



Rockwell Hardness Tester System

INDENTRON

Designed to provide exceptional
Accuracy and **Capability**

Precise and Accurate

Unique Configuration

Cantilevered load arm provides an exceptional view of the indenter and test location. The accurate test positioning prolongs diamond life and enables testing of internal diameters and other tough to measure locations such as shoulders, recesses and grooves.

Friction Free Operation

The Indentron design is virtually free of the effects of frictional inconsistencies providing exceptional accuracy and repeatability. Also maintenance such as adjustment and lubrication is virtually eliminated.

Dead Weight Loading

Dead weights ensure high accuracy and long term stability. This significantly reduces wear or improper adjustment. Also the weights in the Indentron are much heavier than competing testers so little mechanical leverage is needed in the loading mechanism.



Easy Load Setting

Loads are easily selected by a single lever on single range testers and by two levers on combination testers. The electronics monitor the load selection and ensure that the correct load is selected for the Rockwell scale being measured.

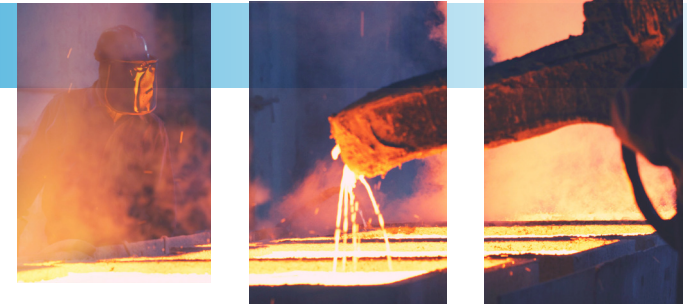
Minimize Measurement Errors

For optimal repeatability and less operator influence, the Test load is automatically applied at correct preload. Application of the Test load is prevented if preload is over or under applied.



Using precision dead weights, the Indentron ensures precise, accurate and repeatable measurements. The Indentron is the only Rockwell hardness tester system to use dead weights for both the Preload and Test Load.

Innovative Design



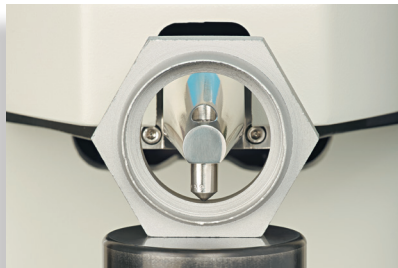
Easy to measure difficult locations

The indenter design makes it ideal for testing inside diameters. Using the standard indenter, inside diameters as small as 1-1/2" can be tested. An optional indenter adapter and shortened indenter can test inside diameters as small as 1/2". The design provides the operator with an excellent view of the testing location.



Easy Calibration on All Units

The Indentron is easily and quickly calibrated. Advanced electronics allow all scales to be calibrated independently thus ensuring high accuracy and low cost of ownership.



Large Measurement Envelope

For long life and easy adjustment the elevating screw runs on ball bearings. The vertical capacity is a full 10" and enables large test specimens to be tested. Extended versions with a capacity of 15" are available on request.



Simple Operation

Intuitive electronics allow easy scale selection, scale conversion per ASTM-140, roundness correction and HI/LO tolerance selection.

Data Output for Quality Control

Standard RS232 output of all measured results to Newage's own DataView quality software, or to other data collection software or devices.

ASTM E-18 Conformance

The Indentron Series conform to ASTM E-18 and ISO 6508.



DataView[®] Software

Seamless Integration

Results are transmitted from the hardness tester to PC for data analysis and documentation.

Comprehensive Documentation

Direct export of test data to Microsoft Excel or other OLE-2-compatible files.

Security

Secure access using USB key.

Flexibility

Upload test data from any digital tester upon request or automatically.

Customizable

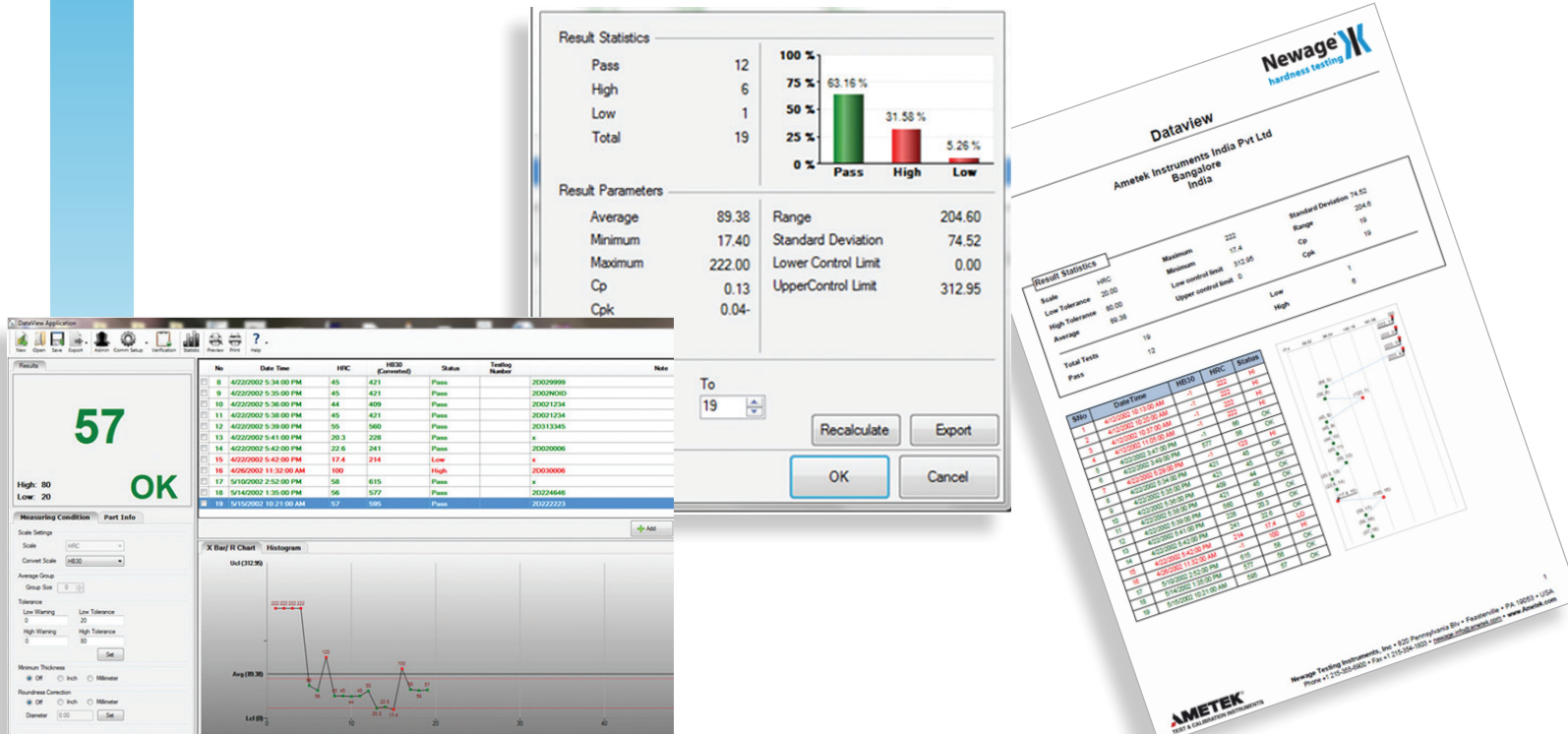
Up to ten user definable fields can be created to save data with measured results.

Powerful Analysis

Average, Min/Max, Range, Std Dev, CpK, Lcl, Ucl.

Easy Reporting and Analysis

DataView[®] allows various graphical printouts to be selected including Xbar R charts, results lists and histograms.



DataView[®] software is an easy-to-use data acquisition utility that is compatible with all Newage or competitive hardness testers having an RS232 serial data output and capable of ASCII transmission. DataView[®] is designed to enhance the capabilities of hardness testers by allowing you to transfer test results directly to a PC for real time, on-screen data management.

Features & Specifications

	500 Series		600 Series		
	Regular NI-500RD	Superficial NI-500SRD	Regular NI-600RD	Superficial NI-600SRD	Combination NI-600C
Membrane key pad operation			x	x	x
Friction-free dead weights	x	x	x	x	x
Average value (display)	x	x	x	x	x
Go/No go evaluation (display + output)	x	x	x	x	x
Automatic display of the selected hardness method			x	x	x
Scale conversion			x	x	x
Roundness correction (diameter = 3 - 20 mm)			x	x	x
Adjustable dwell time (1 ... 50 sec)			x	x	x
Adjustable functions: tolerances, mean value, conversion, roundness correction			x	x	x
Automatic major load application	x	x	x	x	x
RS232 output	x	x	x	x	x
Pre-load (kg)	10	3	10	3	3, 10
Test load (kg)	60, 100, 150	15, 30, 45	60, 100, 150	15, 30, 45	15, 30, 45, 60, 100, 150
Scales	ABCDEFGHIJKLM PRSTV	NTWXY	ABCDEFGHIJKLM PRSTV	NTWXY	ABCDEFGHIJKLM NPRSTVWXY
Vertical Capacity *	10"	10"	10"	10"	10"

*) 15" Vertical Capacity available upon request

Ordering



Indentron Indenters	
Part No.	Description
<i>Diamond Indenters for Indentron, ME-2 and Wilson Style</i>	
8103-07	C & A Scale, Diamond Indenter with certificate
8105-07	C, N & A Scale, Diamond Indenter with certificate
8109-07	N Scale, Diamond Indenter with certificate
8110-07	C Scale, Diamond Indenter with certificate
<i>Diamond and Ball Indenters for Indentron only</i>	
NI-SP3	Short Form, Diamond Indenter
NI-SP4	Short Form, 1/16" Carbide Ball Indenter
NI-SP22A-07	Extended Diamond Indenter
<i>Carbide Ball Indenters</i>	
8111W07	1/16" Carbide Indenter with certificate
8112W07	1/8" Carbide Indenter with certificate
8113W07	1/4" Carbide Indenter with certificate
8114W07	1/2" Carbide Indenter with certificate
<i>Ball Indenter Components</i>	
AT/5116S	1/16" Steel Balls, 50 each
AT/5116W	1/16" Carbide Ball with certificate, 1 each
AT/5117S	1/8" Steel Balls, 10 each
AT/5117W	1/8" Carbide Ball with certificate, 1 each
AT/5121S	1/4" Steel Balls, 10 each
AT/5121W	1/4" Carbide Ball with certificate, 1 each
8118	1/16" Ball Indenter, Cap only
NI-SP8	3/4" Ball Indenter

Indentron Scales				
Scale	Indenter Type	Regular	Superficial	Combination
A	Diamond	Yes*	-	Yes*
B	1/16" Ball	Yes*	-	Yes*
C	Diamond	Yes*	-	Yes*
D	Diamond	Yes	-	Yes
E	1/8" Ball	Yes	-	Yes
F	1/16" Ball	Yes	-	Yes
G	1/16" Ball	Yes	-	Yes
H	1/8" Ball	Yes	-	Yes
K	1/8" Ball	Yes	-	Yes
L	1/4" Ball	Yes	-	Yes
M	1/4" Ball	Yes	-	Yes
N	Diamond	-	Yes*	Yes*
P	1/4" Ball	Yes	-	Yes
R	1/2" Ball	Yes	-	Yes
S	1/2" Ball	Yes	-	Yes
T	1/16" Ball	-	Yes*	Yes*
V	1/2" Ball	Yes	-	Yes
W	1/8" Ball	-	Yes	Yes
X	1/4" Ball	-	Yes	Yes
Y	1/2" Ball	-	Yes	Yes

* Included calibrations in standard delivery.

Indentron Regular Tester include:

C Scale Diamond & C and B Test Blocks

Indentron Superficial Tester include:

N Scale Diamond & 30N and 30T Test Blocks

Indentron Combination Tester include:

C & N Scale Diamond & C, B, 30N and 30T Test Blocks

Ordering

Indentron Anvils	
Part No.	Description
NI-SP10	Anvil Table, 8 inch
NI-SP11	Workrest, Short
NI-SP12	Workrest, Extended
NI-SP13A	Flat Anvil, 70mm (2-3/4")
NI-SP13B	Standard combination Spot and Vee Anvil
NI-SP17	Self-aligning Cylinder Vee Anvil (for NI-SP12)
NI-SP19	Adjustable Cylinder-type Vee Anvil
NI-SP21	Diamond Spot Anvil
NI-SP25	Extended Spot Anvil, 2 inch (incl. locking ring)
AT-5323	Adapter for use with Versitron Anvils in 3/4" (NI) hole

Accessories & Options	
Part No.	Description
NI-SP20	Vinyl Dust Cover
NI-07	Adapter for Wilson A style (no internal thread)
DataView	DataView Application Software Kit
NI-5510	Gooseneck Lamp
NI-08	Indenter, Gripsel
9012	Manual Jominy Fixture

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