



DISCO

Kiru · Kezuru · Migaku Technologies



Metal Bond/Resin Bond Blades with Steel Core **A1A/K1A**SERIES

Maximizes blade rigidity with an integrated steel core



Steel Core Blades - High load, Deep Cut Processing

DISCO has combined a steel core with metal bond blades and resin bond blades to attain high rigidity. As a result, when using multiple blades mounted on a slicer, deep cutting and high-load processing can be achieved. A wide variety of blade types are available for processing different applications.

- High rigidity is attained by combining a steel core with the blade
- Maximum outer diameter is 205 mm



A1A Series - Metal Bond

High rigidity. Long Life

The long life of the metal bond and the high rigidity of the steel core enables deep cutting of hard materials such as ceramics and ferrite.



Ceramics

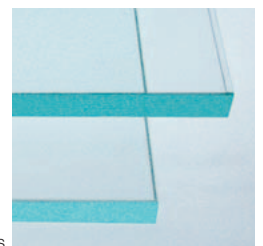
Applications

Ceramics, Various types of glass, Ferrite, Quartz, Crystal, Metals, etc.

K1A Series - Resin Bond

High rigidity, Enhanced Quality

The excellent cutting ability of the resin bond and the rigidity of the steel core allows cutting and grooving of glass and crystal materials.



Glass

Applications

Ceramics, Various types of glass, Ferrite, Quartz, Crystal, Metals, etc.

Processing Data

Comparison of efficiency for bond types



Metal Bond/Resin Bond Blades with Steel Core

A1A/K1A SERIES



Specifications

Type	Thickness accuracy ^{*2}
A Metalbond	1 Standard accuracy ^{*3}
	9 ±0.010
	2 ±0.005
	3 ±0.002
K Resinbond	7 Standard accuracy ^{*3}
	9 ±0.010
	2 ±0.005

^{*3} Varies according to the blade.

^{*5} Stated in blade thickness/substrate thickness only for the 1A1R shape. Example: 76.2 x 0.5 / 0.4 x 40

^{*1} Products that include a special specification may be denoted with "MAT/RAT-*****"

A 1E1 6 1 S2 SD 400 L 50 MJ45

O.D. Thickness^{*5} I.D. Angle
76.2 x 0.4 x 40 x 45°

Basic shape	Internal code ^{*2}	Slit (Available for A1A Type only) ^{*4}	Grit type	Grit size	Concentration
1A1		O.D. 76.2 100 125 150 200 - 80 - 101.6 - 127 - 152.4 - 205	SD Synthetic Diamond	80 #80 100 #100	25 50
1A1R		S1 No. of slits 8 8 16 16 16 Depth 7mm 10mm 12mm 15mm 15mm	SDC Coated Synthetic Diamond	120 #120 150 #150	75 100
1E1		S2 No. of slits 72 80 80 80 80 Depth 2mm 2mm 2mm 2mm 2mm	B cBN	180 #180	125
1M1		S3 Large slit No. of slits 8 8 16 16 16 Depth 7mm 10mm 12mm 15mm 15mm Small slit No. of slits 64 64 64 64 64 Depth 2mm 2mm 2mm 2mm 2mm	BC Coated cBN	220 #220 240 #240 280 #280 320 #320 360 #360 400 #400 500 #500 600 #600 800 #800	
1N1			SS Optional		
1V1					

^{*2} Regarding the combination of blades Internal code and bonding strength of each blade correspond to the bond type. Please refer to the chart below.

Internal code	Bonding strength	Bond	Thickness accuracy
Metal Bond			
6	L	MJ45	1,2,3,9
		MJ35	
	N	MJ30	
		MJ25	
P	MJ15		
	MJ10		
Resin Bond			
6	N	BR10	2,7,9
		BR120	

^{*4} All slit widths are 0.5 mm (except for the SS type). The specification of standard slits varies according to the outer diameter of the blade. When placing orders, please refer to the chart above.

Standard specification range^{*6}

A1A Type (Metal Bond)

Thickness ^{*7}	0.3~	0.4~	0.5~	0.7~3.0
Grit size	#180~#800	#120~#800	#100~#800	#80~#800
O.D.	#180~#800	#120~#800	#100~#800	#80~#800
76.2,80				
100,101.6				
125,127				
150,152.4				
200,205				

A1A1R is out of this standard specification range.

^{*6} Please contact a DISCO representative for details.

^{*7} "Thickness" means the thickness of diamonds' layer. (The thinnest steel core is 0.3 mm)

K1A Type (Resin Bond)

Thickness ^{*7}	0.3~	0.4~	0.5~	0.7~3.0
Grit size	#180~#320	#120~#320	#100~#320	#80~#320
O.D.	#180~#320	#120~#320	#100~#320	#80~#320
76.2,80				
100,101.6				
125,127				
150				
180,203.2				

K1A1R is out of this standard specification range.

Available for K1A1R only.

^{*6} Please contact a DISCO representative for details.

^{*7} "Thickness" means the thickness of diamonds' layer. (The thinnest steel core is 0.3 mm)

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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