



DISCO

Kiru · Kezuru · Migaku Technologies



Electroformed Bond Hub Blades **NBC-ZH SERIES**

High performance hub blades that challenges cutting



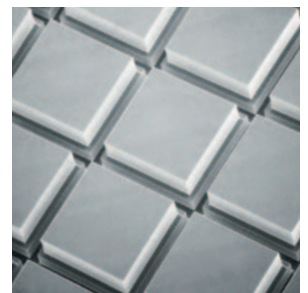
The NBC-ZH Series provides high productivity and excellent process results thanks to its superb cutting ability and long life.

The NBC-ZH Series is produced using DISCO's original technology. A combination of an ultra-thin diamond blade and an aluminum hub provides enhanced operation efficiency and stable cutting results. In combination with DISCO's vast application knowledge, these blades provide excellent cutting results when dicing silicon wafers and compound semiconductor wafers such as GaAs.

- Advanced dicing process - bevel and step cutting
- Wide range of grit sizes and bond types to support various application requirements
- Easy to handling ultra-thin blades
- Shorter blade change time - increased productivity



Bevel Cut



Step Cut

Applications

Silicon, GaAs, GaP, LiTaO₃, etc.

Specifications

Standard Type (Kerf width less than 0.060 mm)

Bond ²	Hub type	Diameter
O Standard Bond	SE Sharp hub edge type	27H O.D. ø55.56 I.D. ø19.05
J Soft Bond		35H O.D. ø76.20 I.D. ø31.75
F For Backside Chipping Reduction		

*1 Products that include a special specification may be denoted with "ZH-****"

NBC - ZH¹ 2 05 0 - SE 27H E D D

Concentration ²	Grit size ²	Grit size code	Exposure	Kerf width
1 Low Concentration	07 #1500	G	A 0.38 - 0.51	A 0.015 - 0.020
	06 #1700	F	B 0.51 - 0.64	B 0.020 - 0.025
2 Standard Concentration	29 #1800	E	C 0.64 - 0.76	C 0.025 - 0.030
	05 #2000		D 0.76 - 0.89	D 0.030 - 0.035
	04 #3000	D	E 0.89 - 1.02	E 0.035 - 0.040
	03 #3500	C	F 1.02 - 1.15	F 0.040 - 0.050
	27 #4000			G 0.050 - 0.060
	02 #4500		B	
	26 #4800	A		
	22 #5000			

Electroformed Bond Hub Blades NBC-ZH SERIES



Standard sizes^{*3}

Kerf width	Exposure mm	A	B	C	D	E	F
		0.015 - 0.020	AA				
0.020 - 0.025	AB	BB	CB				
0.025 - 0.030		BC	CC	DC			
0.030 - 0.035		BD	CD	DD	ED		
0.035 - 0.040			CE	DE	EE	FE	
0.040 - 0.050			CF	DF	EF	FF	
0.050 - 0.060				DG	EG	FG	

*3 Please contact a DISCO representative for details.

*2 Standard concentrations

Grit size	Concentration	Bond		
		1	2	O J F
07 #1500	Size	✓	✓	✓ ✓
06 #1700	1	✓	✓	✓ ✓ ✓
29 #1800	2	✓	✓	✓ ✓ ✓
05 #2000	O	✓	✓	✓ ✓ ✓
04 #3000	J	✓	✓	✓ ✓ ✓
03 #3500	F	✓	✓	✓ ✓ ✓
27 #4000		✓	✓	✓ ✓ ✓
02 #4500		✓		✓ ✓ ✓
26 #4800		✓		✓ ✓ ✓
22 #5000		✓		✓ ✓ ✓

Actual blade thickness with greater than 0.060 mm

NBC-ZH 2 05 0 - D - S1 - T1 - SE

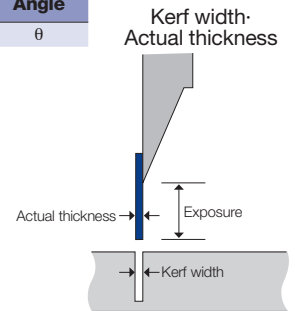
Exposure	Slit ^{*4}	Blade shape ^{*5}
A 0.38 - 0.51	S1 No. of slits 4	T1
B 0.51 - 0.64	S2 No. of slits 8	T2
C 0.64 - 0.76	S3 No. of slits 16	T3
D 0.76 - 0.89	SS Optional	T3A T3B
E 0.89 - 1.02	*4 All slit widths are 0.5 mm (except for the SS type) All slit depths are 80 - 100 % of exposure (except for the SS type) Blade thickness greater than 0.06 mm are available	T4
F 1.02 - 1.15		T4A T4B
G 1.15 - 1.28		
H 1.28 - 1.41		
I 1.41 - 1.54		
J 1.54 - 1.67		
K 1.67 - 1.80		

(mm)

*5 Blade thickness greater than 0.1 mm are available

	O.D.	Thickness ^{*6}	I.D.	Angle
2 inch	55.56	0.060 - 0.200	19.05	θ
3 inch	76.20		31.75	

*6 Since the applicable ranges differ depending on the grit (mesh) size, bond and concentration, please contact your DISCO representative for details.



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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