

Universal Instruments & Engineering
Precision Leadership



Over 60 years of
consistent excellence

Universal Load Cell Based Hardness Testing Machine

Model : Uni Indent



Fully Computerized PC based
Universal Hardness Tester



High accuracy & repeatability of
measurement at all loads



Wide Testing Range from
Soft metal up to hardest



Load cell based close-looped control





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Universal Load Cell Based Hardness Testing Machine Model : Uni Indent

Features :

- Load cell based close-looped control.
- Brinell, Rockwell, Vickers three testing methods.
- Selection of plastic Rockwell scales (specific demands are supplied depending on the contract).
- Hints for indentors when the scales are selected.
- Automatically apply major load and minor load.
- On screen conversion of hardness scales.
- Result can be exported in "Excel" using flash drive.

Description :

FIE make a universal hardness testing machine i.e. "UNI-INDENT".

It is fully automatic load cell based machine. This hardness tester we can cover all types of hardness like Rockwell, Brinell and Vickers.

This hardness tester contain high quality mechanical components and it's working is based on load cell, closed loop force feed back system.

Optical lens with 0.7 to 4.5X objective with built in camera can measure accurate image of indentations of various ranges

Technical Specifications :

Rockwell Scales	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
Vickers Scales	HV5, HV10, HV20, HV30, HV40, HV50, HV60, HV80, HV100, HV120 (10 Grades forces for choose).
Brinell Scales	HBW 1/5, HBW 2.5/62.5, HBW 1/10, HBW 2.5/15.625, HBW 1/30, HBW 2.5/31.25, HBW 2.5/62.5, HBW 5/125, HBW 2.5/187.5, HBW 5/250
Scale Resolution	0.1 HR
Dwell Time	0 to 60 Sec.
Max. Test Height	250 mm
Depth of Throat	170 mm
Hardness Test Range	Brinell 8-650 HBW Rockwell 20-100 HR Vickers 8-1800 HV
Objective	0.7X to 4.5X
Power Supply	AC220V, 50-60 Hz
Total Size	500mm x 240xx x 760mm
Total Weight	110 kg.

Standard Accessories :

Standard Test Block	1 No. each (Rockwell, Vickers, Brinell)
Diamond indenter	1 No. (Rockwell, Vickers, Brinell)
Test Table with Slide Ø50 mm	1 No.
Spanners	1 Set
Electric Cord & PC interface cord.	1 No. each
USB Device for Video	1 No.
Image Analysis software CD	1 No.
Telescopic Cover	1 Set
Instruction Manual	1 Book

* PC & Printer is not in our standard scope of supply.

Rockwell Scale Selection

Voickers Scale Selection

Selected Scale Display

Test Result

Test Report Page 1

Test Report Page 2



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Certificate No. F004
Supplier Name FIE
Sample Name Test Block

Mode Selection
Standard Mode
X-Case Depth Y-Case Depth Customise
AUTOMATIC DISABLED

Load (kgf) 1.00 kg
Measurement
Indentation Size
Hardness
Job No
Remark
Date

Control
X: 0.00mm Y: 0.00mm
X > Y > Home
Start Stop

Status: AT HOME
STOP

Home Screen

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Certificate No. SAROJ325
Supplier Name SAROJ ENGINEERING
Sample Name

Machine Setting
Lub On Time 3.0 Sec
Lub On Interval 60 min
Auto Cycle Rapid Speed
Dwell Time 100 Sec

New Certificate
Certificate No. *
Certificate Date 13/01/2019
Certificate Time 04:12 PM
Sample Name
Steel Grade
Load(kgf)
Ball Dia (mm)
Limit High
Limit Low
Save

SOFT LIMIT
+Ve Limit (mm) -500.000
-Ve Limit (mm) -500.000
X 500.000 -510.000
Y 500.000 -510.000
Z 1010.000 100.000

New File Creation

Fuel Instruments & Engineers Pvt. Ltd.
Precision Leadership

Certificate No. SPM352
Supplier Name FIE
Sample Name

Machine Setting
Lub On Time 3.0 Sec
Lub On Interval 60 min
Dwell Time 100 Sec

Load (kgf) 3000
Ball Dia (mm) 10.00
Measurement Type Automatic
Indentation Size 2.73 mm
Hardness 504.49 HBW 10.00/3000
Job No
Remark High
Date 1/13/2019 11:00:23 PM

Current Position
X (mm) 0.106
Y (mm) 80.332
Z (mm) 720.260

Status: Loading

Loading Screen

Fuel Instruments & Engineers Pvt. Ltd.
Precision Leadership

Certificate No. SPM354
Supplier Name FIE
Sample Name

Machine Setting
Lub On Time 3.0 Sec
Lub On Interval 60 min
Dwell Time 100 Sec

Load (kgf) 3000.00
Ball Dia (mm) 10.00
Measurement Type
Indentation Size
Hardness
Job No
Remark
Date

Current Position
X (mm) 0.106
Y (mm) 71.775
Z (mm) 719.061

Status: Unloading

Unloading Screen

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Default Setting
Camera Selection Communication Calibration Preferences
Camera AllerMedia USB Polaris Anal Refresh Start Camera Stop Camera Set Default

Certificate No. SAROJ325
Supplier Name SAROJ ENGINEERING
Sample Name

Machine Setting
Lub On Time 3.0 Sec
Lub On Interval 60 min
Auto Cycle Rapid Speed
Dwell Time 100 Sec

Load (kgf) 3000.00
Ball Dia (mm) 10.00
Measurement Type
Indentation Size
Hardness
Job No
Remark
Date

SOFT LIMIT
+Ve Limit (mm) -500.000
-Ve Limit (mm) -500.000
X 500.000 -510.000
Y 500.000 -510.000
Z 1010.000 100.000

Default Setting

Fuel Instruments & Engineers Pvt. Ltd.
Precision Leadership

Certificate No. SPM354
Supplier Name FIE
Sample Name

Machine Setting
Lub On Time 3.0 Sec
Lub On Interval 60 min
Dwell Time 100 Sec

Load (kgf) 3000.00
Ball Dia (mm) 10.00
Measurement Type Semi
Indentation Size 2.80 mm
Hardness 477.12 HBW 10.00/3000.00
Job No
Remark High
Date 1/13/2019 11:10:42 PM

Current Position
X (mm) 0.106
Y (mm) 71.775
Z (mm) 722.903

Status: Cycle Completed.

Final Result