

**Sunrich Technologies**  
**[www.sunrichtec.com](http://www.sunrichtec.com)**



Reicherter • Wolpert • Wilson





## Hardness Testers

As the world's leading provider of hardness testing instruments, the Wilson® Hardness Group - Wilson, Wolpert, and Reicherter - supplies a comprehensive range of hardness testers from Rockwell®, Knoop/Vickers, and Brinell to fully-automatic production systems. Our testers are complemented by a range of test blocks, accessories, and fixtures, and our calibration laboratory is recognized as the global leader in the production of premium test blocks and indenters. The Wilson Hardness Group provides service and support that is dedicated to ensuring the highest quality calibration, verification, and service throughout the world. Our applications support combines years of hardness testing experience with unparalleled expertise, problem solving, and solutions to meet your needs.

With dedicated sales, manufacturing, and research and development facilities located around the world, including the Americas, Europe, and Asia, we are always close to you. As a part of the Instron®/Illinois Tool Works (ITW) family, the Wilson Hardness Group is truly the global leader in the design, manufacture, and support of Hardness Testing Instrumentation.

p4 Rockwell

p7 Knoop/Vickers

p11 Universal

p14 Brinell

p16 Portables

p18 Automation Software

p20 Accessories

p22 Shore® Instruments

p23 Support and Service



## Rockwell 574

The Rockwell 574 Series Hardness Testers are proven to be durable and reliable performers meeting a range of Rockwell testing applications. Available in Regular, Superficial or Twin Scale models, the 574 provides a rugged industrial design, an easy-to-use control panel, and a built-in USB for easy data transfer to Microsoft® Excel® or other applications. Designed with the best repeatability in its class, the 574 is an affordable, high-precision depth measurement system with proven performance.

### Features

- USB port for data transfer
- Crisp, intuitive LCD display with test status, hardness values, statistics, and six languages
- Specimen lighting with adjustable illumination levels
- Dial selectable loads
- Durable industrial design to withstand harsh environments
- Automatic minor load braking system

### Hardness Scales

574R	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V
574T	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y
574S	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V, 15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y

## Rockwell 2000

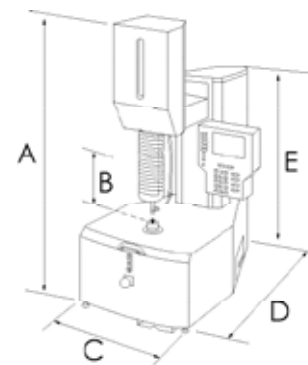
The Rockwell 2000 Series Hardness Testers provide an industry-leading Gauge Repeatability and Reproducibility (GR&R) with accurate and repeatable test results using an electronic force monitoring apparatus and a precision depth measurement system. Featuring a durable frame, an intuitive user panel, and a simple one-button operation, the Rockwell 2000 exceeds a wide variety of testing requirements. The Rockwell 2000 is available in Regular, Superficial, and Twin Scale models, as well as in two different sizes to suit numerous applications.

### Features

- Closed-loop electronic load cell design for precision force application
- Adjustable fiber optic specimen illumination
- Intuitive user control panel for quick test method setup and data collection
- Quick access electronic up/down, start test, and abort buttons

System Dimensions and Weight

	A	B	C	D	E	Weight
2002	1232 mm 48.5 in	254 mm 10.0 in	343 mm 13.5 in	590 mm 23.2 in	787 mm 31.0 in	107 kg 236 lbs
2003	1334 mm 52.2 in	356 mm 4.0 in	343 mm 13.5 in	590 mm 23.2 in	990 mm 39.0 in	113 kg 250 lbs





## BRIRO R Series

The BRIRO R Series Rockwell Hardness Testers offer high testing accuracy, ease of operation, clamping capabilities, and an efficient test cycle, while providing confidence in test results. Manual and automatic test setups are available: the BRIRO R is ideal for general purpose testing, and the BRIRO Automatic is suited for large volume testing and higher production levels. The BRIRO features the unique Reicherter original designed clamping system with a high clamping force (>320 kgf) that eliminates any compliance in the system, and allows for safe testing of both small and very large parts. Original Reicherter Clamping combines both user independent measurements with a very high repeatability and ease of use.

## Features

- Low inertia spring load system ensures high testing accuracy
- Tests to 12 test methods
- Precise test load selection
- Preload indicator allows for testing without clamping
- WIN-Control automation software for automatic measurement or HM-Control

## Vertical Testing Capacity

R	240 mm (9.45 in)
RL	365 mm (14.37 in)
RXL	500 mm (19.69 in)

## Knoop/Vickers Reicherter KL4

The Knoop/Vickers Reicherter KL4 Hardness Testers use an innovative closed-loop control system and are designed to work with Win-Control Software. When combined with a video measurement system, the KL4 delivers highly reliable and accurate test results.

### Features

- Optimized algorithms allow automatic on-screen measurements
- Unique optical design for accurate digital hardness testing
- Digital zooming and autofocus capabilities
- Objective with a range of magnifications
- 5 MP digital camera
- Overview objective with extra-wide field of view for easy positioning
- LED-illumination system for improved specimen imaging
- WIN-Control automation software for simple automatic measurement
- Optional motorized XY-Stage for better accuracy
- Optional multi-sampling with fast cycle times for improved productivity





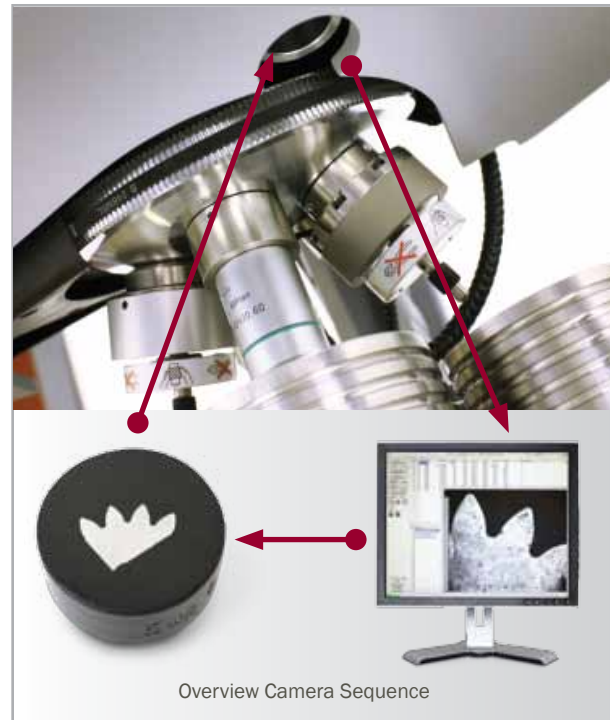
## Tukon 2500

The Knoop/Vickers Tukon 2500 Automated Hardness Testers are precision instruments that boasts a powerful load application range of 10 gf - 50 kgf, along with a completely modular five-position motorized turret. Designed with the most flexible and expansive testing range in the industry, and having all components and software designed, manufactured, and integrated by Wilson® Hardness, the Tukon 2500 meets virtually any Knoop/Vickers testing requirement. Innovative digital zoom stepping provides the widest magnification range ever provided on a hardness tester. The long-working distance objectives and high-accuracy automated stage provide the basis for a truly powerful testing system.

## Features

- Precision optical measurement path with a high-definition 5 MP digital camera
- Calibrated Optical Zooming capability enhances the indentation measurement range
- Motorized five position turret
- Optional 180 × 160 mm motorized XY-Stage with 5 µm or better accuracy
- Optional secondary overview camera available on fully-automatic testing systems
- Minuteman™ Pro Software with calibrated optical zooming, Case Hardness Depth analysis, graphing, and data collection





## System Configurations



	1	2	3	4	5	6
<b>Software Features</b>						
Calibrated Digital Zooming	•	•	•	•	•	•
Manual Filar Measurement	•	•	•	•	•	•
Automatic Measurement Analysis		•	•	•	•	•
Automatic Sample Focusing			•		•	•
Automatic Stage Movement				•	•	•
<b>Hardware</b>						
Overview Camera						•
High-Performance PC	•	•	•	•	•	•
<b>Sample Support</b>						
Stationary Flat Anvil	•	•				
Manual XY-Stage with PC Interface			•			
Motorized XY-Stage				•	•	•



## Tukon™ 1102 | 1202

The Knoop/Vickers Tukon 1102 and 1202 Hardness Testers are versatile and user-friendly, and are ideal for both quality assurance and metallurgical research. Providing an affordable and reliable solution for micro-hardness scale testing, the Tukon 1102 is equipped with one indenter position and two objectives for a 100X and 500X magnification, where the Tukon 1202 has two indenter positions and offers an additional 50X overview magnification for fast and easy positioning and focusing. The Tukon 1102 and 1202 are fully prepared for integration with the Minuteman™ camera systems.

### Features

- LED high-powered specimen illumination
- Large touch screen display with user-friendly software interface
- USB output for easy data export
- Eight available test forces ranging from 10 g - 1 kg (2 kg optional)
- Modular dual indenter, 6 position motorized turret (Tukon 1202 only)

## Brinell, Vickers, and Knoop UH250

The UH250 Universal Hardness Tester contains all standard hardness testing methods between 1 – 250 kgf (HV, HK, HB, and HR). The system is designed with high-quality mechanical components, closed-loop technology, and WIN-Control, our versatile Windows® hardness evaluation software. An integrated camera with calibrated digital zooming capability increases magnification ranges allowing for a fast, accurate, and user-independent Vickers, Knoop or Brinell measurement.

### Features

- Objective with a range of magnifications
- 5 MP digital camera
- Digital zooming and auto focus capabilities
- LED-illumination system for improved specimen imaging
- Easy operation by touch panel PC
- WIN-Control automation software for simple automatic measurement
- Automatic test cycle with fast cycle times
- Optional motorized XY-Stage for better accuracy





## Brinell, Vickers, and Rockwell® UH930

The UH930 Universal Hardness Tester, with its user-friendly operator panel, displays hardness values for all common hardness test procedures. The closed-loop load system eliminates overshoot and combines a fully-automatic controlled test cycle with a broad load range from 1 - 250 kgf. The quick access buttons allow operators access to 99 different test programs for all hardness scales (HR, HB, and HV).

In compliance with ISO standards, each program can be set up with user-defined test parameters including test force, application time, conversion, and shape correction. The intuitive user interface and one-touch operation ensures an efficient and reliable test process, while the interchangeable objectives, which range from 20 - 140X magnification, allows for testing a variety of applications.

## Features

- Operator panel indicates hardness diagonals, value, statistics, and conversions
- Optical system with a 135 mm diameter screen allows for high-precision measurements for Brinell and Vickers
- Brinell, Vickers, Rockwell, and Superficial Rockwell in one machine
- Automated test cycle by the push of a start button
- Load cell technology allows for more accurate test results and improved efficiency
- Heavy-duty clamping and protection device
- Interchangeable magnifications with optional 20X, 44X, 70X and 140X magnification (140X is in standard delivery)
- Wide range of test tables and anvils available for most product geometries

## Brinell, Vickers, and Rockwell® UH750 | UH3000

The UH750 and UH3000 Universal Hardness Testers are available in two versions, with maximum test forces ranging up to 750 and 3,000 kg respectively. The sturdy design makes these machines suitable for rough workshop environments. These systems feature an innovative, Wilson® Hardness designed rotating apparatus that holds several indenters and objectives, allowing the operator to test a variety of methods without manually changing indenters or objectives.

### Features

- Optimized algorithms allow automatic on-screen measurements
- Unique optical design for accurate digital hardness testing
- Digital zooming and autofocus capabilities
- Extremely fast testing cycles
- LED-illumination system for improved specimen imaging
- WIN-Control automation software for simple automatic measurement
- 5 MP digital camera
- Measurement of radial forces prevents errors in test results
- Innovative rotating turret with four locations for objectives and indenters



### Force Range

UH 750	3 - 750 kg (29.42 - 7355 N)
UH 3000	20 - 3,000 kg (196.1 - 29420 N)



## Brinell BH3000

The Brinell BH3000 Hardness Tester is a sturdy, 30 kN hardness tester for the higher load Brinell scales of >187.5 kgf. Designed with a rugged construction to withstand the harshest environments, this reliable tester offers a high-rigidity and closed-loop load cell technology for accurate and safe load applications. Key features include a clamping device for securing parts to table, an easy-to-use human interface to set up and operate the tester, a built-in keypad calculator that accurately presents HB hardness values, and an LCD screen that clearly displays results, statistics per test series, and language settings.

## Features

- High-load Brinell Tester, up to HB 10/3000
- Integrated hardness calculator, hardness diagonals, value, statistics, and conversions
- Load cell technology allows for force accuracy and efficiency
- Heavy-duty clamping and protection device - an optional external microscope with analog reading to measure the diagonals

## Brinell CLB3

The Brinell CLB3 Hardness Tester is a unique testing solution for accurate, high-capacity Brinell testing. This testing instrument utilizes load cell technology and a proven Instron® tension/compression frame to deliver an unlimited load range from 32.5 - 3,000 kgf. The tester is equipped with a user-friendly control panel for test method set up, start and stop, and a return functionality, as well as a 10 mm carbide ball indenter and two Brinell test blocks. For a wide variety of Brinell testing applications, the Closed-Loop Brinell hardness testing system presents an accurate, flexible, and efficient solution.

## Features

- High-load Brinell Tester, up to HB 10/3000
- Integrated hardness calculator, hardness diagonals, value, statistics, and conversions
- Load cell technology allows for force accuracy and efficiency
- Heavy-duty clamping and protection device





## Portable Testers M295

The Portable M295 Hardness Tester offers the most affordable and accurate testing solution for on-site testing in a workshop or in field operations for quality assurance. With an external probe it offers the flexibility to measure hard-to-reach areas. It can be fitted with 7 different probes for various applications and a variety of support rings allow for testing on a wide range of part geometries. For ease of use, the M295 is equipped with standard batteries and internal memory, as well as an RS-232 output.

### Features

- High accuracy of  $\pm 0.5\%$  at 800 HL
- Correction for impact direction  $360^\circ$
- Download results directly to a printer or PC
- Sealed keypad with keys for test setup
- Stores measured values
- Digital display for immediate test results
- Converts directly to HV, HB, HRC, HRB, HRA, HS scales, and Tensile Strength
- A rugged aluminum anti-shock casing
- Seven different exchangeable probes for various applications



## Portable Tester BRIRO TR

The Portable BRIRO TR Hardness Tester offers hardness testing capabilities in accordance to the Rockwell® DIN EN ISO 6508-1 and ASTM E 18-08b, as well as the Brinell penetration depth measuring method (HBW-T). The test accuracy of the BRIRO TR is equivalent to the precision of stationary Rockwell Hardness Testers.

### Features

- Low-mass spring load system ensures operation in any location
- Highly-accurate test results
- C-clamps allow for fast adjustments
- Interchangeable test loads
- Easily tests large samples in drilling or milling machines

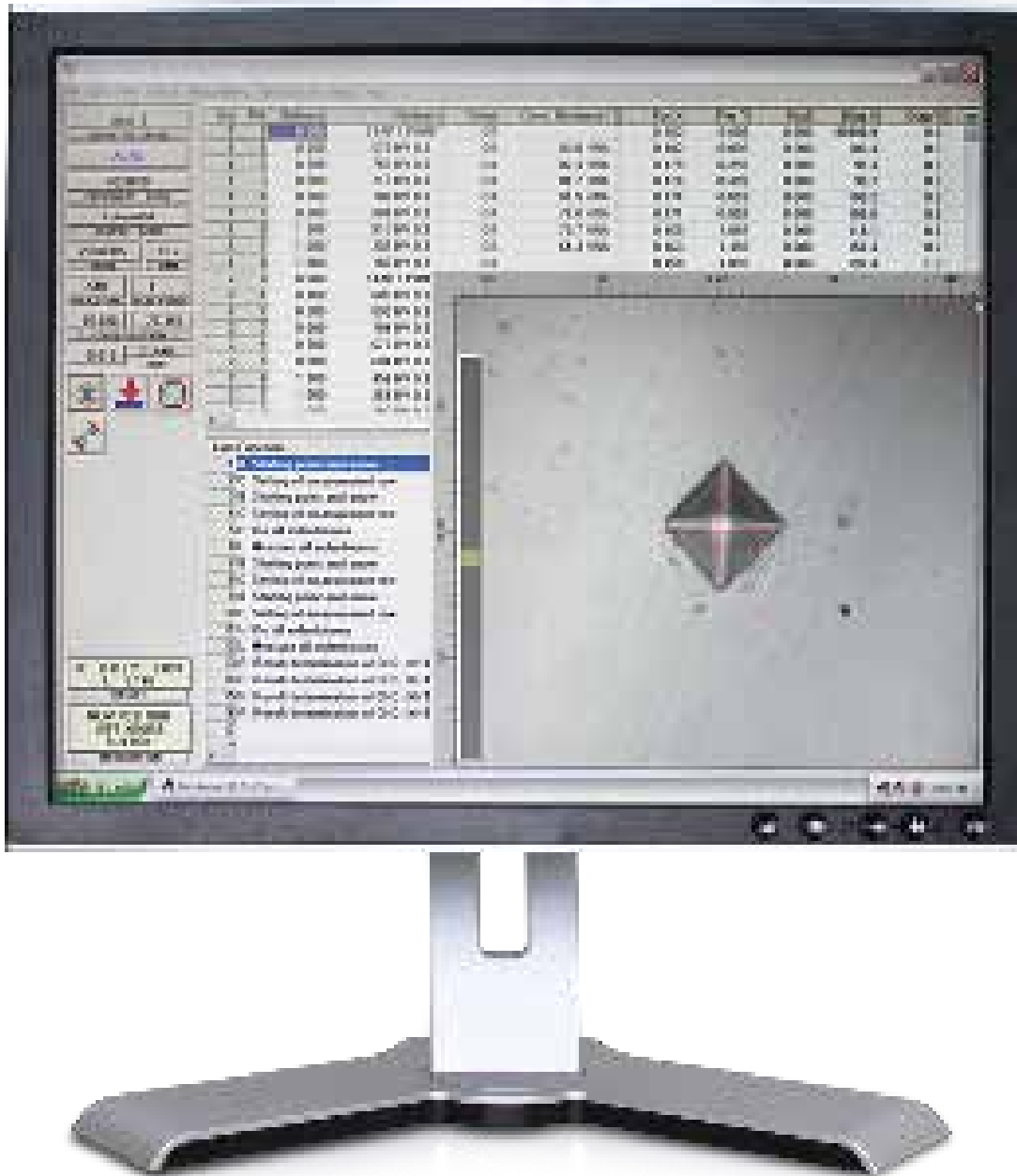
### Specifications

Throat Size	155 mm (6.10 in)
Test Height	0 - 300 mm (0 - 11.81 in)
Test Methods	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK, HR15N, HR15T, HR30N, HR30T, HR45N, HR45T, HBW2.5/62.5, HBW2.5/187.5



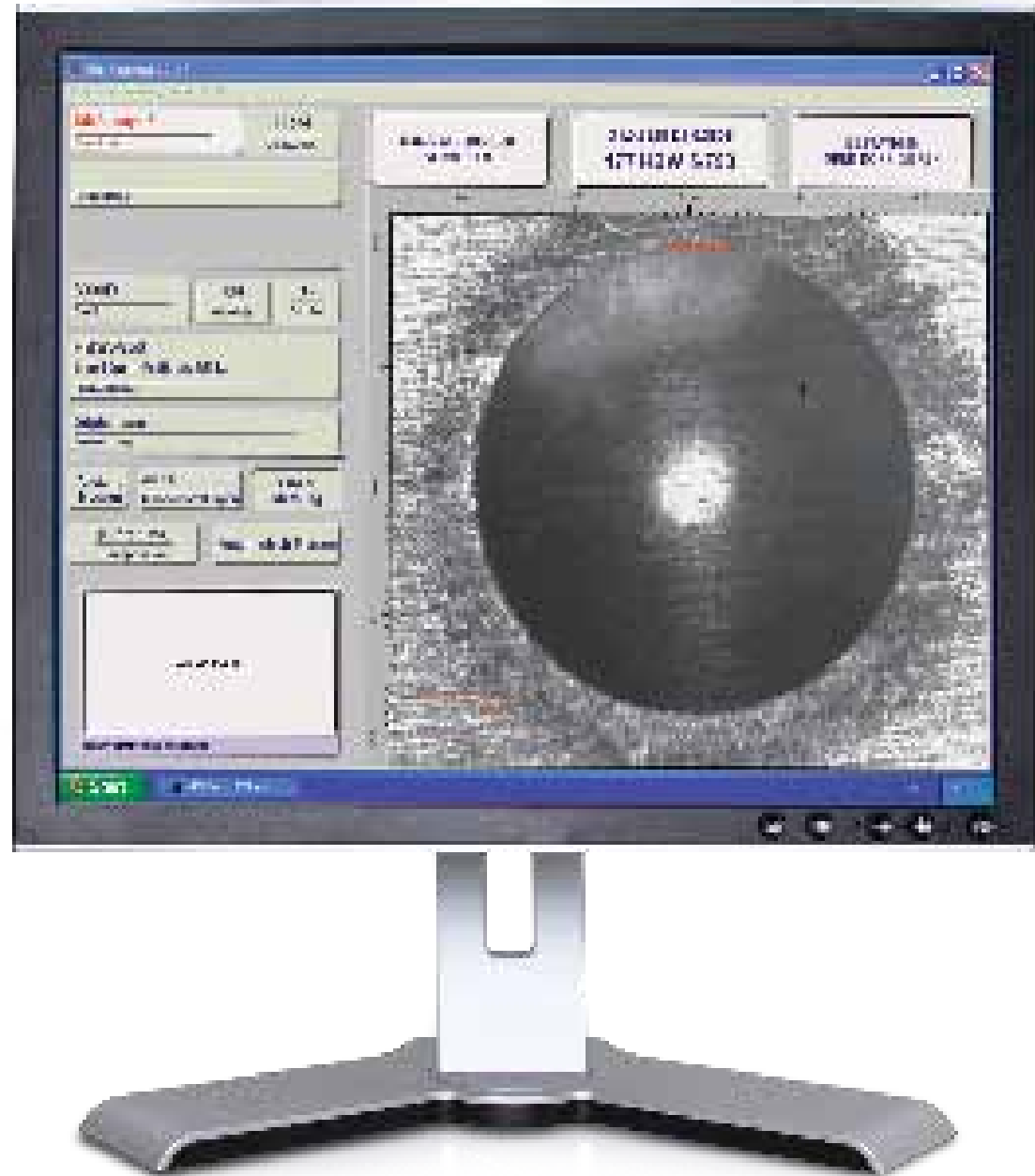
## Minuteman™ Automation Software

The Wilson® Hardness Minuteman Software automates the stage navigation and measurement process of your hardness testing systems. When combined with your hardness testing system, the Minuteman Automation System increases productivity, accuracy, and efficiency, and becomes your solution for reducing costs and process time while maintaining strict compliance to ASTM and ISO standards. Available in an assortment of different levels for Knoop, Vickers, and Rockwell® testing, the Minuteman Software presents a variety of user options to meet your testing challenges.



## WIN-Control Automation Software

Specifically developed for hardness testing equipment, this automation software offers the highest level of performance and simple operation. The operator can easily select the test method, lenses, test time, and conversions through a clear and easy-to-use interface. WIN-Control stores complete testing tasks, automates statistical analysis, provides individual print-outs, allows for multi-sampling, and displays measurement results in ASCII or Microsoft® Excel® formats. The software easily and quickly incorporates your testing system into any network.



# Accessories for Hardness Testers



## Accessories

Wilson® Hardness offers a comprehensive selection of hardness testing accessories to meet the most challenging applications – from anvils to manual and automatic stages, from test blocks to indenters, and from microscopes to software (imaging, automatic, and statistical). Our complete line includes accessories for Brinell, Rockwell, Knoop/Vickers, and Universal hardness testers. No matter your testing application, we can assist you with custom designs to meet your testing requirements.



### NVLAP® Accredited Test Block Lab

Wilson® Hardness provides a comprehensive range of hardness test blocks and indenters for Rockwell®, Vickers, Knoop, and Brinell applications. Certified to a range of ASTM and ISO standards, we manufacture, calibrate, and certify our test blocks in-house to ensure the highest quality test reference standards available. The test blocks and indenters are certified using the latest standardization and optical measurement technology. We operate our own calibration laboratory, traceable to NIST and accredited to ISO/IEC 17025 by NVLAP.



Shore Instruments offers a wide range of materials testing instruments designed to determine the hardness of rubber, elastomeric, cellular, and rigid plastic materials. Shore durometers and durometer systems are used extensively to test the hardness of footwear and athletic shoes, automobile tires, injection molded rubber parts, printer rollers, golf balls, and o-rings. Shore products are found in such varied fields as the automotive, printing, sporting goods, rubber, and plastics sectors.



## You Can Count on Us

- Represented in more than 160 countries, speaking 40 different languages
- Operate in 25 sales and service offices in 18 countries
- Worldwide support provided by 250 factory-trained ISO 17025-accredited service engineers



## We Are Only a Phone Call Away

- Technical support hotline accessible anywhere in the world
- Expert consultants provide tailored solutions to meet your testing needs
- Preventative maintenance, calibration, emergency repair, and system refurbishment services



## Resources at Your Fingertips | [www.wilson-hardness.com](http://www.wilson-hardness.com)

- Comprehensive product information including test blocks, indenters, and other accessories
- Technical resources including a downloadable conversion tool



## Stay at the Forefront of Hardness Testing

- Utilize our Applications Engineering Lab or Custom Engineered Solutions Group for the latest technological advances in materials testing
- Our state-of-the-art Calibration Laboratory guarantees that all calibrations meet the latest ASTM or ISO specifications





### Americas

Worldwide Headquarters  
1 Manufacturing Facility  
200+ Sales and Service Engineers



### Europe

European Headquarters  
1 Manufacturing Facility  
150+ Sales and Service Engineers



### Asia

1 Manufacturing Facility  
120+ Sales and Service Engineers

### Americas

825 University Avenue  
Norwood, MA 02062-2643, USA  
+1 800.695.4273  
sales@wilson-hardness.com

### Europe

ITW Test & Measurement GmbH  
Boschstr. 10, 73734 Esslingen, Germany  
+49 711 4904690 0  
europe.sales@wilson-hardness.com

### Asia

ITW Test & Measurement (Shanghai) Co., Ltd.  
No. 15, Lane 1985, ChunShen Road, Shanghai, China 200237  
China +86 21 54293761 | Asia +86 21 64766110  
asia.sales@wilson-hardness.com



Wilson® Hardness is an Instron® ITW Company

Wilson Hardness is a registered trademark of Illinois Tool Works Inc. (ITW) Other names, logos, icons and marks identifying Instron products and services referenced herein are trademarks of ITW and may not be used without the prior written permission of ITW. Other product and company names listed are trademarks or trade names of their respective companies. Copyright © 2011 Illinois Tool Works Inc. All rights reserved. All of the specifications shown in this document are subject to change without notice.