

Minimized X-axi movement

ACCRETECH

TWIN Dicing concept with two opposing Spindles

SEMI-AUTOMATIC DICING MACHINE

AD20T/S

Fast, refined and innovative

Semi-automatic dicing machines for Φ 200 mm wafers

Features 2-axis spindle design with two opposing spindles. 2 dicing modes are supported — high-quality dicing by step cutting and productivity-oriented dicing by single-path full cutting

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 20T/S, which combines the latest fluidics, mechatronics, and energy conservation techniques.

TOKYO SEIMITSU CO., LTD.

AD20T/S

Features

Semi-automatic dicing machines with 2-axis spindles for Φ200 mm wafers, the industry's smallest size

Single-axis spindle models are widely available on the semi-automatic dicing machine market. Tokyo Seimitsu developed and brought to market a semi-automatic dicing machines with 2-axis spindles, becoming the first manufacturer to do so in the industry.^{*1} A diagonal layout mechanism^{*2} is adopted to make effective use of the floor space and maximize productivity.

Despite the small footprint, the 2-axis spindles deliver high throughput.

*1 Product released in June 2009; information is according to our research

*2 Patent No.: 4478732

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.

3 Enhanced productivity (throughput)

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

The X, Y, and Z axes are all equipped with servo motors for higher axis speeds.

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

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

4 Dressing stage as option

Equipped with two dressing boards (75 mm x 75 mm in size). Capable of dressing the blade of each spindle with a dedicated board.







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.



▲ GUI operation screen



Specifications

Max. workpiece size		Φ 200 mm
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	Feed rate input range	0.1 - 400 mm/sec
	Return speed	800 mm/sec
Y axis	Resolution	0.000078 mm
	Positioning accuracy	Within 0.002/260 mm
Z axis	Repeatability	0.001 mm
	Supported standard blade diameter	Φ 48 - 60 mm
Specifications	Dimensions (W x D x H)	790 mm x 790 mm x 1900 mm
	Weight	1100 kg

AD20T/S* * Spindle-mounted specifications

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



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information

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