



# TOUCH SCREEN DIGITAL VICKERS HARDNESS TESTER



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

**BVH- AT-8/MT-8 SERIES**



**DESCRIPTION:**

Digital Macro Vickers hardness tester is a high-tech and new product combining the optics, mechanic and electric features. It improves the precision of the test force and the repeatability and stability of the indicating value. With digital measuring eyepiece, no need for checking the table or inputting the diagonal of the indentation, it can directly show the test force, indentation length, dwell time, test numbers, conversion scale, date and time. As long as press the eyepiece button after measuring the indentation length, it can automatically get the hardness value and shows on the screen.

**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.



Optional Purchase  
XY work table



Metal material



Surface coating



Glass material



ceramic material



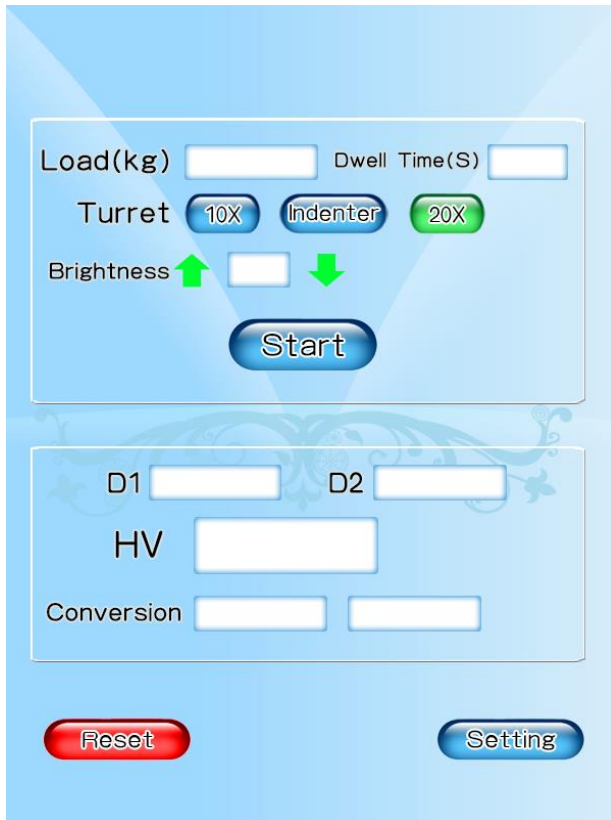
Plastic/ rubber

**TECHNICAL SPECIFICATIONS:**

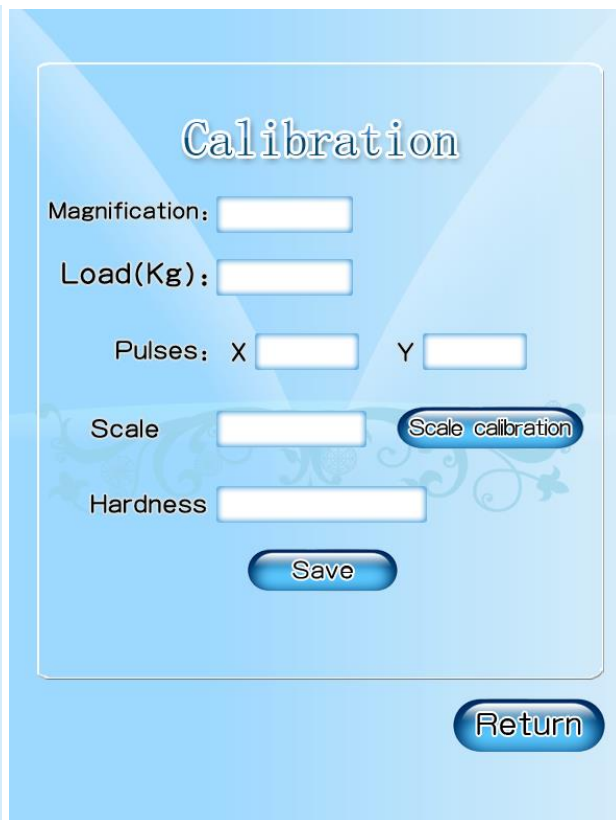
Model No.		BVH-5/10/30/50AT-8	BVH-5/10/30/50MT-8
Turret		Automatic turret	Manual turret
Loading Method		Automatic (Loading/Dwell/Unloading)	
Test Range		8HV-2900HV	
Test Force	BVH-5AT-8 BVH-5MT-8	0.3Kgf(2.94N), 0.5Kgf(4.9N), 1.0Kgf(9.8N), 2.0Kgf(19.6N), 3.0Kgf(29.4N), 5.0Kgf(49.0N)	
Hardness Scale		HV0.3, HV0.5, HV1, HV2, HV3, HV5	
Test Force	BVH-10AT-8 BVH-10MT-8	0.3Kgf(2.94N), 0.5Kgf(4.9N), 1.0Kgf(9.8N), 3.0Kgf(29.4N), 5.0Kgf(49.0N), 10Kgf(98.0N)	
Hardness Scale		HV0.3, HV0.5, HV1, HV3, HV5, HV10	
Test Force	BVH-30AT-8 BVH-30MT-8	1.0Kgf(9.8N), 3.0Kgf(29.4N), 5.0Kgf(49.0N), 10Kgf(98.0N), 20Kgf(196N), 30Kgf(294N)	
Hardness Scale		HV1, HV3, HV5, HV10, HV20, HV30	
Test Force	BVH-50AT-8 BVH-50MT-8	1.0Kgf, 5.0Kgf, 10Kgf, 20Kgf, 30Kgf, 50Kgf	
Hardness Scale		HV1, HV5, HV10, HV20, HV30, HV50	
Dwell Time		1-99s	
Data Display		8" Touch screen	
Min measuring unit		0.01µm	
Eyepiece		10X digital eyepiece with built-in encoder, auto calculate	
Objective	BVH-5AT-8 BVH-5MT-8 BVH-10AT-8 BVH-10MT-8	10X (observe), 20X (measurement); Total Magnification: 100X, 200X	
	BVH-30AT-8 BVH-30MT-8 BVH-50AT-8 BVH-50MT-8	10X (observe & measurement); Total Magnification: 100X	
Light Source		LED Cold light source (can be continuous use for 24 hours, no heat generate ensure stable working, servicing life can reach 100,000 hours)	
Test space		160x135mm (height x depth)	
Power Supply		AC220V, 50Hz	
Execute Standard		ISO 6507, ASTM E92, JIS Z2244, GB/T 4340.2	
Size / Net weight		600*220*700mm; 50kg	
Package size / G.W		800*470*800mm; 78kg	



**OPERATION INTERFACE:**



**Main interface**



**Calibration**

**STANDARD ACCESSORIES:**

Name	Qty	Name	Qty
Instrument Main Body	1 set	10X Digital Measuring Eyepiece	1 pc
Weights	3 pcs	10X & 20X Objective	2 pcs
Large/Middle/V shape testing table	3 pcs	Diamond Vickers Indenter	1 pc
Horizontal Regulating Screw	4 pcs	Level	1 pc
Fuse 2A	2 pcs	Power Cable	1 pc
Touch Screen pen	1 pc	Allen wrench (2.5mm)	1 pc
Anti-dust Cover	1 pc	Standard Hardness Block	2 pcs
Warranty certificate	1 pc	Usage Instruction Manual	1 copy

**Note:**

- 1) 5kg, 10kg Vickers hardness tester with 10X and 20X objective lens; 30kg, 50kg Vickers hardness tester only with 10X objective lens.
- 2) 5kg, 10kg Vickers hardness tester with 3 pieces weights; 30kg, 50kg Vickers hardness tester with 4 pieces of weights.

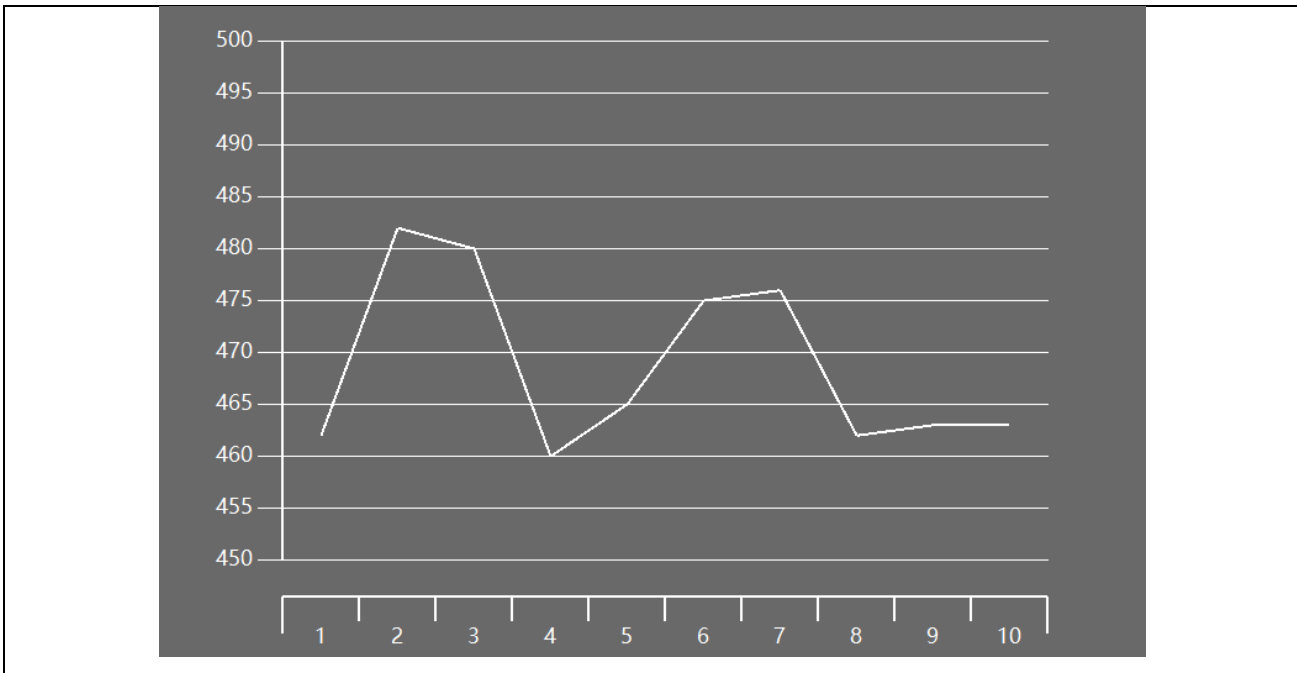


All kinds of XY work table for optional purchase

PS: If want to transfer test data to computer and generate test report, please additional order our data software.

**Hardness Test Report**

Tester		Date	2019/09/05	
Part Name		Part #		
Part Size		Test Standard		
Quality UL		Quality LL		
Test Result				
#	Hardness	Force	Dwell Time	Average D
1	462	30	10	347.013
2	482	30	10	339.737
3	480	30	10	340.444
4	460	30	10	347.767
5	465	30	10	345.892
6	475	30	10	342.231
7	476	30	10	341.872
8	462	30	10	347.013
9	463	30	10	346.638
10	463	30	10	346.638



**Professional HV-HK Hardness Measurement Software (Optional purchase)**

#	Hardness	Hardness Type	Qualified	D1(um)	D2(um)	Davg
1	742.4	HV	YES	50.047	49.909	49.977
2	740.5	HV	YES	49.665	50.418	50.041
3	744.6	HV	YES	49.772	50.039	49.905
4	757.0	HV	YES	49.771	49.220	49.495
5	732.8	HV	YES	49.879	50.733	50.306



**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 (also support manual measurement);
- 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. Hardness Conversion:** Converts HV to other hardness scales (HRA, HRB, HRC, HBW, HK, etc.)

HV **550**

HRC **52**

**4. Data remember / Store function:** All data in the process of measurement will be saved in the right bottom sheet.

Seq	Mea.Time	D1 (µm)	D2 (µm)	DAvg (µm)	HV	XPos (mm)
1	15:48:39	40.89	41.20	41.05	550.00	0.000
2	15:53:33	44.31	36.63	30.41	566.00	0.000
3	15:53:55	91.43	91.22	91.33	111.00	0.000
						0.000

And all measurement data can be 'edit, delete, statistic, report'

Editing the 3 record

Mea.Time: 15:53:55

D1 (µm): 91.43

D2 (µm): 91.22

DAvg (µm): 91.33

HV: 111.00

Xpos (mm): 0.00

Apply

Seq	Mea.Time	D1 (µm)	D2 (µm)	DAvg (µm)	HV	XPos (mm)
1	15:48:39	40.89	41.20	41.05	550.00	0.000
2	15:53:33	44.31	36.63	30.41	566.00	0.000
3	15:53:55	91.43	91.22	91.33	111.00	0.000
						0.000

Edit interface

**5. Statistics:** Automatically updates the statistical values such as average, min and max, standard deviation;

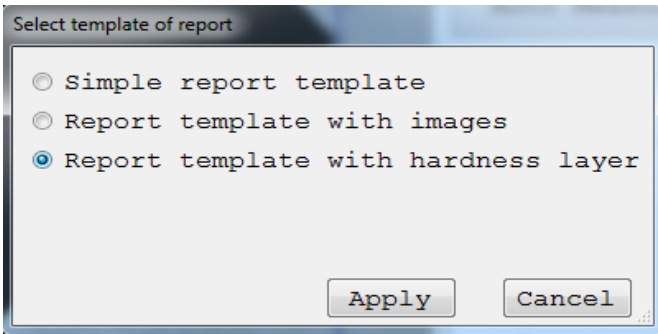
Original Size    Normal Size    X: 284    Y: -4

Number	Minimum	Maximum	Average	Standard Deviation
3	566	111	409	258.2

Seq	Mea.Time	D1 (µm)	D2 (µm)	DAvg (µm)	HV	XPos (mm)
1	15:48:39	40.89	41.20	41.05	550.00	0.000
2	15:53:33	44.31	36.63	30.41	566.00	0.000
3	15:53:55	91.43	91.22	91.33	111.00	0.000
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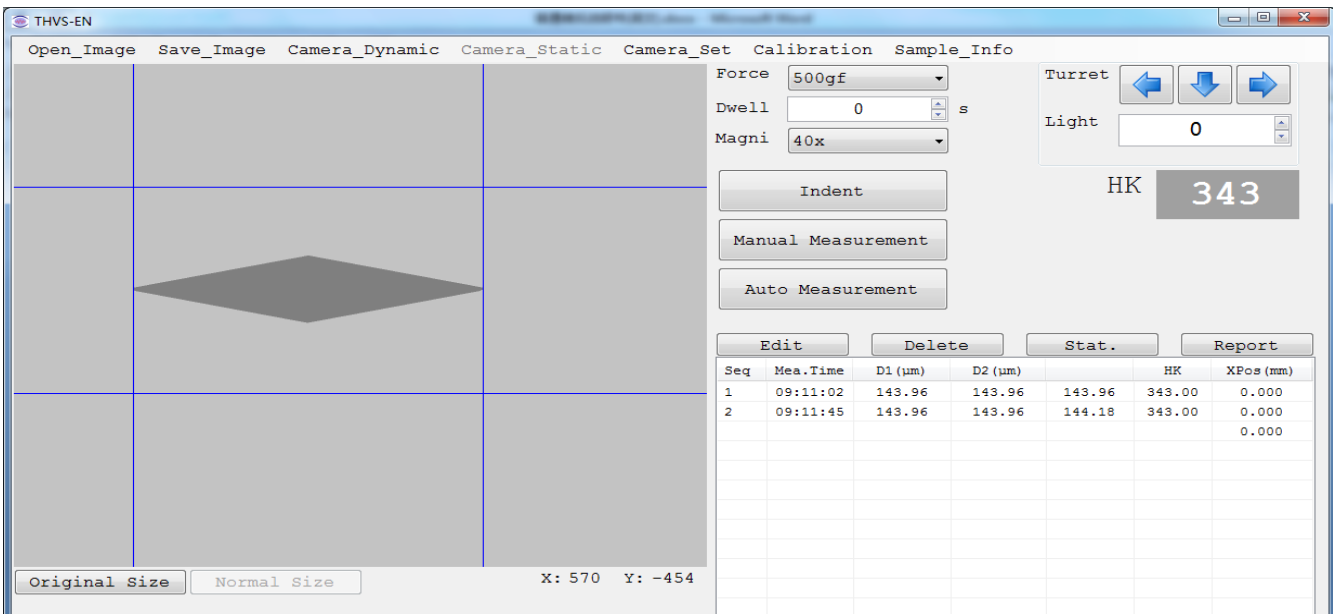
Calculate interface

**6. Test report:** Automatically generates WORD 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, etc.

**10. Camera can built in machine,** no dust dirt and more safe. Software can adjust machine lightness, and can do indentation image Measure and analysis work; Generate test report in word format.

