

# PRIMECA

*semiconductor equipment group*

## Model 8430s Automatic Substrate Singulation Saw



The Model 8430s has been designed from the ground up for today's production environment. It is the singulation saw that will provide the highest throughput of any saw engine available in the industry today. Using Primeca's revolutionary patented dual parallel processing carriers and dual bi-directional cutting spindles, your singulation throughput will be up to twice as high as you currently achieve.

- Patented, dual parallel processing carrier design for highest throughput
- Patented, bi-directional cutting dual spindle rocker
- Large capacity, continuous scrap collection system
- Operator and technician friendly Windows based User Interface
- Compatible with all major industry substrate handling systems
- Advanced vision system accurately aligns substrates for precision cutting
- High mass, low thermal expansion base and gantry for stable process control
- Real-time monitoring of spindle current and coolant flow
- Air, vacuum and coolant low input sensing alerts for ultimate process safety
- Ultra-low maintenance design increases system up-time
- Broken blade detectors, functional with slotted or non-slotted cutting blades
- Modular, pull-out electronics packaging design for ease of service
- CE compliant design

**Spindles**

- Dual bi-directional cutting; opposed rotation
- 1200 watt output power, DC brushless motor
- 60 krpm max (programmable)
- Water cooled, air bearing type

**Cutting Blades**

- 3" diameter standard
- Also configurable for 2" diameter blades

**X-Axis Dual Parallel Cutting Axes**

- Drive type: Closed loop servo motors w/linear encoders
- Axis Velocity: 1 mm/sec to 600 mm/sec

**Blade Y-Axis**

- Drive type: Closed loop servo motor w/linear encoder
- Scale Resolution: 0.001 mm
- Accuracy: 0.004 mm

**Saw Blade Z Actuator**

- Drive type: Closed loop servo motor
- Resolution: 0.0005 mm

**Rotary Axes**

- Drive type: Closed loop servo motor
- Resolution: 3 arc-sec

**Machine Utility Requirements**

- Electrical: Single phase 230VAC 50/60Hz
- Power consumption: 2 kva max
- Compressed air: 80 psi, clean/dry @ 5scfm
- Substrate cleaning water: 1.0 ~ 2.0 liters/min
- Spindle coolant: 1.5 liters/min x (2) spindles
- Cutting water: 2 ~ 7 liters/min
- Exhaust air flow: 6 m<sup>3</sup>/min

**Vacuum Pump**

- Electrical: 3 phase 415VAC 50/60 Hz
- Power consumption: 3 KW
- Chilled water supply: 0.175 m<sup>3</sup>/hr @ 15° C
- Capacity: 72 m<sup>3</sup>/hr
- Vacuum generated: 29" Hg max

**Maximum Substrate Size**

250 mm x 80 mm

**Machine Dimensions**

1300 mm W x 1200 mm D x 1500 mm H

**Machine Weight**

1200 kg (uncrated)

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