NI-HV30 Micro/Macro Vickers Hardness Tester
with Knoop and Brinell Capability


Range of capabilities
- Vickers testing to ASTM E92 & E384, ISO 6507
- Knoop testing to ASTM E384 & ISO 4545
- Brinell testing to ASTM E10 & ISO 6506
- Test Scales:
  - HV0.2, HV0.5, HV1, HV5, HV10, HV30
  - HK0.2, HK0.5, HK1
  - HBW1/1, HBW1/5, HBW1/10, HBW1/30
- Certified Macro-Vickers indenter standard
- Micro-Vickers, Knoop, & Brinell indenters and test blocks are optional. Macro-Vickers block is optional.

Special Characteristics
- Capable of performing tests using loads of: 0.2, 0.5, 1, 3, 5, 10, 30 kgf.
- Automatic turret allows one touch operation when changing between indenter and lens position.
- Fully automatic timing cycle, eliminates operator influence of the dwell times.
- RS232C and USB data output.
- Adjustable dwell times, 5-60 seconds.
- Dead weight load application provides long term test force stability.
- Automatic conversion to alternative scales, eliminating the requirement for conversion tables.
- Horizontal and vertical indentation diagonal measurements displayed.
- Supplied as standard with 70 mm Ø flat anvil and Vee anvil for testing cylindrical parts.
- Visual indicator of “out of tolerance” results, eliminating operator decisions.
- Full range of standard accessories.
- Design of special purpose fixtures available.

NI-HV30 with automated Vickers indentation measurement. Adding C.A.M.S. Computer Assisted Measurement System removes operator influence when measuring an impression. Measurement uncertainty and Gage R & R (repeatability and reproducibility) are significantly reduced. The hardness tester is controlled via a 2 button mouse. Impressions are measured instantly. Results are stored to a file with average, range, standard deviation, Cp and Cpk indices calculated automatically. Average & range charts along with histograms are provided.
Specifications:

<table>
<thead>
<tr>
<th>Type</th>
<th>Test forces (kgf)</th>
<th>Display</th>
<th>Data Entry</th>
<th>Resolution (μ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NI-HV30</td>
<td>0.2, 0.5, 1, 3, 5, 10, 30</td>
<td>2 x 20 Vacuum fluorescent</td>
<td>Membrane keyboard</td>
<td>0.1 e.g. 156.4 μ</td>
</tr>
</tbody>
</table>

Major Configuration Options:

1. The standard measuring microscope with a 200X magnification. The clearly defined indentation is measured by adjusting two lines controlled by large diameter thumb wheels. The lines enable the corners of the diamond shaped indentation to be precisely located. The diagonal measurements and the hardess reading are displayed and can be down loaded to a PC.
2. C.A.M.S.® (Computer Aided Measurement System) enables the indentation to be measured automatically without any operator influence and increases productivity. Database files can be established for each type of sample with independent control factors like load, tolerances, averaging of sets, scale conversions, etc. All results for each file are automatically plotted and can be viewed on-screen or printed.
3. Other options include automatic focus, motorized XY tables and case depth measurement. These features enable complete case depth traverse measurements to be performed with much greater efficiency. A host of special features become available including testing on specimens with multiple samples embedded, multiple traverse on a single part or other metallurgical features like calculation of grain size.

Standard Features:

- Automatic Test Cycle
- Measuring Resolution 0.1μ
- Scale Designation e.g. HV 0.5, HK0.2, HBW1/30
- Motorized Turret
- Manual Load Change with Scales Designation
- Automatic Scale Conversion e.g. to HRC
- ± Tolerance and Warning Limits
- Average (X Bar) and Range (R)
- Adjustable Illumination
- RS232C and USB data output ports
- Programmable Dwell Times 5 to 60 s

Standard Accessories:

- 70 mm Ø flat anvil
- Vee anvil
- Certified Vickers Indenter
- Measuring Microscope
- Objective Lens X 20
- Instruction Manual
- Accessory Box
- Light Source Bulb
- Certified Knoop or Brinell indenters and test blocks are available as optional extras. For test blocks, state calibration load and hardness value.

Standard upgrade options:

- Automatic Indentation Measurement software
- Manual & Motorized X-Y stages
- Automatic Effective Case Depth Software
- Automatic Focus
- 100% Fully Automatic Operation, Zero
- Influence of the Results by the Operator

Operation & Calibration

- ASTM E92 & E384
- Optional Brinell and Knoop calibration if appropriate. Indenters are ordered with the instrument

Standard Capacity

- Vertical 250 mm
- Throat 150 mm

Electrical

- 3 A single phase
- 110 V, 60 Hz

Dimensions

- Height 770 mm
- Width 220 mm
- Depth 580 mm

Weight

- 50 kg

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