4	1	1/4	4
5543	--	3/8	1 1/4	3/8	3
5553	--	1/2	1 1/4	1/2	3
5554	5554L	1/2	1 3/4	1/2	4
5570	--	4mm	16mm	6mm	64mm
5575	--	5mm	20mm	6mm	64mm
5580	--	6mm	25mm	6mm	64mm
5585	--	8mm	25mm	8mm	64mm
5590	--	10mm	30mm	10mm	76mm

L= Left Hand Rotation

* = Not guaranteed against breakage due to extreme cutting edge length

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Series 5600

Single Edge “O” Flute Upcut Spiral

These tools provide clean cuts in hard plastics while allowing the choice of upward chip removal; which can enhance surface finish. These tools have been manufactured with a polished flute which allows the chips to curl/form better, reduces heat, and adds lubricity without the use of coatings. Tools that have an “S” behind the part number have been manufactured with specific geometry for softer plastics.

RIGHT HAND PART #	LEFT HAND PART #	CED	CEL	SHK DIA	OAL
5609	--	1/8	1/4	1/4	2
5610	5610L	1/8	1/2	1/4	2
5618	--	3/16	3/8	1/4	2
5620	--	3/16	5/8	1/4	2
5621	--	7/32	3/4	1/4	2 1/2
5625H	--	1/4	3/8	1/4	2 1/2
5630H	--	1/4	3/4	1/4	2 1/2
5630S	--	1/4	3/4	1/4	2 1/2
5632H	5632HL	1/4	1 1/4	1/4	3 1/4
5632S	--	1/4	1 1/4	1/4	3 1/4
5640	5640L	3/8	1 1/4	3/8	3
5650	--	1/2	1 1/4	1/2	3 1/2
5660	--	3mm	8mm	6mm	64mm
5663	--	3mm	12mm	6mm	64mm
5668	--	4mm	8mm	6mm	64mm
5670	--	4mm	16mm	6mm	64mm
5672	--	5mm	8mm	6mm	64mm
5675	--	5mm	16mm	6mm	64mm
5680	--	6mm	25mm	6mm	64mm
5685	--	8mm	25mm	8mm	64mm
5690	--	10mm	30mm	10mm	76mm

L= Left Hand Rotation

S = Specifically manufactured for cutting softer plastics

H = Specifically manufactured for cutting harder plastics

CED = Cutting Edge Diameter

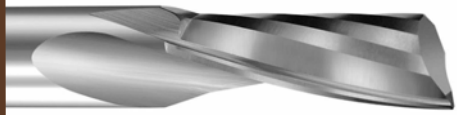
CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Series 5600A - Aluminum Single Edge “O” Flute Upcut Spiral

This series of tools have specific geometry for optimal finish and chip evacuation for machining most sheet, block and extrusion grades of aluminum. These tools are designed to give you maximum feed rates in all CNC applications that involve cutting aluminum.

PART #	CED	CEL	SHK DIA	OAL
5609A	1/8	1/4	1/4	2
5610A	1/8	1/2	1/4	2
5618A	3/16	3/8	1/4	2
5620A	3/16	5/8	1/4	2
5625A	1/4	3/8	1/4	2 1/2
5630A	1/4	3/4	1/4	2 1/2
5640A	3/8	7/8	3/8	3
5650A	1/2	1	1/2	3
5660A	3mm	8mm	6mm	64mm
5668A	4mm	8mm	6mm	64mm
5675A	5mm	16mm	6mm	64mm
5680A	6mm	16mm	6mm	64mm
5685A	8mm	20mm	8mm	64mm
5690A	10mm	22mm	10mm	76mm



Series 5800TSA Double Edge Design for Aerospace Aluminum Sheet Material

This series of aluminum cutting bits are designed specifically for Aerospace aluminum sheet material. A wide variety of grades in various states of hardness were provided by an internationally renowned aircraft manufacturer. After extensive testing on our in-house CNC, we developed the specific TSA geometry to perform well in all grades and hardnesses of Aerospace grade aluminum.

PART #	CED	CEL	SHK DIA	OAL
5825TSA	1/4	1/4	1/4	2 1/2
5830TSA	1/4	3/8	1/4	2 1/2
5840TSA	3/8	3/8	3/8	2 1/2



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Series 5700

Single Edge “O” Flute Downcut Spiral

These tools provide clean cuts in hard plastics while allowing the choice of downward chip removal; which can enhance part hold down. These tools are manufactured with a polished flute which allows the chip to curl/form better, reduces heat, and adds lubricity without the use of coatings. Tools which have an “S” behind the part number were manufactured with specific geometry for softer plastic.

PART #	CED	CEL	SHK DIA	OAL
5709	1/8	1/4	1/4	2
5710	1/8	1/2	1/4	2
5710L	1/8	1/2	1/4	2
5718	3/16	3/8	1/4	2
5720	3/16	5/8	1/4	2
5721	7/32	3/4	1/4	2 1/2
5725H	1/4	3/8	1/4	2 1/2
5730H	1/4	3/4	1/4	2 1/2
5730S	1/4	3/4	1/4	2 1/2
5732H	1/4	1 1/4	1/4	3 1/4
5732S	1/4	1 1/4	1/4	3 1/4
5740	3/8	1 1/4	3/8	3
5750	1/2	1 1/4	1/2	3 1/2
5760	3mm	8mm	6mm	64mm
5763	3mm	12mm	6mm	64mm
5768	4mm	8mm	6mm	64mm
5770	4mm	16mm	6mm	64mm
5772	5mm	8mm	6mm	64mm
5775	5mm	16mm	6mm	64mm
5780	6mm	25mm	6mm	64mm
5785	8mm	25mm	8mm	64mm
5790	10mm	30mm	10mm	76mm

L= Left Hand Rotation

H = Specific geometry for cutting harder plastics

S = Specific geometry for cutting softer plastics

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Upcut - Series 5800



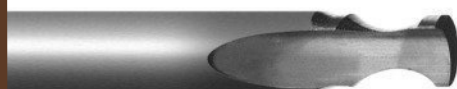
Downcut - Series 5900

Series 5800 & 5900 Double Edge "O" Flute Spirals

Developed for cutting harder plastics, such as acrylic and phenolics, at faster feed rates with a smooth finish. Ideal for CNC applications. Now manufactured with a polished flute to reduce friction inside the cutting edge, run cooler and adding lubricity without the use of coatings. Choose upcut for upward chip removal or downcut for better part hold down.

UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
5830	5930	1/4	3/8	1/4	2 1/2
5833	5933	1/4	3/4	1/4	2 1/2
--	5933L	1/4	3/4	1/4	2 1/2
5835	--	5/16	1/2	3/8	3
5840	5940	3/8	3/4	3/8	3
5843	5943	3/8	1 1/4	3/8	3
5853	5953	1/2	1 1/4	1/2	3 1/2
5880	5980	6mm	25mm	6mm	64mm
5885	5985	8mm	25mm	8mm	64mm

L= Left Hand Rotation



Single Edge 6010 - 6020



Upcut - 6030-6045



Downcut - 6050 - 6065

Series 6000 Edge Rounding Bits for Plastic

These solid carbide tools were designed for rounding the edge of plastic sheets or parts. The double edge low helix design provides ultra smooth cuts while allowing for upward or downward chip removal.

PART #	SM DIA	SHANK DIA	OAL	OPENING RADIUS	# FLUTES	TYPE	PLASTIC SIZE
6010	.194	1/4	2 1/2	5/32	1/8	STRAIGHT	1/8
6015	.162	1/4	2 1/2	7/32	3/16	STRAIGHT	3/16
6020	.163	1/4	2 1/2	9/32	1/4	STRAIGHT	1/4
6030	.320	3/8	2 1/2	5/32	1/8	UPCUT	1/8
6035	.305	3/8	2 1/2	7/32	3/16	UPCUT	3/16
6040	.288	3/8	2 1/2	9/32	1/4	UPCUT	1/4
6045	.379	1/2	3	13/32	3/8	UPCUT	3/8
6050	.320	3/8	2 1/2	5/32	1/8	DOWNCUT	1/8
6055	.305	3/8	2 1/2	7/32	3/16	DOWNCUT	3/16
6060	.288	3/8	2 1/2	9/32	1/4	DOWNCUT	1/4
6065	.379	1/2	3	13/32	3/8	DOWNCUT	3/8



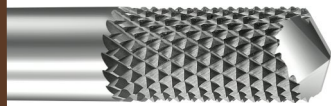
Upcut - Series 6100

Series 6100 & 6200 Three Flute Phenolic/Composite Spirals

Three Flute "O" flute geometry provides excellent finishes and extra life when cutting phenolic and composite materials at high feed rates. The free cutting action of these tools provide for better finishes and significantly lower noise levels.

Downcut - Series 6200

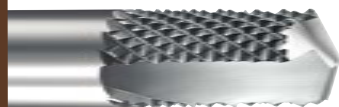
UPCUT PART #	DOWNCUT PART #	CED	CEL	SHK DIA	OAL
6140	6240	3/8	7/8	3/8	3
6150	6250	1/2	7/8	1/2	3
6155	6255	1/2	1 1/4	1/2	3 1/2
6165	6265	1/2	2 1/8	1/2	4



Series 6300 Medium Burr w/Plunge Point - No Flutes

Vortex has developed several new series of tools specifically designed for cutting fiberglass materials as well as composites. Choose between no flute burr design, straight flute or compression flute where top and bottom surface quality is a concern. Material must be made of all one type and not contain wood, plastic or aluminum components.

PART #	CED	CEL	SHK DIA	OAL
6330	1/4	3/4	1/4	2 1/2
6340	3/8	7/8	3/8	2 1/2
6350	1/2	1	1/2	3



Series 6400 Medium Burr w/Plunge Point - Two Flutes

PART #	CED	CEL	SHK DIA	OAL
6430	1/4	3/4	1/4	2 1/2
6440	3/8	7/8	3/8	2 1/2
6450	1/2	1	1/2	3



Series 6500 Medium Burr Compression - Two Flutes

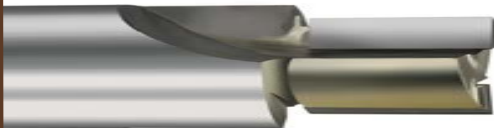
PART #	CED	CEL	SHK DIA	OAL
6530	1/4	3/4	1/4	2 1/2
6540	3/8	1	3/8	3
6550	1/2	1	1/2	3



Series 6600 3 Wing Slotting Cutters

Three wing slotting cutters are constructed from a precision machined one piece alloy steel body and brazed carbide tipped. Suitable for flush trimming and horizontal slots in materials up to 3/4" deep. Designed to cut wood and wood composites.

PART #	DIAMETER	KERF	SHK DIA	DEPTH OF CUT
6600	2	.075	1/2	3/4
6605	2	.093	1/2	3/4
6610	2	.125	1/2	3/4
6615	2	.187	1/2	3/4
6620	2	.250	1/2	3/4



Series 6700 Polycrystalline Diamond Router Bits 2+2 Straight Geometry

This series of PCD (polycrystalline diamond) router bits have been designed with a solid carbide body which provides more strength and rigidity in the cut. Used for cutting abrasive, difficult to cut materials such as carbon fiber, phenolics or composite materials where tool life is an issue.

PART #	CED	CEL	SHK DIA	OAL
6725	1/4	1/4	3/8	3
6730	1/4	1/2	3/8	3
6735	3/8	1/2	1/2	3
6740	3/8	7/8	1/2	3

CED = Cutting Edge Diameter

CEL = Cutting Edge Length

SHK DIA = Shank Diameter

OAL = Overall Length



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Start Up Packages for new CNC Router Owners



Nested Base Tooling Package Kit #5000

- | | |
|--|---|
| 1 - 7040 - 4" Spoilboard Cutter | 5 - DDB05070RB - 5mm x 70mm RH Brad Point Drill |
| 1 - 13273 - 10 pack Replacement Inserts
for Spoilboard Cutter | 5 - DDB05070LO - 5mm x 70mm LH Brad Point Drill |
| 3 - 1330 - 1/4" Downcut Spirals | 1 - DDS0370RB - 3mm x 70mm RH Brad Point Drill |
| 2 - 1340 - 3/8" Downcut Spirals | 1 - DDS0370LO - 3mm x 70mm LH Brad Point Drill |
| 2 - 3185XP - 3/8" Mortise Compression Spirals | 1 - DHB35070RB - 35mm x 70mm RH Hinge Bit |
| 2 - 3189XP - 1/2" Mortise Compression Spirals | 1 - DHB35070LO - 35mm x 70mm LH Hinge Bit |
| 1 - 3435XP - 1/2" Compression Spiral for Plywoods | |

Plastic/Sign Making Tooling Package Kit #6000

- | | |
|--|--|
| 1 - 7025 - 2 1/2" Spoilboard Cutter | 2 - 1/8" O'Flute Upcut Spiral* (5610/5710) |
| 1 - 13273 - 10 pack Replacement Inserts
for Spoilboard Cutter | 2 - 3/16" O'Flute Upcut Spiral* (5620/5720) |
| 2 - 2230 - 1/4" Ballnose Spiral | 2 - 1/4" O'Flute Upcut Spiral* (5630H/5730H) |
| 1 - 2240 - 3/8" Ballnose Spiral | 2 - 5510 - 1/8" Double Edge O'Flute Straight |
| 2 - 2215 - 1/8" Tapered Ballnose Spiral | |
| 2 - 3731 - .020" Engraving Bit | |
- *Your choice between upcut (Series 5600)
and downcut (Series 5700) rotation



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Toolholder Packages for CNC Router Users

Toolholder Package - Kit #3000



10 - HSK63F ER40 or SYOZ 25
Style Toolholders

2 - 1/4" Collets

3 - 3/8" Collets

3 - 1/2" Collets

2 - 3/4" Collets

1 - 200TH Torque Wrench

1 - Collet Key

Use Part #3000 for ER40 style holders and
3000-25 for SYOZ25 style holders

Albrecht Milling Chuck - Toolholder Package Kit #4000



10 - Albrecht Milling Chucks

2 - 1/4" Collets

3 - 3/8" Collets

3 - 1/2" Collets

2 - 3/4" Collets

1 - Tightening Wrench

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Brad Point Dowel Drills

Carbide Tipped and Solid Carbide



Brad point dowel drills are used for drilling blind holes in solid wood, wood composites, or plastic laminated materials. Brad point drills will provide a clean entrance cut, but may cause some blow-out on the backside of the material on thru cuts. These bits have a 10mm shank and are designed to run in your drill bank, but can also be used in your CNC spindle.

57mm Length - CT Brad Point Drill

RIGHT HAND	LEFT HAND	DIAMETER
DDB04057RB	DDB04057LO	4mm
DDB05057RB	DDB05057LO	5mm
DDB06057RB	DDB06057LO	6mm
DDB06457RB	DDB06457LO	1/4
DDB07057RB	DDB07057LO	7mm
DDB08057RB	DDB08057LO	8mm
DDB10057RB	DDB10057LO	10mm
DDB11057RB	DDB11057LO	11mm
DDB15057RB	DDB15057LO	15mm

70mm Length - CT Brad Point Drill

RIGHT HAND	LEFT HAND	DIAMETER
DDB04070RB	DDB04070LO	4mm
DDB04770RB	DDB04770LO	3/16
DDB05070RB	DDB05070LO	5mm
DDB05570RB	DDB05570LO	7/32
DDB06070RB	DDB06070LO	6mm
DDB06470RB	DDB06470LO	1/4
DDB07070RB	DDB07070LO	7mm
DDB08070RB	DDB08070LO	8mm
DDB08270RB	DDB08270LO	8.2mm
DDB09070RB	DDB09070LO	9mm
DDB09570RB	DDB09570LO	3/8
DDB10070RB	DDB10070LO	10mm
DDB11070RB	DDB11070LO	11mm
DDB11170RB	DDB11170LO	7/16
DDB12070RB	DDB12070LO	12mm
DDB12770RB	DDB12770LO	1/2
DDB15070RB	DDB15070LO	15mm
DDB16070RB	DDB16070LO	16mm

57mm Length - SC Brad Point Drill

RIGHT HAND	LEFT HAND	DIAMETER
DDS0257RB	DDS0257LO	2mm
DDS0357RB	DDS0357LO	3mm
DDS0457RB	DDS0457LO	4mm
DDS0557RB	DDS0557LO	5mm
DDS0657RB	DDS0657LO	6mm
DDS0857RB	DDS0857LO	8mm

70mm Length - SC Brad Point Drill

RIGHT HAND	LEFT HAND	DIAMETER
DDS0270RB	DDS0270LO	2mm
DDS0370RB	DDS0370LO	3mm
DDS0470RB	DDS0470LO	4mm
DDS0570RB	DDS0570LO	5mm
DDS0670RB	DDS0670LO	6mm
DDS6470RB	DDS6470LO	1/4
DDS0870RB	DDS0870LO	8mm

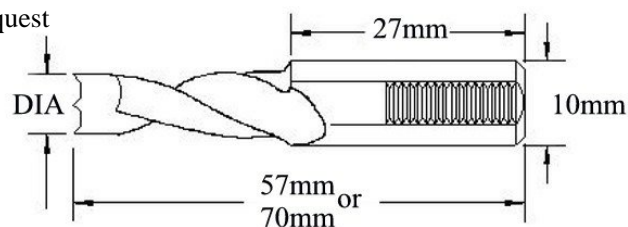
57mm Length - CT Hinge Bits

RIGHT HAND	LEFT HAND	DIAMETER
DHB15057RB	DHB15057LO	15mm
DHB20057RB	DHB20057LO	20mm
DHB25057RB	DHB25057LO	25mm
DHB35057RB	DHB35057LO	35mm

70mm Length - CT Hinge Bits

RIGHT HAND	LEFT HAND	DIAMETER
DHB15070RB	DHB15070LO	15mm
DHB20070RB	DHB20070LO	20mm
DHB25070RB	DHB25070LO	25mm
DHB35070RB	DHB35070LO	35mm

**Other sizes available upon request



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Thru-Hole Drills

Carbide Tipped and Solid Carbide



Thru-hole drills are used for drilling thru-holes in solid wood, wood composites, plastic laminated and plastic materials. Thru-hole drills will leave a clean exit hole, but may cause some chipping on the entrance cut. These drills have a 10mm shank and are designed to run in your drill bank, but can also be used in your CNC spindle.

57mm Length - CT Thru-Hole Drill

RIGHT HAND	LEFT HAND	DIAMETER
DTH04057RB	DTH04057LO	4mm
DTH05057RB	DTH05057LO	5mm
DTH06057RB	DTH06057LO	6mm
DTH06457RB	DTH06457LO	1/4
DTH07057RB	DTH07057LO	7mm
DTH08057RB	DTH08057LO	8mm
DTH10057RB	DTH10057LO	10mm
DTH11057RB	DTH11057LO	11mm

70mm Length - CT Thru-Hole Drill

RIGHT HAND	LEFT HAND	DIAMETER
DTH04070RB	DTH04070LO	4mm
DTH05070RB	DTH05070LO	5mm
DTH05570RB	DTH05570LO	7/32
DTH06070RB	DTH06070LO	6mm
DTH06470RB	DTH06470LO	1/4
DTH07070RB	DTH07070LO	7mm
DTH08070RB	DTH08070LO	8mm
DTH09070RB	DTH09070LO	9mm
DTH09570RB	DTH09570LO	3/8
DTH10070RB	DTH10070LO	10mm
DTH11070RB	DTH11070LO	11mm
DTH12770RB	DTH12770LO	1/2

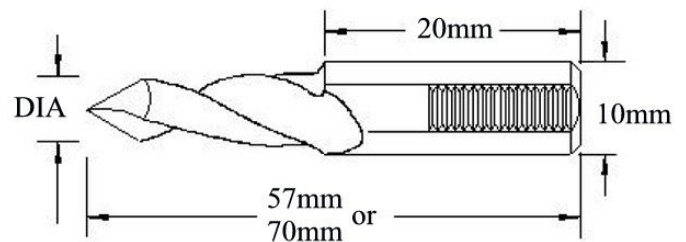
**Other sizes available upon request

57mm Length - S/Carbide Thru Hole

RIGHT HAND	LEFT HAND	DIAMETER
DTS0357RB	DTS0357LO	3mm
DTS0457RB	DTS0457LO	4mm
DTS0557RB	DTS0557LO	5mm
DTS0657RB	DTS0657LO	6mm
DTS0857RB	DTS0857LO	8mm

70mm Length - S/Carbide Thru-Hole

RIGHT HAND	LEFT HAND	DIAMETER
DTS0370RB	DTS0370LO	3mm
DTS0470RB	DTS0470LO	4mm
DTS0570RB	DTS0570LO	5mm
DTS0670RB	DTS0670LO	6mm
DTS0870RB	DTS0870LO	8mm



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Solid Carbide Twist Drills

V-Point or Brad Point Geometry

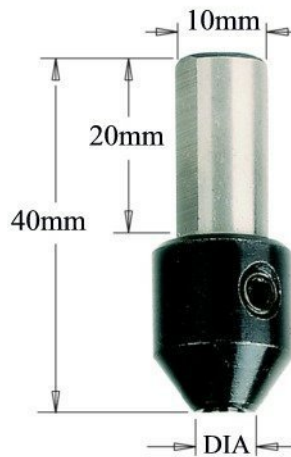
Used on boring machines alone or with adaptor bushings for drilling blind holes in solid wood, wood composites, or plastic laminated materials. Available with v-point geometry for thru cuts or for drilling into plastic or brad point geometry for clean entrance holes.

V-Point (Thru Hole) Geometry

R. HAND	L. HAND	DIA	CEL
SSP020R	SSP020L	2mm	20mm
SSP025R	SSP025L	2.5mm	35mm
SSP030R	SSP030L	3mm	35mm
SSP032R	SSP032L	3.2mm	35mm
SSP035R	SSP035L	3.5mm	35mm
SSP040R	SSP040L	4mm	35mm
SSP050R	SSP050L	5mm	35mm

Brad Point Geometry

R. HAND	L. HAND	DIA	CEL
SBP025R	SPB025L	2.5mm	30mm
SBP030R	SBP030L	3mm	30mm
SBP032R	SBP032L	3.2mm	30mm
SBP035R	SBP035L	3.5mm	30mm
SBP040R	SBP040L	4mm	30mm
SBP050R	SBP050L	5mm	30mm



Adaptors for Twist Drills

PART NUMBER	DRILL BIT DIAMETER
ADP020	2mm
ADP025	2.5mm
ADP030	3mm
ADP032	3.2mm
ADP035	3.5mm
ADP040	4mm
ADP050	5mm



3pk Boeshield Kit

Kit includes 4oz. Rust Free (rust and stain remover), 4 oz. Aerosol T-9 (rust and corrosion protection), and 4 oz. Blade & Bit (resin, gum and pitch remover)

PART NUMBER	COST
BIOSHIELD	\$26.75



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Plexi-Point Drills

High Speed Steel

Drills are specially pointed to reduce chipping when drilling through Plexiglass or other hard plastics. Available in fractional, number, metric and letter sizes.

PART #	DRILL SIZE	DEC. EQUIV	FLUTE LENGTH	OAL
14400062	1/16	.0625	7/8	1 7/8
14400078	5/64	.0781	1	2
14400093	3/32	.0938	1 1/4	2 1/4
14400109	7/64	.1094	1 1/2	2 5/8
14400125	1/8	.1250	1 5/8	2 3/4
14400156	5/32	.1562	2	3 1/8
14400187	3/16	.1875	2 5/16	3 1/2
14400218	7/32	.2188	2 1/2	3 3/4
14400250	1/4	.2500	2 3/4	4
14400281	9/32	.2812	2 15/16	4 1/4
14400312	5/16	.3125	3 3/16	4 1/2
14400375	3/8	.3750	3 5/8	5
14400437	7/16	.4375	4 1/16	5 1/2
14400500	1/2	.5000	4 1/2	6
144000787	2mm	.0787	15/16	1 15/16
144000984	2.5mm	.0984	1 3/16	2 1/4
14400118	3mm	.1181	1 5/16	2 13/32
14400137	3.5mm	.1378	1 3/4	2 7/8
144001575	4mm	.1575	1 11/16	2 15/16
14400177	4.5mm	.1772	2 3/16	3 3/8
144001968	5mm	.1968	2 1/16	3 3/8
14400216	5.5mm	.2165	2 1/4	3 21/32
14400236	6mm	.2362	2 1/4	3 21/32
14400255	6.5mm	.2559	2 7/8	4 1/8
14400275	7mm	.2756	2 23/32	4 9/32
14400315	8mm	.3150	2 15/16	4 19/32
14400354	9mm	.3543	3 3/16	4 29/32
14400374	9.5mm	.3740	3 3/16	4 29/32
14400393	10mm	.3937	3 7/16	5 1/4
14400433	11mm	.4331	3 11/16	5 19/32
14400472	12mm	.4724	3 31/32	5 15/16
14400511	13mm	.5118	3 31/32	5 15/16

**Other sizes available upon request
Letter and Number sizes also available



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