8020 SERIES

Fully Automatic Twin Dicing System

ADT 8020 Dicing Saw has two facing spindles that can simultaneously dice wafers at high throughput. ADT 8020 is a high accuracy system that can dice product up to 8” in diameter, at high performances and low cost of operation.

**Configuration**
- Spindle: 2”-3”
- Size: 8”

**Features and Benefits**
- Flexibility - Supports Hub and Hubless blades up to 3” O.D
- Spindles of 1.8 kW or 2.4 kW high power (for challenging applications)
- Superior vision system with continuous zoom magnification
- Intuitive operation interface using a large 19” touch screen monitor

**Ease of Use**
The 8020 operates with the ADT intuitive New graphic User Interface (NUI), and includes two touch-screens: a 19” monitor for the main screen and a 17” monitor maintenance screen. The maintenance screen assist with performing system setup procedures, blade change and some basic maintenance operations.

**Other Key Features of Importance**
- Highest Dicing Process Speeds – Lowest Cost
- Air bearing feed axis (X)
- Fast automatic alignment and cut positioning for increased throughput
- Automatic Kerf inspection and quality analysis for maximum precision
- Process data logging and statistical analysis
- Fast & Simple Blade Change with a locking spindle shaft
- SECS / GEM platform ready
- Full access to any area of the system for easy maintenance access

**Leading Applications**
- Silicon wafers / discrete devices
- Silicon carbide (SiC)
- MEMS
- SAW devices
- Glass wafer
- Packaging (QFN, LED…)

ADT = Dicing

Advanced Dicing Technologies
# 8020 Fully Automatic Twin Dicing System

## Specifications

<table>
<thead>
<tr>
<th>Machine Model</th>
<th>8020</th>
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<tbody>
<tr>
<td>Workpiece Size</td>
<td>Ø 8&quot;</td>
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<tr>
<td>Spindles</td>
<td>Two facing spindles, Max. 60,000 rpm / 1.2 KW</td>
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<table>
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<tr>
<th>Blade Size</th>
<th>2&quot; - 3&quot;</th>
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### Spindles

- **Y1 / Y2 Axis**
  - Drive: Ball bearing lead screw
  - Control: Linear encoder for each Y axis
  - Resolution: 0.1 µm, 1.5 µm, 1.0 µm, 210 mm

### Spindles

- **X Axis**
  - Drive: Ball bearing lead screw
  - Feed rate: Up to 600 mm/sec
  - Cutting range: 210 mm

### Spindles

- **Z1 / Z2 Axis**
  - Drive: Ball bearing lead screw
  - Resolution: 0.2 µm, 1.0 µm
  - Max. stroke: 30 mm (for 2.188" blade OD)

### Spindles

- **θ Axis**
  - Drive: Closed-loop, Direct-drive
  - Repeatability: 4 arc-sec
  - Stroke: 350°

### Spindles

- **Vision System**
  - USB3 camera, High bright LED illumination (vertical & oblique)

### Spindles

- **Cleaning Station**
  - Spinning speed: 100-2,000 rpm
  - Cleaning method: Full rinse and dry cycle

### Spindles

- **Wafer Handling System**
  - Slot to slot integrity
  - Inspection drawer

### Spindles

- **Standard Features**
  - Automatic alignment
  - Automatic Cut verify
  - Automatic Kerf inspection
  - Automatic Y offset correction

### Spindles

- **User Interface**
  - 2 touch screens: 19" monitor as main screen and 17" monitor for maintenance
  - NUI (New Graphic User Interface)
  - Multilanguage support

### Spindles

- **Options**
  - BBD (Broken Blade Detector)
  - High power spindle up to 2.4KW or 1.8KW at 60 KRPM
  - Barcode reader
  - UV station
  - USB3 camera with Continuous Digital Magnification from x70 to x290

### Spindles

- **Utilities**
  - Electrical
    - Spindle Coolant (per spindle): Up to 3 L/min
    - Cutting water (per spindle): 1.1 L/min
  - Air
  - Spindle Water Temperature: ± 1°C
  - Cutting water / Spindle Water Temperature: ± 1°C

### Spindles

- **Dimensions**
  - WxDxH: 1,015 mm X 1,460 mm X 1,820 mm
  - Weight: 1300 kg

### Environmental

- Temperature: 20°C to 25°C ± 1°C (77°F ± 1.8°F)
- Humidity: Less than 70% relative humidity (non-condensing)

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**Note:** Specifications are subject to change without notice.

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**ADT = Dicing**

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