**Electroformed Bond Hub Blades**

**ZHDG SERIES**

**Electroformed hub blades producing high quality substrate dicing**

**Easy-to-handle hub blade for dicing substrates**

**An extensive lineup of grit sizes and concentrations for high quality processing**

The ZHDG series developed for dicing various substrates adopts a larger grit size compared to the hub blades for semiconductor wafers. Also, the abundant concentration lineup meets a number of different customer requests.

- Improved operability thanks to the aluminum base as compared with standard hubless type blades for dicing substrates.
- Selectable from a lineup with an abundant variety of grit sizes and concentrations.
- Reduction in resin/metal burring by selecting a low concentration.

**ZHDG series**

<table>
<thead>
<tr>
<th>ZHDG Series</th>
<th>For substrates #360～#1000</th>
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</thead>
<tbody>
<tr>
<td>ZH05 Series</td>
<td>For semiconductor wafers #1500～#5000</td>
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**Applications**

Chip LED board, Various types of semiconductor packages, etc.
Specifications

**ZHDG - SD 700 - N1 - 60 R 150 × 60 E - SS**

<table>
<thead>
<tr>
<th>Grit type</th>
<th>Grit size</th>
<th>Bond</th>
<th>Concentration</th>
<th>Exposure</th>
<th>Blade shape</th>
<th>Silt</th>
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<tbody>
<tr>
<td>SD</td>
<td>360</td>
<td>N1</td>
<td>30</td>
<td>C</td>
<td>E</td>
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<td>B</td>
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</table>

- *1 Blade thickness greater than 0.1mm is required*
- *2 All slit widths are 0.5 mm (except for the SS type).*
- All slit depth are 1.0 mm (except for the SS type).

**Experimental Data**

- **Wear amount comparison for different concentrations**
- **Processing quality comparison for different concentrations**

**Workpiece**: Dresser board

Depth: 0.5 mm (Half cut)

Feed speed: 30 mm/s

Spindle revolution: 30,000 min⁻¹

Grit size: #700

**Workpiece**: Resin substrate with electrodes

Depth: 1.5 mm (Half cut)

Feed speed: 50 mm/s

Spindle revolution: 30,000 min⁻¹

Grit size: #700

When ordering

Please contact a DISCO representative with your product needs such as type, wheel size, and quantity.

When you place the first order with us, please explain application information such as materials to grind, sizes, machine, type, and other specification.

We are ready to help you to determine which is our most appropriate product type for your application.

Due to improvements in our products, it is possible that product specifications may be changed without advanced notice.

Please confirm the product specifications with a DISCO representative.

To use these DISCO blades and wheels (hereafter precision tooling) safely...

- Use a safety cover (nozzle case, cover), equipped as a standard accessory, to avoid injury.
- Do not exceed the specified rpm limit indicated on the precision tooling.
- Follow the instruction manual of the equipment to mount the precision tooling properly.
- Do not drop or hit the precision tooling. This may cause breakage or injury.
- Always check the precision tooling for chipping or any other damage before starting to use it. Do not use the tooling if there is any damage.
- Read the operation manual of the cutting/grinding equipment before use.
- Do not use the precision tooling with modified or customized equipment.
- Do not use precision tooling that has a different size from the one recommended for your equipment.
- Do not use the precision tooling for any other purpose than grinding, cutting, or polishing.
- Always use water or coolant to prevent precision tooling damage.

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