XEBEC BRUSH™ WHEEL TYPE

XEBEC®
DEBURRING TECHNOLOGIES

FEATURES

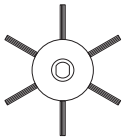
- Ideal for deburring and polishing of side surfaces and inner diameters
- Self-sharpening action on the cutting edge of the Ceramic Fiber tips of the Brush.
- Continuous cutting edge provides consistent grinding performance.

SPECIFICATIONS

Brush Color: **Red**

Sizes Available: **50 and 75 mm Diameter (70 or 150 mm Shank)**

Brush main unit



Shank

Brush requires reusable Shank to operate. Shank includes M4 set screw.

FOR USE WITH THE FOLLOWING TOOLS:

Follow manufacturers instructions for proper mounting

Machining Center | Combined Lathe | Special Machine | Robot | Lathe with Milling

Always operate within the recommended range of maximum speed of rotation, depth of cut and feed rate.

PRECAUTIONS FOR USE

Do not exceed the maximum rotation speed for use.
Operating above the maximum rotation speed may result in tool breakage.
Ensure any dust or debris generated during processing is collected, and work area is kept clean.
Even if there is no abnormal condition observed in the test run, stop use immediately if an abnormality is observed.
Do not use the tool at an unreasonable angle or under excessive pressure.
Do not use the tool in any place with risk of fire or explosion.
Do not grind with, alter or fabricate the shaft.

CONDUCT A TEST

Conduct a test run for 1 minute or more before starting the operation and 3 minutes or more after changing a tool.
Check for any abnormality including excessive vibration or looseness in the mounting place of the tool.

OPERATOR SAFETY MEASURES

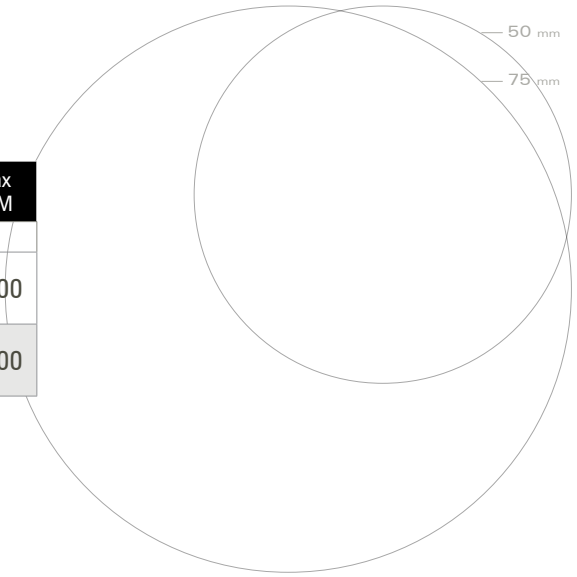
Use Protective Gear Always wear protective goggles, gloves and masks when operating the tool or entering the work area. Wear long sleeves, tight cuffs, and clothing to minimize skin exposure.

Take Precaution Be cautious in surrounding area. Use of machines at high speed can cause flying debris within the work area. Dust or debris generated by operating process could be hazordous.

WARNING!

Use caution and follow all safety measures at all times. Failure to do so could result in injury. A tool or a part of a tool may crack, drop off, distort or break. Broken pieces of a tool or grinding dust may stick into skin or eyes and cause injury.

Selection



Wheel Brush Reusable Shank Sold Separately, See Below

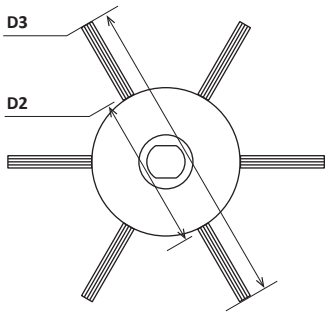
Size		EDP	Part No.	D2 Head Diameter		D3 Brush Diameter		L3 Head Thickness		L4 Brush Height		Max RPM
				MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	
50mm		**60007**	W-A11-50	23	0.906	50	1.969	9.6	0.378	8	0.315	3,000
75mm		**60008**	W-A11-75	23	0.906	75	2.953	9.6	0.378	8	0.315	3,000

Insert shank into brush before use.

Shank Wheel Brush Required

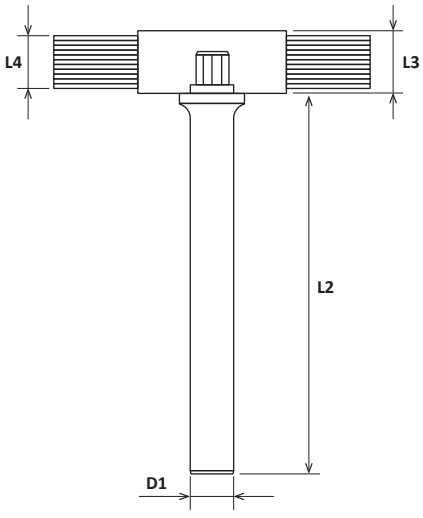
Shank	EDP	Part No.	D1 Shank Diameter		L2 Shank Length	
			MM	INCHES	MM	INCHES
70 mm Shank	**60009**	WSM	8	0.315	70	2.756
150 mm Shank	**60010**	WSL	12	0.472	150	5.906

*Not suitable for use on hand held devices



Set Screw Included with Shank

SIZE	STYLE	DIAMETER	PITCH
M4	Flat Head with Hex	4mm (.157 in)	0.7 mm



ADDITIONAL LEARNING RESOURCES AVAILABLE ON OUR WEBSITE

3D Files (STEP, DXF), Dimensional Drawings and Safety Data Sheets (SDS)
deburringtechnologies.com/technical

Product Demonstration Videos
deburringtechnologies.com/video

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How to Use

Initial Processing Conditions

EDP	Minimum RPM	Depth of cut (inches)	Feed rate (in/min)
60007	1,600	0.008	190
60008	1,000	0.008	120

*As bristles wear, bristle length shortens and stiffness increases.
If bristle breakage occurs, decrease the depth of cut.

If burrs remain

1. Increase the number of passes
2. Decrease the feed rate in 10 to 20% increments
3. Increase Depth of Cut (up to 0.02 inches)

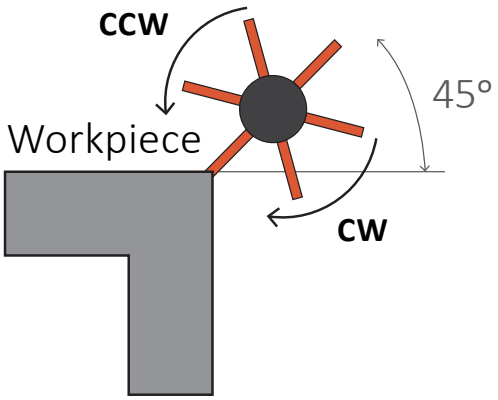
Use of Coolant/Oil will optimize results

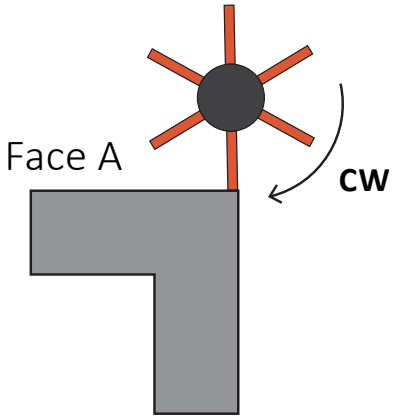
- **It will Extend Tool Life**
- **Improves Surface Finish**

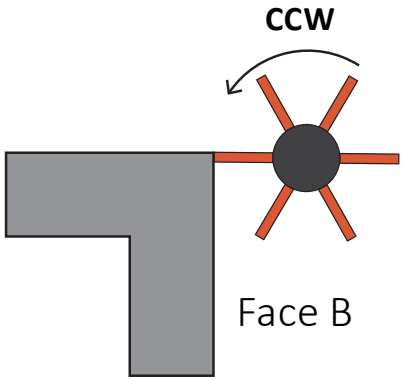
HOW TO ENGAGE

From the top view, the best approach is to place a center of a brush at the center angle to the edge. (Figure 1)
Burrs on Face A and B can be both removed.
Edge quality becomes stable if a brush is rotated in both clockwise and counter-clockwise directions.
Brush position on the Figure 2 is effective for burrs on Face A in the same way as figure 3 for burrs on Face B.

Rotational Direction







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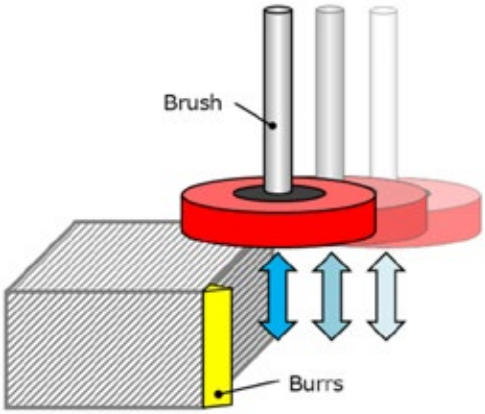
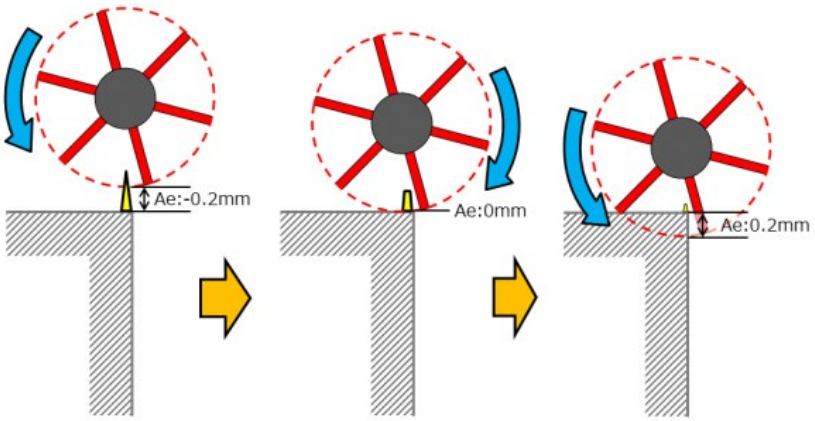
IF BURRS ARE TOO LARGE

Use multiple passes as described below.
Gradually move the brush closer to the bottom of burrs. Increase the depth of cut step by step.
If trying to remove burrs in just 1 pass, it may cause excessive tool wear, tool breakage or burr may not be removed.
Calculate the maximum height of burrs before using the tool.





HOW TO ADJUST WEAR AMOUNT

To use the XEBEC Brush Wheel Type, the depth of cut must be kept small. It is necessary to offset the wear amount in a radial direction. Use a macro program or manually offset the wear amount. Refer to the example below.

```
N10(XEBEC WHEEL BRUSH);
T10;
G91G28Z0M19;
M6;

(WEAR OFS SETTING);
#1=0.01; ···amount of brush wear/use (e.g. 0.01mm/use) *Radius mode

(CUTTING SECTION);
G0G90G54X50.0Y0;
G43Z50.0H10S__M3;
Z-10.0 ;
G1G41X15.0D10;···Tool diameter offset No. e.g. D10
G2I-15.0;
G40X50.0;
G0Z50.0M9;
G91G28Z0M19;

(WERA OFS UPDATE);
#12010=#12010-#1; ···Offset 0.01mm/use
IF[[#13010+#12010]LE15]THEN  ···Alarm when tool radius ≤ 15mm
      #3000=10(BRUSH LIFE EXPIRE);
M1;
```

Tool diameter offset amount
Set by radius mode.

Tool diameter offset Macro No.
e.g. FANUC 31i: standard;
Geometry offset #13000-
Tool wear offset #12000-
Set the value corresponding to your machine.

Tool life and alarm
Set the initial radius
Φ50 brush: 25mm
Φ75 brush: 37.5mm
Alarm when the tool radius becomes 15mm.
[Radial geometry offset amount + radial wear amount] = 15mm.