

Grinding Wheels

# IF SERIES

**High performance grinding wheel that provides 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 such as LiTaO<sub>3</sub>
- Polypropylene packaging - environmentally friendly



### 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

VS202: Low concentration vitrified bond wheel for processing wafers with oxide layers

### 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-SG-M2: Self grinding wheel of the standard type

BGT-270 IF-01-1-20/30-V209: Self grinding wheel for wafer manufacturers

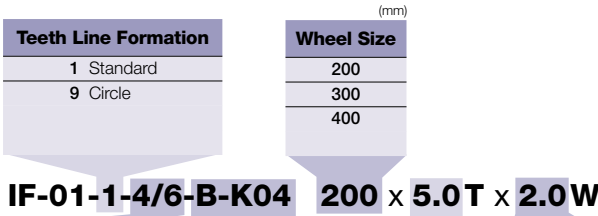
### Applications

**Silicon wafers, compound semiconductor wafers, crystal materials for electronics components, etc.**

## Specifications

## Grinding Wheels

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| Grit Size  | Bond                  | Teeth Thickness | Teeth Width |
|------------|-----------------------|-----------------|-------------|
| 2/4 #4000  | Rough Grinding (Z1)   | VS              | 4.0         |
| 2/6 #3000  |                       | VS202           | 4.0         |
| 4/6 #2000  | Fine Grinding (Z2)    | B-K01           | 5.0         |
| 4/8 #1700  |                       | B-K02           | 5.0         |
| 5/10 #1500 |                       | B-K04           | 5.0         |
| 5/12 #1400 |                       | B-K09           | 5.0         |
| 8/16 #1200 | Etched Wafer Grinding | B-M01           | 5.0         |
| 8/20 #1000 |                       |                 |             |
| 10/20 #800 |                       |                 |             |
| 20/30 #600 |                       |                 |             |
| 30/40 #400 |                       |                 |             |
| 40/60 #360 |                       |                 |             |
| 320 #320   |                       |                 |             |
| 280 #280   |                       |                 |             |

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

### Standard wheel types<sup>1</sup>

| Application               | Bond  | Grit Size |     |     |     |      |      |      |       |     |
|---------------------------|-------|-----------|-----|-----|-----|------|------|------|-------|-----|
|                           |       | 2/4       | 2/6 | 4/6 | 4/8 | 5/10 | 5/12 | 8/16 | 40/60 | 320 |
| Rough Grinding (Z1)       | VS    |           |     |     |     |      |      |      |       |     |
|                           | VS202 |           |     |     |     |      |      |      |       |     |
| Fine Finish Grinding (Z2) | B-K01 |           |     |     |     |      |      |      |       |     |
|                           | B-K02 |           |     |     |     |      |      |      |       |     |
|                           | B-K04 |           |     |     |     |      |      |      |       |     |
|                           | B-K09 |           |     |     |     |      |      |      |       |     |
| Grinding Etched Wafers    | B-M01 |           |     |     |     |      |      |      |       |     |

<sup>1</sup> 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 wheels 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 maximum rpm if it is specified.
- FOLLOW the instruction manual of the machine to mount wheel properly.
- DO NOT DROP OR HIT wheels. this may cause wheel breakage or injury.
- Always CHECK the wheel for chipping or any other wheel damage before starting to use the wheel. DO NOT USE the wheel if there is any damage.
- READ the operation manual of the cutting/ grinding equipment before use.
- DO NOT USE a wheel with a modified or customized equipment.
- DO NOT USE a wheel that has a different size from the one recommended for your machine.
- DO NOT USE a wheel for any other purpose than Grinding, Cutting, or Polishing.
- Always USE water or coolant to prevent wheel breakage.

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