



DISCO

Kiru · Kezuru · Migaku Technologies



Electroformed Bond Hub Blades **ZHFX SERIES**

Realizes continuous processing of oxide wafers



The ZHFX Series realizes high level continuous processing of oxide wafers.

The ZHFX Series employs a bond that has ideal wear properties for processing oxide wafers. In addition, greater processing stability can be expected in the DBG processing of Lithium Tantalite wafers.

- Realizes high level and stable processing of oxide wafers.
- Significantly lowers dress frequency during processing and shows high continuous processing performance.

■ Lithium Tantalite wafers process example



ZHFX Series



NBC-ZH Series



Applications

Oxide wafers (LiTaO₃, etc.), etc.

Specifications

Grit type SD	Bond type C1	Special specification A**** D D	
ZHFX - SD 1700 - C1 - 50 - A**** D D			
Grit size	Concentration	Exposure	Kerf width
1700 #1700	50	A 0.38 - 0.51	C 0.025 - 0.030
2000 #2000	70	B 0.51 - 0.64	D 0.030 - 0.035
	90	C 0.64 - 0.76	E 0.035 - 0.040
	110	D 0.76 - 0.89	F 0.040 - 0.050
		E 0.89 - 1.02	
		F 1.02 - 1.15	

(mm)

Electroformed Bond Hub Blades ZHFX SERIES



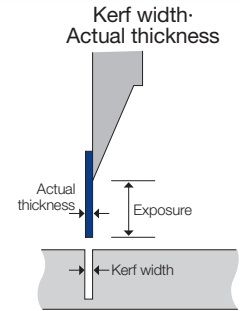
Standard sizes*

Exposure	A	B	C	D	E	F
Kerf width mm	0.38 - 0.51	0.51 - 0.64	0.64 - 0.76	0.76 - 0.89	0.89 - 1.02	1.02 - 1.15
C 0.025 - 0.030	AC	BC	CC			
D 0.030 - 0.035	AD	BD	CD	DD		
E 0.035 - 0.040	AE	BE	CE	DE	EE	
F 0.040 - 0.050	AF	BF	CF	DF	EF	FF

* Please contact a DISCO representative for details.

Standard concentrations

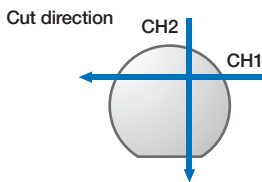
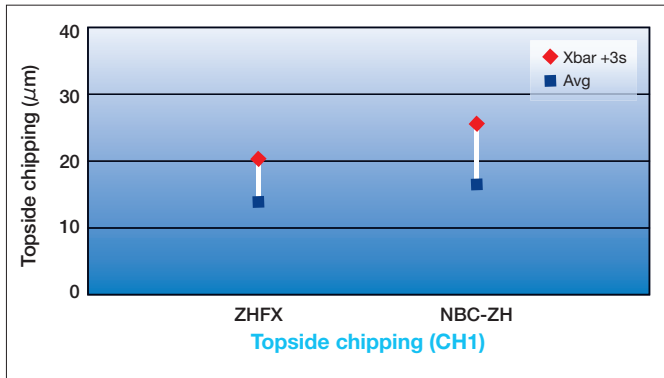
Grit size	Concentration
	50 70 90 110
#1700	✓ ✓ ✓ ✓
#2000	✓ ✓ ✓ ✓



Experimental data

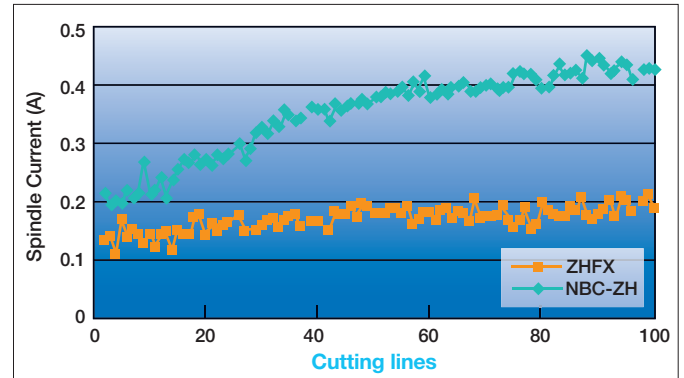
The ZHFX Series is an optimal blade for applications such as half-cut dicing for the DBG process or the continuous processing of oxide wafers.

■ Topside chipping size comparison



Workpiece: 4" LiTaO₃ x 350 μm
Depth: 350 μm (full cut)
Blade: ZHFX-SD2000-C1-50 DF
NBC-ZH105L 27HEDF

■ Spindle current comparison



The above graph shows the measurement of current during the processing of a LiTaO₃ wafer. With the ZHFX Series, compared to the existing series, as the number of lines increased, there is no rise in current, so stable processing can be verified.

Workpiece: 4" LiTaO₃ x 350 μm
Depth: 150 μm (half cut)
Blade: ZHFX-SD1700-C1-50 BC
NBC-ZH106J 27HFBC

When ordering

Please contact a DISCO representative with your product needs such as type, thickness, outer and inner diameter, and quantity.

When you place the first order with us, please explain application information such as materials to cut or grind, sizes, shape, 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.



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