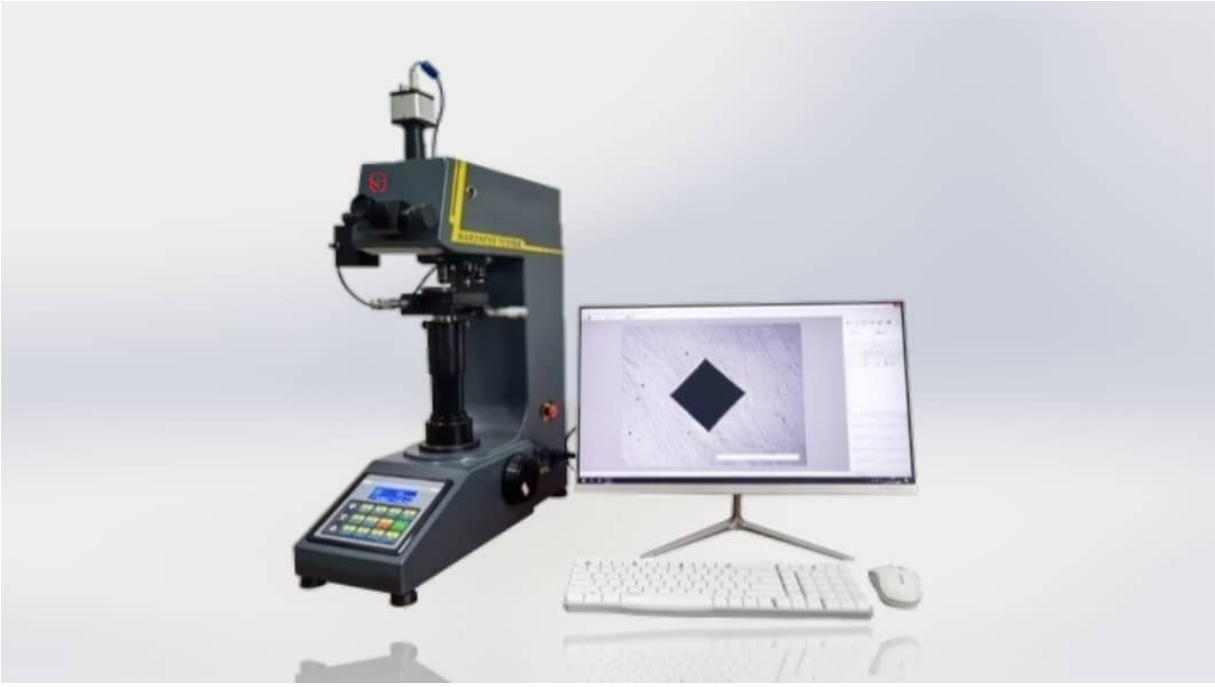
Micro Vickers Hardness Tester

With Automatic Measuring System

Model: JG-119AM



(Photo for reference only)

High resolution image acquisition

Test report can be printed

Software can control the main machine

Decrease human error

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Equipment Usage

- It can be used to determine the Vickers hardness of steel, non-ferrous metals, ceramics, treated layers of metal surface, and the hardness grads of carburized, nitrided and hardened layers of metals. It is also suitable to determine the Vickers hardness of micro and super thin parts.
- It is useful for a variety of applications: testing very thin materials like foils or measuring the surface of a part, small parts or small areas, measuring individual microstructures, or measuring the depth of case hardening by sectioning a part and making a series of indentations to describe a profile of the change in hardness.

Features & Application

1. Made with a unique and precision design in the field of mechanics, optics and light source. Able to produce a clearer image of indentation and hence a more precise measurement.
2. By means of a 10X objective and a 40X objective and a 10X microscope for measurement.
3. It shows measuring method, the testing force value, the indentation length, hardness value, the dwell time of the testing force, as well as the number of measurement on the LCD screen.
4. During the operation, put in the diagonal length with the keys on the keyboard, and the built-in calculator automatically calculates the hardness value and shows it on the LCD screen.
5. The tester has a threaded interface that can be linked to the digital camera and CCD pickup camera.
6. The light source of the tester is firstly and uniquely adopted cold light source, and hence its life can reach 100000 hours. The user also can select halogen lamp as light source according to their requirement.

- The CCD image processing system can finish the process automatically: measurement of the diagonal length of indentation, hardness value display, testing data and image saving, etc.
- It is available to preset the upper and lower limit of hardness value, the testing result can be inspected whether it is qualified automatically.
- Proceed hardness testing on 20 test points at one time (preset the distance between test points at will), and save the testing results as one group.
- Converting between various hardness scales and tensile strength
- Inquire the saved data and image at any time
- Customer may adjust the accuracy of the measured hardness value at any time according to the calibration of Hardness Tester
- The measured HV value can be converted to other hardness scales(HB,HRetc)

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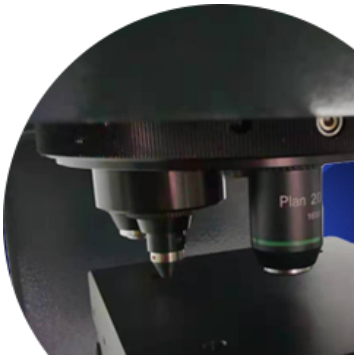
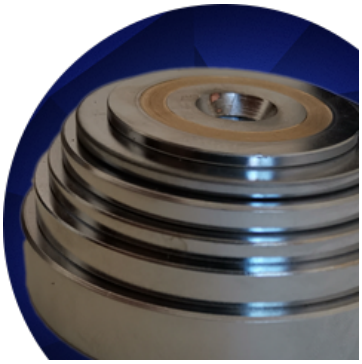
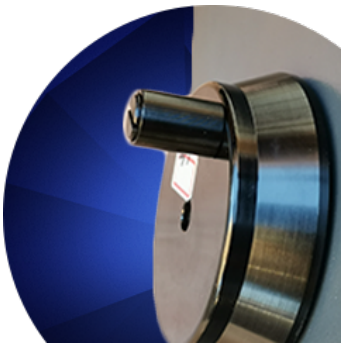
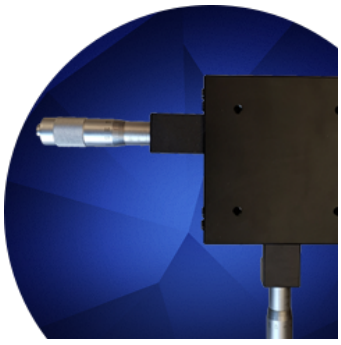
- System provides a rich set of image processing tools for advanced users. The standard tools in the system include adjusting Brightness, Contrast, Gamma, and Histogram Level, and the Sharpen, Smooth, Invert, and Convert to Grey functions. On grey scale images, system provides various advanced tools in filtering and finding edges, as well as some standard tools in morphological operations such as Open, Close, Dilation, Erosion, Skeletonize, and Flood Fill etc
- System provides the tools to draw and measure common geometric shapes such as lines, angles 4-point angles (for missing or hidden vertexes), rectangles , circles, ellipses, and polygons. Note that the measurement assumes the system is calibrated.
- System allows user manage multiple images in an album which can be saved to and opened from an album file. The images can have the standard geometric shapes and the documents as entered by user as described above
- On an image, system provides a document editor to enter/edit documents with contents either in simple plain test format or in advanced HTML format with objects including tabes, list, and images.
- System can print the image with user specified magnification if it is calibrated.









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Technical Specifications

Model	JG-119AM
Measuring range	5HV ~ 3000HV
Test force	0.098, 0.246, 0.49, 0.98, 1.96, 2.94, 4.90, 9.80N (10, 25, 50, 100, 200, 300, 500, 1000gf)
Max. height of test piece	90mm
Depth of throat	100mm
Lens/indenters with	Auto turret
Carriage control	Automatic (Loading / Holding-up of the load / Unloading)
Reading microscope	10X
Objectives	10x, 40x
Total amplification	100x, 400x
Dwell time of the test force	0 ~ 60s (5 seconds as a unit)
Min. graduation value of the testing drum wheel	0.1μm
Dimension of the XY table	100 x 100mm
Travel of the XY table	25 x 25mm
Light source / Power supply	220V, 60/50Hz
Dimensions	480 x 305 x 545mm
Package dimension	610 x 450 x 720mm
Net weight / Gross weight	35kg / 55kg

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Main Accessories

Description of Goods	Quantity
Main unit	1 Unit
Reading microscope	1 Pc
10x, 40x objective	1 Pc each (With main unit)
Diamond Micro Vickers Indenter	1 Pc (With main unit)
Weight	6 Pcs
Weight Axis	1 Pc
XY table	1 Pc
Flat clamping test table	1 Pc
Thin specimen test table	1 Pc
Filament clamping test table	1 Pc
CCD Image Measuring System	1 Set
Computer	1 Set
Horizontal regulating screw	4 Pc
Level	1 Pc
Fuse 1A	2 Pc
Halogen lamp	1 Pc
Power cable	1 Pc
Screw driver	2 Pcs
Hardness block 400 ~ 500 HV0.2	1 Pc
Hardness block 700 ~ 800 HV1	1 Pc
Anti-dust cover	1 Pc
Horizontal regulating screw	1 Pc
Operation manual	1 Set
Certificate	1 Pc

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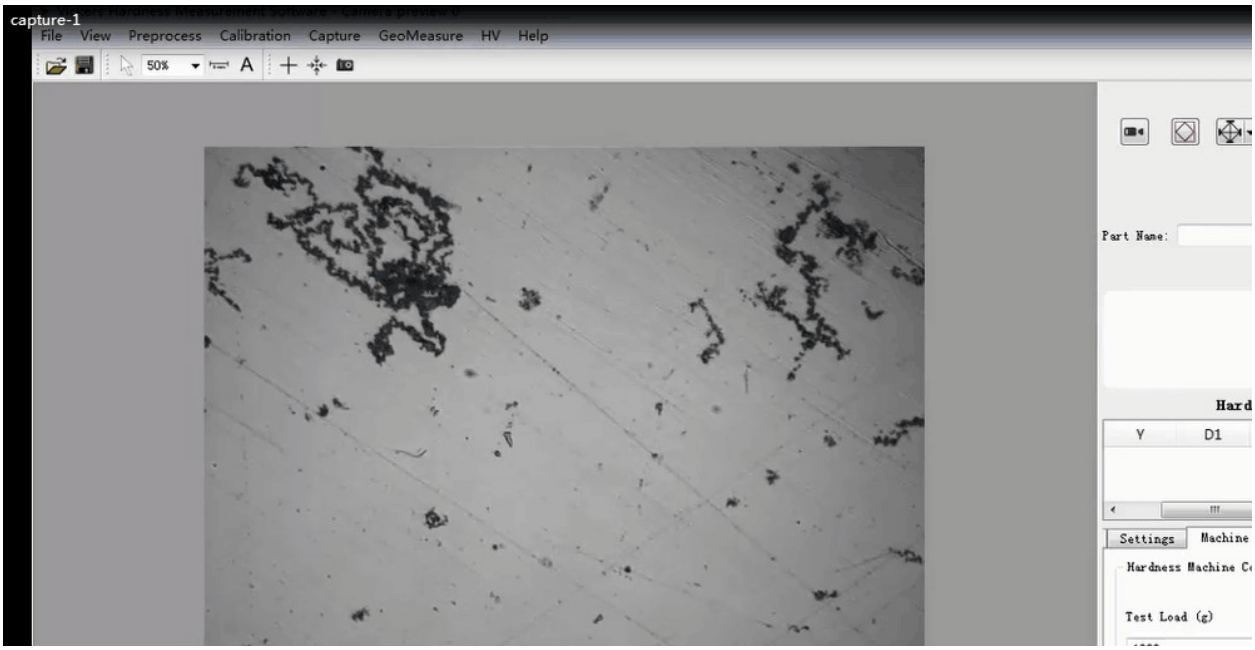
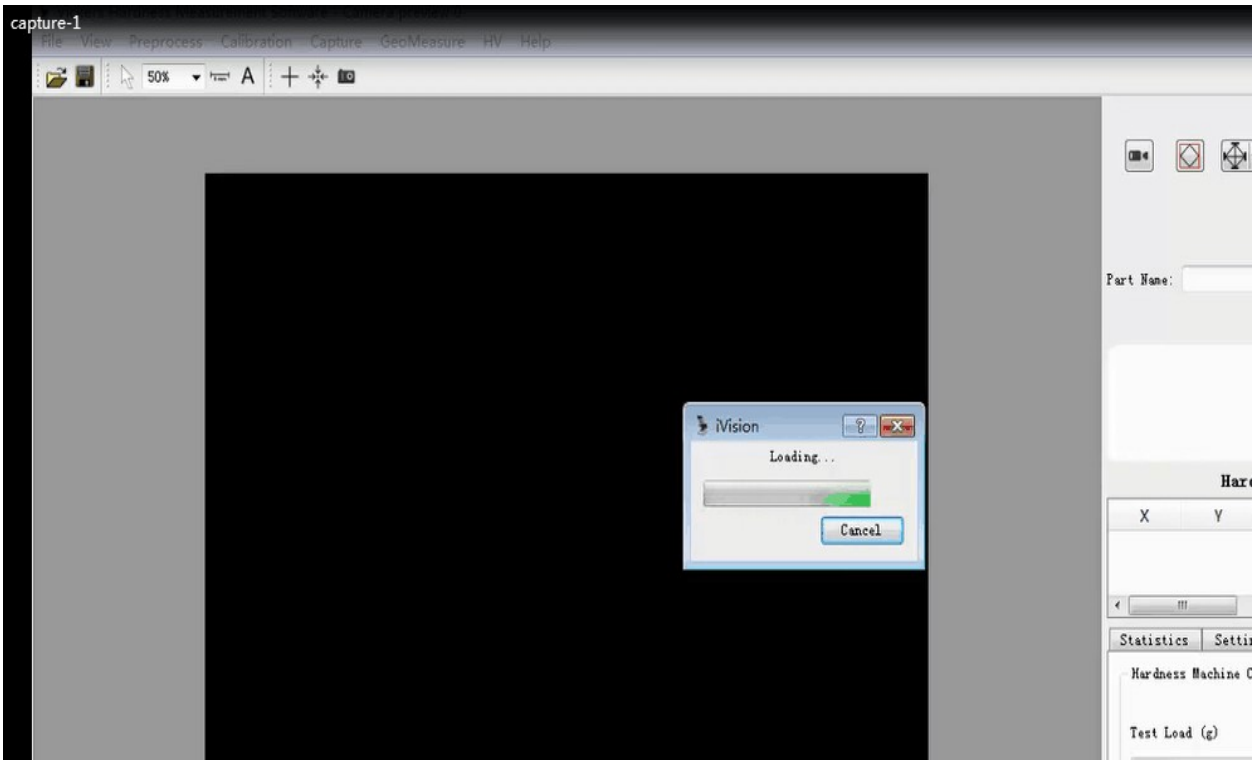
Measuring Steps Of Measuring System

1. Find the clearest interface of the work piece



2. Load, dwell and unload



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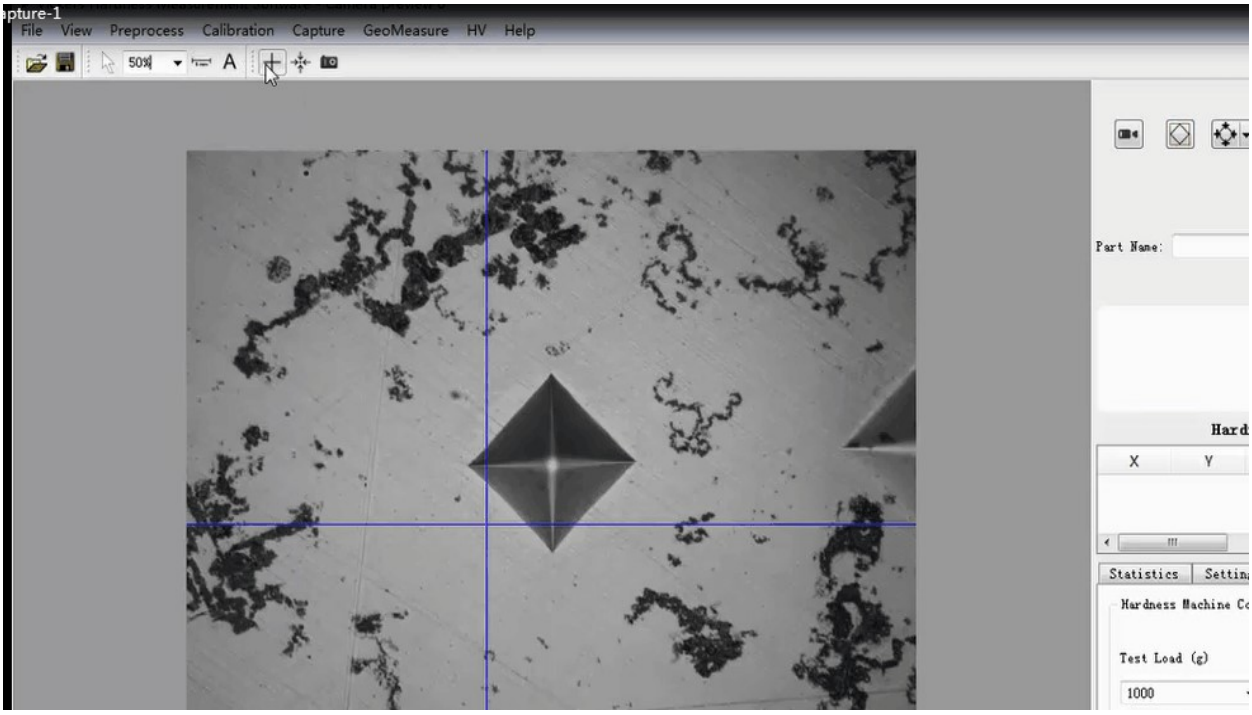
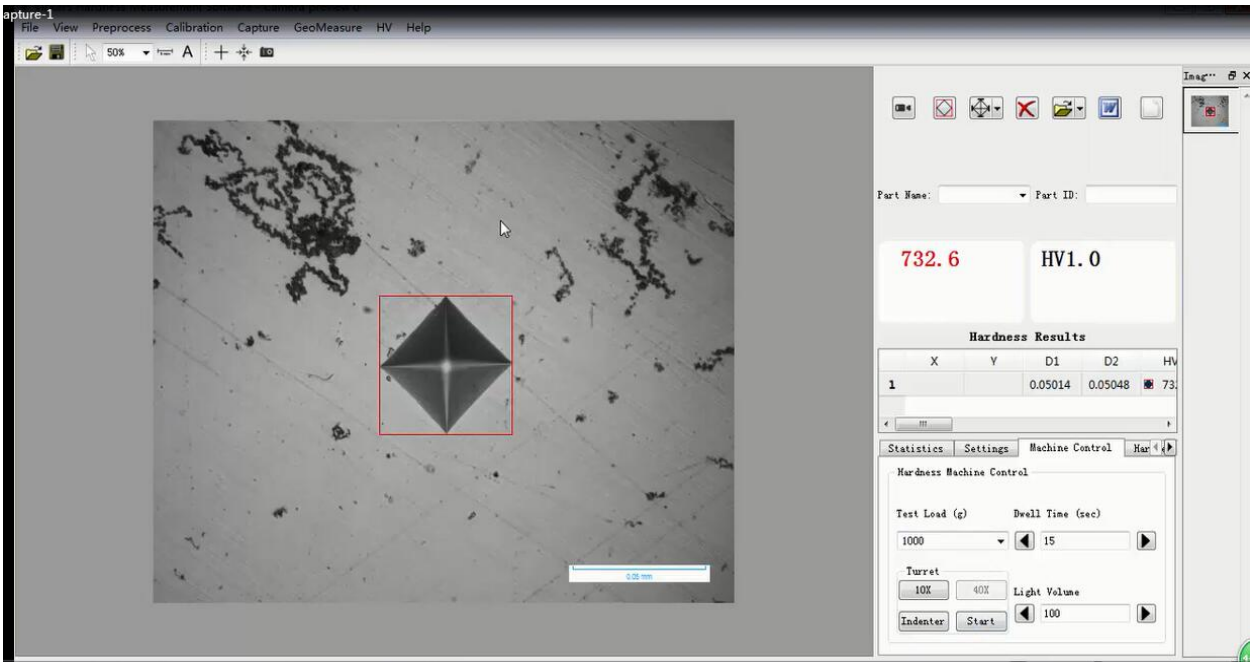
3. Adjust the focus



4. Measure to get the hardness value



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