

## DEBURR MASTER<sup>®</sup> WITH REPLACEABLE BLADES

**Deburr Master Inc.**  
PRECISION DEBURRING TOOLS



Deburr Master<sup>®</sup> tools are constructed with precision machined, solid tool steel and can be used on machines such as single or multi-spindle drilling machines, lathes, NC machine tools, hand tools and machining centers.

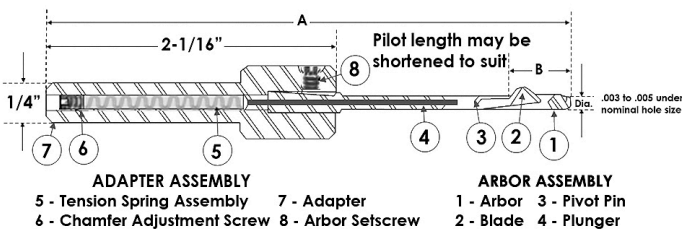
Each tool is fitted with a replaceable standard blade made of high-speed steel in Double Action (DA).

Simply adjust the setscrew in the shank end for desired chamfer based on the hardness of the material and the RPM's being used. No special skills are required.

Deburr Master<sup>®</sup> tools are available in both inch and metric sizes.



### Type A (Two-Unit Construction)



### Type A Complete Tool



### Replaceable Arbor and Replaceable Blade

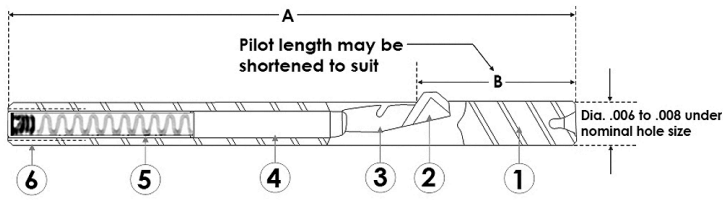


Sizes: 0.0781 - 0.2031

DEC. EQUIV.	HOLE SIZE		DIMENSIONS		BLADE SIZE
	INCHES	MM	A	B	
.0781	5/64	2.0	3-3/8	0.45	3/32
.0938	3/32				
.0984		2.5			
.1094	7/64				
.1181		3.0			
.1250	1/8		4-1/8	0.72	1/8
.1378		3.5			
.1406	9/64				
.1562	5/32				
.1575		4.0	4-1/8	0.72	5/32
.1719	11/64				
.1772		4.5			
.1875	3/16				
.1968		5.0			
.2031	13/64				3/16

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### Type B (One-Unit Construction)



- 1 - Arbor    3 - Pivot Pin    5 - Tension Spring  
2 - Blade    4 - Plunger    6 - Chamfer Adjustment Screw

Type B Complete Tool



Replaceable Blade



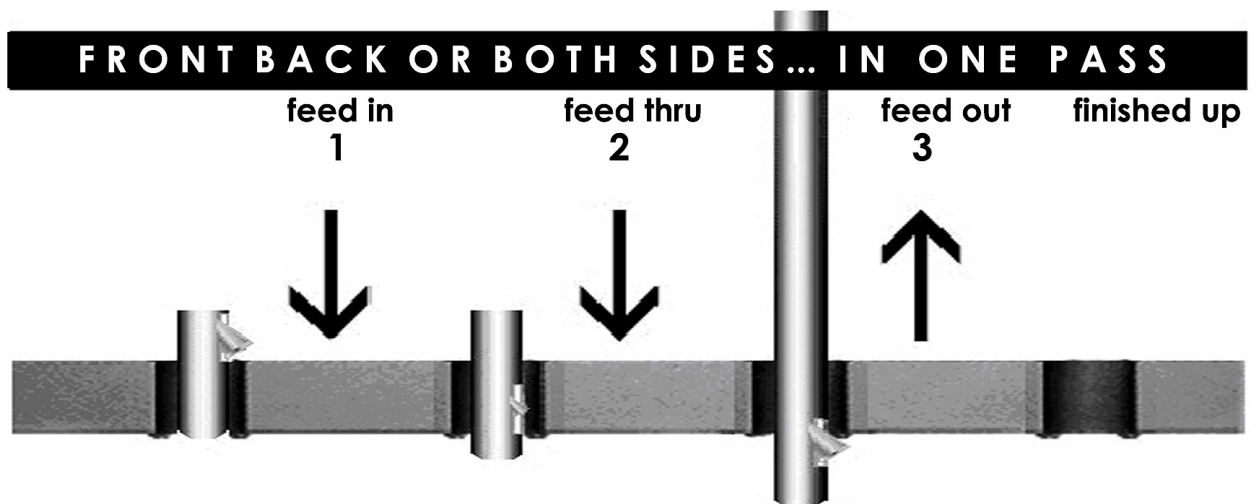
Sizes: 0.2165 - 1.0000

DEC. EQUIV.	HOLE SIZE		DIMENSIONS		BLADE SIZE
	INCHES	MM	A	B	
.2165		5.5	4.5	0.87	#1
.2188	7/32				
.2344	15/64				
.2362		6.0			
.2500	1/4				
.2559		6.5			
.2656	17/64				
.2756		7.0			
.2812	9/32		5.0	1.00	#3
.2953		7.5			
.2969	19/64				
.3125	5/16				
.3150		8.0			
.3281	21/64				
.3346		8.5			
.3438	11/32				
.3543		9.0	5.5	1.03	#3-1/2
.3594	23/64				
.3740		9.5			
.3750	3/8				
.3906	25/64				
.3937		10.0			
.4062	13/32				
.4134		10.5			
.4219	27/64				
.4331		11.0			
.4375	7/16				
.4528		11.5			
.4531	29/64				
.4688	15/32				
.4724		12.0			
.4844	31/64				
.4921		12.5			
.5000	1/2				
.5118		13.0			
.5156	33/64				
.5313	17/32	13.5			

Type B (One-Unit Construction) Continued

Sizes: 0.2165 - 1.0000

DEC. EQUIV.	HOLE SIZE		DIMENSIONS		BLADE SIZE
	INCHES	MM	A	B	
.5469	35/64				#4
.5512		14.0			
.5625	9/16				
.5709		14.5			
.5781	37/64				
.5906		15.0			
.5938	19/32				
.6094	39/64	15.5			
.6250	5/8		6.44	1.31	
.6299		16.0			
.6406	41/64				
.6496		16.5			
.6563	21/32				
.6693		17.0			
.6719	43/64				
.6875	11/16	17.5			
.7087		18.0			
.7283		18.5			
.7480		19.0			
.7500	3/4				
.7874		20.0			#5
.8268		21.0			
.8661		22.0			
.8750	7/8		6.75	1.54	
.9055		23.0			
.9449		24.0			
.9843		25.0			
1.000	1	25.4			



### REPLACEABLE BLADES

#### Blade Types:

Each tool is furnished with a standard blade made of high-speed steel in Double Action (DA)

DA (Double Action) for deburring front and back of hole.

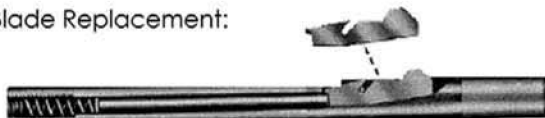


DA

#### Blade Assembly:

- 1) Set blade on the pivot pin within the arbor.
- 2) Place the plunger through the back of the shank.
- 3) Insert spring through the back of the shank.
- 4) Tighten the setscrew in rear end of the shank but do not compress the spring to its solid condition. The blade will not retract without the spring cushion. Damage to the hole and tool may occur.

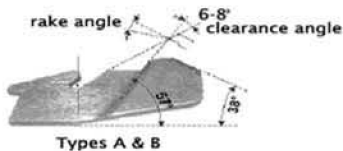
#### Blade Replacement:



Loosen the setscrew at the rear of the shank. The blade will drop freely from the arbor. Set the new blade on the pivot within the arbor and tighten the setscrew to the desired adjustment. Do not compress the spring to its solid condition as the blade will not retract without the spring cushion. Damage to the hole and tool may occur.

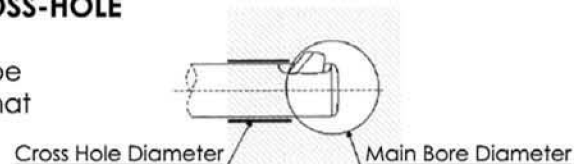
#### Blade Regrinding:

Blades can be reground 4 to 10 regrinds of 0.010" each. See diagram below:



### DEBURRING ON CROSS-HOLE

When deburring on a cross-hole, special attention must be paid to the relationship of the cross-hole diameter and that of the main bore.



The main bore must be at least three times larger than the cross-hole diameter or the hole will be damaged. If the main bore diameter is 3 to 12 times that of the cross-hole then a blade with a 45 degree angle should be used (available by special order). A standard blade can be used if the main bore diameter is more than 12 times that of the cross-hole.



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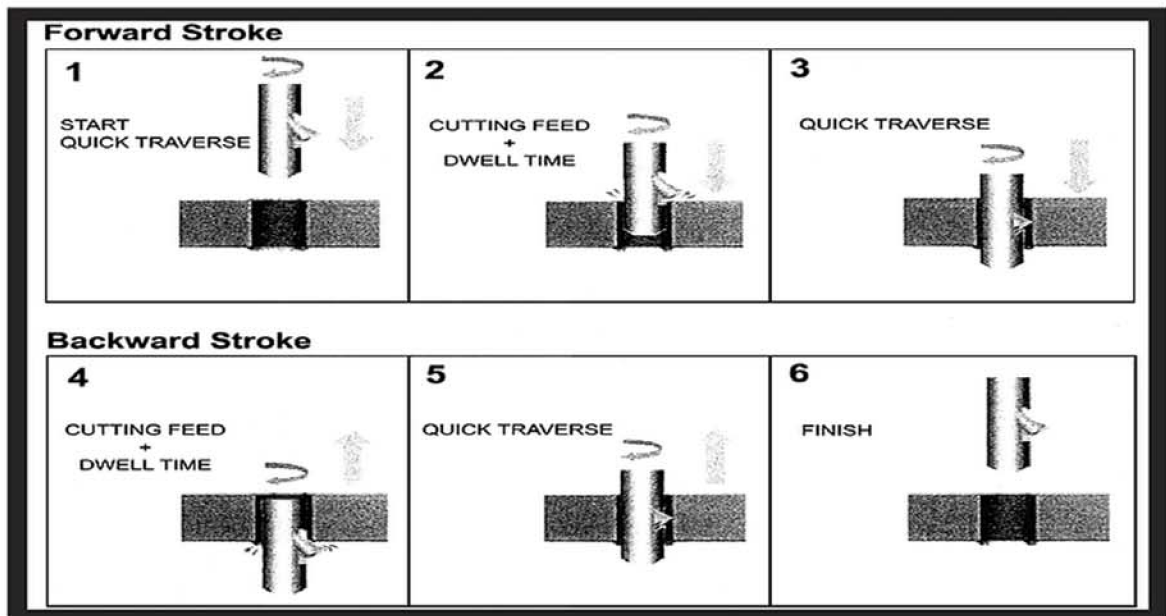
## DEBURR MASTER<sup>®</sup> TOOL SETS

DBS-101 (INCH SET) INCLUDES:  
1/8, 5/32, 3/16, 7/32, 1/4 Deburring tools  
and one extra blade for each tool

DBS-105 (METRIC SET) INCLUDES:  
3mm, 4mm, 5mm, 6mm, 7mm Deburring Tools  
and one extra blade for each tool

## MACHINING ANALYSIS FOR DEBURR MASTER TOOLS

Add Dwell time when feeding the tool through the workpiece to be deburred.  
The illustration and analysis below are for standard analysis for a high-speed steel cutter.



### MACHINING ANALYSIS

HOLE SIZE (mm & inch)	REVOLUTIONS (RPM)	FEED RANGE (mm/rev & inch/rev)
5mm - 2mm or less .197" - .079" or less	1500 - 1750	0.1mm - 0.02mm 0.004" - 0.001"
9mm - 6mm .354" - .236"	800 - 1000	0.15mm - 0.02mm 0.006" - 0.001"
10mm or over .394" or over	600 - 650	0.2mm - 0.05mm 0.008" - 0.002"

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