



DISCO

Kiru · Kezuru · Migaku Technologies



Grinding Wheels **IF SERIES**

High performance grinding wheels that provide a stable surface finish



Superior grinding quality

The IF Series in-feed grinding wheels are excellent for processing not only silicon, but also compound semiconductors, ceramics, crystals, and a wide range of other materials. In addition, DISCO offers applications and IF Series wheels to match virtually any wafer size or processing requirement.

- Superior finishing quality
- Long-life specification - high wear resistance
- Large product range - able to process compound semiconductor wafers and crystal materials for electronics components
- Uses packaging made with environmentally-friendly PP or ABS resin.



Rough grinding

A combination of high rigidity vitrified bond and large grits diamonds are employed to achieve a stable grinding process - even for wafers that are layered with oxide or nitride.

VS: Standard vitrified bond wheel

Fine grinding

By using a resin bond, which causes little damage to workpieces, a stable grinding process is attained. As a result, the thickness accuracy (TTV) is improved and process quality, together with wheel life is enhanced. Also, surface roughness is reduced.

B-K01: Enhances grinding quality

B-K02: Enhances wheel life.

B-K04: Standard resin bond wheel

B-K09: Enables high-load processing

Etched wafer grinding (for wafer manufacturers)

Capable of precision grinding to planarize etched wafers.

B-M01: Standard resin bond wheel for grinding etched wafers

Self grinding

A maintenance wheel that conditions the flatness of the chuck table's surface

IF-01-1-20/30-VS: Self grinding wheel of the standard type

Applications

Silicon wafers, Compound semiconductor wafers, Crystal materials for electronics components, etc.

Specifications

Grinding Wheels

IF SERIES



Tooth line formation
1 Standard
9 Circle

Wheel size (mm)
200
300
400

IF¹-01-1-4/6-B-K04 200 × 5.0 T × 2.0 W

Grit size	Bond	Tooth height	Tooth width
320 #320	Rough grinding (Z1)	VS	4.0
40/60 #360		B-K01	5.0
30/40 #400	Fine grinding (Z2)	B-K02	5.0
20/30 #600		B-K04	5.0
10/20 #800		B-K09	5.0
8/20 #1000	Etched wafer grinding	B-M01	5.0
8/16 #1200			2.0
5/12 #1400			
5/10 #1500			
4/8 #1700			
4/6 #2000			
2/6 #3000			
2/4 #4000			

Tooth dimensions (mm)
These two columns reflect standard dimensions; dimensions may be varied to match the customer's specification.

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

Standard wheel types²

Application	Bond	Grit size									
		320	40/60	8/16	5/12	5/10	4/8	4/6	2/6	2/4	
Rough grinding (Z1)	VS	√	√								
Fine grinding (Z2)	B-K01			√	√	√	√	√	√	√	
	B-K02			√	√	√	√	√	√	√	
	B-K04			√	√	√	√	√	√	√	
	B-K09						√	√			
Etched wafer grinding	B-M01							√			

*2 Please contact a DISCO representative for details.

Note on wheel selection

Processing results depend greatly on the combination of wheels for rough grinding (Z1) and fine grinding (Z2). DISCO offers expertise in process development to determine the right wheel for your application. Please contact your DISCO representative for details.

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.



DISCO CORPORATION

13-11 Omori-Kita 2-chome, Ota-ku, Tokyo 143-8580, Japan
Phone: 03-4590-1100 Fax: 03-4590-1075 • www.disco.co.jp