

Electroformed Bond Hub Blades

# ZHCR SERIES

## Realizes stable processing by suppressing blade tip shape collapse

The ZHCR series hub blade realizes a special blade structure, suppresses tip shape collapse for blades exceeding 60  $\mu\text{m}$  thickness, and provides stable processing using DISCO unique technology.

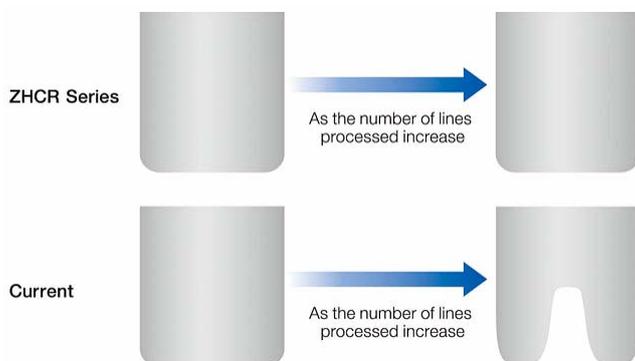
For relatively thick blades in excess of 60  $\mu\text{m}$ , the blade tip midsection may suffer wear as the number of cut lines increase. This blade tip shape collapse causes quality deterioration such as widening of the kerf and sporadic chipping. The ZHCR series restrains the collapse of the blade tip shape and realizes stable processing without deterioration using a special blade structure based on unique technology. The ZHCR series proves its worth in the following processes where blades tip shape collapse easily.

- Processes that use blades with thicknesses exceeding 60  $\mu\text{m}$ .
- Processing of wafers with large amounts of TEG on the street.
- Blade dicing after laser grooving.



### ■ Image of the blade tip shape

The ZHCR has properties that maintain regular blade shape for cutting processes where only the blade tip midsection wears easily.



### Applications

Silicon wafers, etc.

**Specifications**

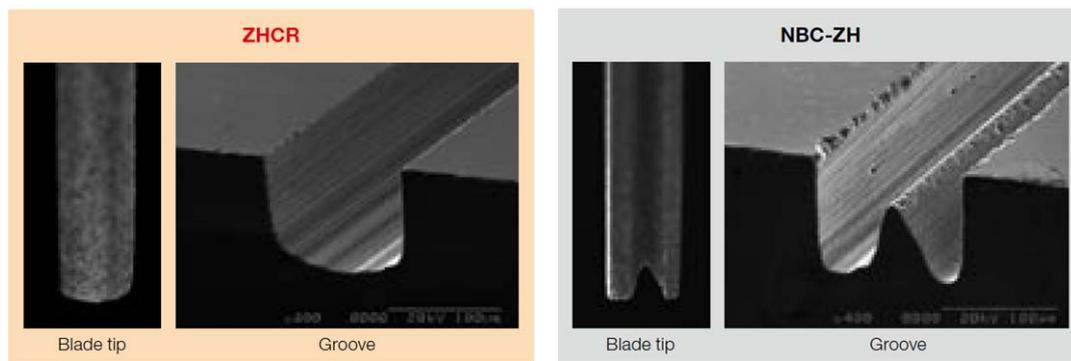
Grit type		Grit size		Bond	Concentration	Exposure	Kerf width*1
		2000	#2000	N1	50	C 0.64 - 0.76	F 0.040 - 0.050
		3000	#3000		70	D 0.76 - 0.89	G 0.050 - 0.060
		3500	#3500		90	E 0.89 - 1.02	H 0.060 - 0.070
					110	F 1.02 - 1.15	I 0.070 - 0.080
						G 1.15 - 1.28	J 0.080 - 0.090
						(mm)	K 0.090 - 0.100
							(mm)

\*1 Maximum kerf width of 0.2 mm are available.

**Experimental Data**

**Tip shape and groove comparison (SEM Image)**

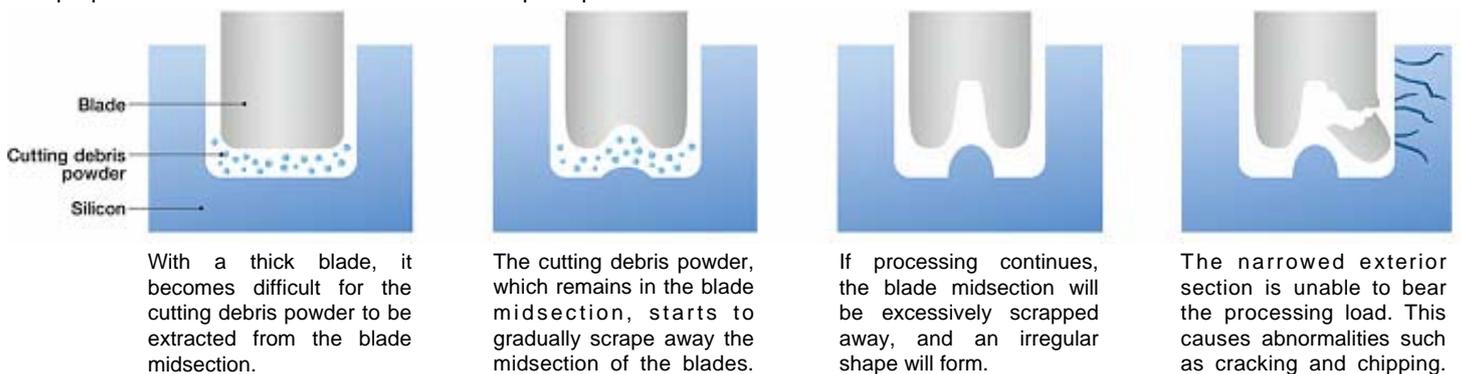
As the cutting process progresses, the midsection of a regular blade becomes uneven and chipping increases. With the ZHCR, the normal shape of the blade is maintained.



**Blade:**  
ZHCR-SD2000-N1-50BD FN  
NBC-ZH205F-SE 27HEFN

**Reference) Image of the blade tip shape change**

These images show that how quality deterioration happens when the tip shape of a thick blade collapses. The ZHCR Series has properties that maintain a functional blade tip shape.



Quality deterioration caused by the collapse of the blade tip shape include kerf widening, sudden chipping, curving of 2-axes step cut and workpiece damage.

**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.