



## Universal Hardness Tester for Vickers, Rockwell and Brinell

EN ISO 6508, ISO 6506, ASTM E92, ISO 6507, ASTM E-18, JIS Z2245, GB/T 230.2, ASTM E10-12, JIS Z2243, GB/T 231.2, JIS Z2244, GB/T 4340.2



ULTIMATE USER-FRIENDLINESS



LEADING DEPENDABILITY AND RELIABILITY



STRICT COMPLIANCE WITH INDUSTRY STANDARDS



STOCKED CONSUMABLES AND SPARES



TRUSTED AFTER SALES TECHNICAL SUPPORT



LIFETIME PRODUCT SUPPORT ADVANTAGE



### Description:

NextGen's UniGen is a versatile all-in-one Universal Hardness Testing System. The unit is specifically designed to offer industry leading user-friendliness combined with a robust built for accurate and repeatable Vickers/Knoop, Rockwell and Brinell Hardness testing measurement results. The unit comes standard with an 8" LCD touch screen, CCD Camera, state-of-art automatic measuring software, and the full scope of NIST Certified consumables for all 3 testing methods, providing the ultimate Turnkey Solution for your facilities hardness testing requirements.

### Product Video:

[https://youtu.be/csR1I7IB\\_C4](https://youtu.be/csR1I7IB_C4)

### System Features:

- Equipped Brinell, Rockwell, Vickers test methods;
- Large touch-screen interface for ease of operation;
- Closed loop system with the highest accuracy load cell avoiding the need to install weights;
- Automated test force correction and force compensated to ensure the a high level of accuracy;
- Meets all up-to-date industry strands and conversions;
- Rockwell hardness testing function has an auto-correct curvature radius;
- Password protection for setup parameters;
- Large samples and testing information capacity;
- Supplied with a disc to save data to EXCEL format for ease of editing and processing;
- Modular design for easy maintenance





## Technical Specifications

Universal Hardness Testing System - UniGen Series	
Display	8" Touch Screen Interface
Brinell Scale	HBW1/5, HBW2.5/6.25, HBW1/10, HBW2.5/15.625, HBW1/30, HBW2.5/31.25, HBW2.5/62.5, HBW10/100, HBW5/125, HBW2.5/187.5
Rockwell Scales	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
Vickers Scale	HV5, HV10, HV20, HV30, HV40, HV50, HV60, HV80, HV100, HV120
Test Forces	Rockwell: 60kgf(588N), 100kgf(980N), 150kgf(1471N); Initial test force:10kgf(98N); Brinell: 5kgf(49N), 6.25kgf(61.25N), 10kgf(98N), 15.625kgf(153.125N), 30kgf(294N), 31.25kgf(306.25N), 62.5kgf(612.5N), 100kgf(980N), 125kgf(1225N), 187.5kgf(1837.5N) Vickers: 5kgf(49N), 10kgf(98N), 20kgf(196N), 30kgf(294N), 40kgf(392N), 50kgf(490N), 60kgf(588N), 80kgf(784N), 100kgf(980N), 120kgf(1176N)
Indication Accuracy	Brinell: 8-650HB (δ/%)±2.5; Rockwell: ±0.1HR; Vickers: ±2
Repeatability	Brinell: 8-650HB (Hcf/%)≤3.0; Rockwell: 0.5HR; Vickers: ≤2.5
Hardness range	Brinell: 8-650HBW; Rockwell: 20-100HR; Vickers: 8-2900HV
Force error	<0.5%
Holding Time	0-60s
Minimum measuring unit	0.1μm
Allowed maximum sample size (test space)	Allowed max. Sample height in vertical: 220mm(for Rockwell); 150mm(for Vickers & Brinell test mode); Allowed max. Sample height in horizontal: 200mm
Magnification	Eyepiece: 15X, 2.5X (for Brinell), 5X (for Vickers) (10X, 20X optional) Total magnification: 37.5X, 75X
Hardness read	Touchable LCD display, USB Flash Drive
Power supply	AC 110V / 220V, 50-60Hz
Implementation of the standards	ISO 6508, ASTM E-18, JIS Z2245, GB/T 230.2 ISO 6506, ASTM E10-12, JIS Z2243, GB/T 231.2 ISO 6507, ASTM E92, JIS Z2244, GB/T 4340.2
Dimensions	<b>Machine size:</b> 22.05x13.8x31.5" 56x35x80 cm  <b>Packing size:</b> 28.75x17.72x35.83" 73x45x91 cm

## Testing Software:

- Image with high resolution and indentation measurement by auto or manual;
- Calibration using micrometer or hardness block, can be calibrated automatically;
- Hardness converted to other hardness scales according to ASTM standard, alarm when hardness values out of range;
- Test reports can be customized; all testing data can be saved for long time and easy for historical inquiry.



## Brinell Hardness Test Interface:

Open\_Image Save\_Image Camera\_Dynamic Camera\_Static Camera\_Set Calibration Sample\_Info AutoMea.Config μAdj

Force\_Diameter: HBW10/1000 Turret: [Left] [Right]

Force (kgf): 1000

Diameter (mm): 10

Dwell: 10s

Hardness Level: 125-225

Buttons: Indent, Manual Measurement, Auto Measurement

Measurement Options: HBW (selected), CVT, Measure By Circle (selected), Measure By Region

Seq.	Mea.Time	D1 (mm)	D2 (mm)	DAvg (mm)	HBW

Original Size Normal Size X: 186 Y: 246

## Support Test Result Edit Function:

Editing the 1 record

Test Force: HBW10/3000 Sample Name: [ ]

Dwell Time: 10s Sample No.: [ ]

Magnification: 4x Report No.: 20130607-1514E

Sample From: [ ] Tester: [ ]

Original: [ ] Reviewer: [ ]

Date of Provided: 2013/12/10 Date of Test: 2013/12/10

Required: [ ] ~ [ ] Time of Test: 15:58

D1: 5.7 HB: 106

D2: 5.7

Buttons: Apply, Cancel

Main Interface: Ball Diameter 10, Test Force 29400 N, Dwell 10s, Magnific 4x, HB 103

Seq.	Sample Name	Sample No.	Test ...	d1	d2	Har...
1			HBW10...	5.7	5.7	106
2			HBW10...	5.8	5.8	103

Buttons: Edit, Delete, Stat., Report

## Rockwell Hardness Test Interface:

Test Parameters

Workpiece name: [ ] Standard: GBT 17669.1

Workpiece No.: [ ] Spec.: [ ] Sample from: [ ]

Material Name: [ ] Testing eqpt.: [ ] Date of the Sample Provided: 2019/ 2/18

Furnace No.: [ ] Holding time: [ ] Report No.: 2012061104334

Number of parts: [ ] Type of hardness: [ ] Tester: [ ]

Thickness: [ ] Type of Conv.: [ ] Auditor: [ ]

Radius of curvature: Plane Qualified range: [ ] ~ [ ] Approved by: [ ]

Testing date: 2019/ 2/18

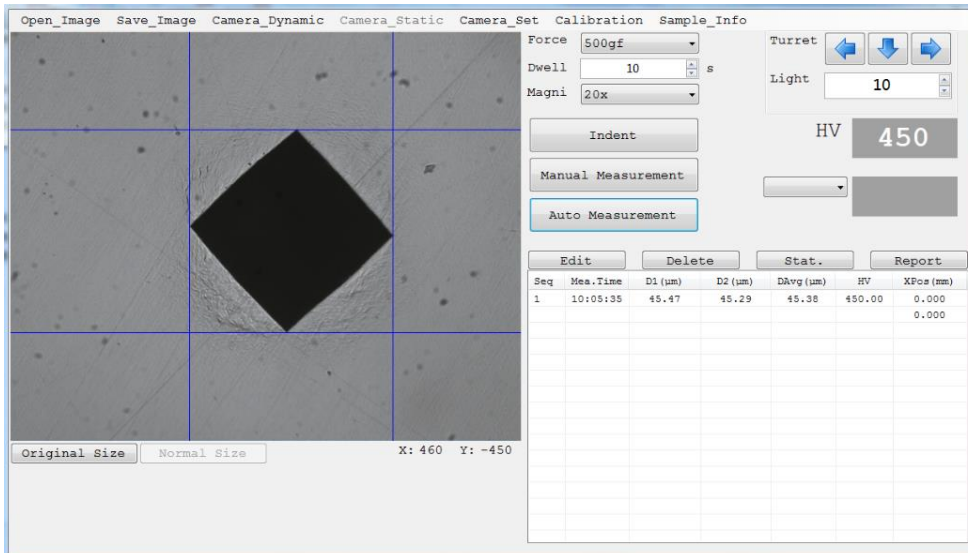
Start Value of hardness: [ ] Calibration

ID	Value of hardness	Effectiveness	Result of verc

Buttons: Edit, Delete, Report, Query data, Stat.



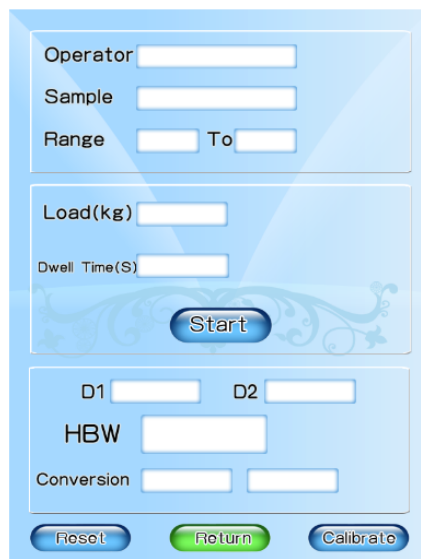
## Vickers Hardness Test Interface:



## Standard Configurations:

Item	QTY	Item	QTY
15X eyepiece	1	Brinell indenter diameter of 2.5mm, 5mm, carbide ball	1 each
Vickers Indenter	1	Rockwell 1.588 carbide ball indenter	1
Rockwell Diamond indenter (NIST Certified)	1	Objective Lens 2.5 x, 5x	1 each
Hardness block Vickers x1, Rockwell x3, and Brinell x2	5pcs	Exterior lighting	1
Power line	1	Large, medium, V-test sets	1 each
Sliding test sets	1	U disk (with an operations manual)	1
Fuse 2A	2	Adjustable level screws	4
Dust proof cover	1	Accessory Box	1

## 8-Inch Touch Scree within the Menu Structure for Ease of Operation:



Main Interface for Brinell



Brinell Test Scale



# NEXTGEN MATERIAL TESTING

YOUR QUALITY TESTING CHOICE

Operator:

Sample:

Curvature:

Range:  To

Hardness type:

Conversion type:  Value:

Dwell Time(S):

Hardness value:

Main Interface for Rockwell Test

Measurement scale for the Rockwell

<input type="button" value="HRA"/>	<input type="button" value="HRB"/>	<input type="button" value="HRC"/>	<input type="button" value="HRD"/>
<input type="button" value="HRE"/>	<input type="button" value="HRF"/>	<input type="button" value="HRG"/>	<input type="button" value="HRH"/>
<input type="button" value="HRA"/>	<input type="button" value="HRL"/>	<input type="button" value="HRM"/>	<input type="button" value="HRP"/>
<input type="button" value="HRR"/>	<input type="button" value="HRS"/>	<input type="button" value="HRV"/>	

Rockwell Test Scale

Operator:

Sample:

Range:  To

Load(kg)

Dwell Time(S)

D1  D2

HV

Conversion

Main Interface for Vickers Test

Measurement scale for the Vickers

<input type="button" value="5"/>	<input type="button" value="10"/>	<input type="button" value="20"/>
<input type="button" value="30"/>	<input type="button" value="40"/>	<input type="button" value="50"/>
<input type="button" value="60"/>	<input type="button" value="80"/>	<input type="button" value="100"/>
<input type="button" value="120"/>		

Vickers Test Scale (Any 10 types)

Calibration

Magnification:

Load(kg):

Pulse count: X  Y

Hardness value

Brinell, Vickers Testing Calibration

Calibration

Scale:

Standard hardness value: Measured:

Low

Medium

High

Rockwell Testing Calibration



## Lead Time

3-8 Weeks Depending on when the PO is placed

## Price

Model	Description	Pricing
UniGen CCD	Digital Universal Hardness Testing System for Brinell, Vickers, Rockwell, and Superficial Rockwell Hardness Testing Scales with User-Friendly Touch Screen Interface, CCD Camera and Automatic Analytical Software	
NG-860	<b>Certified Macro-Vickers Test Block</b> Certified and NIST traceable. All loads and ranges available.	<b>FREE BONUS</b>
NG-811	<b>Rockwell Test Block, Any Scale – Any Hardness</b> <b>N.I.S.T Traceable Certificate, ASTM E18 and ISO 6508</b> Please specify your Rockwell scale as well as your desired hardness upon ordering.	
NG-850	<b>Brinell Hardness Test Blocks 3000kg</b>	
Extended Warranty	<b>5-Year Total Extended Warranty for Vickers Hardness Testing System</b>	

## Optional Accessories – Vickers

Part Number	Description of Part #
NG-VDI	<b>NIST Certified Vickers Diamond Indenter according to ISO 17025</b>
NG-860	<b>NIST Certified Micro-Vickers Test Block according to ISO 17025</b> Certified and NIST traceable. All loads and ranges available.
NG-Fixture1000	<b>Full Set of Fixtures for your NG-1000DGEN Model</b> Includes: <ul style="list-style-type: none"> <li>• Flat clamping test table</li> <li>• Thin specimen test table</li> <li>• Filament clamping test table</li> </ul>

## Optional Test Blocks – Rockwell

Part Number	Description of Part #
NG-811	<b>Rockwell Test Block, Any Scale – Any Hardness</b> <b>N.I.S.T Traceable Certificate, ASTM E18 and ISO 6508</b> Please specify your Rockwell scale as well as your desired hardness upon ordering.

## Optional Penetrators – Rockwell

Part Number	Description of Part #
	<b>DIAMOND PENETRATORS - NIST Traceable (Certified)</b>
NG-101	<b>Standard C Rockwell Diamond Penetrator Certified</b>
NG-102	<b>Standard N Rockwell Diamond Penetrator Certified</b>
NG-103	<b>Versitron' - Type C Rockwell Diamond Penetrator Certified</b>
NG-104	<b>Versitron' - Type N Rockwell Diamond Penetrator Certified</b>
NG-105	<b>Indentron' - Type C Rockwell Diamond Penetrator Certified</b>
NG-106	<b>Indentron' - Type N Rockwell Diamond Penetrator Certified</b>



NG-101	Standard C Rockwell Diamond Penetrator Certified
	<b>ANVILS</b>
NG-701	Pedestal Spot Anvil (1/4")
NG-702	1-1/2" Flat Anvil
NG-703	2-1/2" Flat Anvil
NG-704	Shallow V Rockwell Anvil
NG-705	Standard V Rockwell Anvil
NG-706	1-inch through 4-inch V Rockwell Anvil
	<b>BALL PENETRATORS - NIST Traceable (Certified)</b>
NG-601	1/8-inch Rockwell Ball Penetrator Unit Indentron Certified
NG-602	1/4-inch Rockwell Carbide Ball Certified
NG-603	1/2-inch Rockwell Carbide Ball Certified
NG-604	1/16" BP Ames Portable
NG-606	1/16-inch Rockwell Ball Penetrator Unit Versitron Certified
NG-616	1/8-inch Rockwell Ball Penetrator Unit Versitron Certified
NG-617	1/16-inch Rockwell Carbide Ball Certified
NG-618	1/8-inch Rockwell Carbide Ball Certified
NG-619	1/8-inch Rockwell Ball Penetrator Unit Indentron Certified

### Optional Test Blocks – Rockwell

Part Number	Description of Part #
NG-811	Rockwell Test Block, Any Scale – Any Hardness N.I.S.T Traceable Certificate, ASTM E18 and ISO 6508 Please specify your Rockwell scale as well as your desired hardness upon ordering.

### Optional Ball Penetrators– Brinell

Part Number	Description of Part #
NG-609	1/16" Carbide Ball - NIST Traceable (Certified)
NG-610	1/8" Carbide Ball - NIST Traceable (Certified)
NG-611	1/4" Carbide Ball - NIST Traceable (Certified)
NG-612	1/2 Carbide Ball - NIST Traceable (Certified)
NG-613	10 mm Carbide Ball - NIST Traceable (Certified)
NG-GRID	Grided block upgrade

### Optional Test Blocks– Brinell

Part Number	Description of Part #
NG-850	Brinell Hardness Test Blocks 3000kg
NG-850	Brinell Hardness Test Blocks 2000kg
NG-850	Brinell Hardness Test Blocks 1500kg
NG-850	Brinell Hardness Test Blocks 1000kg
NG-850	Brinell Hardness Test Blocks 500kg
NG-850	Brinell Hardness Test Blocks 250kg
NG-850	Brinell Hardness Test Blocks 187.5kg

\* Request a [formal quotation](#) or send an e-mail to [sales@nextgentest.com](mailto:sales@nextgentest.com) for the most up-to-date pricing and applicable discounts and incentives