Dage 4000 Bondtester
Engineered for Excellence

www.nordsondage.com
The Nordson DAGE 4000 is firmly established as the Industry Standard benchmark platform for both traditional and emerging applications.

**Operator Friendly**

The Nordson DAGE 4000 has been specifically designed to be ergonomically adjustable for operators, thus helping to overcome problems associated with Repetitive Strain Injury (RSI). Particular attention has been given to working heights, optics eyeline, arm rests and the position of controls.

**Advanced software features include an operator configuration with selection for**

- Operator name
- Right-hand or left-hand joystick or both
- Joystick button preference
- Reference table of microscope position settings

All of which can be stored and transferred with the operator to another machine for quick setup.

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**Leading The Way In Bondtesting**

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**4000 Entry Level Applications**

The Nordson DAGE 4000 can also be configured for lower cost entry level applications where system configurations are limited or where a more dedicated rather than multipurpose function is required but where accuracy and repeatability are maintained with simply no compromise in performance.

**4000 Dedicated Wire Pull**

Removal of the pneumatic chassis and XY stage from the mainframe combined with basic shuffle style fixturing provide a basic platform dedicated to pull testing up to a maximum force of 10kg in Z. Manipulation of the wire under the test head is quick and simple.

**4000 LED Applications**

The flexibility of the 4000 modular design concept combined with specialist fixturing allow for specific configurations.
Quick Release Intelligent Load Cartridge System

- Smart electronics to store and identify serial numbers and calibration details.
- Quick release load cartridge mechanism for fast changeover from one application to another (no tools required and changeover in less than 30 seconds).
- On-machine storage for two cartridges.
- Load tool protection guard that is activated as the load cartridge is removed from the machine, thus offering protection to the tool and transducer while not in use.
- High resolution low force capability to detect small loads during fine pitch bond testing.

Results Repeatability Guaranteed

- Total system accuracy of +/-0.25% full-scale deflection of selected load range.
- Maximum load cartridge accuracy and repeatability to within 0.01% (100ppm), as tested and qualified by the United Kingdom Accreditation Service (UKAS).
- Total ballshear Z positioning accuracy of complete system +/- 1 micron (qualified with laser measurements).
- Automatic alarm notification for load cartridges that have drifted outside their calibration tolerance band.

Cold Bump Pull

An application enabling the pull testing of solder balls from chip scale style packages.

Cavity Shear Testing

Special shear tooling resulting in less ball deformation providing the ability to apply the maximum shear force possible.

Vector Pull Testing

Allows force vectors to be applied to the tab leads on packages.

Zone Shear

An application for testing of multiple rows on BGA and CSP packages.

Calibration

The 4000 offers calibration features in the test plane with fully automated routines allowing consistent calibrations.

- Automatic load cartridge calibration and linearity checks using weights directly traceable to National Standards. Calibration information is stored in the cartridge and a printout is available.
- Automatic load cartridge calibration check without the use of weights.
- Calibration jigs can be used for machine GR&R qualification.
Specifications

General

Machine footprint
W (including joystick, excluding PC/monitor) 425mm
D (including front arm rest) 730mm
H 670mm

Weight 49kg

Power Supply Switchable 100/110V, 220/240V AC 50/60Hz

Pneumatic Supply (for machine) 4bar, 6mm OD/4mm ID plastic pipe clean dry air

Vacuum Supply (for workholder) mm. 500mm Hg plastic pipe


Manufactured In accordance with ISO 9002

Monitor VGA/SVGA (Optional 17” LCD Flat Panel Display)

Manufactured to International Standards

- Manufactured in accordance with ISO 9001:2008
- European Directives
- CE Declaration of Conformity
- Machinery Directive (2006/42/EC)
- Low Voltage Directive (2006/95/EC)
- Electromagnetic Compatibility (2004/108/EC)
- Restriction of the use of certain hazardous substances in Electrical and Electronic equipment (RoHS) (2002/95/EC)

Standards

The Nordson DAGE 4000 conforms to, and in many cases exceeds, the following industry standards:

Cold bump pull JEITA EIAJ ET-7407

BGA bump shear JEDEC JESD22-B117A

Cold bump pull JEDEC JESD22-B1115

AU ball shear JEDEC JESD22-B1116

Ball bond shear ASTM F1269

Wire pull D/T/NDT ML STD 883

Die shear ML STD 883

Stud pull ML STD 883

Rip chip pull JEDEC JESD22-B109

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 both local and international organizations alike. Founded in 1961, with global headquarters in Aylesbury, UK, Nordson DAGE is part of the Nordson Corporation which has direct operations and sales support offices in more than 30 countries.

Nordson DAGE continues to invest significantly in research and development to remain at the cutting edge of bond testing technology. Nordson DAGE has a truly global presence and is recognized as the industry standard.

For more information, please contact your Nordson DAGE regional office or speak with your Nordson DAGE representative, all of which are listed on www.nordsondage.com.

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