Protect Your Process

4600 Series

Automated Bondtesters

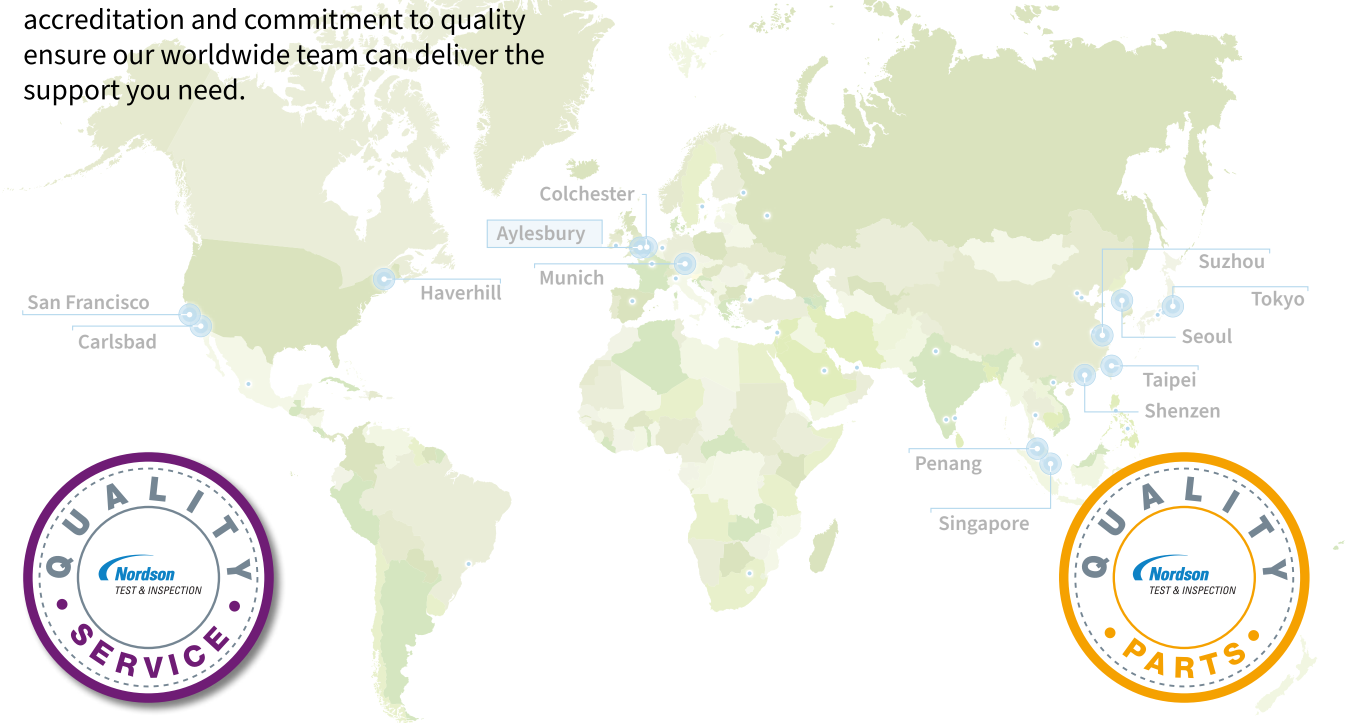
www.nordsondage.com

Nordson
TEST & INSPECTION

The Electronics People

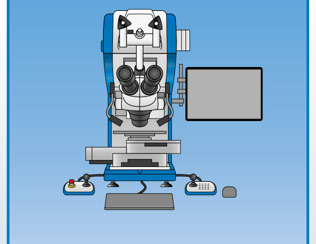
For over 50 years Nordson has designed and manufactured Bond Test systems from the dedicated facility in Aylesbury, UK. Our ISO accreditation and commitment to quality ensure our worldwide team can deliver the support you need.

Guaranteed support
from Nordson's worldwide network



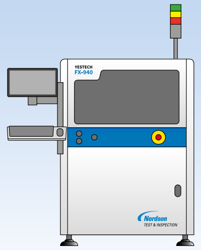
Nordson Corporation is a worldwide industrial technology company with over $2 billion in annual revenues and a presence in 30+ different countries. We are leaders in mechanical testing and optical, X-ray and acoustic inspection.

TEST
Products



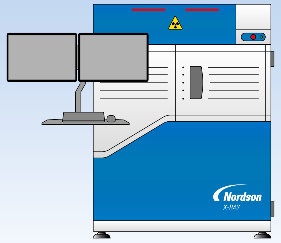
ABT

OPTICAL
Products



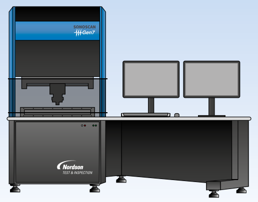
AOI

MXI
Products



MXI

ACCOUSTIC
Products



AMI

Data Integrity With Automation

For the best data quality, automate every step.

1 Automatic sample identification

2 Automatic sample transfer

3 Automatic position recognition

4 Automatic tool alignment

5 Automatic high speed testing

6 Automatic tool clean

7 Automatic failure mode identification

8 Automatic results delivery

Life With Automation

Every operator touch-point is an opportunity to degrade measurement spread. Ensure the most accurate results with operator-free automation.

Repeatable results every time

The 100 nm resolution rapid and closed loop motion system ensures the test tool is precise and never misses. Operators cannot match the accuracy and consistency of the test results.

Data is everything

Achieve maximum data integrity and traceability with full barcode scanning support. Data is made available for your MES or factory host.

Remove the expert

Paragon™ software is easy to use, so you don't need to rely on expert operators to run the system. An operator can easily manage multiple systems rather than a single manual machine.

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

Improve tool ROI

High quality test capture is standard. Start the test, attend to other work, and return to review the full batch of test results. No inspection required.

Ultimate product safety

Protect your wafers and lead frames from static and physical damage with robotic handling. There is no risk of losing a batch and no need to ever repeat a test.

Maximum UPH

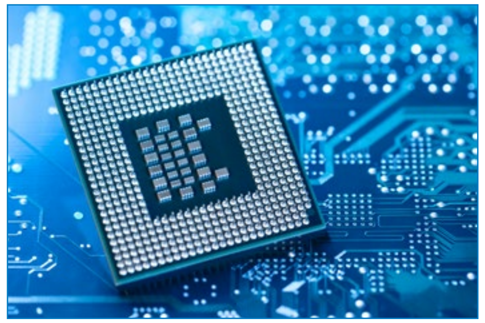
Large testing envelope eliminates the need to index large parts and fit more in each batch. Increase test efficiency and throughput with the 50 mm/s table speed and camera-assisted automation.

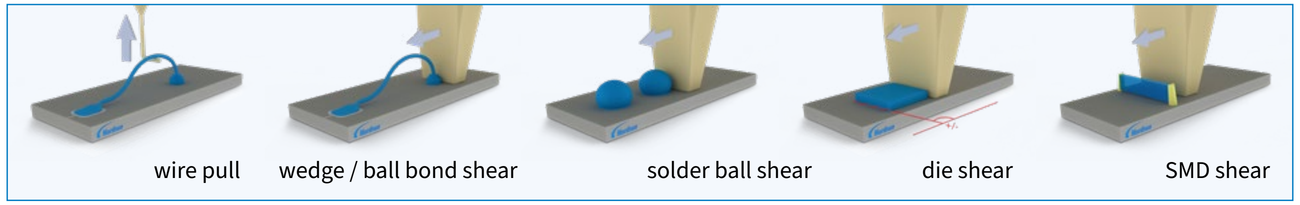
We’ve Got It Covered

Micro-electronics

✓ Test every interconnect on a device

- Lead frames and strips
- Package substrates
- BGA
- MEMS





Electronics must be tested to industry standards for all of the above applications.

Battery

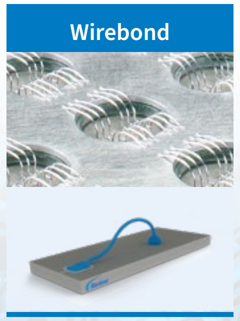
Automate battery interconnect strength testing to ensure maximum automotive safety.

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

✓ Destructive mode (sample testing)

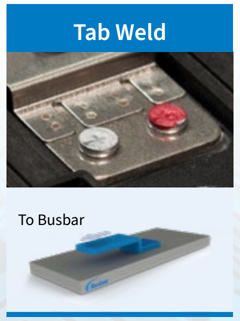
✓ Non-destructive mode (100 % testing)

Wirebond



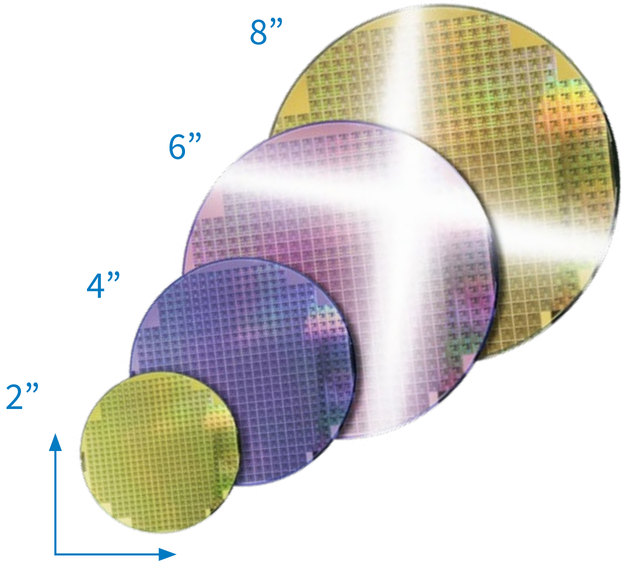
Ribbon

Tab Weld



Wafer level

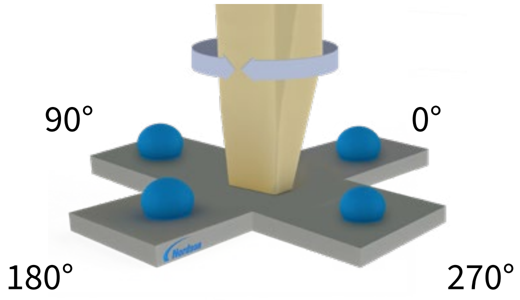
✓ Test wafers from 2 inches to 8 inches



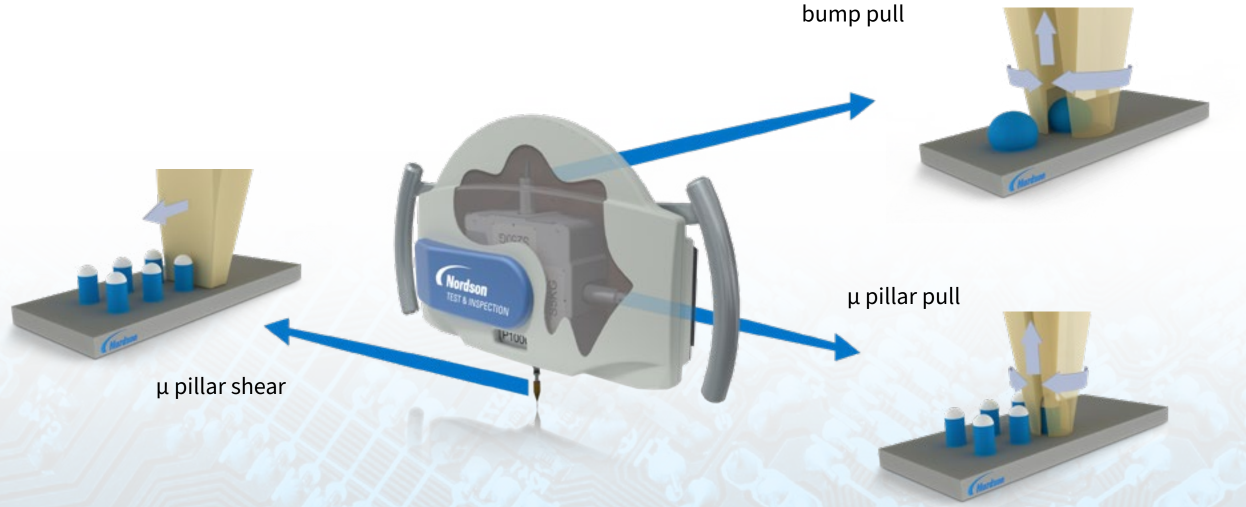
✓ Silicon, glass, laminate, composite, compound and warped wafers

✓ Pillars and bumps <50 µm

✓ Test in any direction with the rotational shear cartridge



✓ Automate with the multi-functional cartridge



Test The Extreme

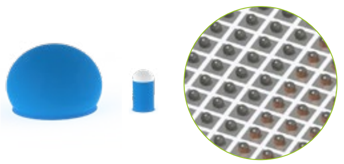
	Manual	4600	Handler Wafer / Lead Frame
Test repeatability	Rotary encoders	High resolution linear encoders	
Data integrity	Operator alignment	Fiducial recognition alignment	Fiducial recognition + OCR
Test procedure	Operator control	Automatic test	
Product safety	Manual load / unload		Automatic load / unload
Throughput and ROI	Variable (operator dependent)	✓ ✓ ✓ ○	✓ ✓ ✓ ✓

Test More With Automation

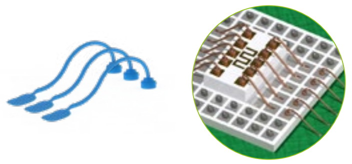
For the most complex devices with a high density of bumps or very fine pitch wires, automation is the only way to ensure maximum test accuracy.

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

DATASYNC™
UNIVERSAL TEST TECHNOLOGY

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

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

Specifications at a Glance

Testing	
Test modes	Manual + dual camera-assist automation
Test force	0.01 gf - 50 kgf
Multi-Function Cartridge (MFC)	Pull, shear + CBP available
Imaging	Autofocus + Compound Surface Imaging (CSI)
Process monitoring	Auto failure mode ID + wire detection

Automation	
Sample handling	Wafer + strip auto-load
Traceability	Wafer OCR + strip ID
Programming	Pattern transfer + file import
Light tower	3 colour included
Factory communication	Optional SECS / GEM & RS 232

Axis Performance	
Step back accuracy (force dependent)	± 0.25 µm
System accuracy (force dependent)	± 0.10 % - 0.05 % FSL
Axis travel (X x Y x Z)	450 mm x 410 mm x 75 mm
XY speed and resolution	Up to 70 mm/s, 100 nm
Z speed and resolution	5 mm/s, 250 nm

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	Min 4.0 Bar
Vacuum supply (4600-W only)	Min 500 mm Hg

Americas	+ 1 760 930 3307 sales@nordsondage.com
Europe	+44 1296 317800 globalsales@nordsondage.com
China	+86 512 6665 2008 sales.ch@nordsondage.com
Germany	+49 89 2000 338 270 sales.de@nordsondage.com
Japan	+81 120 537 555 sales.jp@nordsondage.com
Korea	+82 31 462 9642 korea.at.cs@nordson.com
South East Asia	+65 6552 7533 sales.sg@nordsondage.com
Taiwan	+886 2 2902 1860 globalsales@nordsondage.com
United Kingdom	+44 1296 317800 globalsales@nordsondage.com

CERTIFIED ISO 9001

UKAS MANAGEMENT SYSTEMS 001

THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2020

DAGE products are patent protected and covered by the patent listed at www.nordson.com/dagepatents.

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