



DIGITAL MICRO VICKERS HARDNESS TESTER WITH TOUCH SCREEN

- *VALUE*
- *VERSATILITY*
- *PERFORMANCE*



Precision Screw Rod Type



Precision Worm Rod Type

BMVH-1000-1MT/1AT



DESCRIPTION: -

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.

APPLICATION: -

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



With hardness conversion function

MAIN FEATURES: -

- Adopted one time casting aluminum machine body and car painting technology, structure more stable and appearance more decent.
- The independent research and development of lift & down system and positioning system, ensured the accuracy and repeatedly of the testing process.
- 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.
- The optical system designed by our senior optical engineer not only meet the definition of hardness testing requirements, but also can observe the micro structure of the material, image is very clear.
- 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.
- With Vickers hardness and Knoop hardness testing capabilities. By measuring the indentation diagonal length, the hardness will show on the screen directly, no need to check hardness table.
- 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.
- Double optical path design. Both eyepiece and CCD camera path can work at same time. No need switch optical path. Camera can be install inside machine (camera for optional purchase).



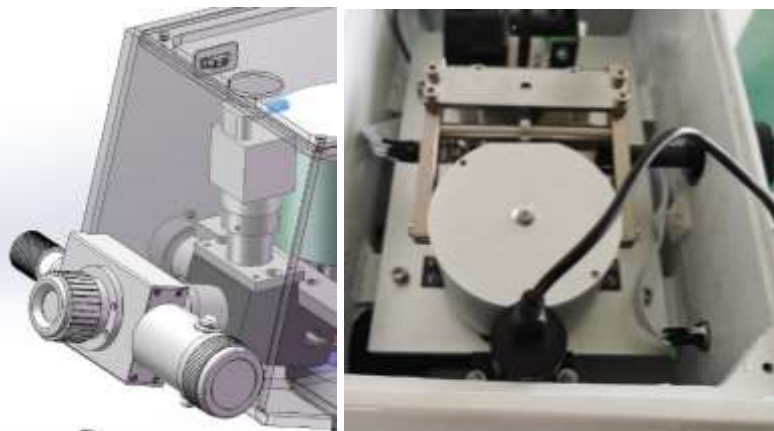
FEATURES: -

X-Y Testing table of Micro Vickers hardness tester
Dim.:100×100 mm, Max. Travel Range: 25×25mm,
Moving Resolution Ratio: 0.01mm



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



Double optical path design. Both eyepiece and CCD camera path can work at same time. No need switch optical path.

**TECHNICAL SPECIFICATION: -**

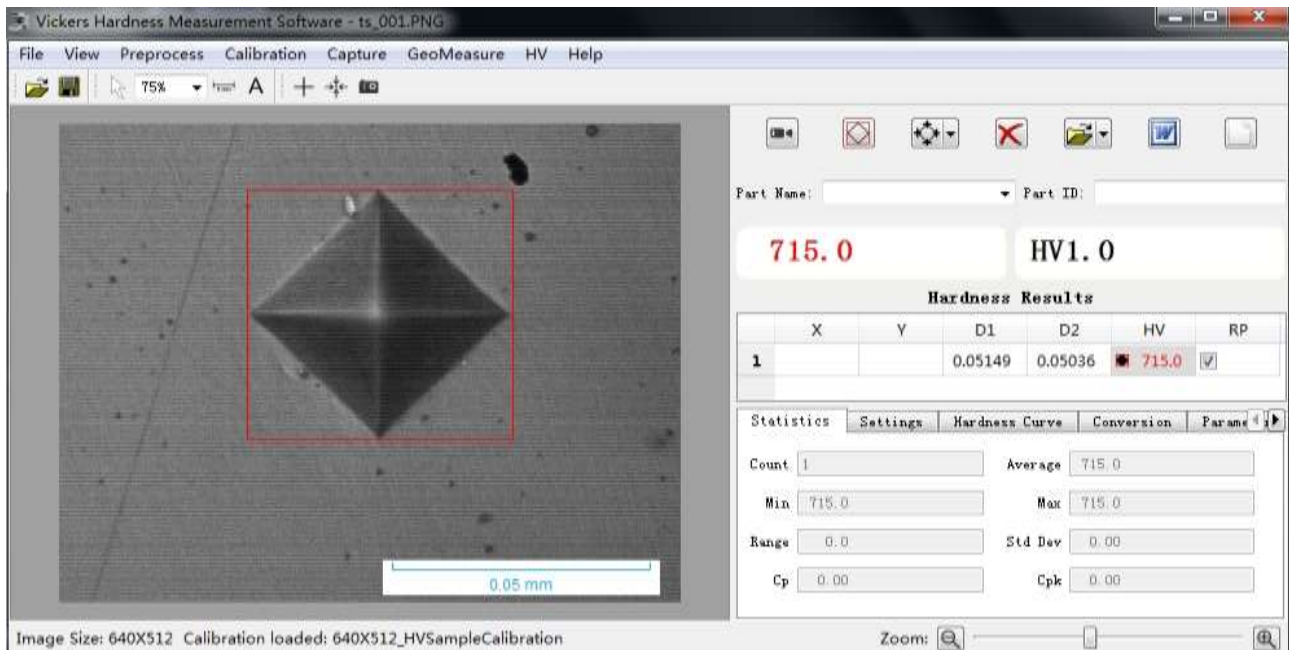
Model No.	BMVH-1000-1MT	BMVH-1000-1AT
Turret	Manual Turret	Automatic Turret
Testing force	10g (0.098N), 25g (0.245N), 50g (0.49N), 100g (0.98N), 200g (1.96N), 300g (2.94N), 500g (4.9N), 1000g (9.8N) Test force error: $\pm 1.0\%$	
Hardness scale	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1	
Loading speed	$\leq 0.05\text{mm/sec}$	
Indenter	Standard Rectangular pyramid diamond indenter ($136^\circ \pm 0.5^\circ$)	
Min. measuring unit	0.01 μm	
Hardness value rang	5HV-3000HV	
Hardness Value of Reading	Digital LCD Screen	
Eyepiece	10X digital eyepiece	
Objective lens	10X (observe), 40X (Measurement)	
Total magnification	100X (For Observation), 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	
Instrument size and Net weight	405*290*480mm (LxWxH)	40kg
Packing size and Gross weight	580x345x580mm (LxWxH)	55kg
Light Source	LED cold light source	
Power Supply	220V + 5%, 50/60 Hz (110V is available)	
X-Y Testing Table	Dim.:100x100 mm, Max. Travel Range: 25x25mm, Moving Resolution Ratio: 0.01mm	
Executed Standard	GB/T4340, ASTM E384 & E92, EN-ISO 6507, JIS B-7734	
Optional Purchase Accessories	Image analysis software; Metallographic equipment; Knoop Indenter; hardness block; 15X micrometer eyepiece, Filament Clamping Test Table	

STANDARD ACCESSORY: -

Item Name	Qty	Item Name	Qty
Weights shaft	1 pc	Standard block of hardness	2 pcs
Weights	6 pcs	Spare fuse 2A	2 pcs
10X digital eyepiece	1 pc	Horizontal adjusting screw	4 pcs
10X objective lens	1 pc	Power line	1 pc
40X objective lens	1 pc	Dust proof cover	1 pc
Vickers diamond indenter	1 pc	Manual Book	1 pc
X-Y Testing Table	1 pc	Certificate of quality	1 pc
Level bubble Note: For avoid potential risks, Will remove level bubble if ship by air, since liquid materials are forbidden by airlines	1 pc	Screwdriver	2 pcs
Flat fixture	1 pc	Warranty Card	1 pc
Sheet specimen fixture	1 pc	Accessory box	1 pc



BVS-A Micro / Vickers Hardness Measurement Software (optional)



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 Cyl. /Sph. Diam. (mm)	0	Force (g)	1000										
Test Results													
#	Depth μm	Y μm	D1 μm	D2 μm	Hard. HV	Conv.	#	Depth μm	Y μm	D1 μm	D2 μm	Hard. HV	Conv.
1	100		53.95	54.48	630.9								
2	200		93.4	92.06	215.7								
3	300		94.48	95.005 99	206.6								
Case Hardness (HV)		550		Case Depth (μm)		119.5							
Indent Images													
	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												