

STEP INTO THE FUTURE OF DICING

# 7200 Series

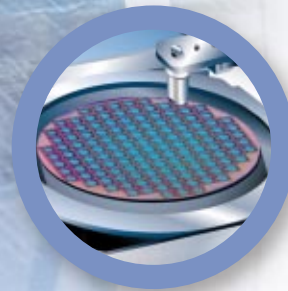
Fully Automatic Dicing System

## A Comprehensive Dicing Solution

- Silicon Wafers
- Package Arrays
- Hard Materials

## Series Highlights

- Advanced Automation
- High Flexibility
- Small Footprint



**WX3**  
Wafer Handling System



**ADT** = **Dicing**  
Advanced Dicing Technologies

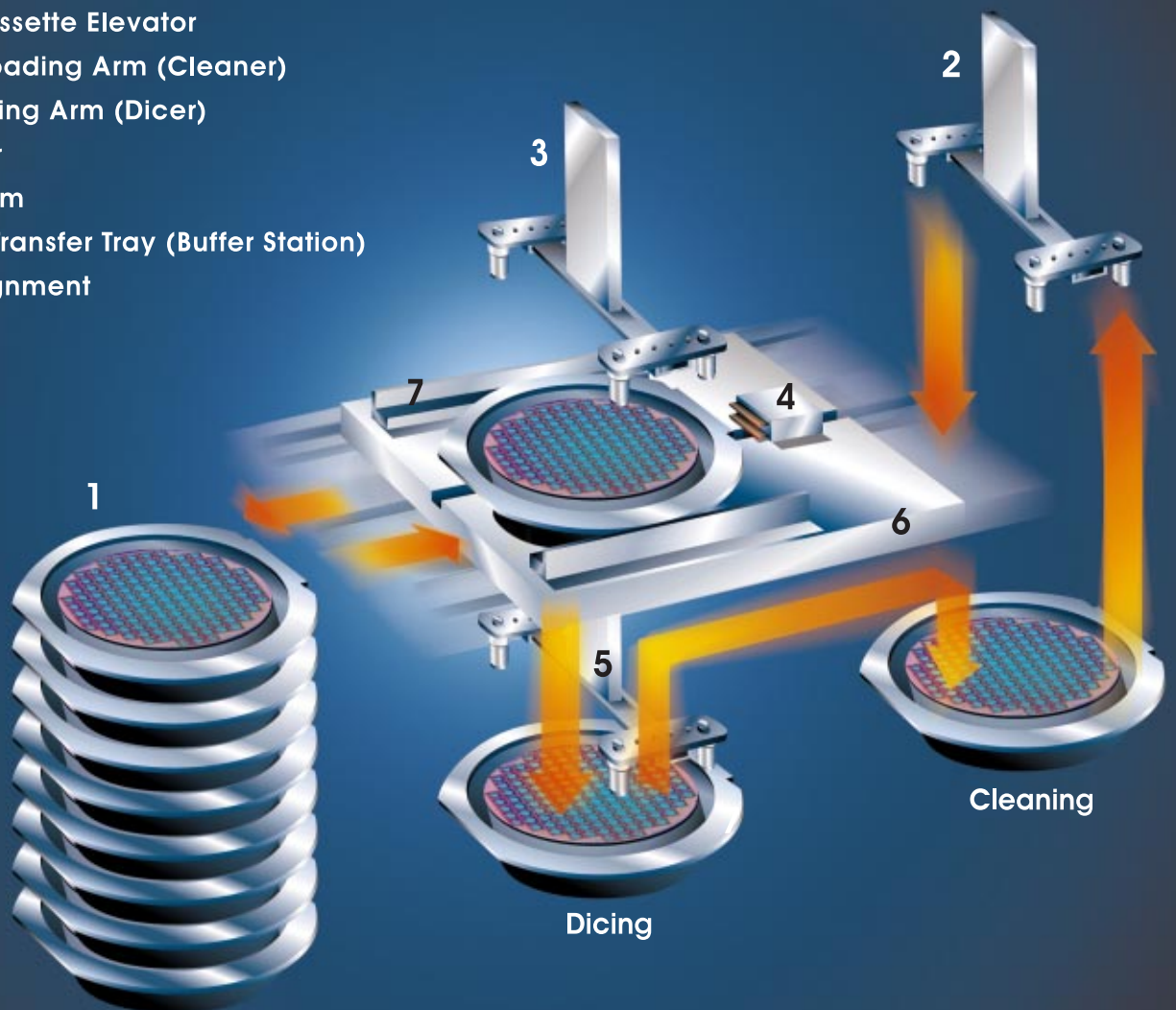
# WX3

## Wafer Handling System

Simultaneous wafer processing via three coordinated wafer stations to avoid bottleneck slowdown

- Finger extracts wafer from cassette, loading arm (Dicer) loads wafer to dicing chuck → Dicing
- Wet arm moves wafer from dicer to cleaner → Cleaning
- Unloading arm (Cleaner) returns wafer back to cassette (through transfer tray)

1. Cassette Elevator
2. Unloading Arm (Cleaner)
3. Loading Arm (Dicer)
4. Finger
5. Wet Arm
6. Wafer Transfer Tray (Buffer Station)
7. Pre-alignment



- Reduces cost

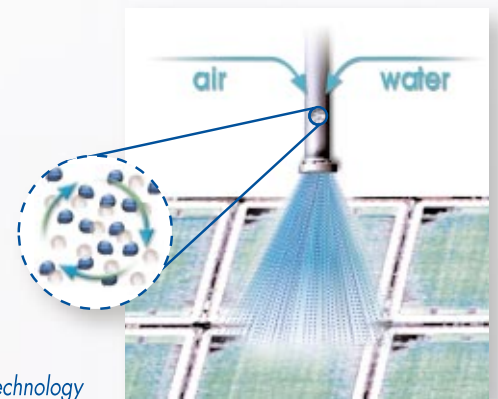
- Increases UPH

# STEP INTO THE 7200 Series

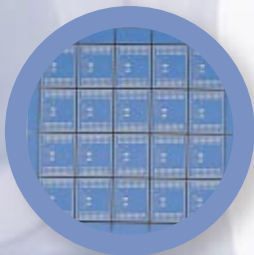
## Fully Automatic Dicing System

Semiconductor manufacturers face new production challenges as they struggle to improve dicing quality and throughput while minimizing cost. At ADT we strive to be fully tuned in to our customers' requirements. Hence, our new 7200 fully automatic system comes with innovative and exciting features that set new industry standards for automation, productivity, ease-of-use and affordability.

The 7200 system offers a wide range of advanced automation and process monitoring options to meet the throughput & quality requirements of your most challenging dicing applications: Silicon, Glass on Silicon and GaAs wafers, BGA & QFN packages, LTCC, PCB and other hard material applications.



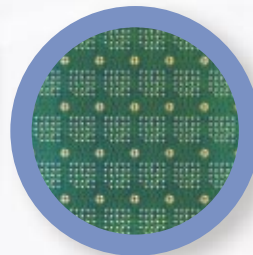
*Atomized Cleaning Technology*



*LTCC Substrate*



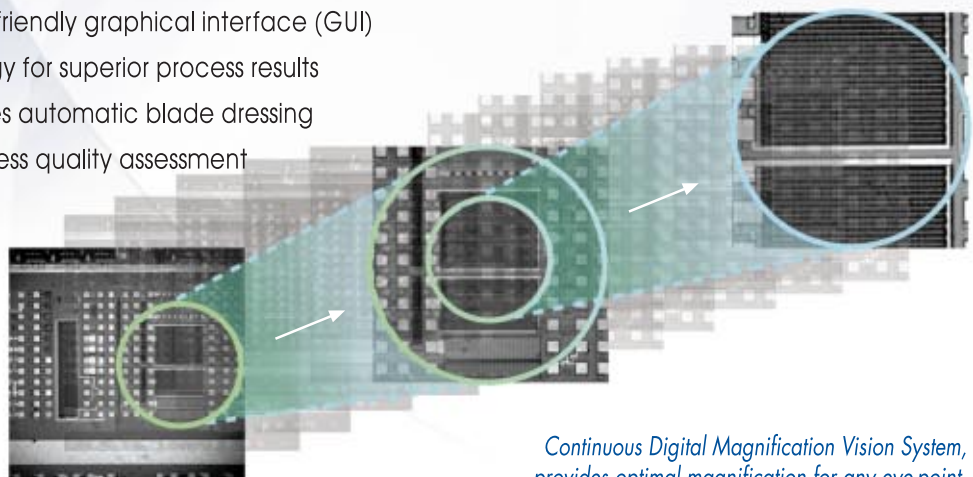
*BGA Substrate*



*Silicon Wafer*

## Features & Benefits

- Unique **WX3** Wafer Handling System streamlines wafer flow for greater productivity
- Continuous Digital Magnification Vision System provides fast and accurate alignment of wafers for maximum throughput
- Special Algorithm predicts blade wear rates to reduce height measurement time and increase UPH
- Touch Panel Display supports a user-friendly graphical interface (GUI)
- Atomized Wafer Cleaning Technology for superior process results
- Dedicated Dressing Cassette enables automatic blade dressing
- Built-in Inspection Tray allows in-process quality assessment
- Small footprint



*Continuous Digital Magnification Vision System, provides optimal magnification for any eye-point, from X1 (8 micron/pixel) to X8 (1 micron/pixel)*

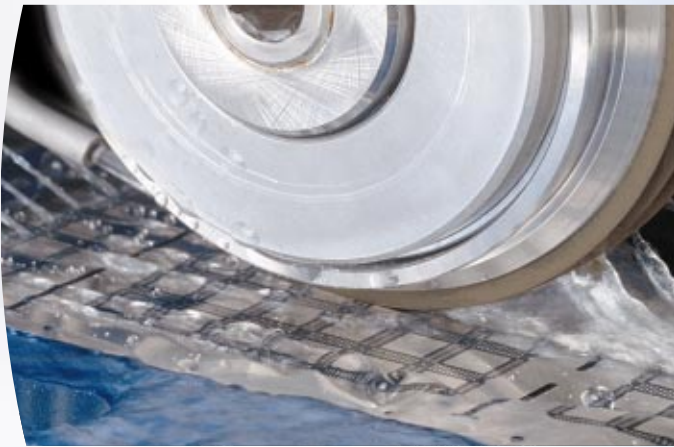
# FUTURE OF DICE

## 7200 Models



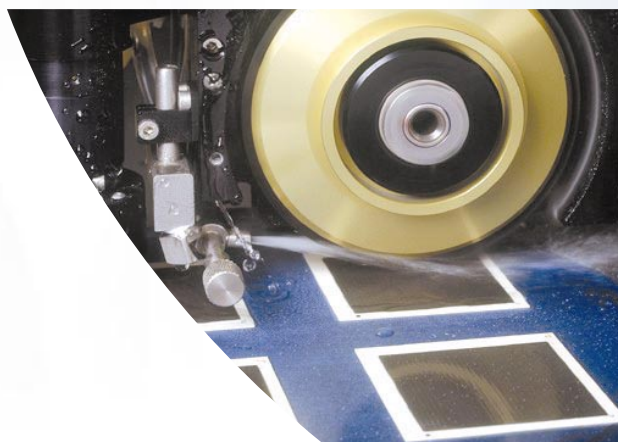
### **ProDice**

2"-3", DC-brushless,  
Air-bearing, 1.2KW, 60 Krpm Spindle,  
optimized for IC applications.



### **MegaDice**

2"-3" High-torque, DC-brushless,  
Air-bearing, 2.4KW, 60 Krpm Spindle,  
optimized for package singulation  
and IC applications.



### **GigaDice**

4"-5" High-torque, DC-brushless,  
Air-bearing, 2.5KW, 30 Krpm Spindle,  
optimized for automated dicing  
of hard materials.

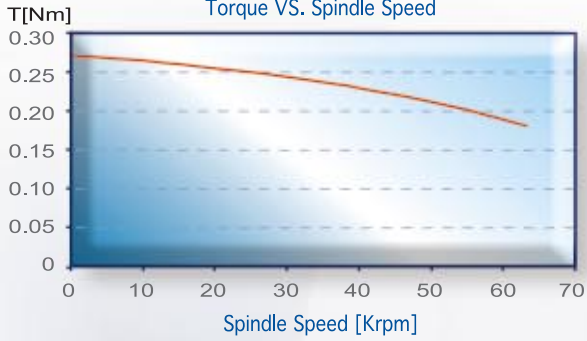
# 7200 Series

# NG

## High Flexibility

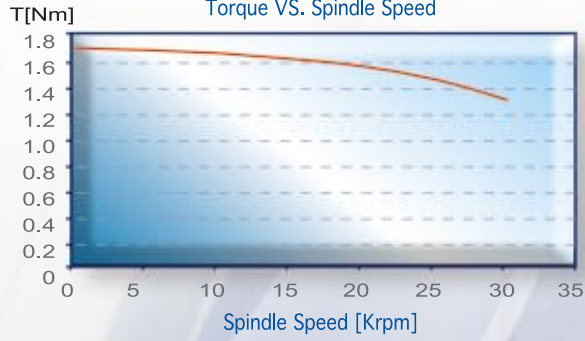
### 2" Spindle

Torque VS. Spindle Speed



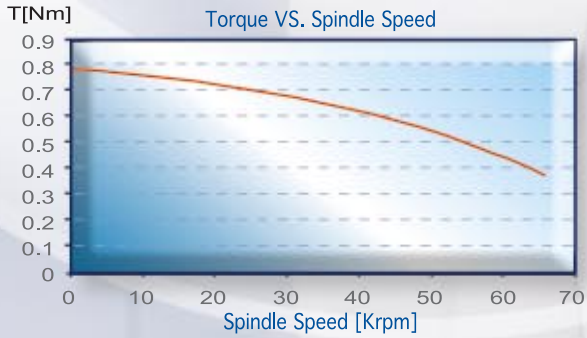
### 4" High Torque Spindle

Torque VS. Spindle Speed



### 2" High Torque Spindle

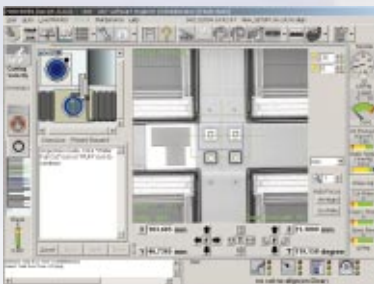
Torque VS. Spindle Speed



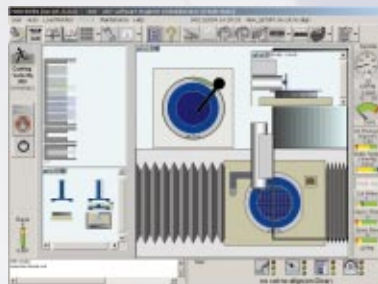
2", 2" High Torque, 4" High Torque

- Front-mounted spindle reduces vibrations and thermal expansion effects
- DC-brushless, direct drive motor provides closed-loop speed control
- Compatible with 2"-3" hub and annular blades
- Flat torque curve guarantees consistent results

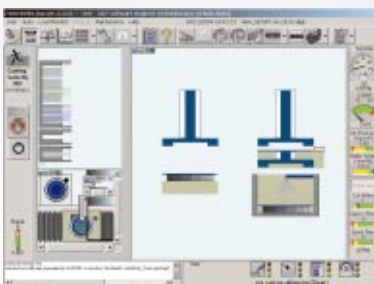
## User-Friendly Interface



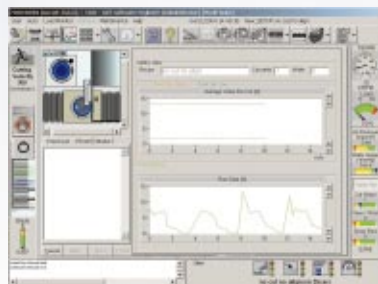
Vision Screen



Main Screen (General View)



Main Screen (Automation View)



Load Monitor

# WX3

# 7200 Series

## Specifications

	ProDice	MegaDice	GigaDice
<b>Work piece Size</b>	Ø 200 mm	Ø 200 mm Package singulation – up to 235 X 170 mm	Ø 200 mm
<b>Blade Size</b>	2" – 3"		4" – 5"
<b>Spindle</b>	<b>1.2 KW</b> , Air bearing DC- brushless 60 Krpm	<b>2.4 KW</b> , Air bearing DC- brushless 60 Krpm	<b>2.5 KW</b> , Air bearing DC- brushless 30 Krpm
<b>Indexing Axis (Y)</b> Drive Control Resolution Cumulative accuracy Indexing accuracy	Ball Bearing Lead Screw with stepper motor Linear encoder 0.2 µm 1.5 µm 1.0 µm		
<b>Feed Axis (X)</b> Drive Feed rate	Ball Bearing lead Screw with DC-brushless motor Up to 700 mm/sec		
<b>Cut Depth Axis (Z)</b> Drive Resolution Accuracy Repeatability	Ball Bearing lead Screw with stepper motor 0.2 µm 2.0 µm 1.0 µm		
<b>Rotary Axis (T)</b> Drive Accuracy Repeatability Stroke	Close Loop, Direct Drive, DC-brushless 4 arc-sec (0,001 deg.) 4 arc-sec (0,001 deg.) 350°		
<b>Vision system</b>	Digital Camera High Bright LED Illumination (Vertical & Oblique) Continuous Magnification From X1 (8 micron/pixel) to X8 (1 micron/pixel)		
<b>Cleaning Station</b> Spinning Speed High Pressure	Full rinse and dry cycle 100-2500 RPM Up to 10 MPa Atomizing capabilities Additives (optional)		
<b>Wafer Handling system</b>	Slot to slot integrity Dress Cassette Inspection Drawer UV curing station (optional) Barcode reader (optional) SECS-GEM host Communication (optional)		
<b>User Interface</b>	Flat 15" touch screen Graphical User Interface (GUI) Multilanguage support Keyboard & Mouse (optional)		
<b>Utilities*</b> Electrical Air / N2  Spindle coolant Process Water (DI) * pending model & application	200-240 Single Phase VAC 50/60 Hz 700 L/min @ 5.5 bar 500 L/min compressed air, 200 L/min process air/ N2 1.1 L/min tap water Blade/process coolant - Up to 7 L/min High Pressure cleaning – Up to 5 L/min		
<b>Dimensions (WxDxH)</b>	965 x 1460 x 1700 mm		
<b>Weight</b>	1,200 Kg		

Specifications may be changed without notice.



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