



VERTEX

Digital Micro Vickers Hardness Tester With Touch Screen HVD- 1000TS



With high-quality imported components, ensure the new type digital Micro Hardness Testers working more stable. Protected by the state patent application of the lift & down system, after upgrading, the control system can provide more measuring data, and control more precise.

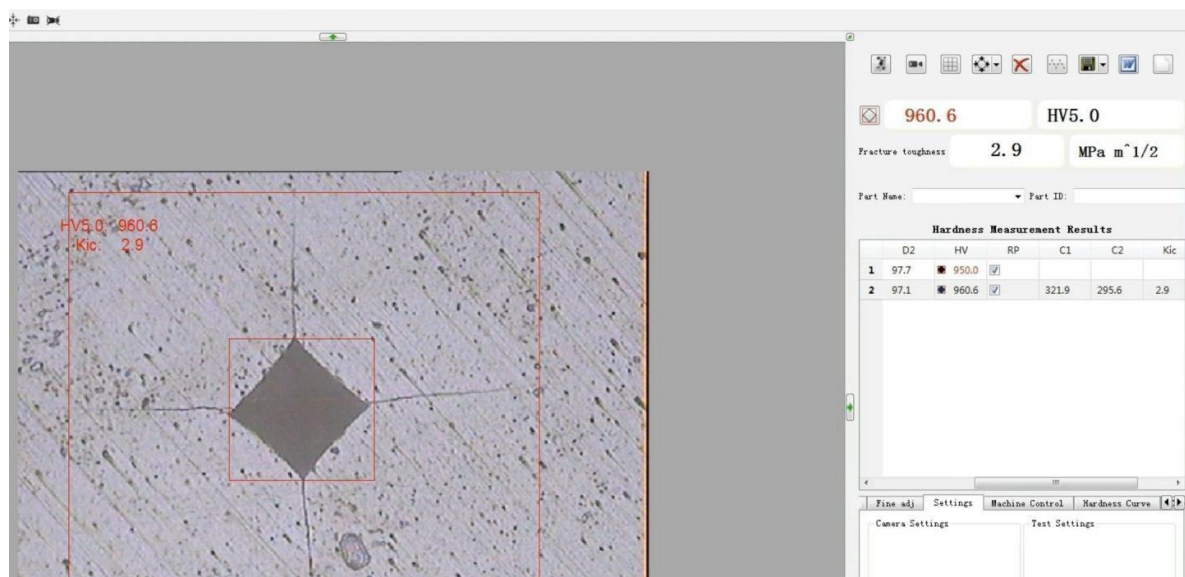
This machine is integrated with optics, mechanics and electricity. It with unbeatable price / performance ratio, widely used in quality inspection and quality control field.

Main purpose and application::

1. Steel, nonferrous metals, tinsel, cemented carbide, sheet metal, metallographic structure.
2. Carburization, nitriding and decarburization layer, surface hardening layer, galvanized coating.
3. Glass, chip and ceramic material.






Main Features:

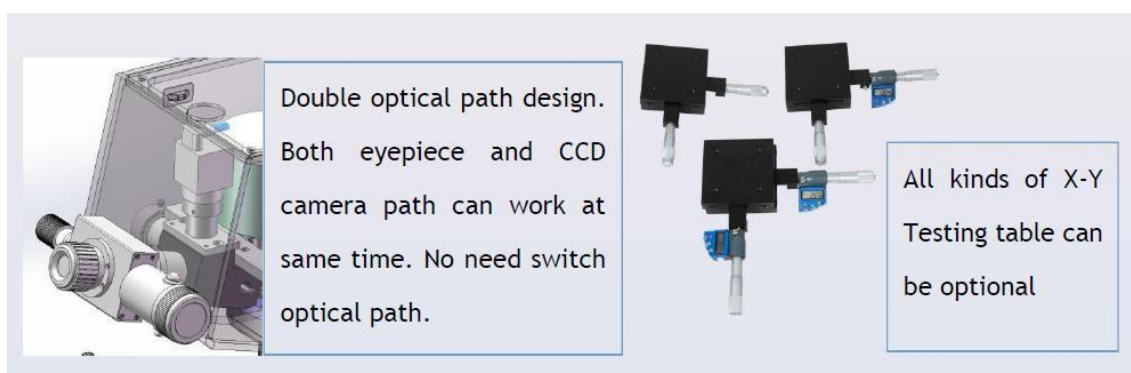
1. Adopted one time casting aluminum machine body and car painting technology, structure more stable and appearance more decent.
2. The independent research and development of lift & down system and positioning system, ensured the accuracy and repeatedly of the testing process.
3. 10X Digital eyepiece with encoder, only click the button of encoder, the D1, D2 value will input machine automatically. No need manually input the value of diagonal length. Easy operation, greatly improve working efficiency, and test result more accurate.
4. According to different visual habits of the operators, the strength of the light source can be adjusted. To avoid the visual fatigue for long time operation.
5. With Vickers hardness and Knoop hardness testing capabilities.
6. Industrial digital touch screen can direct display hardness value, conversion hardness value, testing method, testing force, dwell time, easy for operator to save the data.
7. Double optical path design. Both eyepiece and CCD camera path can work at same time. No need switch optical path. Work with camera and software more convenient.
8. FRACTURE TOUGHNESS TESTING, K_{IC} value can be measured as a standard function.



Features:

Touch screen control and menu structure design, makes operation more easier!
Hardness conversion function: from HV can automatically convert to HR / HBW / HK hardness scales. It can meet more widely applications.

MENU		SCALE CONVERSION									
 SCALE	 SCALE CONVERSION	 DWELL TIME									
 CURRENT DATA	 STORAGE DATA										
		ESC									
<h3>QUALIFIED JUDGMENT</h3> <p>MAX VALUE : MODIFY</p> <p>MIN VALUE : MODIFY</p> <p>BACK ESC</p>		<h3>STORAGE DATA</h3> <div>ESC DEL</div> <table border="1"> <thead> <tr> <th>HARDNESS</th> <th>DWELLTIME</th> <th>FORCE (g)</th> <th>CONVERSION</th> </tr> </thead> <tbody> <tr><td colspan="4" style="height: 100px; vertical-align: top;"> <div>↑</div> <div>↓</div> </td> </tr> </tbody> </table> <div> <div>MAX : ←</div> <div>MIN : →</div> <div>DEV : DATA OUTPUT</div> <div>R : DATA PRINT</div> </div>		HARDNESS	DWELLTIME	FORCE (g)	CONVERSION	<div>↑</div> <div>↓</div>			
HARDNESS	DWELLTIME	FORCE (g)	CONVERSION								
<div>↑</div> <div>↓</div>											





LED Cold light source (can be continuous use for 24 hours, no heat generates ensure stable working, servicing life can reach 100,000 hours); Lightness can be adjusted, avoid visual fatigue of operator.

Precision digital eyepiece (10X) with inbuilt encoder, automatic calculate



Automatic turret design, Loading - Dwell - Unloading automatically process, greatly improved machine accuracy and working efficiency.

Test Load:
10g (0.098N), 25g (0.245N), 50g (0.49N), 100g (0.98N), 200g (1.96N), 300g (2.94N), 500g (4.9N), 1000g (9.8N)



Built-in printer can print the test data directly, easy for data save and record.

Specification:

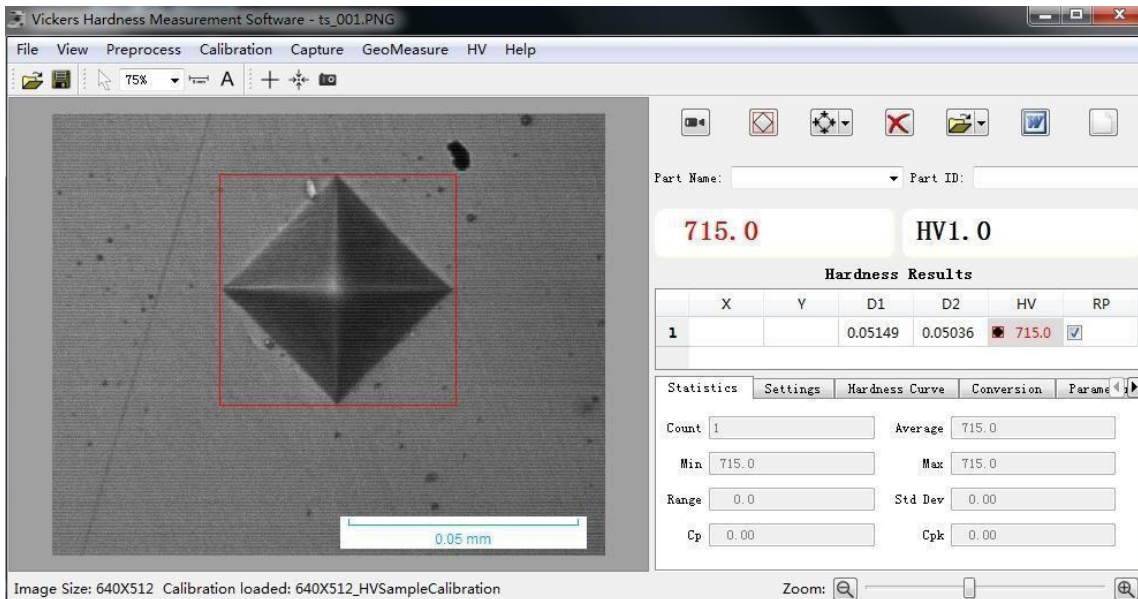
Model	HVD-1000TS
Turret	Automatic Turret
Testing force	10g (0.098N), 25g (0.245N), 50g (0.49N), 100g (0.98N), 200g (1.96N), 300g (2.94N), 500g (4.9N), 1000g (9.8N)
Hardness scale	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
HV Software system	5 million pixel camera; camera connect tube and adapter; Professional HV/HK Indentation image measurement and analysis software, support automatic measure mode and manual measure mode, generate test report automatically in word / Excel format
Loading speed	≤0.05mm/sec
Indenter	Standard Rectangular pyramid diamond indenter (136°±0.5°)
Resolution	0.01μm
Testing rang	5HV-3000HV
Screen	Color touch screen
Eyepiece	10X digital eyepiece
Objective lens	10X (Measurement), 40X (Measurement)
Total magnification	100X (For Measurement), 400X (For Measurement)
Loading method	Automatically (Load, dwell and unload the testing force)
Duration time	1-99s (each step is 1 second)
Maximum height	90mm
Throat depth	95mm
Machine size & N.W	405*290*480mm (L×W×H) 40kg
Packing size & G.W	580x345x580mm(LxWxH) 55kg
Light Source	LED cold light source
Power Supply	220V + 5%, 50/60 Hz (110V is available)
X-Y Testing Table	Dim.:100×100 mm, Max. Travel Range: 25×25mm, Moving Resolution Ratio: 0.01mm
Executed Standard	GB/T4340, ASTM E384 & E92, EN-ISO 6507, JIS B-7734

Standard Accessory:

Item #	Name	Qty
1	Weights shaft	1
2	Weights	6
3	10X digital eyepiece	1
4	10X objective lens	1
5	40X objective lens	1
6	Vickers diamond indenter	1
7	Camera and camera connect tube and adapter	1
8	Vickers hardness measurement software	1
9	X-Y Testing Table	1
10	Level bubble	1
11	Flat fixture	1
12	Sheet specimen fixture	1
13	Standard block of hardness	2
14	Spare fuse 2A	2
15	Horizontal adjusting screw	4
16	Power line	1
17	Dust proof cover	1
18	Manual Book	1
19	Certificate of quality	1
20	Screwdriver	2
21	Warranty Card	1
22	Accessory box	1

Optional Purchase Accessories	Metallographic equipment: sample cutter, mounting press machine, grinder polisher; Knoop Indenter; hardness block; 15X micrometer eyepiece, Filament Clamping Test Table
-------------------------------	--

HVS-A Micro / Vickers Hardness Measurement Software



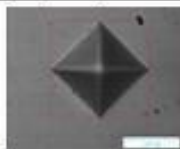
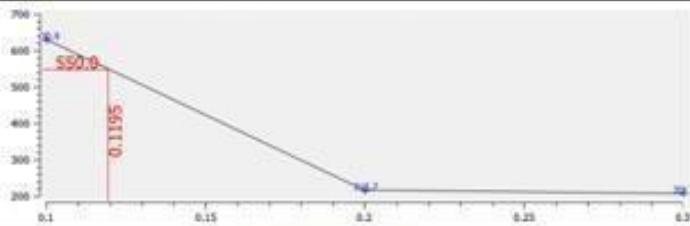


Main Functions:

1. **Auto hardness measurement:** With a click of a button, the software automatically measures the diagonals of the indentation, calculates the hardness value and the statistics;
2. **Hardness curve:** With the depths of test points by user input, the software automatically plots the hardness curve(s); User may save and load the depths in a depth template file for later testing for convenience;
3. **Conversion, compensation, and validation:** Converts HV to other hardness scales ;
Validates the test results with sample dimensions; Compensates the test results with respect to sample cylindrical/spherical diameters;
4. **Statistics:** Automatically updates the statistical values such as average, min and max, standard deviation, Cp and Cpk;
5. **Auto-alarm:** Automatically marks the out of spec measurements;
6. **Test report:** Automatically generates WORD or EXCEL report with customizable template;
7. **Data archiving:** Measurement data and images can be saved in one file for later retrieval;
8. **Knoop Scale:** Can be configured for Knoop Scale measurement;
9. **Other Functions:** Includes the basic functions of imaging system such as image capture, camera calibration, image processing, geometric measurement, document labeling, album management, and printing with specified magnifications.

Hardness report format as below:

Micro/Vickers Hardness (HV) Test Results

Submitter		Date Submitted																			
Part Name	Gear	Part #	0002																		
# of Samples		Sample Descri.																			
Qual. UL	650	Qual. LL	450																		
Machine ID		Meas. Standard	GB/T231.1-2002																		
Sample Ck _A / Sph. Diam. (mm)	0	Force (g)	1000																		
Test Results																					
#	Depth μm	T μm	D1 μm	D2 μm	Hard. HV	Convex	#	Depth μm	T μm	D1 μm	D2 μm	Hard. HV	Convex								
1	100		53.95	54.48	630.9																
2	200		93.4	92.06	215.7																
3	300		94.48	95.009	206.6																
Case Hardness (HV)				550				Case Depth (μm)				119.5									
Indent Images																					
																					
																					
Hard. Curve																					
	Statistics																				
	Maximum	630.9					Minimum	206.6													
	Average	351.1					Std. Dev.	114.26													
	Cp	0.29					Cpk	-0.29													
Operator	Test Date					Auditor	Audit date														
	2011. 12. 25																				



<https://www.vertexmachines.com/>



+91 93234 05785



info@vertexmachines.com

Actual product may differ in color and appearance due to constant development.