Electroformed Bond Blades

**Z09 SERIES**

Electroformed blades with higher strength and variety of concentration

The Z09 series adopts a newly developed high strength bond and meets various needs thanks to highly accurate concentration control technology

The Z09 series consists of electroformed bond blades for applications needing fine grit sizes, which require particularly high quality processing. Since there are five levels of concentration, a blade having a good balance of quality and life is selectable. Furthermore, the newly developed high strength bond realizes highly straight processing and increases the process speed.

- Increases the choices for blades thanks to the technology allowing for more detailed classification of concentration.
- Introduces a blade with a concentration of 30.
- Reduces interval dressing by offering low concentration blades.
- Realizes highly straight processing and increases the process speed thanks to the high strength bond.

**Concentration range**

During dicing, concentration affects both the speed of blade wear and the size of chipping. By selecting precisely a concentration* that is appropriate to the application, both wear speed and process quality can be made more stable and consistent.

*Concentration refers to the percentage of diamond grit in the abrasive portion of the blade. For example, a concentration level of 100 indicates 25% diamond grit by volume.

**Applications**

PZT, LiTaO₃, Ceramics, Silicon wafers, etc.
Specifications

Z09 - SD 1700 - Y1 - 60 51 × 0.1 A2 × 40 × 45 E - L - S3

**Grit type**
- SD Synthetic Diamond

**Grit size**
- 1700 #1700
- 2000 #2000
- 3000 #3000
- 3500 #3500
- 4000 #4000
- 4500 #4500
- 4800 #4800
- 5000 #5000

**Concentration**
- 30
- 60
- 90
- 120
- 150

**Thickness accuracy**
- A1 ±0.002
- A2 ±0.005
- A3 ±0.010
- A4 ±0.015
- AS Optional

**Thickness**

**Bond**
- Y1

**O.D.**

**I.D.**

**Angle**
- E
- N
- M
- V
- S

**Blade shape**

**No. of slits**
- S1 4
- S2 8
- S3 16
- S4 60
- S5 20
- SS Optional

**Depth**
- 1mm
- 1mm
- 1mm
- 2mm
- 1mm

**Blader thickness**

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

Blade thickness greater than 0.04 mm are available.

**Experimental Data**

**Processing of PZT**
The Z09 series enables highly straight deep grooving which was difficult with the NBC-Z blade.

**Workpiece**
- NBC-ZB 1060-V 52 x 0.03 x 40
- Z09-SD1700-Y1-30 52 x 0.03A1 x 40-V

**Blade exposure**
- 1.3 mm

**Speed**
- 4 mm/s

**Spindle revolution**
- 30,000 min⁻¹

**Depth**
- Half Cut (1 mm depth)

**Processing of Alumina ceramics**
The Z09 series processes ceramics at a speed which could not be realized with the NBC-Z blade.

**Workpiece**
- Alumina ceramics

**Work size**
- 70 x 60 x 0.28 mmt

**Blade**
- NBC-ZB 1060-V 52 x 0.03 x 40
- Z09-SD1700-Y1-30 52 x 0.03A1 x 40-V

**Blade exposure**
- 1.3 mm

**Speed**
- 8 mm/s

**Spindle revolution**
- 20,000 min⁻¹

**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...
Please read carefully and follow the instructions below to prevent any accidents or injuries.

- 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.