



# Wafer Dicing Machine

# A-WD-250S



**TOKYO SEIMITSU**

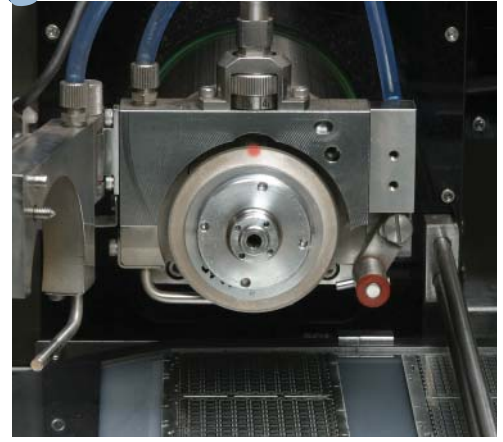
# Fully automated dicing machine for 8 inch wafer and

## Large-sized substrates



With a Y-axis stroke of 256 mm, large-sized substrates (long side: 230 mm) can be processed. Additionally, frames mounted with two substrates can also be automatically processed.

## High Reliability



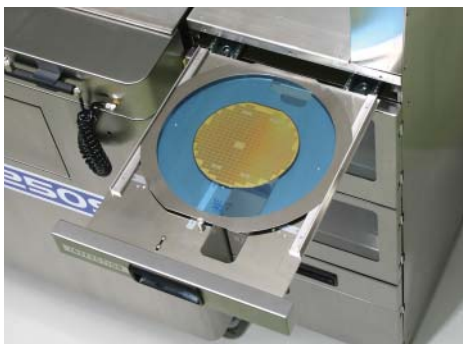
### Blade breakage detector

A highly sensitive optical method detects blade breakage in real time.

## High Processing Quality



A high-resolution LCD screen and touch panel produce an operation screen that is easy to understand and use.



### Inspection stage for monitoring cutting quality

The designated wafer is automatically extracted to the inspection stage for inspection which is indispensable for dicing process. After inspection, the wafer is automatically returned to the original slot from the inspection stage.



# large-sized substrates

## Options

### Optical cutter set unit

The cutting position is set without any physical contact, avoiding damage to the blade.



### Shape recognition device

This device automatically recognizes the shape of broken and partial wafers and optimizes the processing range to enable highly efficient processing.

### Cassette for automatic dressing

A frame mounted with up to five dress boards or mirror wafers can be mounted to allow automatic dressing, even while the machine is in motion.



### Built-in UV curing unit

Low cost, high performance UV curing unit can be loaded.



### Bar code recognition for automatic device data changeover

Bar codes marked on cassettes or frames can be read to change device data automatically.

### Melody alarm

The alarm can be set to play a specified melody.

### System compatible with FA

GEM networks systems is available.

### High-pressure pump unit

This unit produces high pressured water for spinner cleaning.

### Booster pump unit

This unit boosts the pressure of water for cutting.

### Thermo regulator for water

This equipment controls temperature of feed water (D. I. Water).

## Our unique frame handling system



## Keeps the wafer clean

The suction-type frame handling is clean, reliable, and speedy processing with the least waiting time. As wafers are picked up by a different suction mechanism before and after cleaning, wafers are kept clean after the cleaning process.

## Space Saving



Besides achieving high throughput, high processing quality and easy operation, this model has the smallest footprint of any machine for CSP substrates in the world.



## A-WD-250S SPECIFICATIONS

|                    |                               |   |
|--------------------|-------------------------------|---|
| Cutting wafer size |                               | 1" - 8", 230 × 145 mm (CSP substrates)                                    |
| Usable frame sizes |                               | 5", 6", 8"  |
| X axis             | Movement stroke               | 400 mm  |
|                    | Cutting speed                 | 0.1 - 600 mm/s  |
| Y axis             | Movement stroke               | 256 mm  |
|                    | Maximum speed                 | 80 mm/s   |
| Z axis             | Movement stroke               | 35 mm   |
|                    | Resolution                    | 0.0002 mm   |
| θ axis             | Rotation range                | 290°  |
|                    | Minimum angular setting range | 0.648"  |
| Alignment          | Microscope                    | High/Low magnification are interchangeable                                |
|                    | Magnifications on the monitor | High : 350 ×    Low : 88 ×  |
| Spindle            | Type                          | DC brushless motor internal air spindle                                   |
|                    | Maximum revs.                 | 60,000 min <sup>-1</sup>  |
| Spinner            | Maximum revs.                 | 3,000 min <sup>-1</sup>   |
| Others             | Power supply                  | 200/220/240/380/415 V AC ±10%, 3 phase                                    |
|                    | Power consumption             | 2.5 kVA   |
|                    | Air supply                    | 0.5 - 0.6 MPa, 220 ℓ/min  |
|                    | Spindle coolant water         | 0.2 - 0.5 MPa, 1.5 ℓ/min  |
|                    | Cutting water                 | 0.4 - 0.5 MPa, 2 - 8 ℓ/min  |
|                    | Nitrogen gas supply           | 0.5 - 0.6 MPa, 100 ℓ/min  |
|                    | Equipment dimensions / weight | 1153 <sup>W</sup> × 1,170 <sup>D</sup> × 1,300 <sup>H</sup> mm / 1,000 kg |

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Specifications and other descriptions may be changed for product improvement without any notice.