DISCO
Kiru·Kezuru·Migaku Technologies

Kiru Kezuru Migaku

Automatic Dicing Saw

# DAD3220/3230/3430

## Compact dicing saw lineup for 6" wafers

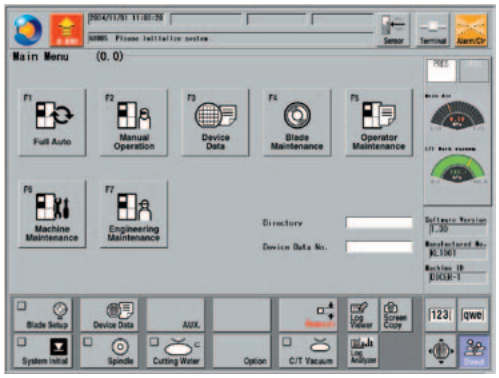
### Full lineup serves wide variety of processing needs

DAD3220, 3230 or 3430 is a one-axis dicing saw for ø6-inch (6-inch square) workpieces. DAD3220, just 500 mm wide, helps conserve valuable cleanroom space. DAD3230, designed for high performance and expandability, is ideal for processing such electronic component materials as glasses and ceramics. DAD3430, designed for extra-high precision and process quality, cuts and grooves optical components, magnetic heads, and similar workpieces to extremely strict tolerances.

### Improved usability and performance

Each model features an LCD touch panel with Graphical User Interface for easy and intuitive operation. In addition, all models include auto-alignment, auto-focus, and auto-kerf check functions for enhanced productivity. The newly developed 1.5 kW spindle, standard on each model, features a shaft lock function for easier blade changes. A reduced-expansion spindle (option) is made with special expansion-resistant materials for even greater precision during processing.


DAD3220 DAD3230/DAD3430



Control screen

Automatic Dicing Saw

# DAD3220/3230/3430

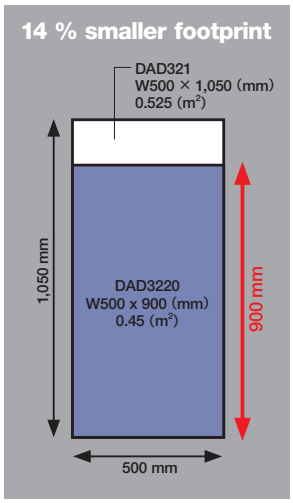

DAD3220 DAD3230 DAD3430

## Special features of each model

- With a footprint approximately 14 % smaller than that of predecessor DAD321, DAD3220 is extremely compact.
- DAD3230 features an expandable design ideal for customization.
- DAD3430, based upon the DAD3230 design, is a high-precision dicing saw with an air slide on the X-axis.

## Advanced options

- The cutting water flow rate controller, programmable for each device data, helps prevent operator error while supporting a stable and consistent flow of cutting water. The macro microscope allows for a greater field of view and can improve usability during alignment.
- Overall machine layouts have also been improved, allowing either a transformer or UPS to be installed internally in the DAD3220, and both a transformer and UPS to be installed DAD3230 and DAD3430.




## DAD3220/3230/3430 Specifications

| | | | DAD3220 | DAD3230 | DAD3430 |
|---|---|---|---|---|---|
| **Workpiece size** | | - | ø6", 6"square (*1) | 6"square (*1)<br>220 x 160 mm (*2 optional) | |
| **X-axis** | Cutting range | mm | 160 | 160 / 220 (optional) | |
| | Transfer speed input range | mm/s | 0.1 - 500 | | 0.1 - 300 |
| **Y-axis** | Cutting range | mm | 162 | | |
| | Index step | mm | 0.0001 | | |
| | Positioning accuracy | mm | 0.005 or less/160<br>(Single error)0.003 or less/5 | | 0.0015 or less/160<br>(Single error)0.0005 or less/5 |
| **Z-axis** | Max. stroke | mm | 32.2 (for ø2"blade) | | |
| | Moving resolution | mm | 0.00005 | | |
| | Repeatability accuracy | mm | 0.001 | | |
| | Max. blade size | mm | ø58 | | |
| **θ-axis** | Max. rotating angle | deg. | 320 | | |
| **Spindle** | Output | kW | 1.5 at 30,000 min$^{-1}$ | | |
| | Rated torque | N-m | 0.48 | | |
| | Revolution speed range | min$^{-1}$ | 3,000 - 40,000 | | |
| **Applicable tape frame** | | - | 2-6-1 | | |
| **Utilities** | Power supply | V | 200 - 240 V AC±10 %, 3-phase (50/60 Hz)<br>For other than the above voltages, a transformer is necessary. | | |
| | Power consumption | | | | |
| | When processing | kW | 0.5 (for reference) | | |
| | During warm-up | kW | 0.4 (for reference) | | |
| | Max. power | kVA | 3.5 | | |
| | Air pressure | MPa | 0.5 - 0.8 | | |
| | Air max. comsuption | L/min(ANR) | 170 | | 200 |
| | Cutting water, Cleaning water | | | | |
| | Water pressure | MPa | 0.2 - 0.4 | | |
| | Max. consumption flow rate | L/min | 0.2 - 4.0 | | |
| | Cooling water | | | | |
| | Water pressure | MPa | 0.2 - 0.4 | | |
| | Consumption flow rate | L/min | 1.5 at 0.3 MPa | | |
| | Exhaust duct capacity | m$^3$/min | 1.5 | 2.5 | |
| | Machine dimensions (W x D x H) | mm | 500 x 900 x 1,670 | 730 x 900 x 1,670 | |
| | Machine weight | kg | Appox. 550<br>(without transformer for overseas use)<br>Approx. 595<br>(with transformer for overseas use) | Approx. 600<br>(without transformer for overseas use)<br>Approx. 645<br>(with transformer for overseas use) | |

(*1) A special jig is required for this function.
(*2) θ-axis rotating angle is limited.

**Environmental conditions**

- Use clean, oil-free air at a dew point of -15 °C or less. (Use a residual oil: 0.1 ppm. Filtration rating: 0.01 µm/99.5 % or more).
- Keep room temperature fluctuations within ±1 °C of the set value. (Set value should be between 20 - 25 °C, 20 - 23 °C for DAD3430).
- Keep cutting water 2 °C above room temperature (fluctuations within ±1 °C).
- Keep spindle cooling water the same as room temperature between 20 - 25 °C (fluctuations within ±1 °C).
- The machines should be used in an environment, free from external vibration. Do not install machine near a ventilation opening, heat generation equipment or oil mist generating parts.
- This machine uses water.
  In case of water leakage, please install the machine on the floor with sufficient waterproofing and drainage treatments.

*** All the pressures are described using a gauge pressure.**
*** The above specifications may change due to technical modifications. Please confirm when placing your order.**
*** For further information please contact your local sales representatives.**

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