



**BANBROS ENGINEERING PVT. LTD.**

The Precision Measurement People

# ADVANCED TOUCH SCREEN DIGITAL MICRO VICKERS HARDNESS TESTER

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



**BMVHD-1AT-8P**

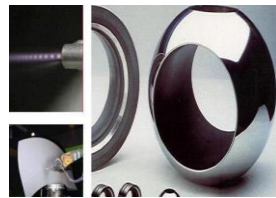


**APPLICATION:**

- 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.



Metal material



Surface coating



Glass material



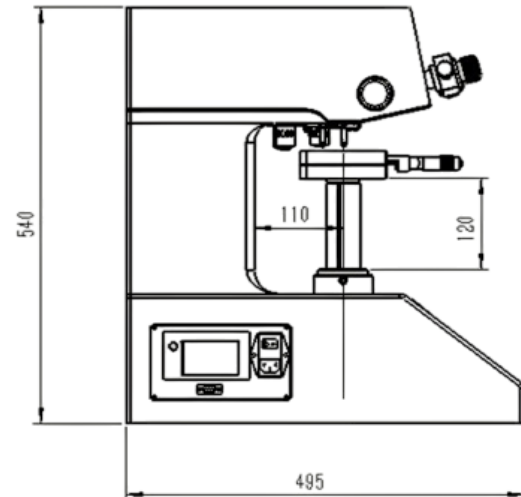
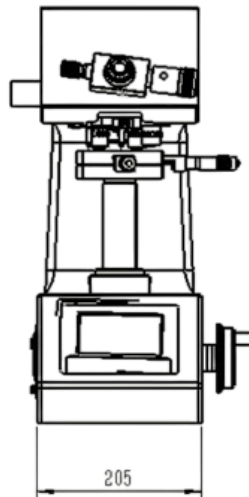
Ceramic material

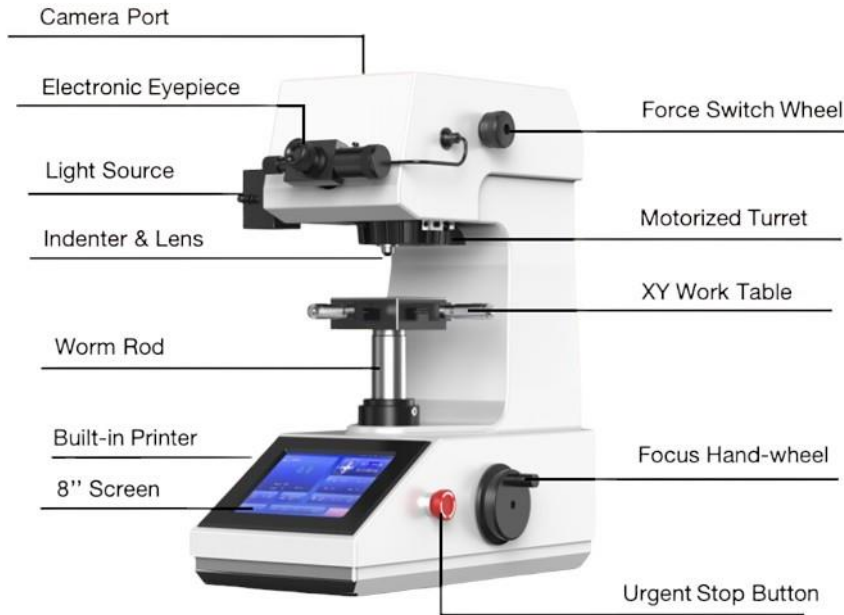


Plastic/ rubber

**FEATURES:**

- One-time casting machine body with car painting technology, structure more stable and appearance more decent.
- Digital 10X eyepiece with inbuilt encoder, click the encoder machine will automatic get indentation diagonal length data D1 & D2, no need manual input data into machine, greatly improved testing accuracy and working efficiency.
- With 8" large touch screen digital display, directly display hardness value, dwell time, conversion hardness value, etc.
- Menu structure interface, easy operation.
- With HV / HK test function (if need HK test function, optional purchase Knoop diamond indenter and standard Knoop hardness blocks).
- With built-in printer, test result can be printed out directly.
- With RS232 communication port, machine can upgrade to semi-automatic or fully automatic type easily if needed in future.
- Double optical path design. Support inbuilt camera or external camera (Optional).



**TECHNICAL SPECIFICATION:**

<b>Model No.</b>	<b>BMVHD-1AT-8P</b>
<b>Turret</b>	Automatic Turret
<b>Objective</b>	10X (measure); 40X (measure)
<b>Eyepiece</b>	10X digital eyepiece with built-in encoder
<b>Total Magnification</b>	100X (measure); 400X (measure)
<b>Testing force</b>	10g (0.098N), 25g (0.245N), 50g (0.49N), 100g (0.98N), 200g (1.96N), 300g (2.94N), 500g (4.9N), 1000g (9.8N)
<b>Hardness scale</b>	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
<b>Conversion scale</b>	HRA, HRB, HRC, HRD, HRF, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HV, HK, HBW
<b>Indenter</b>	Standard Rectangular pyramid diamond indenter ( $136^\circ \pm 0.5^\circ$ )
<b>Min. measuring unit</b>	0.01 $\mu$ m
<b>Hardness value rang</b>	5HV-3000HV (or 5-4000HV)
<b>Data display</b>	8 inch LCD touch screen
<b>Loading method</b>	Automatically (Load, dwell and unload the testing force)
<b>Duration time</b>	1-99s (each step is 1 second)
<b>Data output</b>	Inbuilt printer
<b>X-Y Testing Table</b>	Dim.:100×100 mm, Max. Travel Range: 25×25mm, Moving Resolution Ratio: 0.01mm
<b>Test space</b>	Maximum height: 100mm (vertical); Throat depth: 110mm (horizontal)
<b>Light Source</b>	High resolution halogen light source
<b>Machine size &amp; N/W</b>	405*290*480mm 40kg
<b>Packing size &amp; G/W</b>	600*420x850mm 55kg
<b>Power Supply</b>	220V $\pm$ 5%, 50/60 Hz (110V is available)
<b>Executed Standard</b>	GB/T4340.2, ASTM E384 & E92, EN-ISO 6507, JIS B-7734



**STANDARD ACCESSORIES:**

Item Name	Qty	Item Name	Qty
Weights shaft	1	Weights	6
X-Y table	1	Level adjustment screw	4
Level bubble	1	Objective 10X, 40X	1+1
Micro Vickers hardness block	2	Eyepiece 10X	1
Dust-proof cover	1	Screw driver	2
Power cable	1	Fuse (2A)	2
Manual	1	Product Certificate	1

**Sample Clamp  
Fixture:**



**Professional HV-HK 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. (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)
- 4. Data remember / Store function:** All data in the process of measurement will be saved in the right bottom sheet.
- 5. Statistics:** Automatically updates the statistical values such as average, min and max, standard deviation.
- 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.