

MIDLAND METROLOGY LIMITED

uVickers-1

Micro Vickers Hardness Tester



Product Feature & Application

Product Features

8" Touch screen menu structure and digital eyepiece with built in encoder. By clicking encoder button the diagonal length of the indentation, D1 and D2 and hardness value are automatically calculated.

Optical cross guide rail ensures guidance accuracy.

High precision gear rod with high transmission ratio to ensure more precise force transmission and to achieve more stable and continuous lifting.

Rack and pinion force transmission realizes fast and stable transmission.

Equipped with dual optical path for eyepiece and another for the CCD camera. Both paths can work at the same time.

LED illumination for long service life. Brightness of the light source can be adjusted.

Test setting parameters are protected by password.

The machine can be calibrated according to the standard hardness block or length scale to make hardness values more accurate.

Eyepiece with digital encoder and the touch screen directly displays the hardness value and D1 & D2 values.

Advanced machine with x5/ x10. x 20 and x40 lenses to be used for measurement. Suitable for testing a range of materials from most soft to very hard.

Hardness conversion function HV can convert to HRA, HRB, HRC and HBW etc.

HV and HK vickers and knoop hardness testing capabilities.

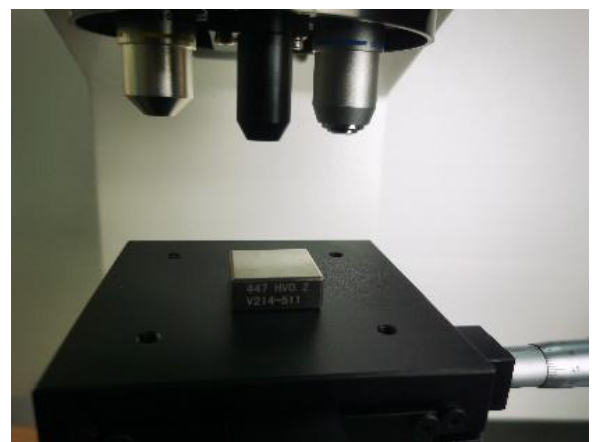
Optional built in camera.

RS232 interface connected to computer for data output. Testing results can be saved in USB in EXCEL format. Built in mini printer for printing test data.

Indenter smart cover to prevent indenter from colliding with samples and parts.

English language as standard.

Auto load can be selected by using the touch screen.



Product Application

Steel, nonferrous metals, cemented carbide, sheet metal, metallographic structure, surface hardening layer, galvanized coating, glass, and ceramic material.

Touch Screen Interface

8" Touch screen, menu structure. The diagonal length of indentation D1, D2 and hardness value automatically calculated. Test setting parameters are protected by password. Brightness adjustment, calibration operation system, data saving and printing function. Data Statistical function for Max, Min, Average and Variance values of testing results on data sheet.

Operator

Sample

Range To

Load(kg) Dwell Time(S)

Turret

10X

Indenter

40X

Brightness ↑ ↓

Start

D1 D2

Conversion

Reset

Calibrate

Main Interface

Calibration

Magnification:

Loda(kg) :

Pulses : X

Y

Scale

Scale Calibration

Hardness

Save

Return

Hardness Calibration

[illegible]

Data Interface

Testing calibration
should only be operated under
help of professional personnel.

Password: 0

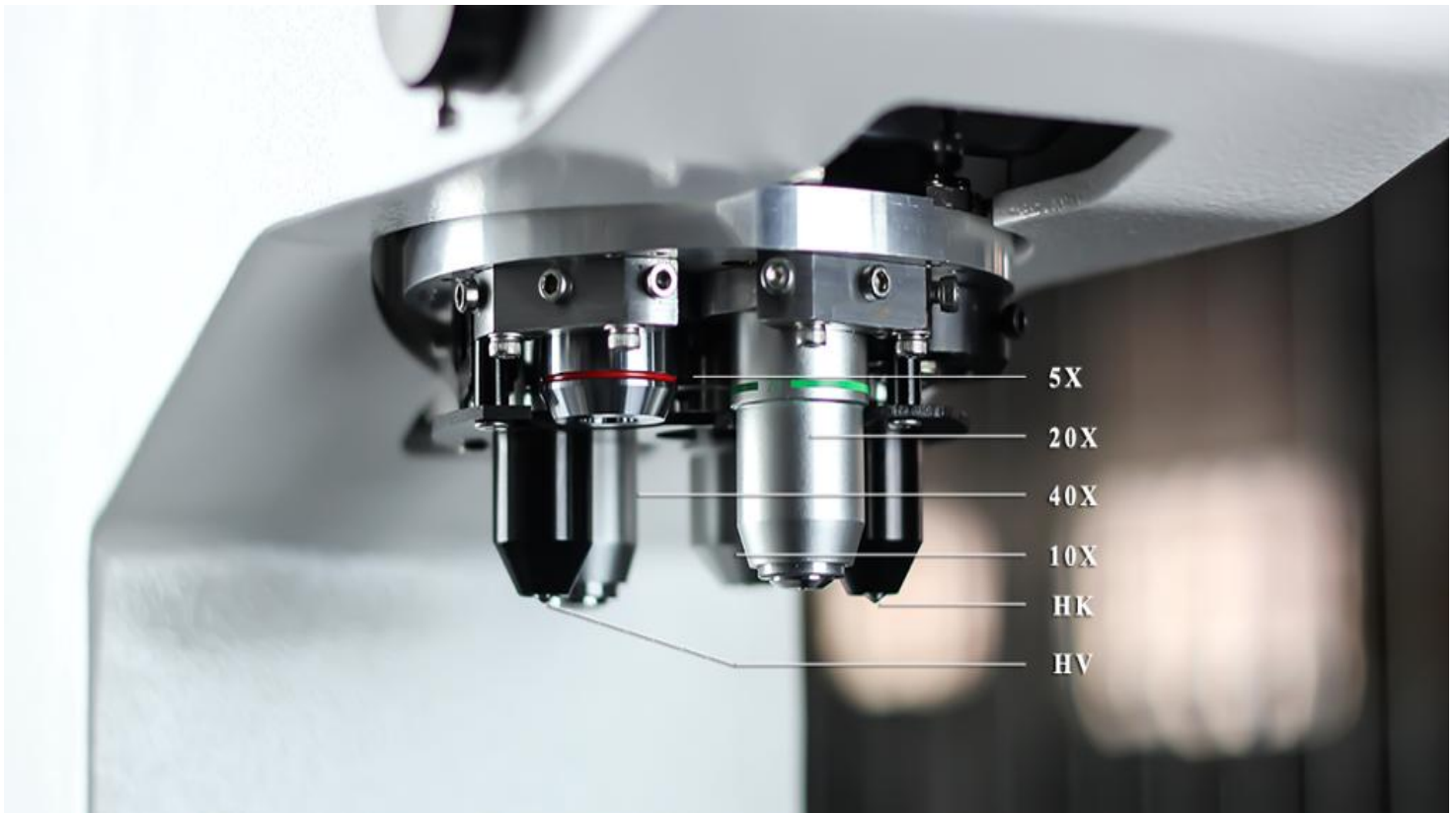
Enter Return

Password Protection

Password Protection

User Friendly

uVickers-1A-4 auto turret micro vickers hardness tester has 5x/10x/20x/40x objective lens for measuring, plus micro vickers indenter , total of 5 positions. Advanced design hardness testing machine.



User Friendly

High precision gear rod with high transmission ratio to ensure more precise force transmission and achieve stable continuous lifting. Micro vickers indenter smart cover to protect indenter collision by test sample or other parts.



Gear Rod



Handwheel for Gear Rod



Micro Vickers Indenter Smart Cover



Micro Vickers Indenter Smart Cover

User Friendly

Digital eyepiece with built-in encoder. Auto loading selection is optional instead of manual type. Equipped with dual optical path, one optical path for eyepiece system, another path for CCD camera, both path can work at the same time.



Digital Eyepiece



Manual Loading Selection (Auto Type Optional)



Dual Optical Path

Data Output

Machine can be equipped with a built-in camera (optional) to make the image clearer or for capturing micro vickers indentation to software. RS-232 interface connected to computer for data output. Testing result can be saved in USB (optional) in EXCEL format or built-in mini printer to print testing data.



Built-in Camera (Optional)



RS-232 Interface



RS-232 Interface & USB



RS-232 Interface & Mini-Printer

Machine in Workshop



Ordering Information



uVickers-1M-2E Economic Manual Turret Micro Vickers Hardness Tester (Only 40X Objective Lens for Measuring)

uVickers-1A-2E Economic Auto Turret Micro Vickers Hardness Tester (Only 40x Objective Lens for Measuring)



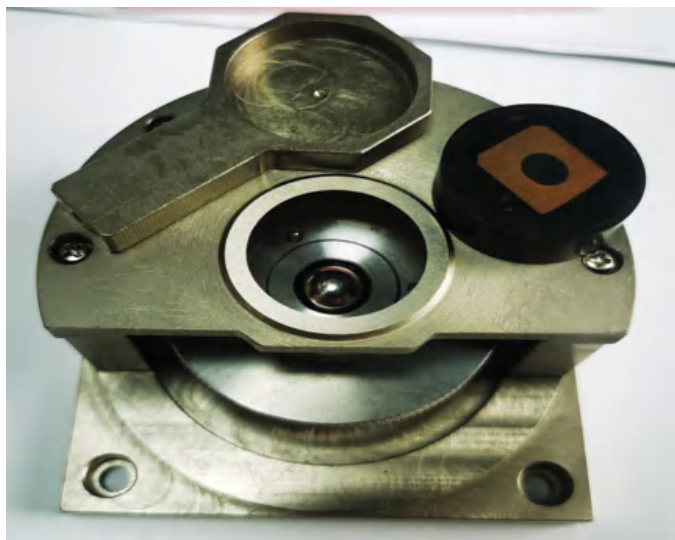
uVickers-1M-2 Manual Turret Micro Vickers Hardness Tester (10x/40x Objective Lens for Measuring)

uVickers-1A-2 Auto Turret Micro Vickers Hardness Tester (10x/40x Objective Lens for Measuring)

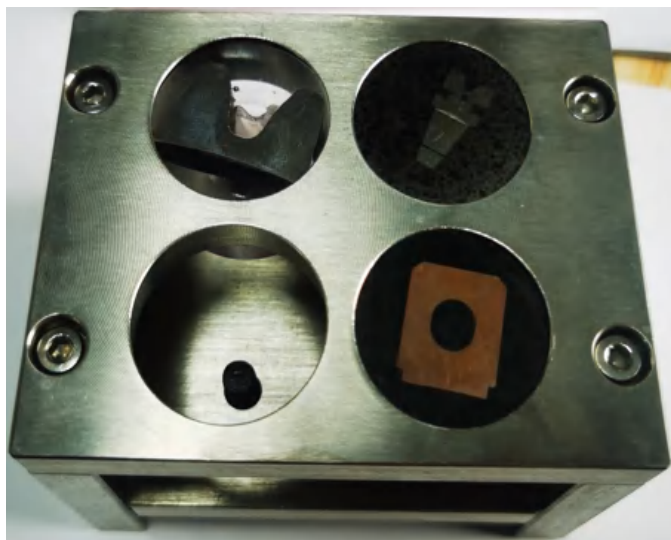
uVickers-1A-3 Auto Turret Auto Turret Micro Vickers Hardness Tester (10x/20x/40x Objective Lens for Measuring)

uVickers-1A-4 Auto Turret Auto Turret Micro Vickers Hardness Tester (5x/10x/20x/40x Objective Lens for Measuring)

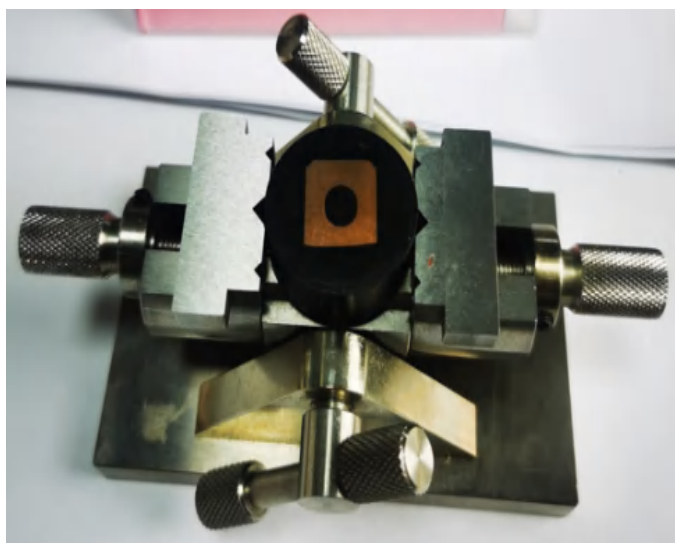
Variable Test Sample Clamping Vice Optional



Single Inlay Sample Clamping



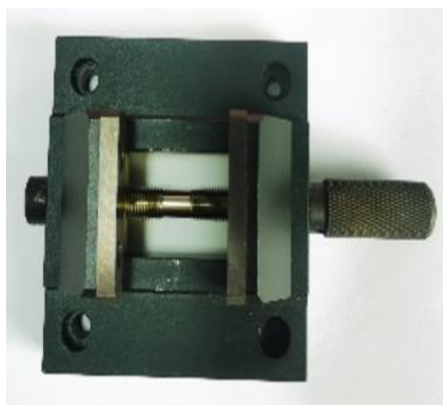
4 Pcs Inlay Samples Clamping



Universal Tilt Clamping



Pencil Clamping (For Pencil Hardness Tester)



Flat Clamp



Filament Clamp

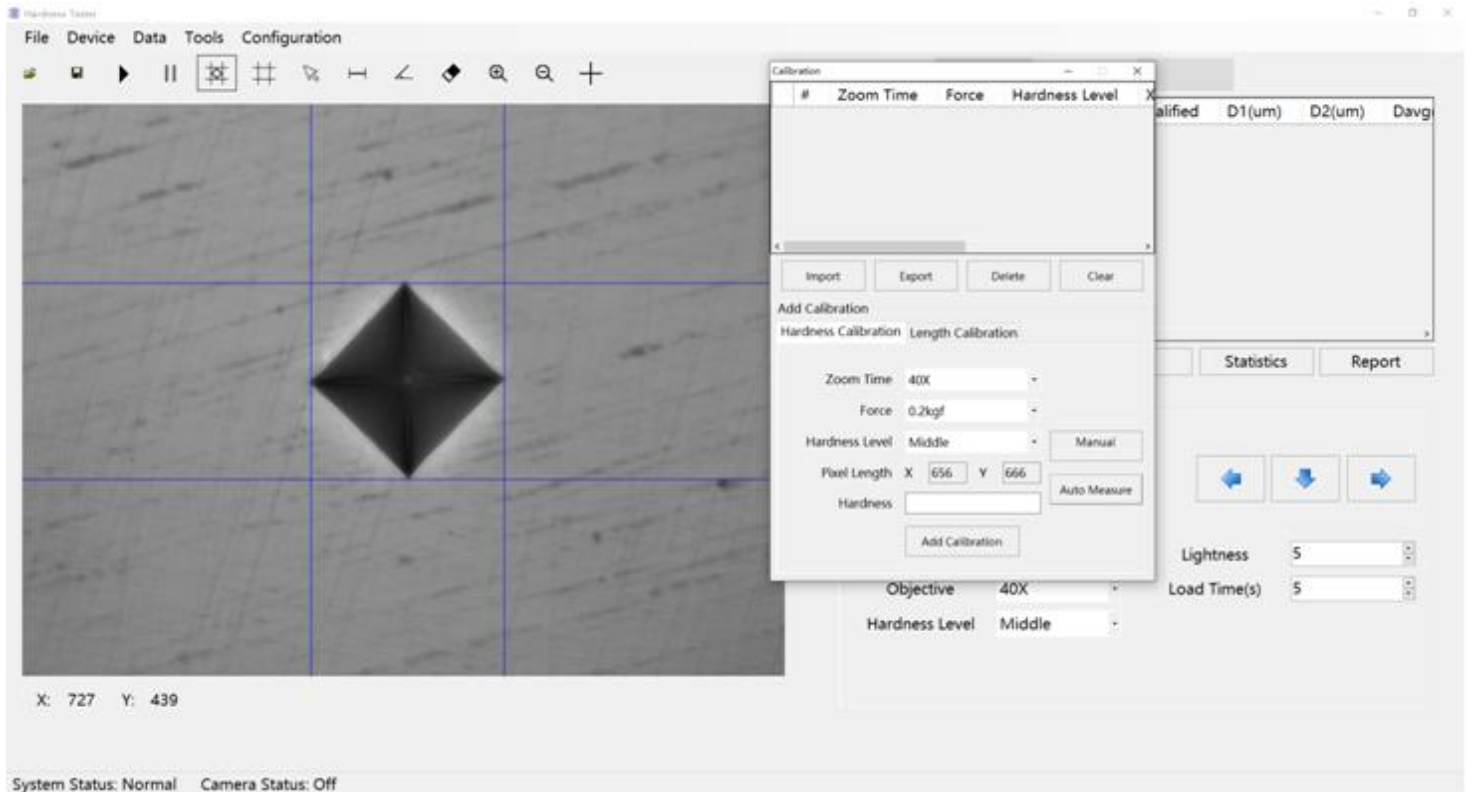


Thin Specimen Clamp



Balance Support (For Long Test Sample)

Micro Vickers Measuring Software(Optional)



Standard configuration

Item	Specification	Qty
Camera	5 million pixels	1 pc
Adapter	Connect the machine and camera	1 pc
USB Flash Disc	Includes software and instruction manual	1 pc
Encryption dog	/	1 pc

Web: www.midland-metrology.co.uk

Email: sales@midland-metrology.co.uk

Technical Specification

Product Name	uVickers-1 Micro Vickers Hardness Tester					
Model	uVickers1M-2E	uVickers-1A-2E	uVickers-1M-2	uVickers-1A-2	uVickers-1A-3	uVickers-1A-4
Turret	Manual	Auto	Manual	Auto	Auto	Auto
Built-in Mini Printer	No	No	Yes	Yes	Yes	Yes
Data Statistic Function	No	No	Yes	Yes	Yes	Yes
Objective	10X(Oberve)	10X(Oberve)	10X(Observed&Measure)	10X(Observed&Measure)	10X(Observed&Measure)	5X(Observed&Measure)
	40X(Measure)	40X(Measure)	40X(Observed&Measure)	40X(Observed&Measure)	20X(Observed&Measure)	10X(Observed&Measure)
					40X(Observed&Measure)	20X(Observed&Measure)
10X digital eyepiece with built-in encoder						
Total Magnification	100X(Oberve)	100X(Oberve)	100X(Observed&Measure)	100X(Observed&Measure)	100X(Observed&Measure)	50X(Observed&Measure)
	400X(Measure)	400X(Measure)	400X(Observed&Measure)	400X(Observed&Measure)	200X(Observed&Measure)	100X(Observed&Measure)
					400X(Observed&Measure)	200X(Observed&Measure)
10gf (0.098N), 25gf (0.245N), 50gf (0.49N), 100gf (0.98N), 200gf (1.96N), 300gf (2.94N), 500gf(4.9N), 1000gf (9.8N)						
Hardness Scale	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1					
Conversion Scale	HRA, HRB, HRC, HRD, HRF, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T,HV, HK, HBW					
Loading Speed	≤50μm/sec					
Indentor	Standard Rectangular Pyramid Diamond Indenter (136°±0.5°)					
Objective lens center and indenter center	Coincidence accuracy error< 1um (objective lens center position can be adjusted)					
Measurement Resolution	0.01μm					
Data Display /Output	8 "Touch Screen Display, Can Store 20 Test Results, USB drive, Built-in Printer and RS-232 Interface					
Hardness Test Range	8~2900HV					
Loading Method	Automatic (loading、dwell、unloading)					
Dwell Time	1-99s(each step is 1 second)					
Test Space	Test height: 100mm (Vertical); Test Throat: 130mm(Horizontal)					
X-Y Test Anvil	Dimension: 100*100mm, Movement:25*25mm,Moving Resolution Ratio:0.01mm					
Illumination	LED Cold light source (can be continuous use for 24 hours, no heat generate ensure stable working, servicing life can reach 100,000 hours)					
Machine Size&N/W	540*260*650mm,50kg					
Package Size&G/W	710*420*627mm ,68kg					
Power supply	AC220V+5%, 50-60Hz(110V is available)					
Executive Standards	GB/T4340, ASTM E384 & E92, EN-ISO 6507, JIS B-7734					

Packing List

Item	Quantity
Weight Shaft	1 pc
Eyepiece	1 pc
X-Y Test Anvil	1 pc
Gradienter	1 pc
Power Cord	1 pc
Product Certificate, Warranty Card	Each 1 Copy
Printing Paper	1 pc
Screwdriver	2 pc

Item	Quantity
Weight	6 pcs
Micro Hardness Block	Each 1 pc
Spare Fuse (2A)	2 pcs
Dust Cover	1 pc
Instruction Manual	1 pc
Touch Pen	1 pc
Level Adjustment Screw	4 pcs



X-Y Test Anvil



Digital Eyepiece



HV0.2 Hardness Block



HV1 Hardness Block

Optional Accesaries



Flattening Device(Used With Universal Tilt Clamping Fixture)



Built-in Camera



Micro Vickers Measuring Software



USB Interface