

MIDLAND METROLOGY LTD

uVicky-5/10/30/50/100/120

Macro Vickers Hardness Tester



Product Feature&Application

Product Features

• Closed loop design with high accuracy load cell, instead of dead weights, loading - dwell - unloading automatically.

• With load automatic correct~function, greatly improved test accuracy and get calibration more easy.

• Hardness value automatic corrected according to different hardness block.

• 8" Touch screen interface~with menu structure, easy to operate.

• Any three of the 5X, 10X, 20X, and 40X objective lenses are installed to ensure the indentation of different sizes can meet the standard size in the field of view. At the same time, a wide range of sample profile scanning can be carried out with low magnification.

• All the three objective lenses can realize the -
summa

• Level 11 test force, to meet all the test forces in the range of the standard. force value is optional.

• Indentor and objective lens automatically switch to each other, and accurately automatic positioning of test point.

• It can be calibrated according to the standard hardness block or length scale, and the hardness can be modified automatically according to the high, middle and low hardness values.

• Test setting parameters are protected by -
words

• LED illumination, long life, no need to replace the bulb.

• Built-in camera, clearer image (optional).

• Chinese, English and other languages for choice.

• With RS-232 interface, on-line with computer (optional).

• Test data can save~to USB flash disk~as EXCEL format, edit and process more easy.

• Equipped with~dual optical path, one optical path for eyepiece system, another path for CCD camera, both path can working in same time, no need switch optical path rod. Greatly extend the service life of the optical system.

• OK/NG judgement~function.

• Modular design, simple maintenance.

• With hardness conversion function, from HV -
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• With HV/HK test function.

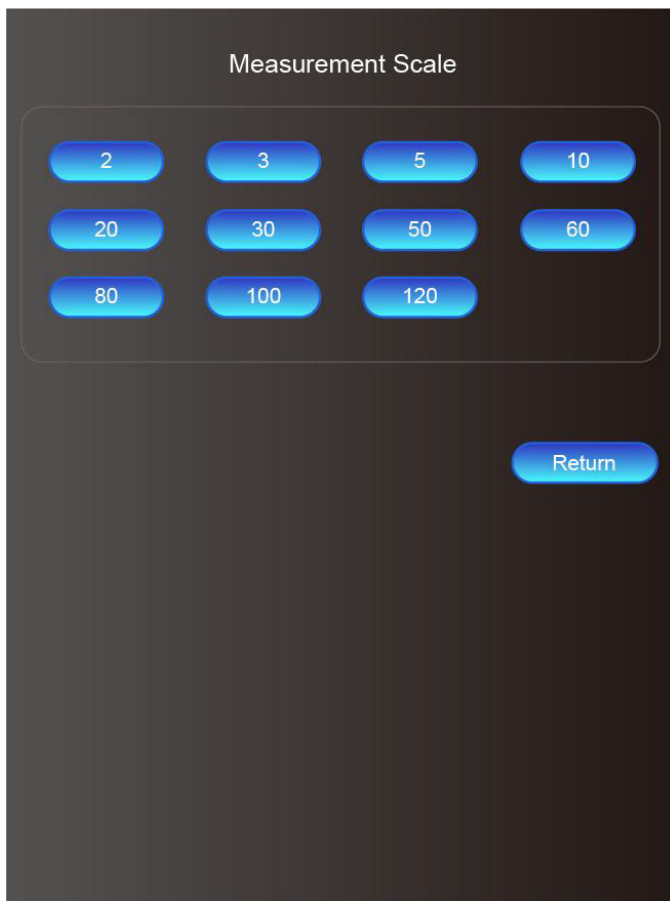


Product Application

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.

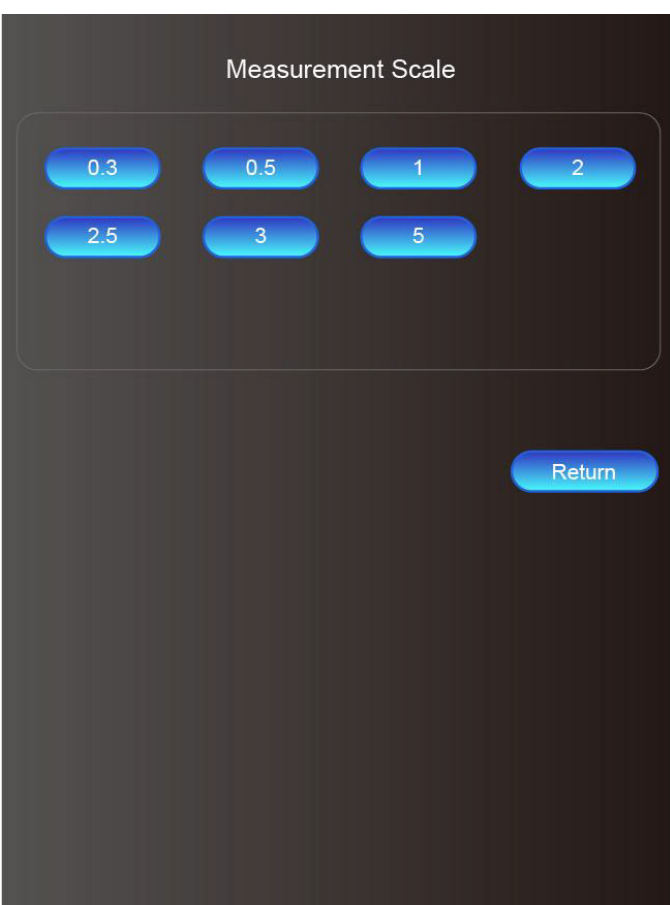
Operation Interface

8" Touch screen interface with menu structure, easy to operate. Chinese, English and other languages for choice. Test setting parameters are protected by password. OK/NG judgment function. With hardness conversion function, from HV hardness value can convert to HR, HB, etc.



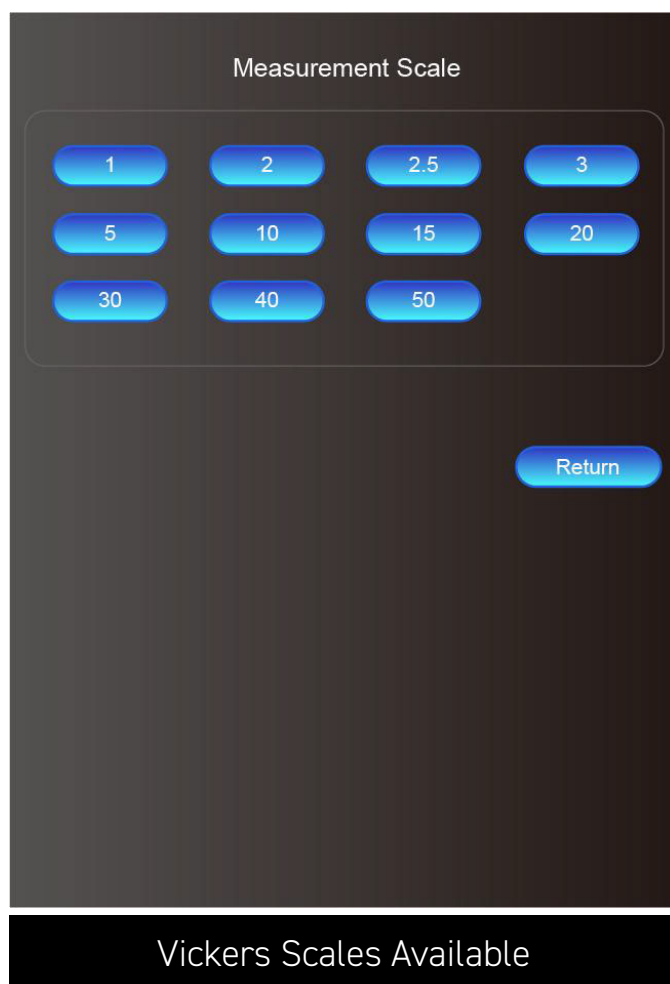
Vickers Scales Available

Vickers Scales Available



Vickers Scales Available

Vickers Scales Available



Vickers Scales Available

Operation Interface

Operator

Sample

Range To

Load(kg) Dwell Time(S)

Turret

Brightness

D1 D2

HV

Conversion

Calibration

Magnification:

Loda(kg) :

Pulses : X Y

Scale

Hardness

Force Calibration

Standard: kg

Measured: kg

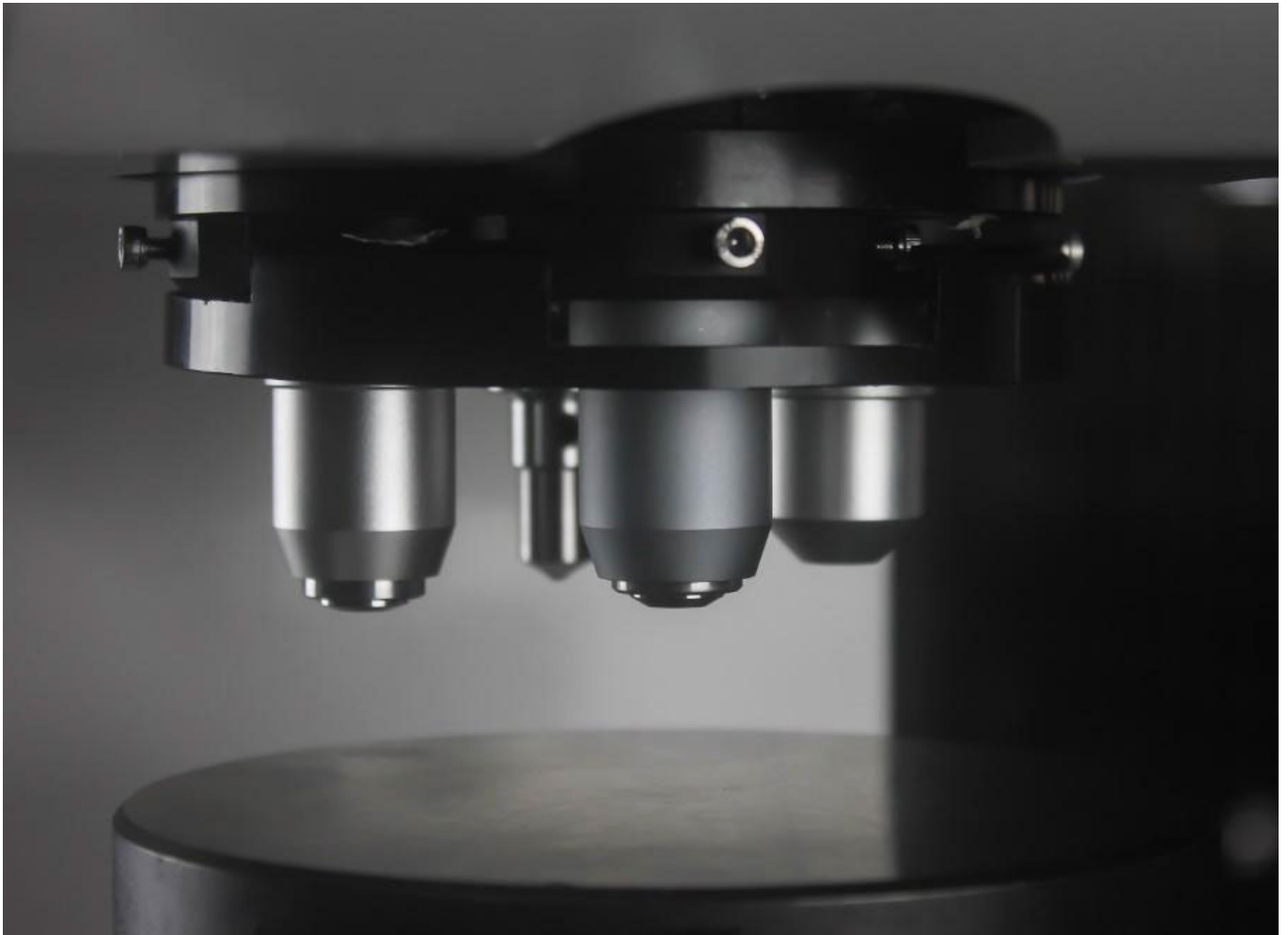
DATA

No.	Hardness-S	Hardness-V	Conversion-S	Conversion-V

MAX	MIN	AVE	VAR

Turret Structure

Any three of the 5X, 10X, 20X, and 40X objective lenses are installed to ensure the indentation of different sizes can meet the standard size in the field of view. At the same time, a wide range of sample profile scanning can be carried out with low magnification.



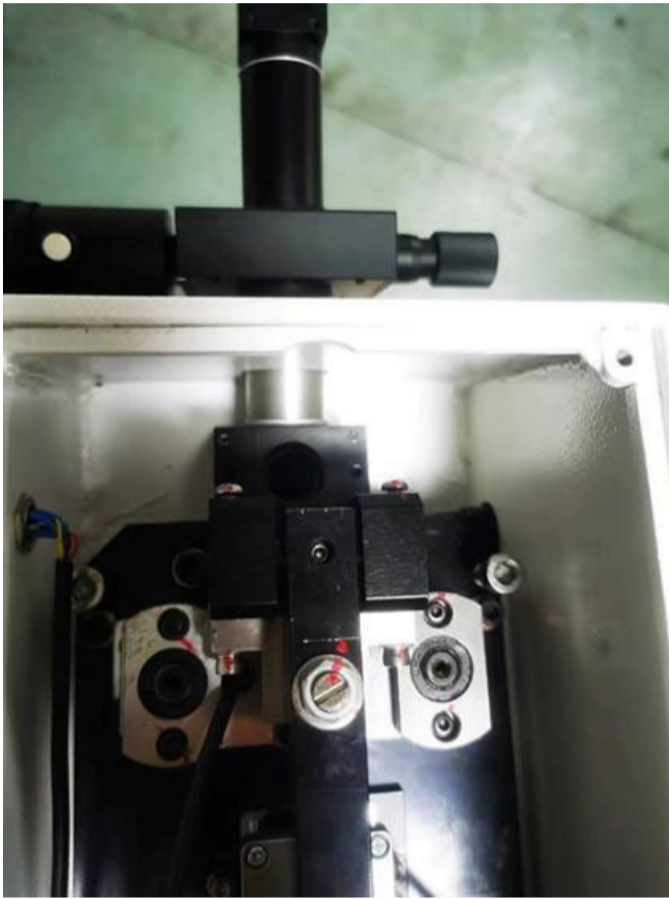
One Indentor with Three Objective Lens Realized



One Indentor with Three Objective Lens Realized

User Friendly

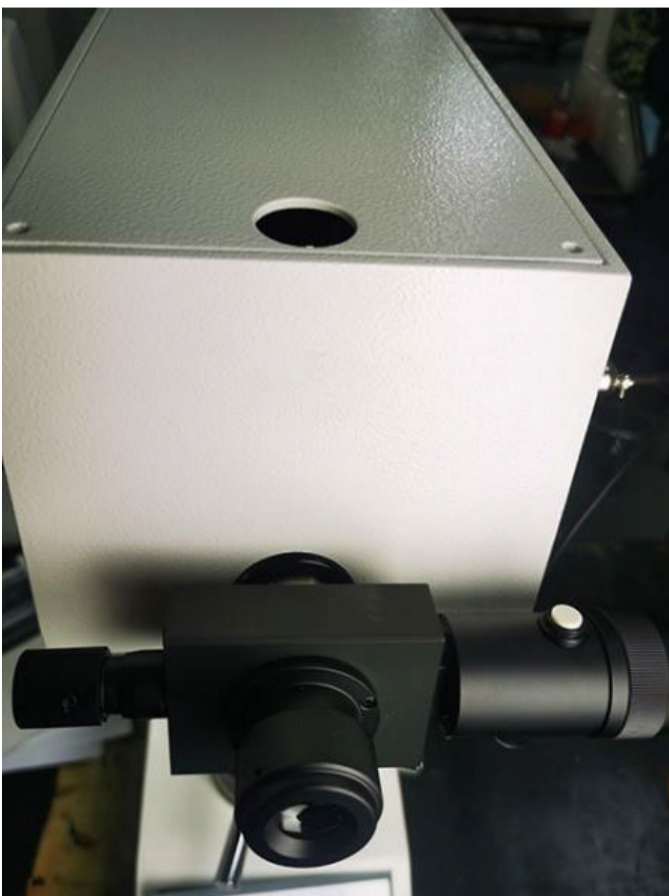
Equipped with dual optical path, one optical path for eyepiece system, another path for CCD camera, both path can working in same time, no need switch optical path rod. Greatly extend the service life of the optical system.



Dual Optical Path



Camera Built Inside

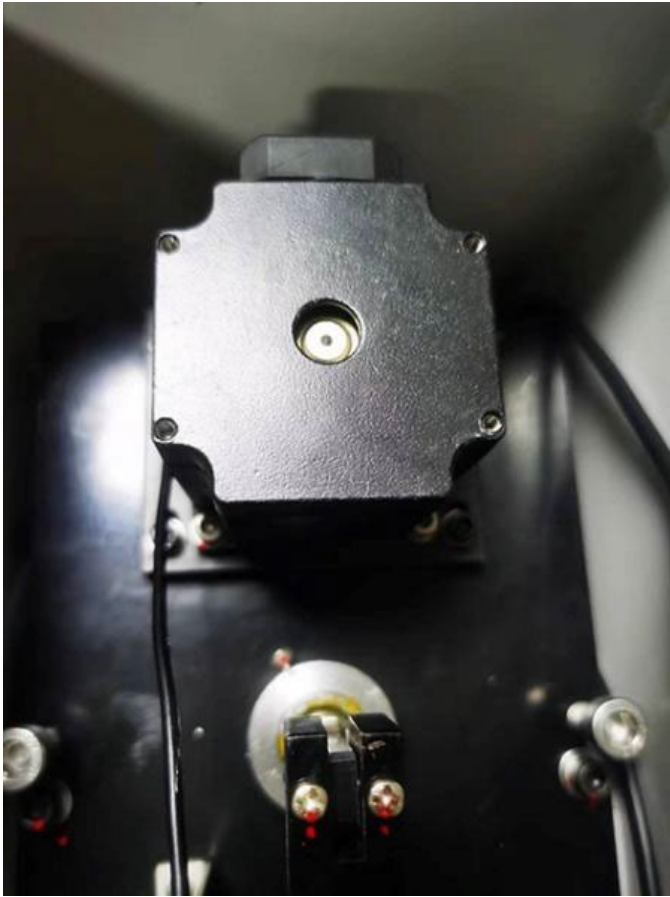


Optical Path for Eyepiece



Camera Outside Path

Machine More Detailed Photoes



Closed Loop System



Closed Loop System



One Indenter with Two Objective System



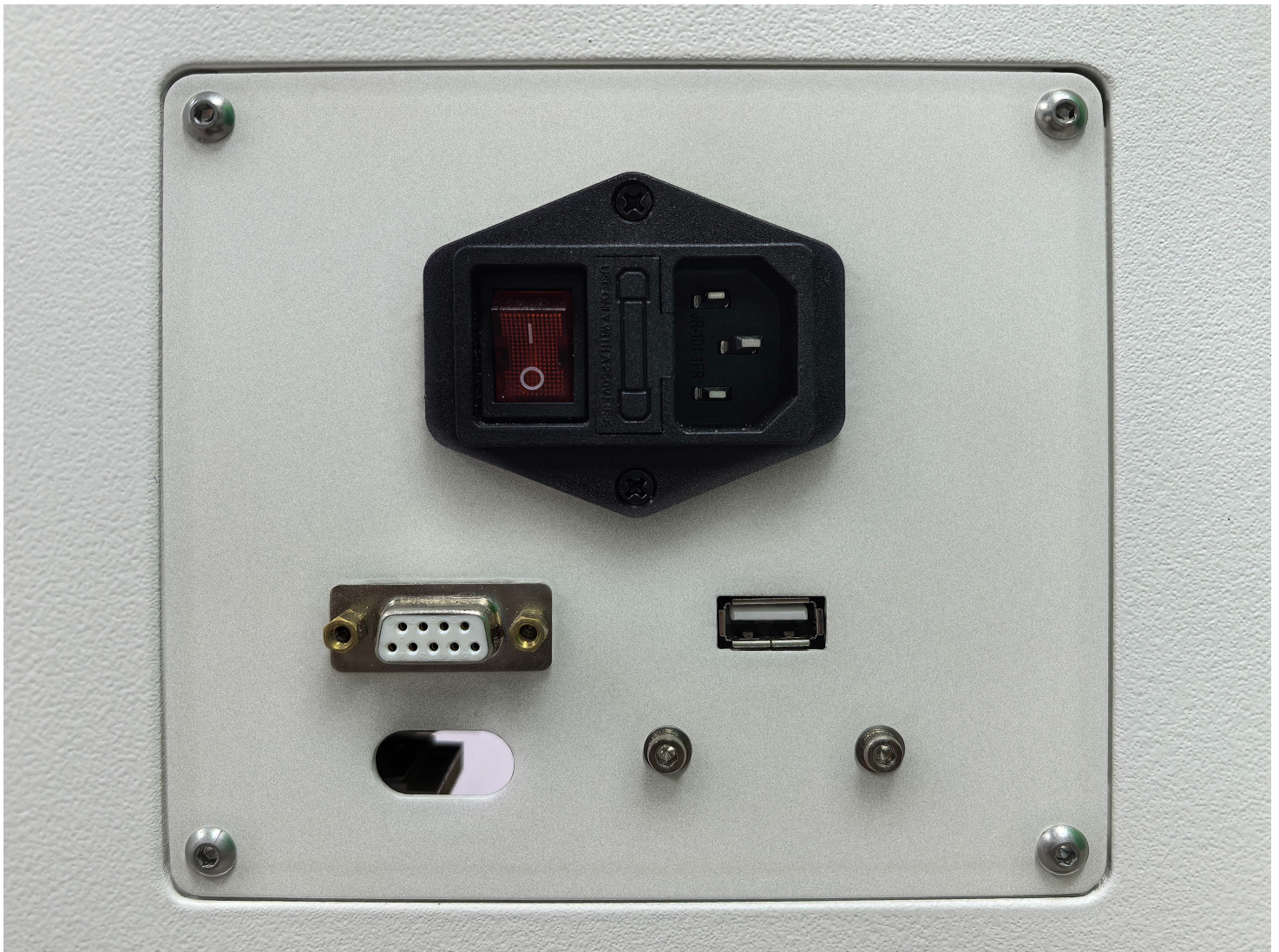
Digital Eyepiece

Machine Lifting Screw



Data Output

Test data can save to USB flash disk as EXCEL format, edit and process more easy.
Optional RS-232 interface, on-line with computer (optional).



Technical Specification

Model	uVicky-5	uVicky-10	uVicky-30	uVicky-50	uVicky-100	uVicky-120
	uVicky-5Q	uVicky-10Q	uVicky-30Q	uVicky-50Q	uVicky-100Q	uVicky-120Q
Objective Lens	10X/20X (uVicky-5/10/30/50/100/120)			10X/20X/40X(uVicky5Q/10Q/30Q/50Q/100Q/120Q)		
	Both Lens for Observe&Measure			All Three Lens for Observe&Measure		
Eyepiece	10X Digital Eyepiece with Built-in Encoder(15X Optional)					
Measuring Magnification	100X/200X(uVicky-5/10/30/50/100/120)			100X/200X/400X(uVicky5Q/10Q/30Q/50Q/100Q/120Q)		
Customized Magnification	Yes	Yes	Yes	Yes	Yes	Yes
	0.3Kgf	0.3Kgf	0.5 Kgf	1.0 Kgf	2.0Kgf	2.0Kgf
	0.5Kgf	0.5 Kgf	1.0 Kgf	2.0 Kgf	3.0Kgf	3.0Kgf
	1.0Kgf	1.0 Kgf	2.0 Kgf	2.5 Kgf	5.0Kgf	5.0Kgf
	2.0Kgf	2.0 Kgf	2.5 Kgf	3.0 Kgf	10.0Kgf	10.0Kgf
Test Force	2.5Kgf	2.5 Kgf	3.0 Kgf	5.0 Kgf	20.0Kgf	20.0Kgf
	3.0Kgf	3.0 Kgf	5.0Kgf	10.0Kgf	30.0Kgf	30.0Kgf
	5.0Kgf	5.0Kgf	10.0Kgf	15.0 Kgf	50.0Kgf	50.0Kgf
		10.0Kgf	15.0kgf	20.0Kgf	60.0Kgf	60.0Kgf
			20.0Kgf	30.0Kgf	80.0Kgf	100.0Kgf
			30.0Kgf	40.0Kgf	100.0Kgf	120.0Kgf
			50.0Kgf			
Customized Test Force	Yes	Yes	Yes	Yes	Yes	Yes
Test Force Standard	GB/T4340.1, GB/T4340.2,ASTM E92					
Closed Loop System	Yes	Yes	Yes	Yes	Yes	Yes
Minimum Unit of Test	0.01 μm					
Precision Standard	JJG260-91,JISB7725,JISB7734,GB/T3430.2-99,ASTME-384,ISO6507-2,ISO4546					
Conversion Scale	HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T					
Conversion Standard	GB1172-99, ASTM					
Turret	Auto	Auto	Auto	Auto	Auto	Auto
Hardness Test Range	8~2900HV					
Loading Method	Automatic Loading-Dwelling-Unloading					
Dwelling Time	1~99s					
Test Space	Test Height:180mm, Test Throat: 160mm					
Data Output	8" Touch Screen, Built-in Printer, RS232 Interface, Saved to U-disk in Excel Format (Measuring Software Optional)					
Weight&Dimension	Machine Net Weight : 55Kg , Machine Dimension:580x190x700mm Package Gross Weight:78Kg, Package Dimension: 800*470*800mm					
Power Supply	AC220V ± 5%, 50 to 60 HZ(110V is Available)					

Calibration Method

It can be calibrated according to the standard hardness block or length scale to make hardness value more accurately. RS-232 interface connected to computer for data output, testing result can be saved in USB (optional) in EXCEL format. bulut-in mini-printer to print testing data.



Standard Block



Length Scale

Ordering Information



One Indentor , Two Objectives

uVicky-5 Macro Vickers Hardness Tester
uVicky-10 Macro Vickers Hardness Tester
uVicky-30 Macro Vickers Hardness Tester
uVicky-50 Macro Vickers Hardness Tester
uVicky-100 Macro Vickers Hardness Tester
uVicky-120 Macro Vickers Hardness Tester



One Indentor , Three Objectives

uVicky-5-Q Macro Vickers Hardness Tester
uVicky-10-Q Macro Vickers Hardness Tester
uVicky-30-Q Macro Vickers Hardness Tester
uVicky-50-Q Macro Vickers Hardness Tester
uVicky-100-Q Macro Vickers Hardness Tester
uVicky-120-Q Macro Vickers Hardness Tester

Macro Vickers Measuring Software(Optional)

Description:

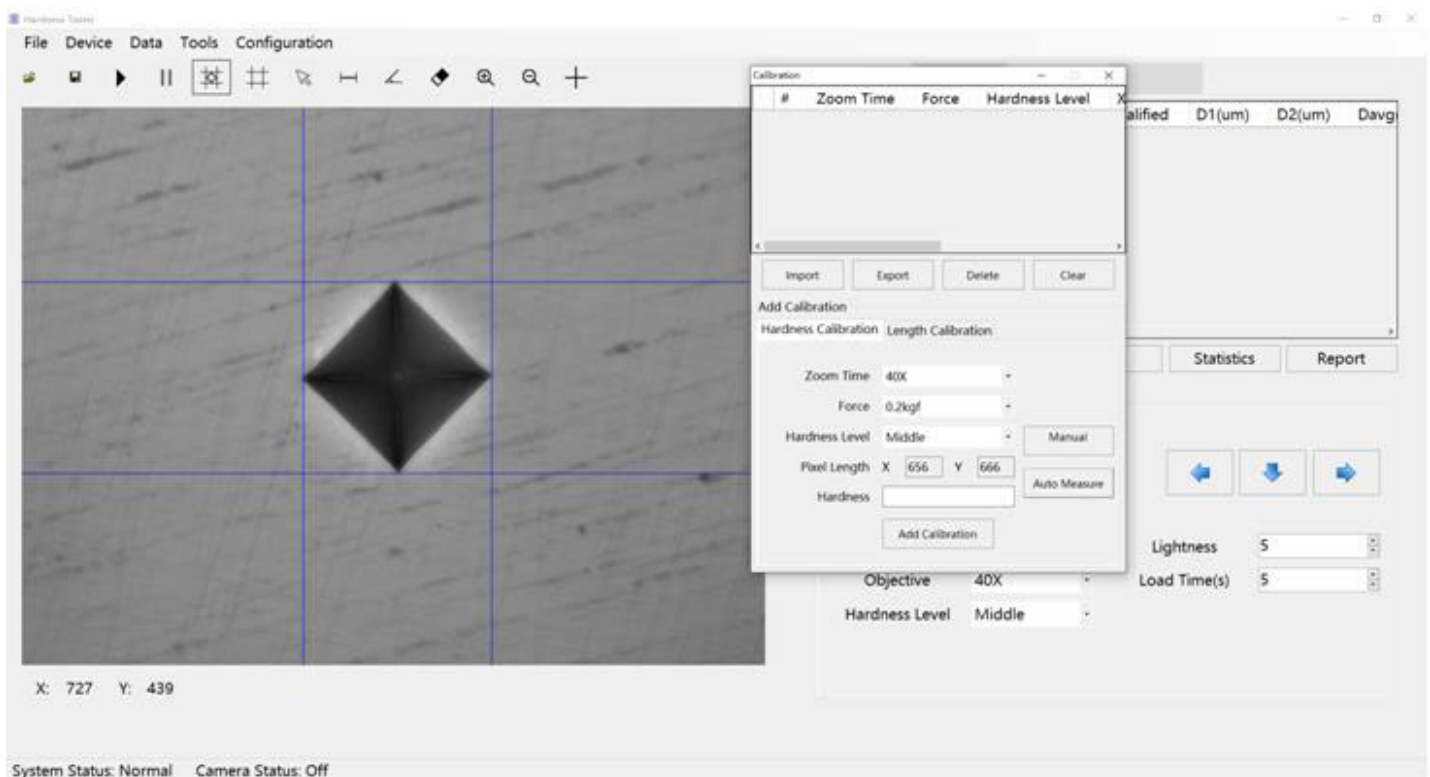
• The measuring system can be matched with a variety of Vickers hardness tester, upgrade the hardness tester to the computer measuring system.

• The measuring system is integrated with the hardness tester. Computer controlled hardness tester, such as turret, brightness adjustment (can only be used with our own automatic turret (micro) Vickers hardness tester).

• Suitable for micro and Vickers hardness tester, its maximum test force can be: 1, 5, 10, 30, 50, 120 kg.

- Image clear, indentation measurement automatic/manual measurement.
- Calibration using micrometer or hardness block calibration, automatic calibration.
- Hardness according to national standard and ASTM conversion to other hardness. Hardness value statistics and hardness beyond the alarm.

• The test report can be customized by users, and all the test data will be saved forever for easy historical query.



Standard Configuration:

Name	Description	Qty
Camera	5 million pixels	1
Adapter	Connect the machine and camera	1
USB Flash Disc	Includes software and instruction manual	1
Dongle	/	1

Packing List

Item	Quantity	Item	Quantity
10X Eyepiece	1	Large, Medium Flat Test Anvil	Each 1
Vickers Hardness Block	2	V-shaped Test Anvil	1
U disk	1	Spare Fuse (2A)	2
Power Cable	1	Dust Cover	1
Hexagon Socket Wrench (2.5mm)	1	Touch Pen	1
Product Certificate	1	Adjust Feet Screw	4
Warranty Card	1	Instruction Manual	1



Vickers Hardness Block



Vickers Hardness Block



U disk



Flat Test Anvil



V-shaped Test Anvil



Touch Pen