

Protect Your Process



4600 Series

Automated Bondtesters

www.nordsondage.com

The logo for Nordson DAGE, featuring a blue swoosh above the word 'Nordson' in a bold, blue, sans-serif font, with 'DAGE' in a smaller, blue, sans-serif font below it.

The Electronics People

For over 50 years Nordson DAGE has been designing and manufacturing Bond Test systems from the dedicated factory in Aylesbury, UK. Our ISO accreditation and commitment to quality ensure our worldwide team can deliver the quality you need.

Guaranteed support from Nordson's worldwide network

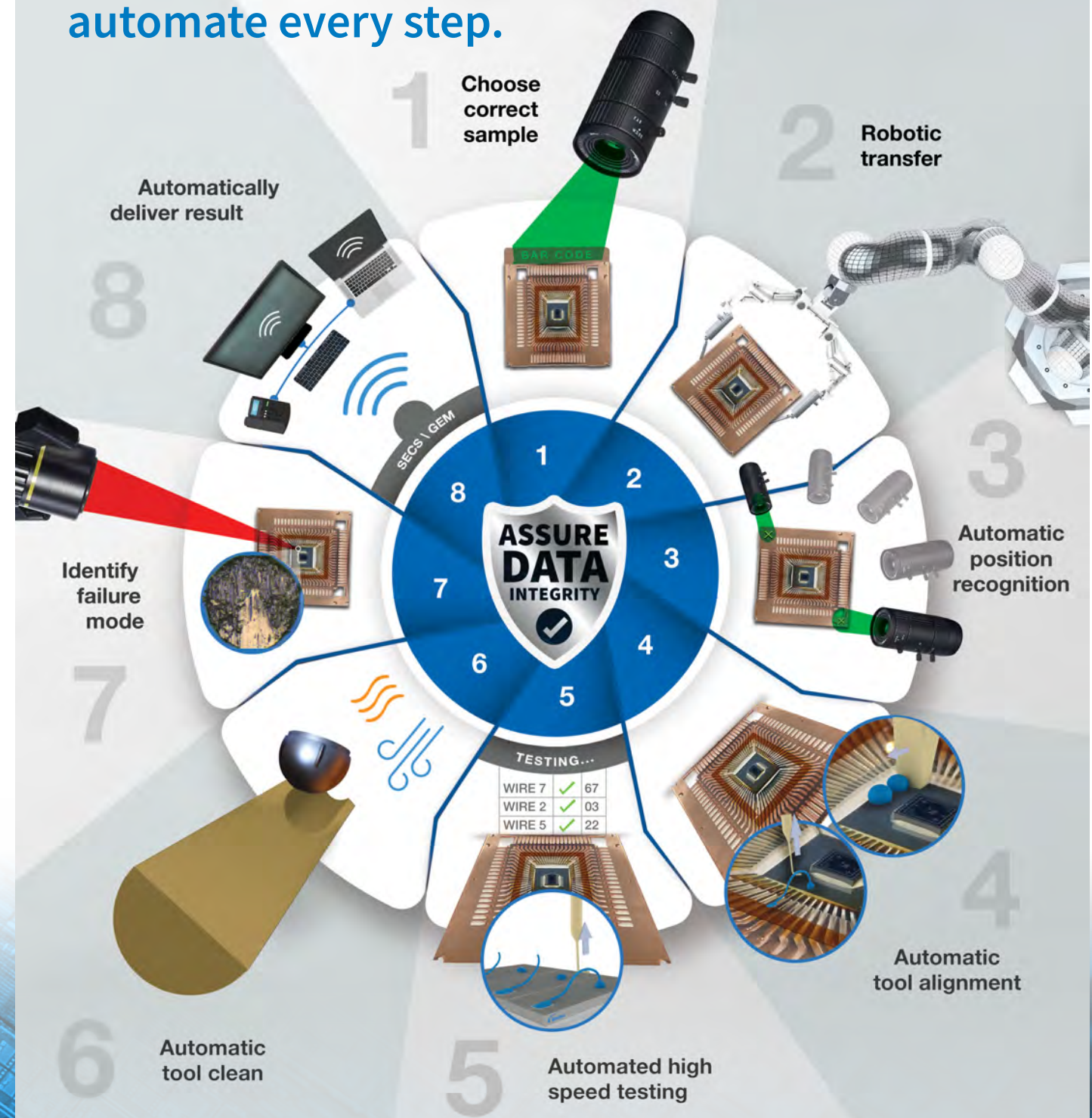


Nordson Corporation is a worldwide industrial technology company with over \$2 billion in annual revenues and a presence in 30+ different countries. We have test and inspection experience in **mechanical, optical, X-ray** and **acoustic** systems.

 ABT	 AOI	 MXI	 AMI
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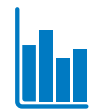
Data Integrity with Automation

For the best data quality, automate every step.



Life with Automation

Operator free - remove all errors and achieve the most accurate results every time.



Repeatable Results Every Time

Our linear encoder stages with 100nm resolution ensure you get to the right location every time.



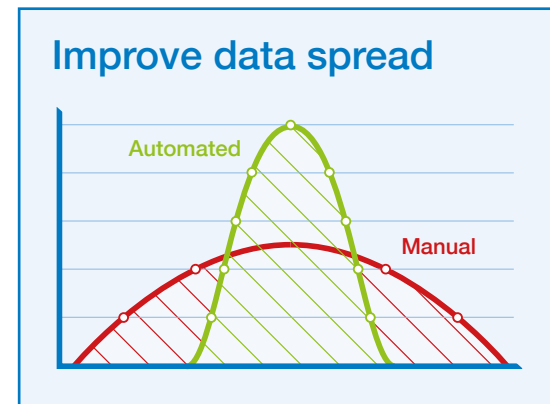
Data is Everything

Achieve maximum data integrity with multiple on-board cameras to recognize fiducial markings and automatically capture failure mode images.



Remove the Expert

Paragon™ software is easy to use and simple to set-up for a new product, meaning you don't need to rely on expert operators as a single point of failure. A single operator can manage multiple systems if required.



Load large batches of samples and benefit from robotic handling to load, align and transfer each device to the Bondtester.



Improve Tool ROI

Start the test then attend to other work while the system automatically completes large batch testing. Tests can be controlled and data exported using SECS/GEM protocols integrated with your factory.



Ultimate Product Safety

Using robotic handling with vacuum you can safely load and unload your product and protect from handling errors and damage. There is no risk of losing a batch and no need to ever repeat a test.



Maximum UPH

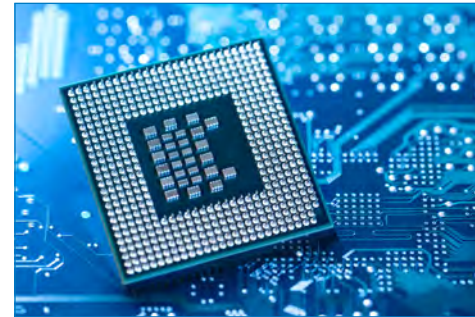
Fully integrated cassette handling and mapping capabilities combined with device mapping delivers maximum efficiency. Achieve consistent UPH results 24/7 regardless of who is operating the Bondtester.

We've Got it Covered

Micro-electronics

✔ Test every interconnect or die

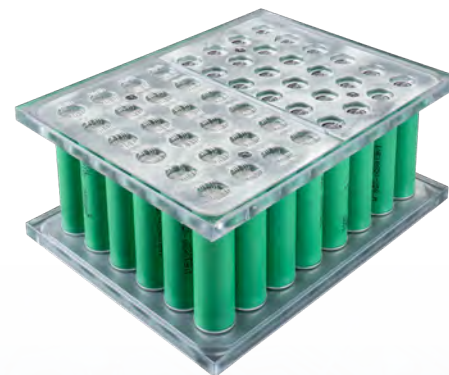
- Leadframes and strips
- Package substrates
- BGA
- MEMS



Electronic systems have a range of test requirements including wire pull, ball shear, die shear and surface mount shear.

Battery

Automate battery interconnect strength testing to ensure maximum automotive safety.

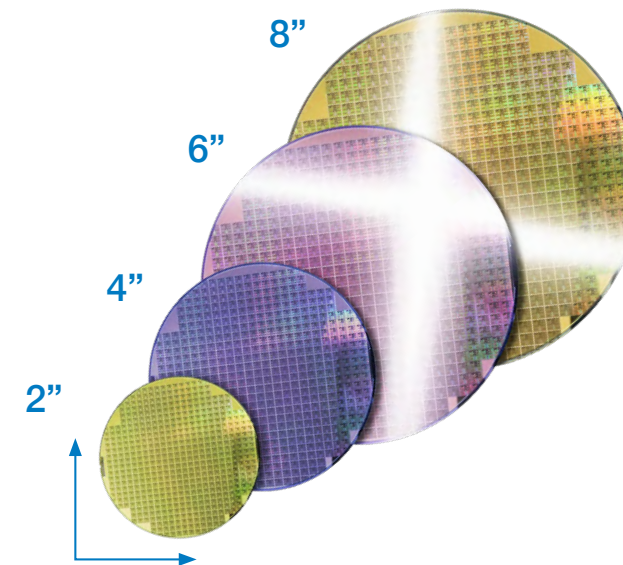


For battery systems the intercell connection technology requires mechanical testing in either:

- ✔ Destructive mode (sample testing)
- ✔ Non-destructive mode (100% testing)

Wafer level

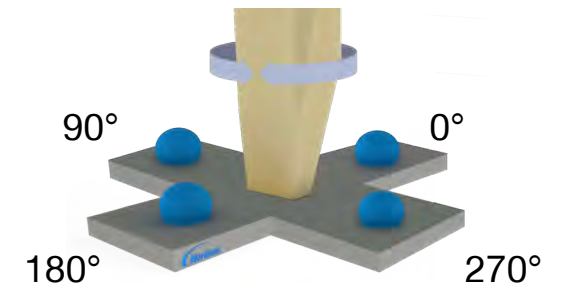
✔ Test wafers from 2 inches to 8 inches



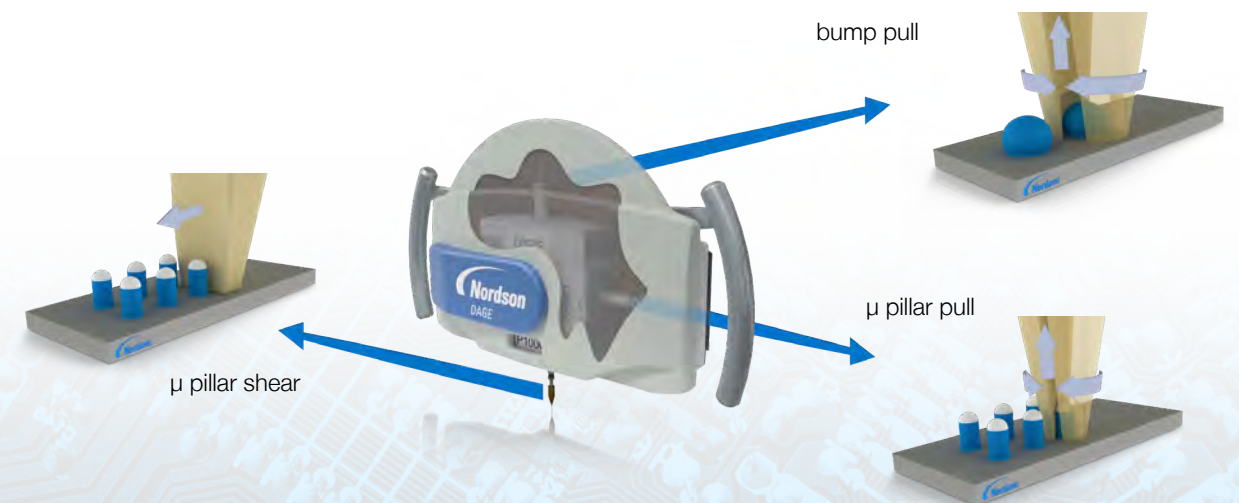
✔ Silicon, glass, laminate, composite, compound and warped wafers

✔ Pillars and bumps <math>< 50\mu\text{m}</math>

✔ Test in any direction with the rotational shear cartridge



✔ Automate with the multi-functional cartridge



Test the Extreme



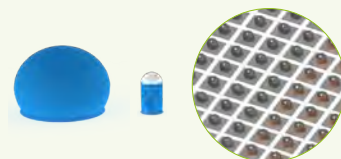
	Manual	4600	Handler <small>Wafer/leadframe</small>
Test repeatability	Rotary encoders	High resolution linear encoders	
Data integrity	Operator alignment	Fiducial recognition alignment	Fiducial recognition + OCR
Test procedure	Operator control	Automatic test	
Product safety	Manual load/unload		Automatic load/unload
Throughput and ROI	Variable (operator dependent)	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Test More with Automation

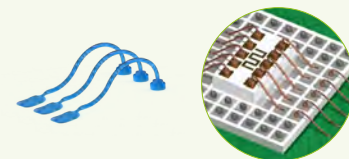
For the most complex devices with a high density of bumps or very fine pitch wires, automation is the only way to ensure maximum test accuracy.

Automation gives you the precision required to achieve the highest data integrity, test after test.

Small dimensions
High density



Complex product
Fine pitch



Data that Correlates

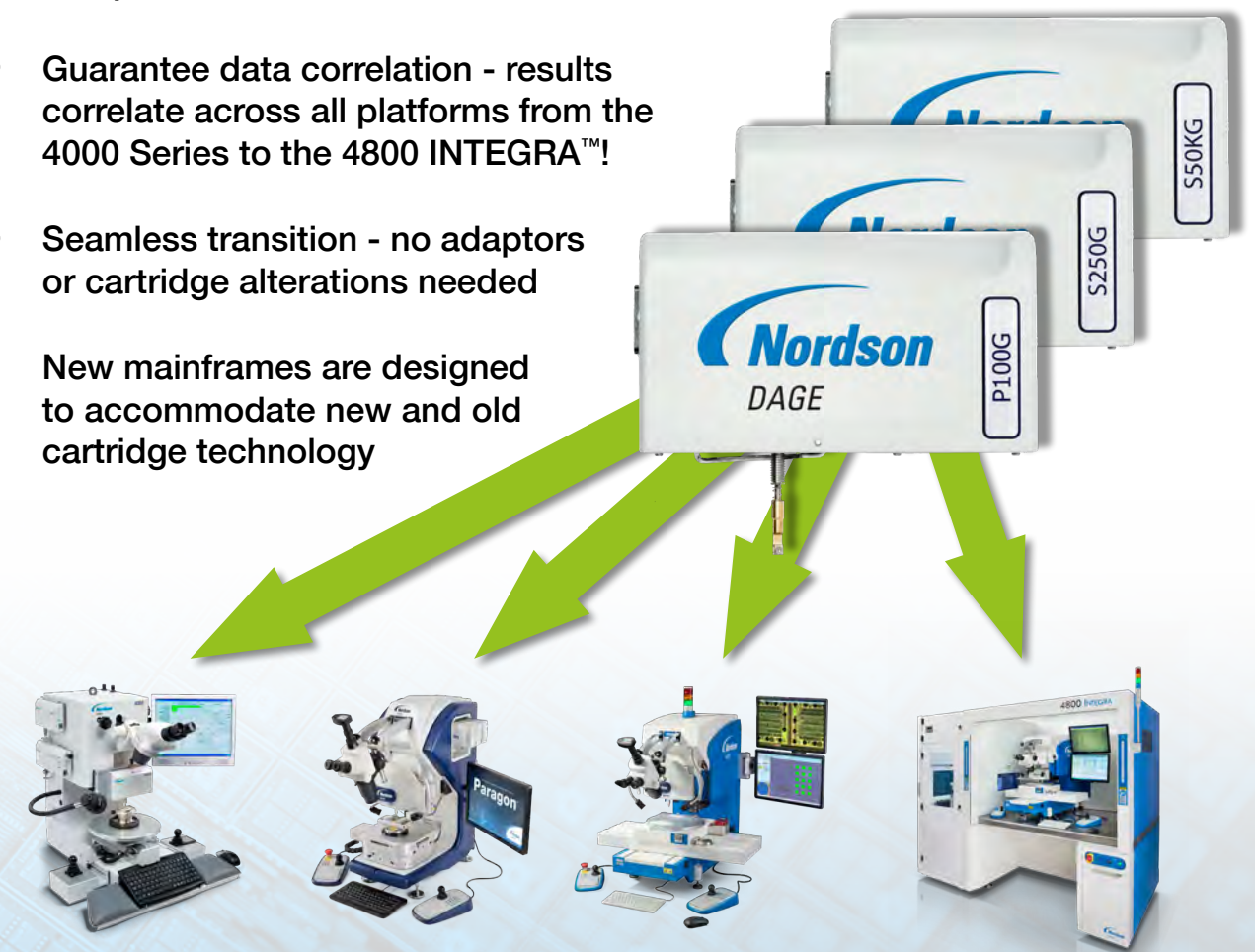
DATA SYNC™ UNIVERSAL TEST TECHNOLOGY

The measurement cartridge is at the heart of every Bondtester and is critical to achieving accurate and consistent results.

Nordson DAGE cartridge technology is interchangeable between each of our systems, enabling new data to correlate with data up to 20 years old.

Future proof your bond testing systems:

- ✔ Save costs and improve ROI - cartridges from older systems are compatible with the latest mainframes
- ✔ Guarantee data correlation - results correlate across all platforms from the 4000 Series to the 4800 INTEGRA™!
- ✔ Seamless transition - no adaptors or cartridge alterations needed
- ✔ New mainframes are designed to accommodate new and old cartridge technology



Specifications at a Glance

Automation	
Automation programmes	Camera assisted fiducial recognition
Wafer map import	Sinf, Klarf and G85
Wafer ID reading	Via OCR
Sample handling	Wafer or leadframe
Light tower system	Included as standard

Testing	
Topology information	Compound Surface Imaging (CSI) + auto-focus
Grading assistance	Automatic area calculation upgrade
Step back accuracy (force dependent)	+/- 0.25 µm
System accuracy (range dependent)	+/- 0.10% - 0.05% FSL
Multifunctional cartridge	Combinations of shear and pull transducers

Axis specification	
Stage and resolution	100 nm Renishaw linear encoders
X, Y travel	450 mm X, 410 mm Y
X, Y speed and force	50 mm/s, 20 kg or 30 mm/s, 50 kg
Z travel and resolution	75 mm, 5 mm/s
Z speed and force	5 mm/s, up to 50 kg

Installation	
Footprint (W x D x H)	1075 mm x 920 mm x 1000 mm
Weight	140 kg
Power supply	90-264 V, AC Single phase
Pneumatic supply	4 Bar, 6 mm OD / 4 mm ID plastic pipe
Vacuum supply	Minimum 500 mm Hg plastic pipe



SECS/GEM
ready



**High magnification
and large FOV
cameras included
as standard**



**Paragon™
automation software**



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