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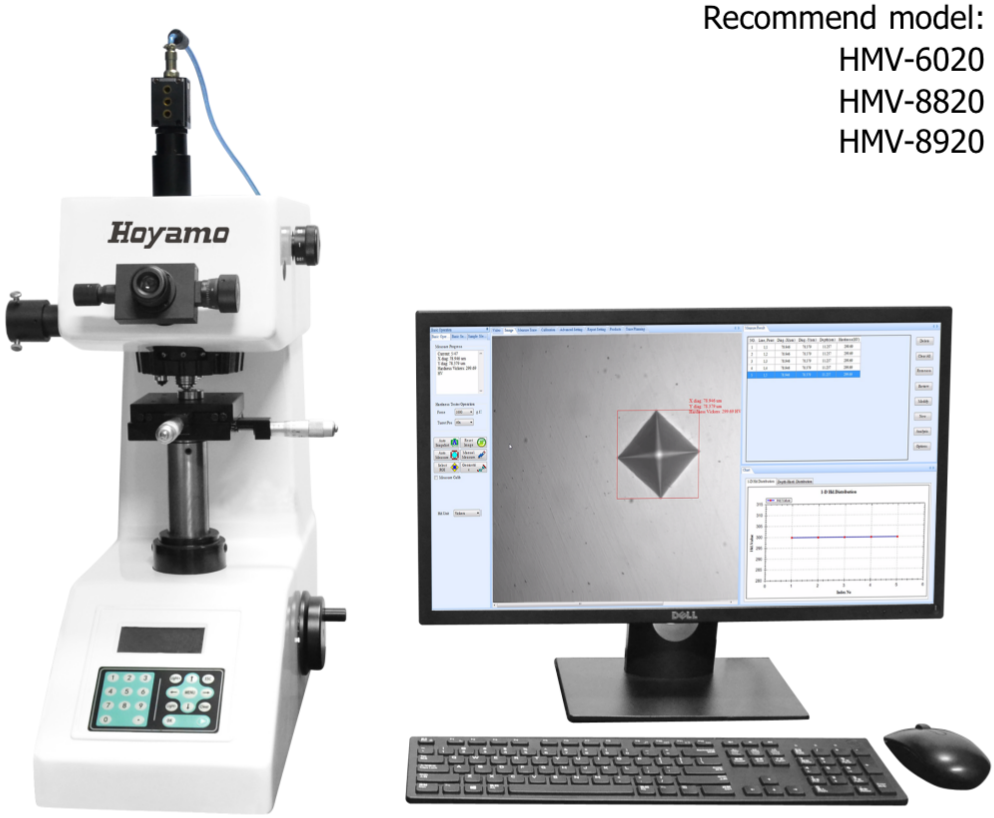
Automatic/SemiAuto Micro Vickers Hardness Tester

Recommend model:
HMV-6020
HMV-8820
HMV-8920



（Picture is for reference ,the object is the standard）

❖ Application Range:

● The micro hardness testing of materials allows for the determination of the hardness of small or thin specimens and small areas of larger specimens, Micro hardness testing is commonly used to determine characteristics of thin sheets, foils, fine wire, epoxies, paints, etc. and is often employed in R&D applications.

● Micro hardness is especially useful in determining hardness variations, caused by hardening, quenching, plating, fabrication, welding or annealing, bonding, etc. Micro hardness testing can be accurately employed using loads as slight as 10 grams, somewhat less and considerably more in certain situation.

●Optional Auto Micro/Vickers hardness testing software is available for CDH(Carburized layer depth)measurement.

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❖ Technical Specifications:

Auto/Semi Auto Micro Vicker Hardness Tester				
Type/software		Manual	Semi Automatic	Full Automatic
Model		HMV-6020	HMV-8820	HMV-8920
Code#		823-111	823-121	823-131
Hardness Scale		HV		
Hardness Conversion		HV, HR, HRC, HB, HK		
Loading Force	N	0.098、0.246、0.49、0.98、1.96、2.94、4.90、9.80		
	gf	10、25、50、100、200、300、500、1000		
Indentation Measurement		Analogue Eyepiece with Mechanic Micrometer		
		(To measure the indention by AutoVicker Testing Software system)		
Loading Control		Automatic (Loading, Dwell, Unloading)		
Magnification of Microscope		Observation:10x/40x; Measurement:10x/40x		
Magnification on of Eyepiece		10x Analogue Eyepiece		
Dwell Time		Adjustable 5~60s		
Testing Range		1HV~3000HV		
Analogue X-Y Anvil		Size:100x100mm; Travel:25 x25mm; Resolution: 0.25um		
Optical Channel		Two-Channel: Eyepiece/camera switchable		
Illumination		Adjustable Halogen light-source		
Max. Height of Specimen		90mm		
Instrument Throat		120mm		
Operating Temperature		23±5℃		
Operating Humidity		<65%		
Power Supply		AC220V/50Hz; AC110V/60Hz		
Dimension (LxWxH)		530×290×490mm		
Gross/Net Weight		50Kg/40Kg		
Software		HDS6020	HDS8820	HDS8920

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❖ Software:

Model	HMV-6020	HMV-8820	HMV-8920
Software Version	HDS6020 Professional	HDS8820 Semi-automatic	HDS8920 Full-automatic
Basic function	YES	YES	YES
Connect Durometer	YES	YES	YES
Route Planning	×	YES	YES
XY Automatic Station	×	YES	YES
Connect to Type and Test	×	YES	YES
Panoramic scanning	×	YES	YES
Z-Axis Control	×	×	YES
Automatic Focusing	×	×	YES

Notes:
1.Software code can be seen on the title of software interface;
2..Hardness test device connection only directs at specific hardness test device model number;
3.Some functions requires device protocol support of durometer.

❖ Features of Software

① Automatic recognition capability of hardness indents outperforms most competitors.

② Remote focusing; high-speed focusing（~3s）; Automatic quantization of focusing process sharpness. Automatically capture the clearest video frames which will be upgraded as “current images”.

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④ Besides automatic measurements, there are two kinds of manual measurement modes: diagonal measurement and four-point measurement (selective sequence of four vertexes can be random).

⑤ Besides automatic measurements, there are two kinds of manual measurement modes: diagonal measurement and four-point measurement (selective sequence of four vertexes can be random).

⑥ Provide indenter/lens shift calibration function, eliminating mechanical deviation between the indenter and lens and correcting entirety system error. Precision of hardness measurement results will be enhanced.

⑦ Provide the pixel distance and physical distance of indents diagonal, and conduct real-time computation of the HV/HK value under the current loading.

⑧ Control the turret (switching between objective lens and indenter) of hardness test device of different brands and models.

⑨ Support various video capture devices, like digital cameras with resolutions of 1.3 megapixels, 2 megapixels, 3 megapixels and 5 megapixels. Display indents videos in the computer, snapshots and image storage are feasible.

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⑪ The distance between two points can be manually measured; Multi-group distances can also be displayed in videos or images.

⑫ With reference to hardness conversion standards like GB, DIN, ISO, ASTM and so on, the software can realize hardness conversions among: Vickers HV, Knoop HRC, HRA, HRB, HRD, HRE, HRF、HRG, HRK; Rockwell: HRC, HRA, HRB, HRD, etc.; Superficial Rockwell: HR15N, HR30N, HR45N, HR15T, HR30T, HR45T; Brinell: HBS, HBW, etc.

⑬ There are various flexible initial setup modes for the measurement of route sequence of hardened layer. Previous route sequence will be automatically saved and imported; Frequently used measuring route can be saved as individual files for re-importion.

⑭ Measurement results of route sequence will automatically generate corresponding depth value of hardened layer and hardness change curve graph.

⑮ There are various analysis patterns for measurement data; All results can be exported into word report. The content and format of reports can be set up flexibly, and word and excel files will be automatically generated.

⑯ Passwords and administration authority can be set up: a general operator can only conduct hardness testing according to pre-defined settings.

⑰ There are built-in hardness conversion tools of most standards. The tools can convert hardness values according to tables and list them into result table.

⑱ The software provides versions of Chinese (simplified and traditional), English, German, French, Japanese and Italian.

❖ Advanced Functions:

Route Planning

As an extension of distance measuring function, this completes accurate planning of 9 routing patterns by clicking and selecting current image.

Free Point Selection	Click and select any position of the image which becomes a route to be measured.
Any Direction	Click and select line segments of any starting point and direction.
Edge Normal	Click and select nearby position of the edge and automatically generate a normal segment.
Two-Point Normal	Click and select two points of the edge and generate a center normal segment.
Angular Bisector	Three points constitute an angle and an angular bisector segment be generated.
Circular Route	Two points determine the center/radius and generate a route clockwise.
Edge Contour	Click and select nearby position of the edge and automatically generate edgewise route.
Edge Equidistance	Edgewise click and select distance and generate equidistance segment.
Sawtooth Waveform	A quantitative setting can be conducted for the cycle, and height and symmetrical degree of the tooth.

Automatic Platform Product

Low-end object platforms commonly used today, no matter manual or automatic platforms, either adopts elastic sliding structure or has no dust-proof design. Once the measured object or the load is overweight, the precision will be out of the question. How to ensure that the precision doesn't vary from the load becomes an issue needing to be urgently addressed.
By now, Leiden has launched product series of high-precision object platforms for rigid structure design.

XY stage table	Objective Platform Function of equipment
T1-10	High-precision manual digital platform
T1-20	High-precision manual wireless digital display platform
T2-10	Automatic platforms of sealing, rigid and high-speed type.
T2-20	Specialized Wilson automatic platform
T2-30	Automatic platforms of sealing, rigid and high-precision type.
T2-40	Large-travel Wilson automatic platform.

❖ Standard Delivery:

Commodity	Code #	Commodity	Code #	Commodity	Code #
MicroVickers Intender	823-401	10x Analogue Eyepiece	823-301	Dust Cover	823-911
X-Y Working Stage	T1-10	10x Objective	823-311	Toolbox	823-901
Hardness Block (700~800) HV1	823-611	40x Objective	823-341	Power Cord	823-801
Flat Precision Clamp	823-711	Thin-Piece Clamp	823-751	Filament Clamp	823-761
Hardness Block (400~500) HV0.2	823-621	Warranty Card / Qualified Certificate/ Operation Manual / Packing List	HMV-1000	Flat Precision Clamp	823-711
Digital Micrometer Head	823-719	Unequal Specimen Clamp	823-741	Dell PC System	Dell3070MT
Camera Adapter	823-361	USB CMOS Camera	823-471	Vickers Measuring Software	HDS8820

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