



## FULLY AUTOMATIC DICING MACHINE

# AD2000T/S

Fast, refined and innovative



**TWIN Dicing concept with two opposing Spindles**

### Fully automatic dicing machines for $\Phi 200$ mm wafers

Opposing 2-axis spindles are arranged diagonally, ensuring high maintainability while achieving space savings  
Available for a broad range of dicing applications from electronic devices to power semiconductors

### Space-saving design

Unique diagonal layout design  
Accessible from the front for all the work from normal operation to maintenance

### High-performance, high-power spindle as standard

Rating: 1.8 kW, Max. rotation speed: 60,000 rpm  
Available for dicing a broad range of materials from silicon to difficult-to-cut materials

### Enhanced productivity (throughput)

Gate-shaped structure + X-, Y-, and Z-axis servo motors  
Achieves both a small footprint and high throughput  
High rigidity and low vibration for improved cutting quality

### Operability

17-inch touch panel + GUI (Graphical User Interface)  
The machine can be operated with ease and comfort just by touching icon buttons  
The operation method is the same as the familiar AD/SS series



Tokyo Seimitsu developed Japan's first wafer dicing machine, Model A-WD-75A, in 1970, making a tremendous contribution to the success of the semiconductor industry in its early days by providing more precise and more efficient die separation process technology. A wealth of technological resources we have accumulated over five decades enables us to lead the world in dicing technology with our next-generation dicing machine, Model AD2000T/S, which combines the latest fluidics, mechatronics, and energy conservation techniques.

TOKYO SEIMITSU CO., LTD.

## Features

### 1 Enhanced productivity (throughput)

2-axis spindle design with two opposing spindles enables waste-free dicing with minimized X-axis movement.

X axis 1,000 mm/sec, Y axis 300 mm/sec, and Z axis 80 mm/sec  
The X, Y, and Z axes are all equipped with servo motors for higher axis speeds.

Optimized control software and 3-axis synchronous control reduces dicing time.

2 optical cutter (OPC) setting units are provided as standard components.

Setting up the cutters simultaneously leads to a shorter standby time.

### 2 High-performance, high-power spindle as standard

Rating: 1.8 kW, Max. rotation speed: 60,000 rpm.

High-torque spindle with a rating of 2.2 kW also available as an option.

Available for dicing a broad range of materials from silicon to difficult-to-cut materials

### 3 Operability

17-inch touch panel + GUI (Graphical User Interface)

The machine can be operated with ease and comfort just by touching icon buttons.



▲ GUI operation screen

### 4 A variety of option settings

Intermediate dressing function, built-in UV irradiation system, barcode reader, automatic recipe switchover function, ionizer, etc.

Smaller optional unit sizes and optimized interior design allow the major optional units to fit into the compartment.

### 5 More than 10,000 recipes can be stored in HDD

### 6 USB port as standard

USB memory devices can be used as external memory.

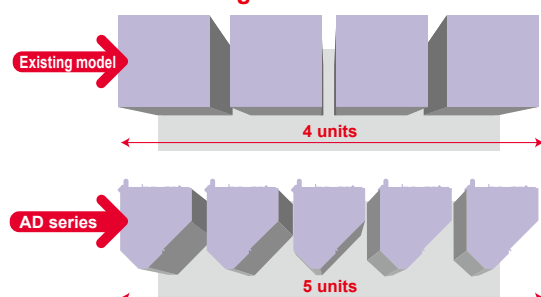
## Space-saving design

Unique diagonal layout design.

Accessible from the front for all the work from normal operation to maintenance.

If multiple units are installed side by side, there is no need for side service clearance. Up to 5 AD2000T/S units can be installed in a space that can accommodate no more than 4 existing models.

**The AD series has succeeded in footprint reduction compared with the existing model.**



## Specifications

Max. workpiece size		Φ 200 mm
Max. number of frames		8 inch
Spindle	Layout*	T (TWIN): 2-axis spindle specification with two opposing S (Single): Single-axis spindle specification
	Rating	1.8 kW
	Max. rotation speed	60,000 rpm
X axis	Available cutting range	260 mm
	Max. speed	1000 mm/s
Y1/Y2 axes	Available cutting range	260 mm
	Max. speed	300 mm/s
	Control resolution	0.078 μm
	Accumulated accuracy	0.002 mm / 210 mm
Z1/Z2 axes	Stroke	34 mm
	Resolution	0.002 μm
	Max. speed	80 mm/sec
	Repeatability	0.001 mm
θ axis	Range of rotation	380°
Misc	Voltage	3-phase 200 to 220 VAC ±10% (Transformer adoptable)
	Power consumption	6.0 kVA (MAX)
	Air pressure	0.55 - 0.7 MPa
	Avg. air consumption	210 L/min (0.55 MPa)
	Cutting water and others (pressure)	0.3 - 0.5 MPa
	Cutting water and others (max. flow)	Cutting water: 10.0 L/min Others: 3.6 L/min
	Cooling water (pressure)	0.3 - 0.5 MPa
	Cooling water (max. flow)	3.4 L/min (0.3 MPa)
Exhaust		5.0 m <sup>3</sup> / min more
Dimensions (W x D x H)		1080 mm x 1190 mm x 1900 mm
Weight		1100 kg

Note) • The air consumption and the cutting and cooling water flow rates shown in the table are the values of AD2000T.

• These specifications are subject to change for improvement without prior notice.

AD2000T/S\* \* Spindle-mounted specifications

T (TWIN): 2-axis spindle specification with two opposing spindles

S (Single): Single-axis spindle specification

## Maintenance



The large door and spacious working chamber offer improved maintainability

The machine is accessible from the front for operating all routine work such as blade replacement and maintenance.

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