

Ceramic Stones

crosshole deburring



XEBEC Stone™ Flexible Shaft

| Head | | Aggressiveness | | | Max RPM |
|----------|-------------------------------|------------------------------|------------------------------|----------------------------------|---------|
| | | Less <<<<<<<<>>>>>>>> More | | | |
| Shape | Size | Blue - #800 | Orange - #400 | Gray - #220 | |
| Ball | 3 mm 0.118 in | CH-PB-3B EDP 10001 | CH-PO-3B EDP 10008 | CH-PM-3B EDP 10015 | 15,000 |
| | 4 mm 0.157 in | CH-PB-4B EDP 10002 | CH-PO-4B EDP 10009 | CH-PM-4B EDP 10016 | 13,000 |
| | 5 mm 0.197 in | CH-PB-5B EDP 10003 | CH-PO-5B EDP 10010 | CH-PM-5B EDP 10017 | 12,000 |
| | 6 mm 0.236 in | CH-PB-6B EDP 10004 | CH-PO-6B EDP 10011 | CH-PM-6B EDP 10018 | 10,000 |
| | 10 mm 0.393 in | | | CH-PM-10B EDP 10027 | 7,000 |
| Cylinder | 3 x 3 mm 0.118 x 0.118 in | CH-PB-3R EDP 10005 | CH-PO-3R EDP 10012 | CH-PM-3R EDP 10019 | 15,000 |
| | 4 x 4 mm 0.157 x 0.157 in | CH-PB-4R EDP 10006 | CH-PO-4R EDP 10013 | CH-PM-4R EDP 10020 | 13,000 |
| | 5 x 5 mm 0.197 x 0.197 in | CH-PB-5R EDP 10007 | CH-PO-5R EDP 10014 | CH-PM-5R EDP 10021 | 12,000 |
| | 5 x 10 mm 0.197 x 0.393 in | | | CH-PM-5R-C01 EDP 10022 | 12,000 |



- Made of Alumina Fiber abrasive stone, cutting edges exposed over entire surface
- Flexible shaft allows soft contact with the work piece
- Efficient removal of fine burrs where the base thickness is 0.2mm or less after machining
- Ideal for point processing of crosshole fine deburring
- Can be used in a machining center, NC lathe, robot or with hand grinder for manual deburring

Ceramic Stones

tech applications

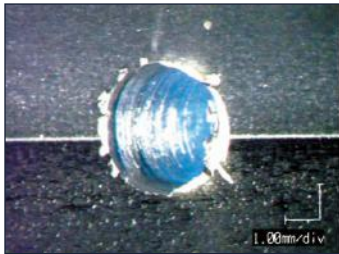


Xebec Beats the Competition!

Comparison of finish on \varnothing 3.5mm drilled crosshole deburring

Before

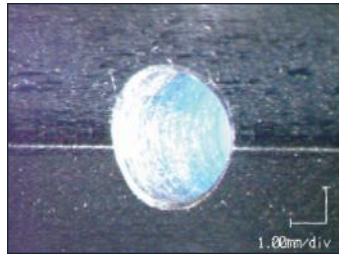
Burrs generated on crosshole



Material: Carbon Steel S45C
Rotation speed: 5000min⁻¹
Processing time: 1 sec
Primary processing hole diameter
Secondary processing hole diameter

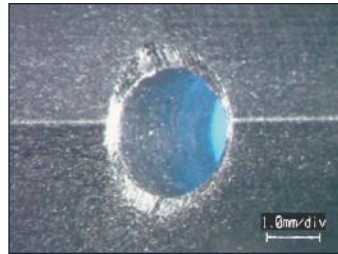
After

Xebec Stone™ Flexible Shaft
(#220 equivalent head shape = ball type)



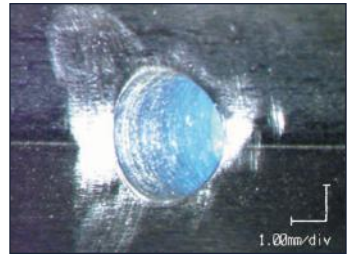
Remove burrs only with point processing
Edge quality: Excellent

Other company's diamond bur
(#220 equivalent head shape = ball type)



The edge shape is broken & secondary burrs are generated
Edge quality: Poor

Other company's diamond bur
(#220 equivalent head shape = cylinder type)

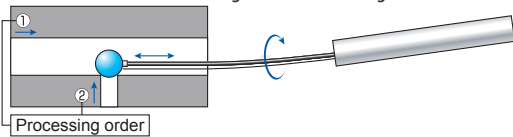


The finish other than the edge is affected
Edge quality: Fair

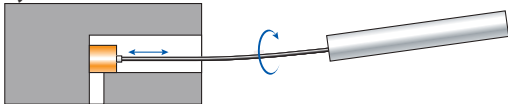
How to Use - "Point Processing"

Insert from primary processing hole. Using a head slightly larger than the secondary hole diameter results in efficient deburring

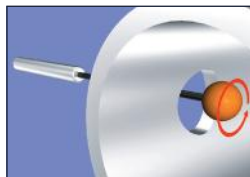
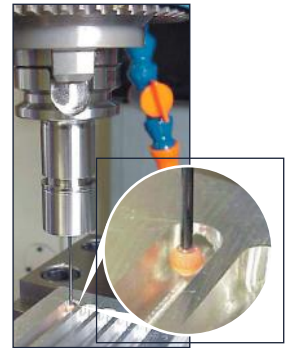
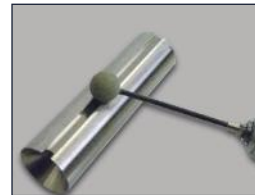
Ball head: Does not damage the surrounding area



Cylindrical head: Use for dead-end holes



* No ceramic stone vibration while rotating. By pressing the head against the work, the shaft bends, softening the impact.

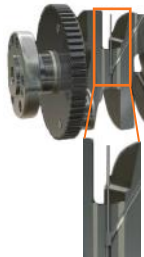


Can also be used to deburr surfaces, diagonal holes and used for back deburring for contour processing

Successful Applications

| | |
|------------------------|--|
| Category | Automotive engine part |
| Workpiece | Crankshaft |
| Material | Carbon steel S48C |
| Process Details | Custom Machine/ Crosshole deburring of internal diameter |

XEBEC product used: CH-PM-5R-CO1
Rotation speed: 1500min⁻¹



| | |
|------------------------|--|
| Category | Automotive brake part |
| Workpiece | ABS block |
| Material | Aluminum alloy |
| Process Details | Macnining Center/ Crosshole deburring of internal diameter |

XEBEC product used: CH-PO-5B
Rotation speed: 6000min⁻¹

