



AUTOMATIC TURRET VICKERS HARDNESS TESTER (LOAD CELL BASED)

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



BVH-A/M SERIES



- Close loop high Precision load cell structure.
- Dual optical systems design (eyepiece + camera path), both paths can work at same time, no need switch knob
- LCD screen digital display, menu structure, easy operate
- Automatic turret, automatic loading, dwell, unloading
- With emergency stop button, operation more safe
- Large range test force: 0.3 to 30kgf

APPLICATION:

- Widely used to test the hardness of all kinds of metal materials (steel, nonferrous metals, tinsel, cemented carbide, sheet metal, etc.)
- Surface layer / coating (Carburization, nitriding, decarburization layer, surface hardening layer, galvanized coating, etc.)
- Glass, chip, ceramic, plastic and rubber, etc.

FEATURES:

- Closed loop design with high accuracy load cell, no need to install dead weights, let installation more easy and loading - dwell - unloading automatically, easy operation
- Modular design, simple maintenance
- With hardness conversion function, from HV hardness value can covert to HR, HB, HK, etc.
- With HV/HK test function
- Built-in printer for optional purchase
- Can work with camera and Vickers indentation measuring software
- 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.
- Industrial digital LCD screen can direct display hardness value, conversion hardness, testing method, testing force, dwell time, test number and testing process.
- One-time casting iron molding shell ensure structure more stable; Adopted car painting technology, pure white color looking more decent; High scratch resistance capability, used for years still brightness like new.



**Optional purchase:
XY cross work table**



TECHNICAL SPECIFICATION:

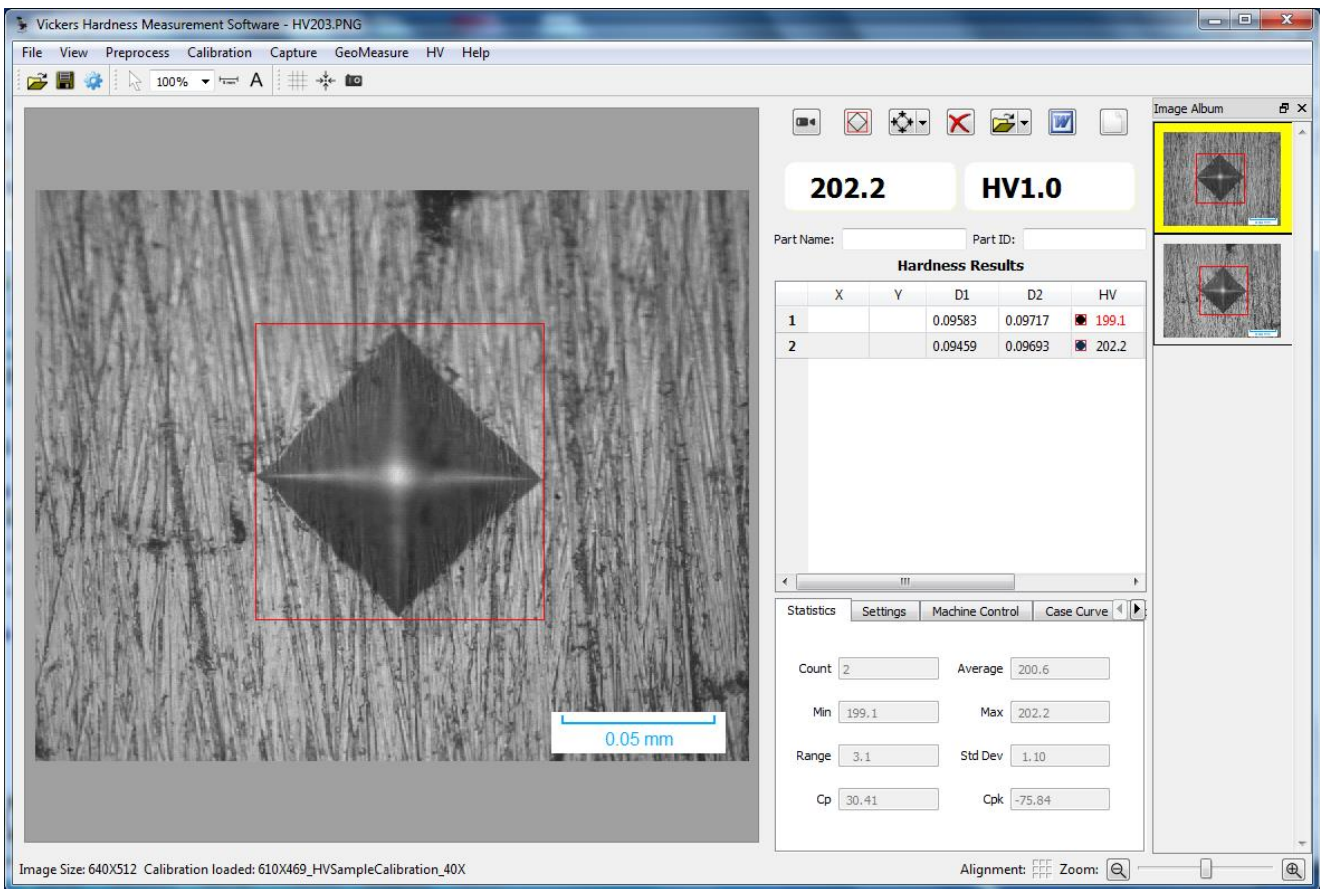
Model No.		BVH-5/10/30/50A	BVH-5/10/30/50M
Turret		Automatic (Motorized)	Manual
Testing Force & Hardness Scale	BVH-5A BVH-5M	0.3Kgf (2.94N), 0.5Kgf (4.9N), 1Kgf (9.8N), 2Kgf(19.6N), 2.5Kgf(24.5N), 3Kgf(29.4N), 5Kgf(49N) & HV0.3, HV0.5, HV1, HV2, HV2.5, HV3, HV5	
	BVH-10A BVH-10M	0.3Kgf (2.94N), 0.5Kgf (4.9N), 1Kgf (9.8N), 2Kgf(19.6N), 2.5Kgf(24.5N), 3Kgf(29.4N), 5Kgf(49N), 10Kgf(98N) & HV0.3, HV0.5, HV1, HV2, HV2.5, HV3, HV5, HV10	
	BVH-30A BVH-30M	0.3Kgf (2.94N), 0.5Kgf (4.9N), 1Kgf (9.8N), 2Kgf(19.6N), 2.5Kgf(24.5N), 3Kgf(29.4N), 5Kgf(49N), 10Kgf(98N), 20Kgf(196N), 30Kgf(294N) & HV0.3, HV0.5, HV1, HV2, HV2.5, HV3, HV5, HV10, HV20, HV30	
	BVH-50A BVH-50M	1Kgf (9.8N), 2Kgf(19.6N), 2.5Kgf(24.5N), 3Kgf(29.4N), 5Kgf(49N), 10Kgf(98.0N), 20Kgf(196N), 30Kgf(294N), 50kg(490N) & HV0.3, HV0.5, HV1, HV2, HV2.5, HV3, HV5, HV10, HV20, HV30, HV50	
Conversion Scales		HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T	
Force Loading		Automatic Loading - Dwell - Unloading	
Min Measuring Unit		0.25µm	
Hardness Range		5-4000HV	
Eyepiece		10X Analog eyepiece	
Objective		10X, 20X	
Magnification		100X (Observe), 200X (Measurement)	
XY Work Table (Optional Purchase)		Dim.:100x100 mm, Max. Travel Range: 25x25mm, Moving Resolution Ratio: 0.01mm	
Dwell Time		1-99S (1 second per step)	
Data Output		LCD screen display, Built-in printer	
Test Space		175mm x 125mm (Height x Depth)	
Power Supply		AC220V, 50Hz	
Standard		ISO 6507, ASTM E92, JIS Z2244, GB/T 4340.2	
Overall Dimension		320*580*620mm	
Net Weight		71kg	
Packing Size		680*470*750mm	
Gross Weight		91kg	

STANDARD ACCESSORIES:

Item Name	Q'ty	Item Name	Q'ty
Large Round Test Table	1pc	Medium Size Test Table	1pc
10X Analog Eyepiece	1pc	V-Shape Test Table	1pc
Vickers Hardness Block	2pcs	Accessory Case	1pc
10X Objective Lens	1pc	Spare Fuses (2A)	2pcs
20X Objective Lens	1pc	Production Certificate	1pc
Regulating Screw	4pcs	Warranty Card	1pc
Dust Cover	1pc	Manual Book	1pc



HVS-A MICRO / VICKERS HARDNESS MEASUREMENT SOFTWARE (Optional)



MAIN FUNCTIONS:

- **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.
- **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.
- **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.
- **Statistics:** Automatically updates the statistical values such as average, min and max, standard deviation, Cp and Cpk.
- **FRACTURE TOUGHNESS TESTING,** Kc(kic) value can be measured as a standard function.
- **Auto-alarm:** Automatically marks the out of spec measurements.
- **Test report:** Automatically generates WORD or EXCEL report with customizable template.
- **Data archiving:** Measurement data and images can be saved in one file for later retrieval.
- **Knoop Scale:** Can be configured for Knoop Scale measurement.
- **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				Part #									
# of Samples				Sample Descri.									
Qual. UL		400.0		Qual. LL		450.0							
Sample Cyl./Sph. Diam.		0.00 mm		Test Load		1000g							
Test Results													
#	X	Y	D1	D2	Hard.	Conver.	#	X	Y	D1	D2	Hard.	Conver.
	mm	mm	µm	µm	HV			mm	mm	µm	µm	HV	
1	0.100		55.901	54.994	603.2								
2	0.200		64.976	64.613	441.7								
3	0.300		72.780	70.965	359.0								
Case Hardness(HV)		400		Case Depth(mm)		0.250							
Indent Images	1.			2.			3.						
Statistics													
Maximum		603.2		Minimum		359.0							
Average		468.0		Std. Dev.		124.2							
Cp		0.27		Cpk		0.05							
Operator		Test Date		Auditor		Audit date							
		09-06-2022											

* Due to continuous product development, Image & specification can be upgrade.