

Resin Bond Blades

R07 SERIES

Realizes high-grade cutting of various hard, brittle materials with a wide range of bonds

The R07 series realizes high-grade processing of hard, brittle materials, such as glass, quartz and ceramics, It also has a wide range of bonds to support various needs.

A new bond material was developed for the resin bond blade R07 series to match the characteristics of the material that will be processed. With the newly developed bond range, it is possible to satisfy both high-grade and high-speed processing.



- High processing quality for cutting of hard, brittle materials.
- High-speed processing of hard, brittle materials is possible.

Bond comparison



Characteristics and uses of each bond

Bond Name	Characteristics	Major uses
BB101	Standard type	Glass (borosilicate glass, non-alkali glass), crystal, etc.
BB200	Quality-oriented type	Quartz, etc.
BB300	Life-oriented type	Ceramics (alumina, LTCC), aluminum nitride, etc.
BB500	Extended Life-oriented type	Ceramics (alumina, LTCC), aluminum nitride, etc.

Specifications

R07 - SDC 600 - BB101 - 75

Grit type*1	Grit size				Bond*1	Concentration
SD	180	#180	400	#400	BB101※2	50
SDC	220	#220	500	#500	BB200	75
	240	#240	600	#600	BB300	85
	280	#280	700	#700	BB500	100
	320	#320	800	#800		
	340	#340	1200	#1200		
	360	#360				

54 × 0.2 A2 × 40

O.D.	Thickness	Thickness accuracy	I.D.
		A2	±0.005
		A3	±0.010
		A4	±0.015
		AS	Special specification (mm)

*1 Combinations

Bond	Grit type
BB101	SDC
BB200	SD, SDC
BB300	SDC
BB500	SDC

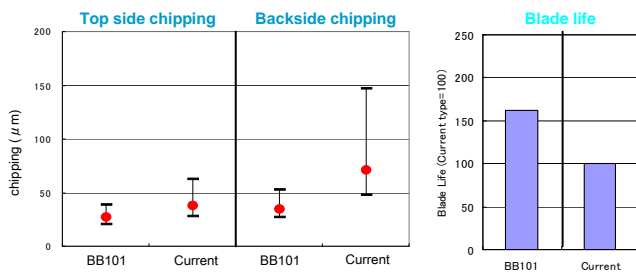
Note: #180-800 is usable only for SDC.

※2: BB101 is an improved version of the BB100 bond. Currently, DISCO recommends the BB101 bond.

Experimental Data

Borosilicate glass cutting process (BB101 bond)

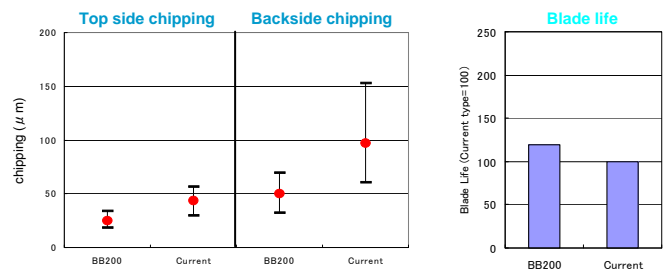
Achieves smaller chipping than the existing blade for both the front and backside, and longer blade life.



Workpiece : Borosilicate glass 0.7 mm
Blade : New R07-SDC600-BB101-75
Current P1A851 SD600R10MB01
Spindle revolution : 20000 min⁻¹
Feed speed : 10 mm/s
Size : 54 x 0.1 x 40 mm

Quartz cutting process (BB200 bond)

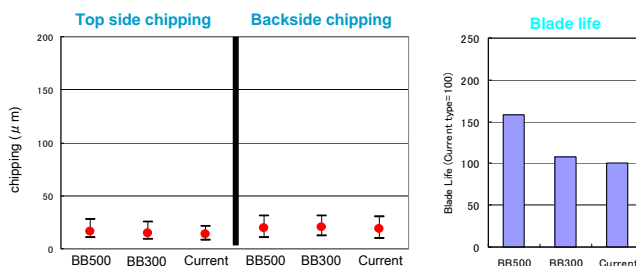
Achieves smaller chipping than the existing blade for both the front and backside, and longer blade life.



Workpiece : Quartz 1.1 mm
Blade : New R07-SD400-BB200-75
Current P1A851 SD400R10MB01
Spindle revolution : 20000 min⁻¹
Feed speed : 5 mm/s
Size : 54 x 0.2 x 40 mm

Alumina ceramics cutting process (BB300, BB500 bond)

The chipping is about the same for both the front and backside chipping as the existing blade, however it achieves longer blade life.



Workpiece : 96% Al₂O₃ 100 x 100 x 0.5 mm
Blade : Current P1A851 SDC400R10MB01
R07-SDC400-BB300-75
R07-SDC400-BB500-75
Spindle revolution : 30000 min⁻¹
Feed speed : 10 mm/s
Size : 54 x 0.15 x 40 mm

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.