In-Process Deburring of
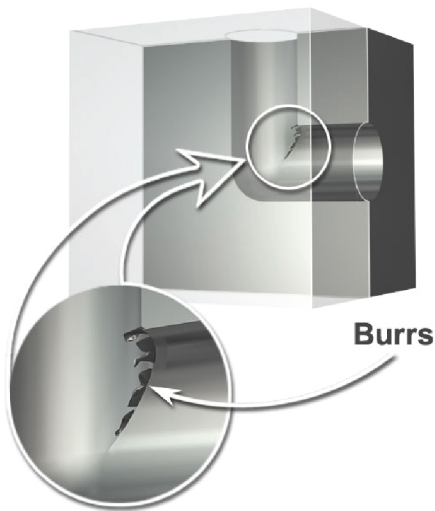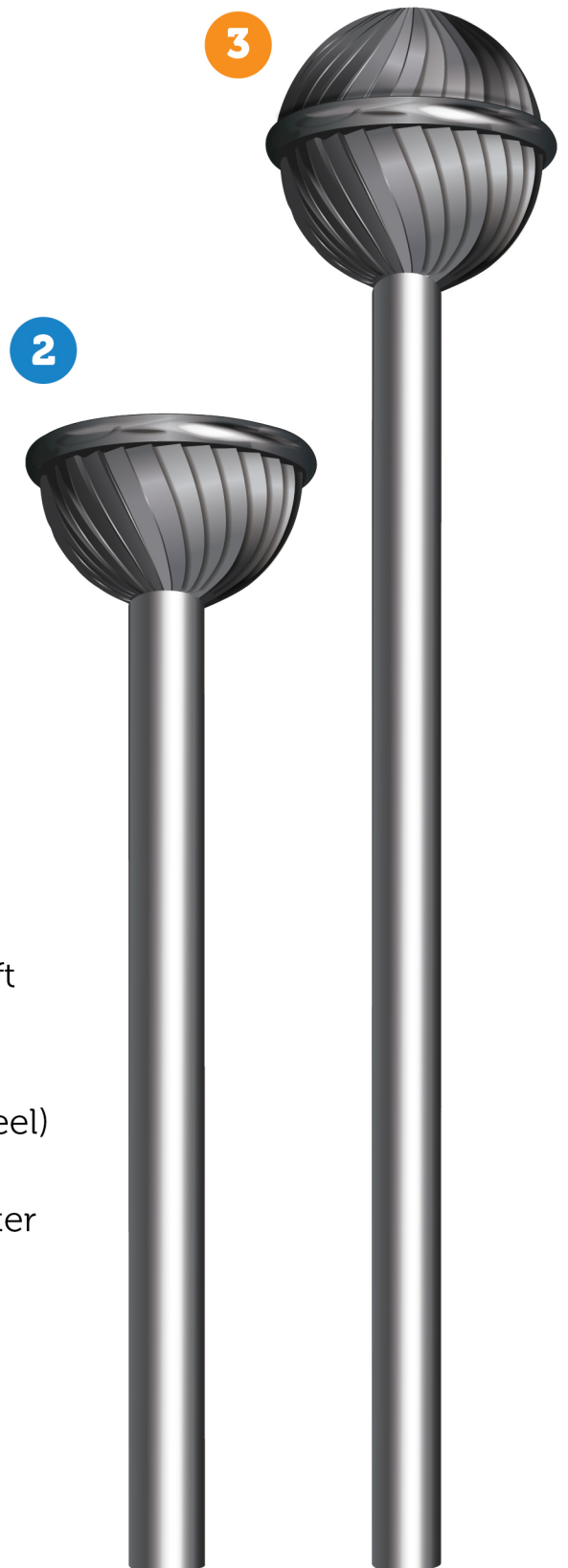# Cross-Drilled Holes Made Easy With

ORBITOOL®
DEBURRING TOOLS

Why Choose ORBITOOL®?

Consistent results and consistent quality:

- Increased throughput / shorter cycle time

- Reduced deburring cost

- No setup for secondary deburring operations

- No batch and queue

- Ideal for controlled process environment

Burrs

1 Flexible Shaft

2 Disk
(polished steel)

3 Shaped Cutter
(carbide)

Ø .250

ØD

ØB   ØA

CNC Mills

The fundamental motion of the tool is helical. The machine tool controller should be capable of helical interpolation, i.e. simultaneous 3-axis motion control. The tool path is similar to thread-milling. For mills without helical interpolation capability, a helix can be crudely approximated by combining circular interpolation with step-wise advancement of the tool in the Z-axis.
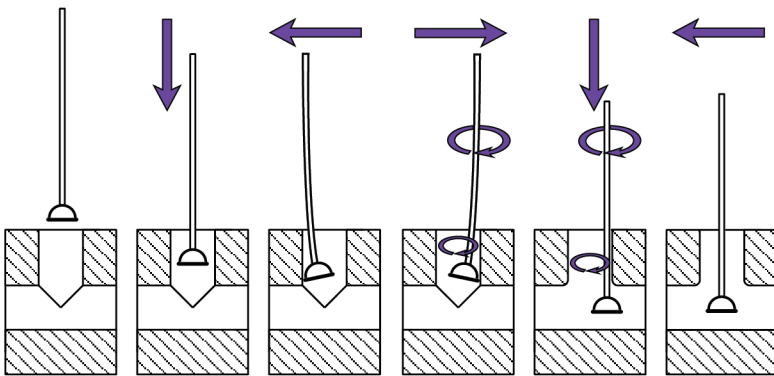
CNC Lathes

With lathes the helical motion is accomplished by offsetting the tool axis with respect to the axis of the hole, then advancing the tool in the Z-axis. Lathes with live tools are easiest to outfit with ORBITOOL® deburring tools. Lathes without live tools can be fitted with moderately priced devices to run ORBITOOL® deburring tools.
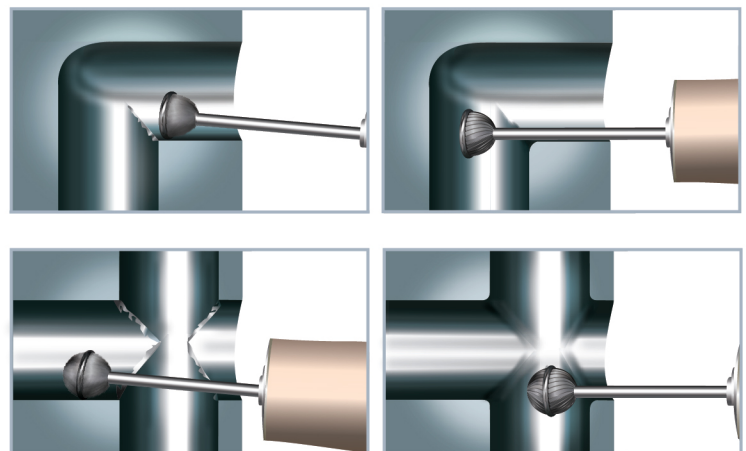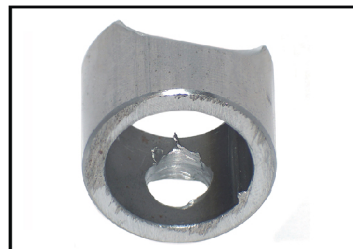

Before   **After**

Manual Deburring

Manual deburring is readily accomplished with ORBITOOL® deburring cutters mounted in electric hand grinders (air grinders are not recommended-the rpm's are too high). We offer the unit shown here, part number 30004.

The patented design of ORBITOOL® cutters provides a distinct advantage over conventional burrs. With ORBITOOL® cutters it is much easier to control the deburring. Conventional burrs will remove material anywhere they touch the surface of the workpiece. Accidental/unintended contact damages the workpiece resulting in scrap or rework. With ORBITOOL® cutters material removal occurs ONLY at the edge of a workpiece - where the burrs are! The disk on the end of the cutter prevents the tool's cutting edges from contacting the surface of the workpiece until the tool encounters an edge. Once the disk passes over the edge, the cutting edges can contact the workpiece and remove material. Moving the head of the tool back and forth over an edge is how you deburr with ORBITOOL® cutters.
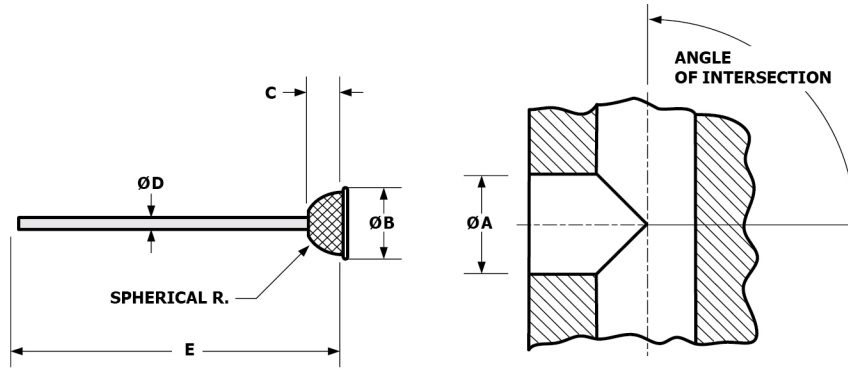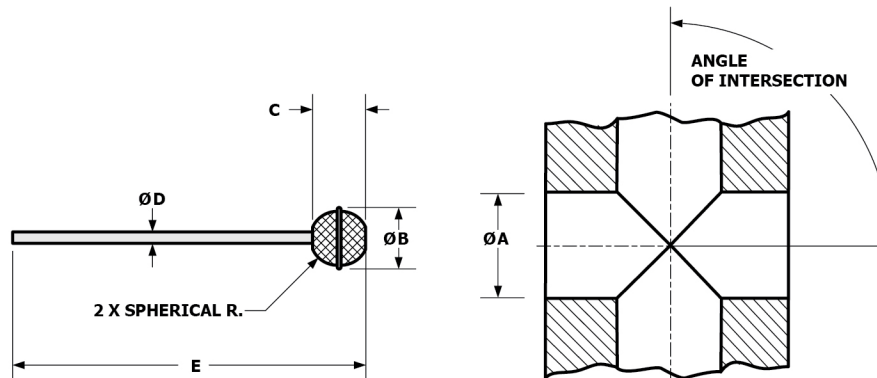
Before **After**

One-Hemisphere Configuration Available Sizes

| Nominal	Cutter P/N Series	Ø A min (approx) varies with angle of intersection			Ø B disk	C head height	ØD shaft	E shaft length (supplied)
		90	60	45				
0.074	14000-074	.079 Please contact us for specific application assistance			.074	.039	.030	2.50
3/32	14000	.125	.178	.242	.106	.070	.030	2.50
1/8	11000	.172	.237	.322	.141	.094	.045	4.00
5/32	15000	.215	.296	.403	.174	.108	.061	4.00
3/16	16000	.258	.356	.483	.204	.124	.061	4.00
1/4	12000	.344	.473	.644	.271	.151	.093	6.00
3/8	13000	.517	.710	.966	.406	.217	.093	6.00

# Two-Hemisphere Configuration Available Sizes

Nominal	Cutter P/N Series	Ø A min (approx) varies with angle of intersection			Ø B disk	C head height	Ø D shaft	E shaft length (supplied)
		90	60	45				
0.074	14000D-074	.079 Please contact us for specific application assistance			.074	.078	.030	2.50
3/32	14000D	.125	.178	.242	.106	.114	.030	2.50
1/8	11000D	.172	.237	.322	.141	.152	.045	4.00
5/32	15000D	.215	.296	.403	.174	.179	.061	4.00
3/16	16000D	.258	.356	.483	.204	.213	.061	4.00
1/4	12000D	.344	.473	.644	.271	.267	.093	6.00
3/8	13000D	.517	.710	.966	.406	.398	.093	6.00

Process Demonstration

US Patents 6,857,943 and 6,846,226

J.W.Done Corp.

ORBITOOL®
DEBURRING TOOLS
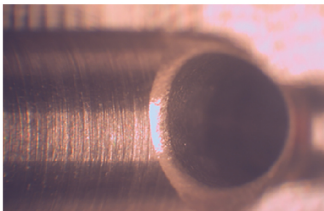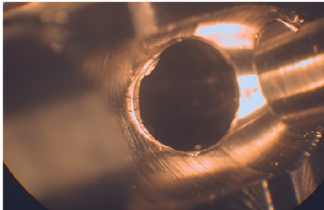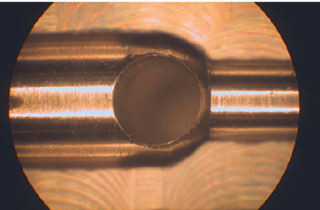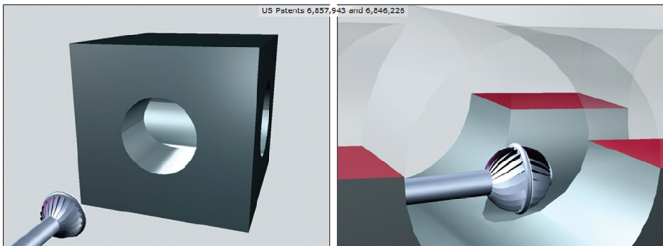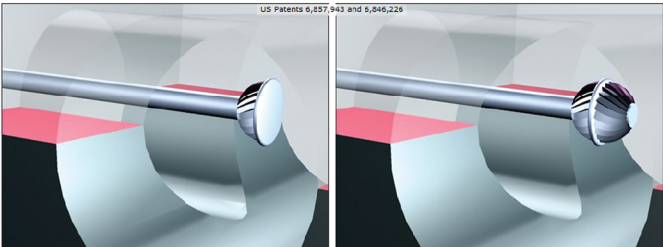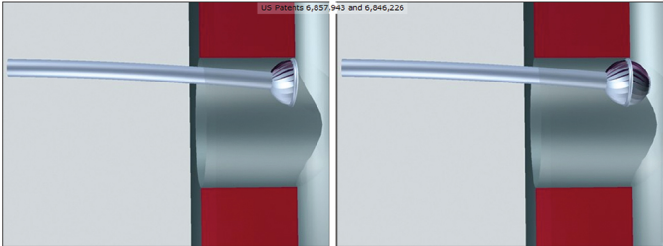
For immediate assistance or to place an order:

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Fax (510) 732-6078

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