

## Edge of Arlington Saw & Tool, Inc.

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### Item #2243, Vortex Series 2200 Two Flute 3/8 x 1 1/2 Upcut Ballnose Spiral \$83.86

Thank you for shopping with us! These bits have been geometrically designed to cut cleaner than other 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. **\*Not guaranteed against breakage due to extreme cutting edge length**



#### Upcut Spirals

- ▼ The upcut spiral is a right hand spiral with a right hand rotation of cut. An upcut spiral will cause the chips to be “augered” upwards during cutting. This can be particularly useful in slotting cuts or where chip removal is a problem. Upcut spiral bits have a tendency to “lift” the part in some cases. Additional holding power or stepped cutting may be required.
- ▼ Upcut spiral bits will leave a smooth cut on the bottom of a thru cut and tend to leave some fuzzing on the top edge in certain materials.
- ▼ Upcut spirals straight plunge/drill and have good end cutting geometry.



#### Downcut Spirals

- ▼ A downcut spiral (right hand cut, left hand spiral) causes the chip flow to be directed downward. It also helps hold down the part being cut. The edge quality on the part is smooth on the top and tends to be fuzzy on the bottom in certain materials.
- ▼ The downward chip flow can sometimes cause clogging problems particularly in a blind slotting situation. Downcut bits tend to preload the routing system and can substantially improve part hold down in a marginal routing setup.
- ▼ Downcut tools CAN NOT be used to plunge straight into wood and should be ramped into the part.



#### Compression Spirals

- ▼ A compression spiral is designed with both upcut and downcut flutes. The upcut and downcut flutes compress the material being cut preventing chipping or fuzzing on the top and bottom of the cut.
- ▼ Compression spirals are used extensively for cutting double sided laminates, and can be used on natural woods where edge fuzzing is a problem.

## SPECIFICATIONS

Manufacturer	Vortex Tool
Diameter	3/8 in

## SPECIFICATIONS

<b>Cut Height, Length, or Width</b>	1 1/2 in
<b>Flute Geometry</b>	Upcut
<b>Flute</b>	2
<b>Overall Length</b>	4 in
<b>Rotation</b>	Right
<b>Shank</b>	3/8 in
<b>Note</b>	Not guaranteed against breakage due to extreme cutting edge length