



# Wafer Testing Solutions

**Engineered for Excellence**

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Nordson DAGE provide a range of wafer testing solutions, enabling semi-automatic handling and testing of wafers. Auto-handling of wafers eliminates the risk associated with handling of fragile wafers manually, resulting in reduced damage and contamination.

The semi-automatic bond test routines provide load tool to bump alignment, providing increased bump test throughput.

## 4000W Test Platform

The Nordson DAGE 4000W test platform provides semi-automatic handling and test of wafers up to 8 inches. The system comprises of a modified 4000 system with extended stroke XY table and modified Nikon model NWL200 wafer handler for 6 and 8 inch wafers.

## Features and Benefits

- Semi automatic testing of wafers from cassette to bondtester up to 6 and 8 inch diameter
- Semi automatic bump shear testing of entire wafer surface
- Semi automatic transfer of tested wafers back to cassette
- Wafer orientation and safety interlocks
- Image capture and Trinocular camera options available\*
- Ultra thin 100um wafer handling capability on Nikon wafer handler option
- Automatic cassette scan to check location of wafers and the presence of any cross slotted wafers
- Shear testing using the Dage air bearing patented frictionless intelligent load cartridge system
- Automated bump shear routines, with no camera assistance required
- 420mm x 240mm joystick controlled precision XY stage up to 50mm/s
- System accuracy  $\pm 0.25\%$  of selected load range
- Automatic calibration and linearity checks
- Integrated analysis including statistics and SPC functions
- ODBC compliant

\*Consult factory for 4000W camera options.

## Automatic Test Routines

Automated test provides the option of auto alignment of the test head to the bumps or features to be tested, enabling high repeatability testing and efficient test throughput. Once programmed, the 4000W and 4300FP test platforms can shear or pull automatically to a defined test pattern.

- Program any number of tests by assisted self-teach
- No camera alignment system necessary
- Both fixed pitch and random position test sequences can be taught.
- Rotating shear cartridges (BS250R, BS5KGR) provide 360 degree tool rotation for efficient test throughput
- Save an unlimited number of test patterns
- Test positions automatically calculated from two datum points, for fixed position and random positioned bonds
- Assisted manual alignment for any missed tests



4000W and Nikon Wafer handler

## 4300FP Test Platform

The Nordson Dage 4300FP test platform provides semi-automatic handling and testing of wafers up to 300mm.

The system comprises of a dedicated 300mm bond test platform integrated with a fully automatic wafer handler.

The 4300FP supports the next generation of bond testing software, Paragon™. The highly intuitive and configurable interface provides quick and easy automated test routine development and execution for a wide range of sample configurations.

A step by step wizard guides the user through the set up process, catering for a variety of options. Paragon also provides the ability to simultaneously display and record the view from multiple cameras.



4300FP and CHAD wafer handler

## Features and benefits

- Semi automatic testing of wafers up to 300mm
- Fully automatic wafer handling via third party integrators robot handler, the Wafermate 300 from CHAD Industries
- Semi automatic bond testing of entire wafer surface without repositioning wafer chuck
- Automatic bond test routines (only 2 reference points required)
- Program an unlimited number of tests and test patterns
- 360 degree chuck and load tool rotation
- 460mm x 300mm joystick controlled precision XY stage up to 50mm/s
- Fully integrated Paragon image capture and Trinocular camera systems option
- Automatic calibration and linearity checks
- Integrated analysis including statistics and SPC functions
- ODBC compliant

4000W and 4300FP Bond test in accordance with:  
CBP JEITA EIAJ ET-7407 (max pull force 2 KG due to chuck limitations)  
Ball Shear JEDEC JESD22-B117.  
Ball Bond Shear JEDEC JESD22-B116 and ASTM F1269

Consult factory for SECS/GEM connectivity options

## CHAD Industries

CHAD Industries are the integrators of the automated 4300FP bond tester solution for reliable and repeatable operation. The integrated system provides the following features and benefits:

Automation option to load warped wafers, thin wafers, or bowed thick wafers, with clean contact at the wafer.

Integrated clean air fan filter option available for stringent cleanliness requirements.

SECS/GEM communication option to factory host. Wafer/lot traceability option (OCR, RFID, Barcode).

Multiple wafer size capability without tooling change-over.

Please consult factory for full specifications





## A Partner You Can Trust

Nordson DAGE is the market leading provider of award winning test and inspection systems for destructive and non-destructive mechanical testing of electronic components. Taking pride in delivering support to multi national organisations globally.

Founded in 1961, with global headquarters in Aylesbury, UK, Nordson DAGE is part of the Nordson Corporation which has direct operations in more than 30 countries.

Nordson DAGE continues to invest significantly in research and development to remain at the cutting edge of test and inspection technology. Nordson DAGE are continuing to invest in next generation testing for bond test and materials test markets.

Nordson DAGE has a global presence and is recognised as the industry standard for test and inspection technology.

For more information on the Nordson DAGE test platforms, please contact your Nordson DAGE regional office or speak with your Nordson DAGE representative, all of which are listed on [www.nordsondage.com](http://www.nordsondage.com).

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