



Automatic Dicing Saw

DAD3431

Adopted an air slide on the X-axis to support high precision processing needs

Able to support wide range of applications

Supports workpieces up to $\phi 6$ -inch or 150 X 150 mm with user-specified specification. In addition, the standard 2.0 kW high torque spindle enables processing of difficult-to-process materials.

The structure includes a wide water case for a longer X-axis stroke.

Able to support high precision / high quality processing

X-axis adopts a structure that makes use of the air slider characteristics to achieve improved straightness.

In addition, a linear scale mounted on the Y-axis as standard enables stable axis control and higher positioning accuracy. This supports fine processing needs which require high accuracy, including optical parts and magnetic head cutting and grooving.

Improved throughput

High Z-axis feed speed



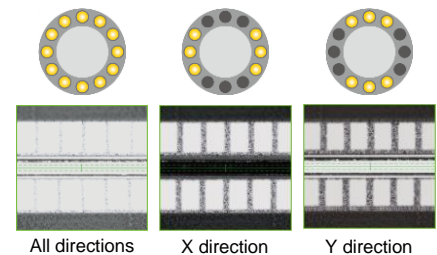
Improved functions and operation

- New non-contact setup (optional)
Shortens blade height measurement time by 74%. Measurement accuracy is improved for more stable processing quality.
- Microscope optimization
Adopted CMOS digital camera
Supports three-channel switching in the ring illumination lighting direction for improved kerf check visual confirmation.
- Supports SECS/GEM (Optional)

High maintainability

Installation of microscope lens shutter and scope blow function reduces maintenance frequency while improving equipment operation ratio.

◆Ring light three-channel switching specification



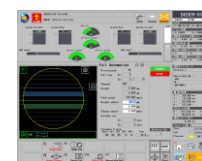
Easy operation

- XIS (Extended Interface System)
Operation buttons consolidated on microscope screens
- Wafer mapping
Graphic processing condition display similar to full automation equipment.
- Log viewer
Graphic analog data display and equipment data visualization
- Help viewer
Displays instructions when error occurs for quick, accurate recovery.

◆Operating Interface



XIS



Wafer mapping



Log viewer



Help viewer

Specifications

Specifications		Unit	
Max. workpiece size		-	Ø6" inch (Supports 150 mm square workpieces with DPR) Can cut 220 x 160 mm (option)
X axis	Cutting range	mm	160
	Cutting speed	mm/s	0.1 – 300
Y axis	Cutting range	mm	162
	Index step	mm	0.0001
	Positioning accuracy	mm	Within 0.0015/160 (Single-step error) Within 0.005/5
Z axis	Max. stroke	mm	32.2 (using Ø2" blade)
	Movement resolution	mm	0.0000002 (0.2 nm)
	Repeatability accuracy	mm	0.001
Θ axis	Max. rotation angle	deg	320°
Spindle	Rated torque	N·m	0.48
	Revolution speed range	min-1	3,000 - 40,000
Machine dimensions (W × D × H)		mm	730 × 900 × 1,670
Machine dry mass		kg	Approx. 600

■ Environmental conditions

- Use clean, oil-free air at a dew point of -15 °C or less. (Use a residual oil: 0.1 mg/m³ or less. 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).
- Use grinding water and cleaning water at room temperature +0 - 2 °C (fluctuation range: within 2 °C in one hour). For cooling water, use water controlled at 1 °C in relation to the grinding water.
- 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 pressures specified above are gauge pressures.
 - * As the above specification may change due to technical modifications. Please confirm when placing your order.
 - * For further information, please contact your local sales representative.