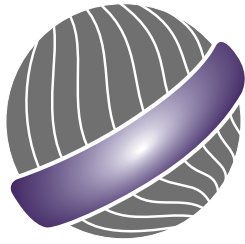


In-Process Deburring of
Cross-Drilled Holes Made Easy With



ORBITOOL[®]
D E B U R R I N G T O O L S



ORBITOOL[®] is a Registered trademark of J.W.Done Corp. US and Foreign Patents.

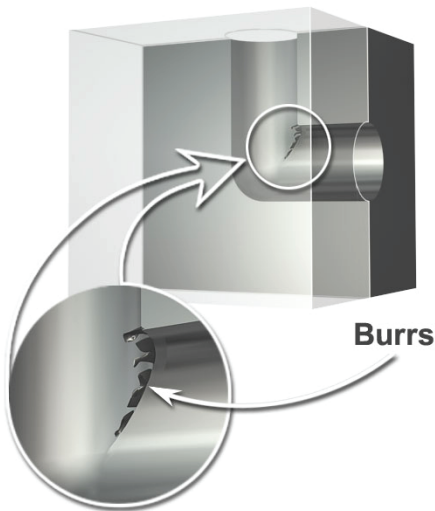




Why Choose ORBITOOL® ?

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

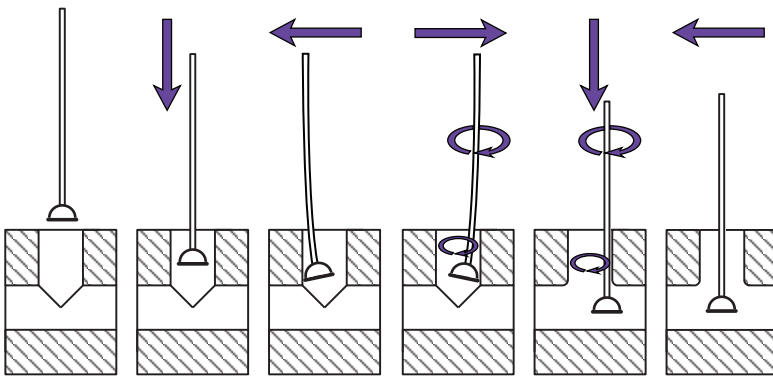


- 1** Flexible Shaft
- 2** Disk (polished steel)
- 3** Shaped Cutter (carbide)



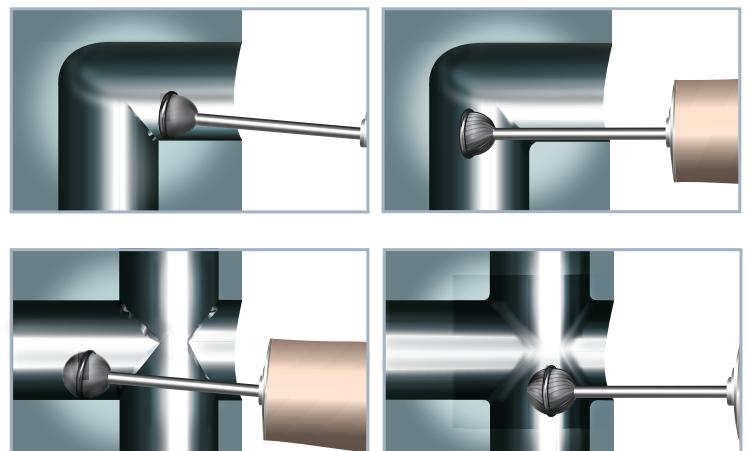
CNC Mills

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

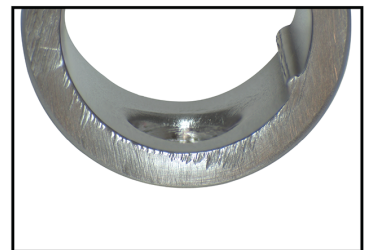
Manual deburring is readily accomplished with ORBITOOL® deburring cutters mounted in electric hand grinders (air grinders are not recommended-the rpm's are too high). We offer the unit shown here, part number 30004.

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.

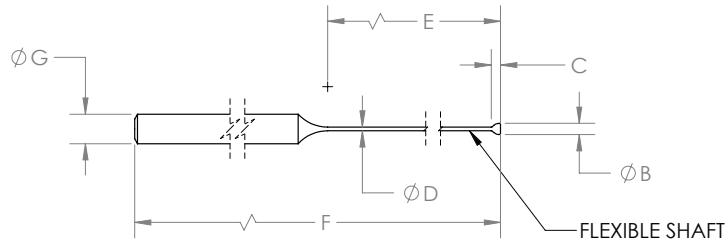


Before

After

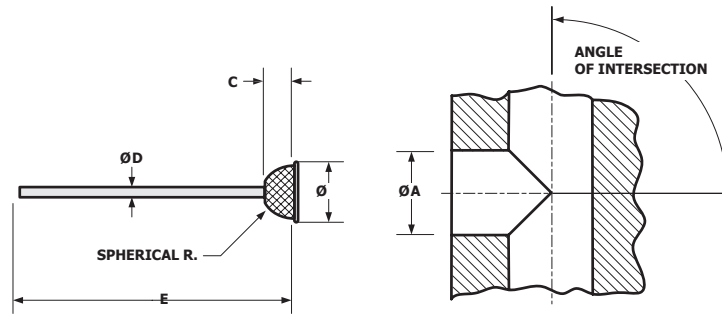


Microtool 18000 Series



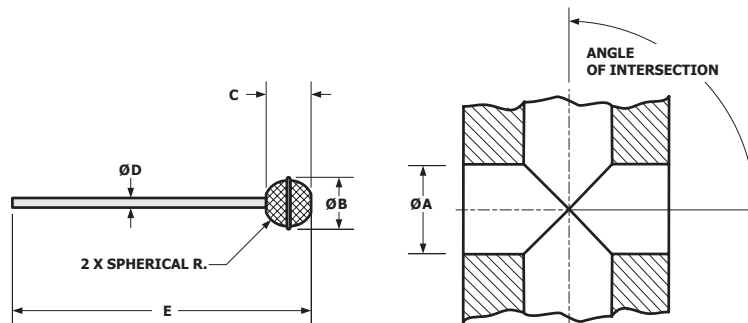
Size, Nominal	Cutter P/N Series	Ø A min (approx) varies with angle of intersection, in			Ø B disk, in	C head height, in	Ø D shaft, in	E AS supplied, in	F length, in	G clamping end, in
		90	60	45						
0.045	18000	.050 *please contact for specific application assistance			.045	.032	0.15	.5	2.17	.118
0.045	18001	.050 *please contact for specific application assistance			.045	.032	0.15	1	2.17	.118

One-Hemisphere Configuration Available Sizes



Nominal	Cutter P/N Series	Ø A min (approx) varies with angle of intersection, in			Ø B disk, in	C head height, in	Ø D shaft, in	E AS supplied, in
		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, in			Ø B disk, in	C head height, in	Ø D shaft, in	E AS supplied, in
		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

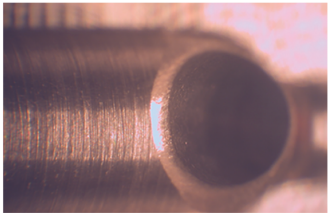
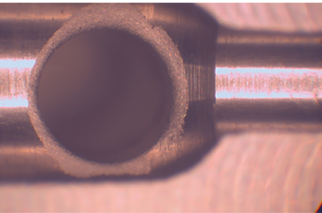
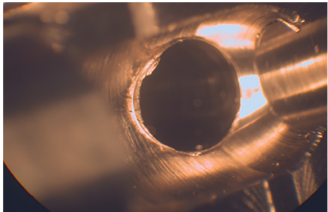
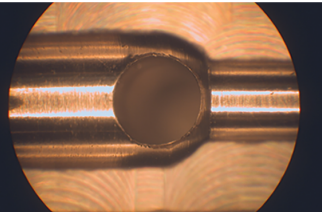
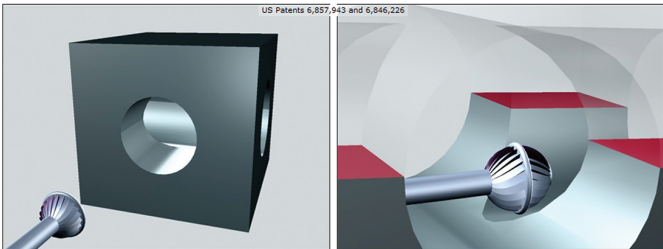
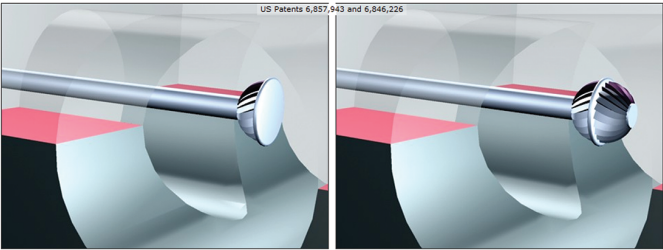
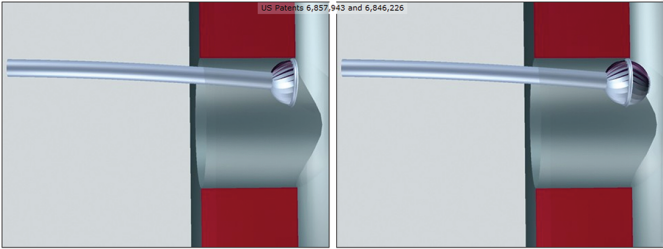
Ø .250

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Ø B

Ø A

Process Demonstration



J.W. Done Corp.



For immediate assistance or to place an order:

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Fax (510) 732-6078

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