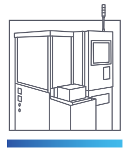
ADT Advanced Dicing Technologies

80Ai Dicing Saw



Introducing the 80Ai Dicing System

AI technology is advancing at an extraordinary pace, driving unprecedented demands for high-performance AI components. To meet these needs, cutting-edge solutions are essential—especially for dicing thick devices like DC-DC converters.
AI-based products heavily rely on cloud technology, revolutionizing industries across the globe and driving innovations in various applications, including consumer electronics, industrial automation, automotive technology, servers & data storage, networking & connectivity solutions, and more.
As a global leader in semiconductor dicing technology, ADT proudly introduces the 80Ai, a cutting-edge solution designed to maximize efficiency, precision, and performance in AI component fabrication.

Key features of the 80Ai solution

- Fully automatic twin process
- Support for 3" OD blades
- Capable of handling products up to 10 mm thick
- Microscope with 70 mm Focal Length
- Oblique illumination for enhanced 70 mm focus
- Advanced software features
- Supports heavy product handling

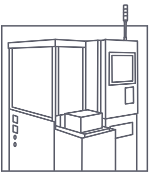
Typical applications

- BGA
- QFN
- SIP

Leading Applications

- DC to DC Converter
- Silicon wafers for Memory and Logic products
- MEMS (micro-electromechanical system)
- CMOS Image Sensors (CIS)
- Packaging (FOPLP, FOWLP, QFN, BGA)

Stay ahead in the AI revolution with ADT's cutting-edge 80Ai dicing solution



80*Ai* Fully Automatic 12" Twin Dicing System

Specifications

Specification	Value
Machine Model	80Ai
Workpiece Size	Ø8, Ø 12" or 12" by 12" Square Up to 10 mm thick
Spindles	Two 1.9KW shaft-lock facing spindles (option of 2.2KW)
Blade Size	2"–3"
Y1 / Y2 Axis	
Drive	Ball bearing lead screw
Control	Linear encoder for each Y-axis
Resolution	0.1 µm
Cumulative Accuracy	1.5 µm
Indexing Accuracy	1.0 µm
Cutting range	310 mm
X-Axis	
Axis	Air slide
Drive	Ball bearing lead screw
Feed rate	Up to 600 mm/sec (option of 1000 mm/sec)
Cutting range	310 mm
Z1 / Z2 Axis	USB3 camera, High bright LED illumination (vertical & oblique)
Resolution	0.2 µm
Repeatability	1.0 µm
Max. stroke	30 mm (for 2.188" OD blade)
θ Axis	Slot to slot integrity
Drive	Closed-loop, Direct-drive
Repeatability	4 arc-sec
Stroke	380°
Vision System	USB3 camera, High bright LED illumination (vertical & oblique)
Microscope	70 mm focal lengh
Cleaning Station	Full rinse and dry cycle
Spinning speed	100–3,000 rpm
Cleaning Method	Atomized cleaning capabilities
Wafer Handling System	Slot-to-slot integrity Inspection drawer
User Interface	Two touch screens: a 19" main screen monitor and a 17" monitor for maintenance NUI (New Graphic User Interface) with multilanguage support
Standard Features	Automatic: Alignment, Kerf check, Y offset, and Cut verify
Utilities	
Electrical	200-240 VAC, 50/60 Hz, single phase
Air	500 L/min @ 5.5 bar
Spindle Coolant	1.1 L/min (per spindle)
Cutting water	Up to 3 L/min (per spindle)
Dimensions:	
WxDxH	1125mm × 1667mm × 1820mm
Weight	1500 kg
Environmental	Room Temperature: 20°C to 25°C ± 1°C (77°F ± 1.8°F) Humidity: Less than 70% relative humidity (non-condensing) Cutting water / Spindle Water, Temperature ± 1°C (± 1.8°F) Floor must be vibration free
Options	UV station CO_2 bubbler ESD air blower kit Dicing Floor Management (SECS GEM)

Ver. 05/26

Note: Specifications are subject to change without notice.

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