

# MIDLAND METROLOGY LIMITED

## 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. Automatic loading - dwell - unloading.

With automatic load correct function. Greatly improved test accuracy.

Hardness value automatically corrected according to different hardness blocks.

8" touch screen interface with menu structure. Easy to operate.

Lenses are installed to ensure the indentation of different sizes can meet the standard size in the field of view. A wide range of sample profile scanning can be carried out with low magnification.

All three objective lenses can carry out the measurement function.

Indenter and objective lens automatically switch to each other and accurately position the test point.

The machine 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 password protected.

LED illumination and Built in camera.

English language as standard.

Test data can be save to USB flask disk in EXCEL format which is easy to process and edit.

Equipped with dual optical path - one for eyepiece system and the other for the CCD camera. Both can work in conjunction with each other.

Modular design ensuring simple maintenance.

Hardness conversion function - HV hardness converts to HR, HB etc.



## Product Application

Widely used to test the hardness of all kinds of metal materials (steel, nonferrous metals, cemented carbide, sheet metal, etc.).

# Operation Interface

8"Touch screen interface with menu structure, easy to operate. English language as standard. Test setting parameters are protected by password. OK/NG judgement function. With hardness conversion function, from HV hardness value can covert to HR, HB, etc.

Measurement Scale

2

3

5

10

20

30

50

60

80

100

120

Return

Measurement Scale

0.3

0.5

1

2

2.5

3

5

10

Return

Vickers Scales Available

Vickers Scales Available

Measurement Scale

0.3

0.5

1

2

2.5

3

5

Return

Measurement Scale

0.5

1

2

2.5

3

5

10

15

20

30

Return

Vickers Scales Available

Vickers Scales Available

Measurement Scale

1

2

2.5

3

5

10

15

20

30

40

50

Return

Vickers Scales Available

# Operation Interface

Operator

Sample

Range  To

Load(kg)  Dwell Time(S)

Turret 

10X

Indenter

20X

Brightness 

↑

↓

Start

D1  D2

HV

Conversion

Reset

Data

Setting

Calibration

Magnification:

Loda(kg) :

Pulses : X  Y

Scale 

Scale Calibration

Hardness

Save

Calibration

Language

Return

Force Calibration

Standard:  kg

Measured:  kg

Enter

Return

DATA

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

Last

Next

Clean

Statistical

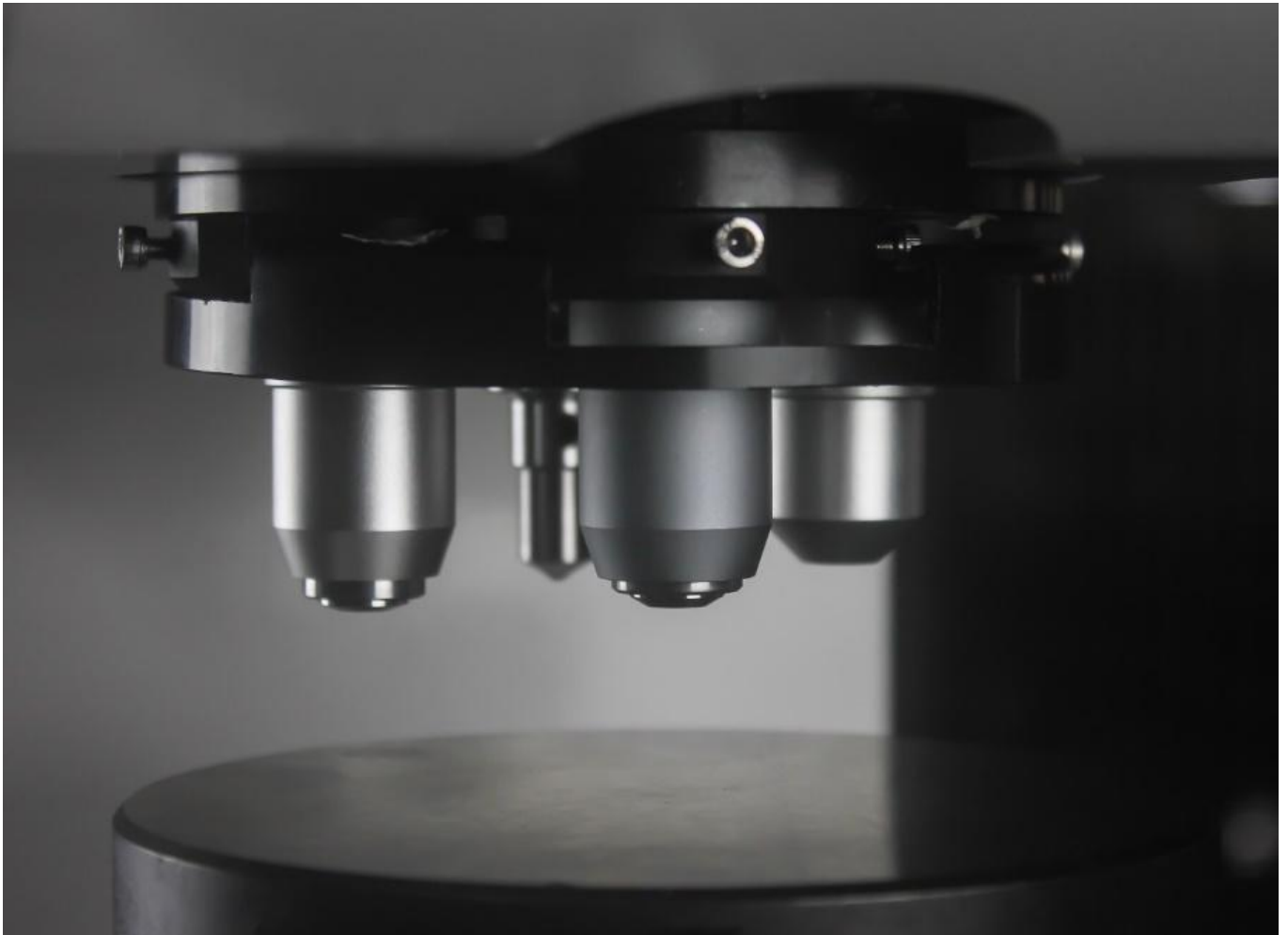
MAX	MIN	AVE	VAR

Empty

Return

# 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

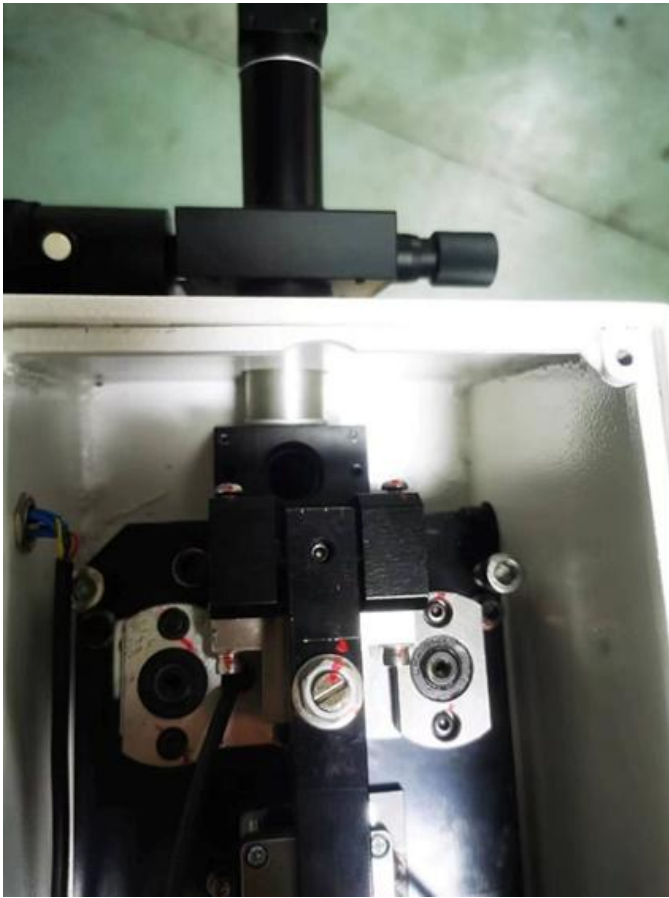


One Indentor with Three Objective Lens Realized



# User Friendly

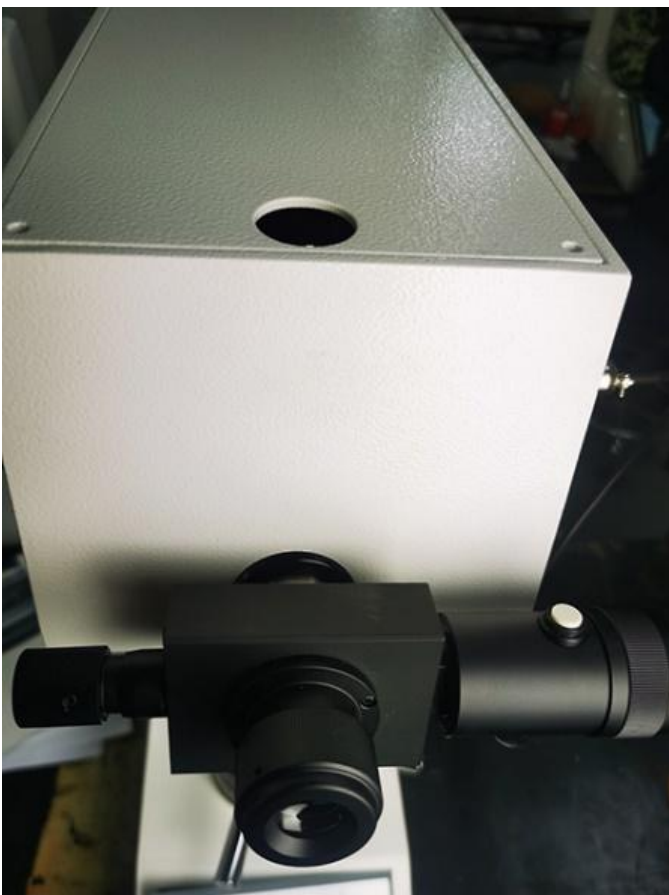
Equipped with dual optical path, one optical path for eyepiece system, another path for CCD camera, both path can working in same time, no need switch optical path rod. Greatly extend the service life of the optical system.



Dual Optical Path



Camera Built Inside

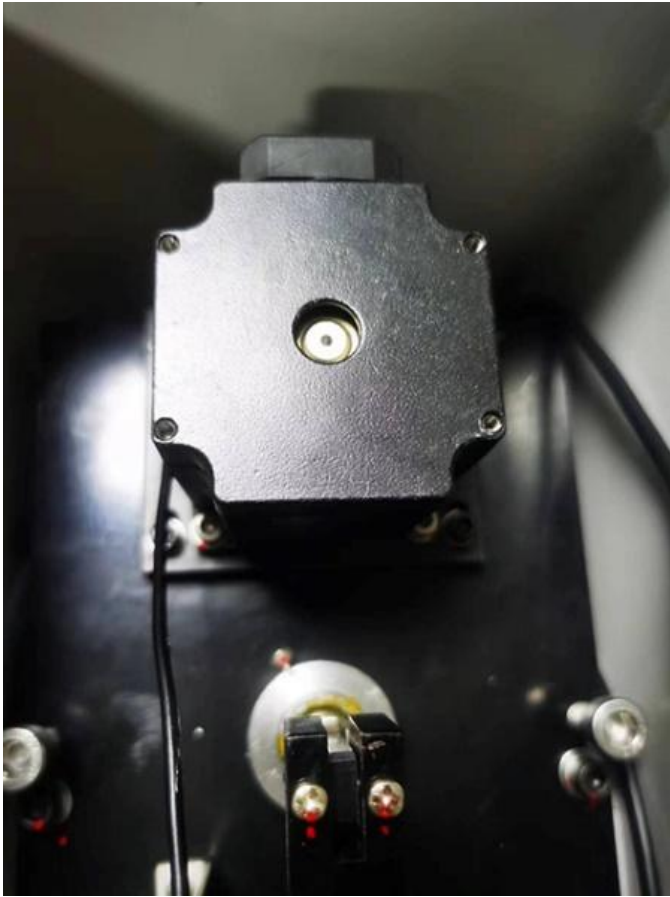


Optical Path for Eyepiece

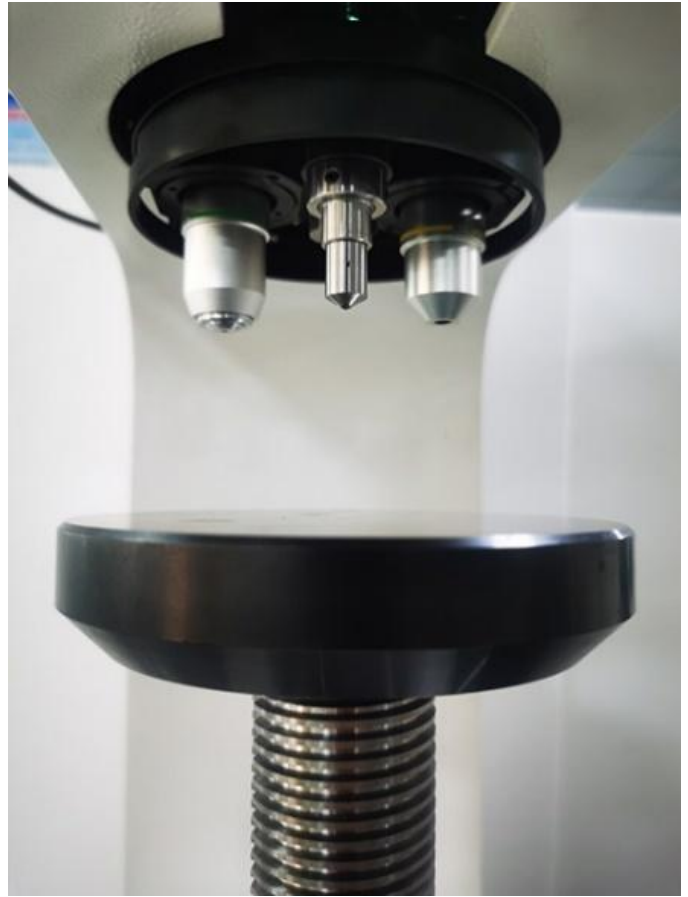


Camera Outside Path

# Machine More Detailed Photos



Closed Loop System



Closed Loop System



One Indenter with Two Objective System



Digital Eyepiece

# Machine Lifting Screw



Web:[www.midland-metrology.co.uk](http://www.midland-metrology.co.uk)

Email:[sales@midland-metrology.co.uk](mailto:sales@midland-metrology.co.uk)



# Data Output

Test data can be saved to USB flash disk as EXCEL format making it easy to edit and process. Optional RS-232 interface.



# 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
Test Force	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
	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

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

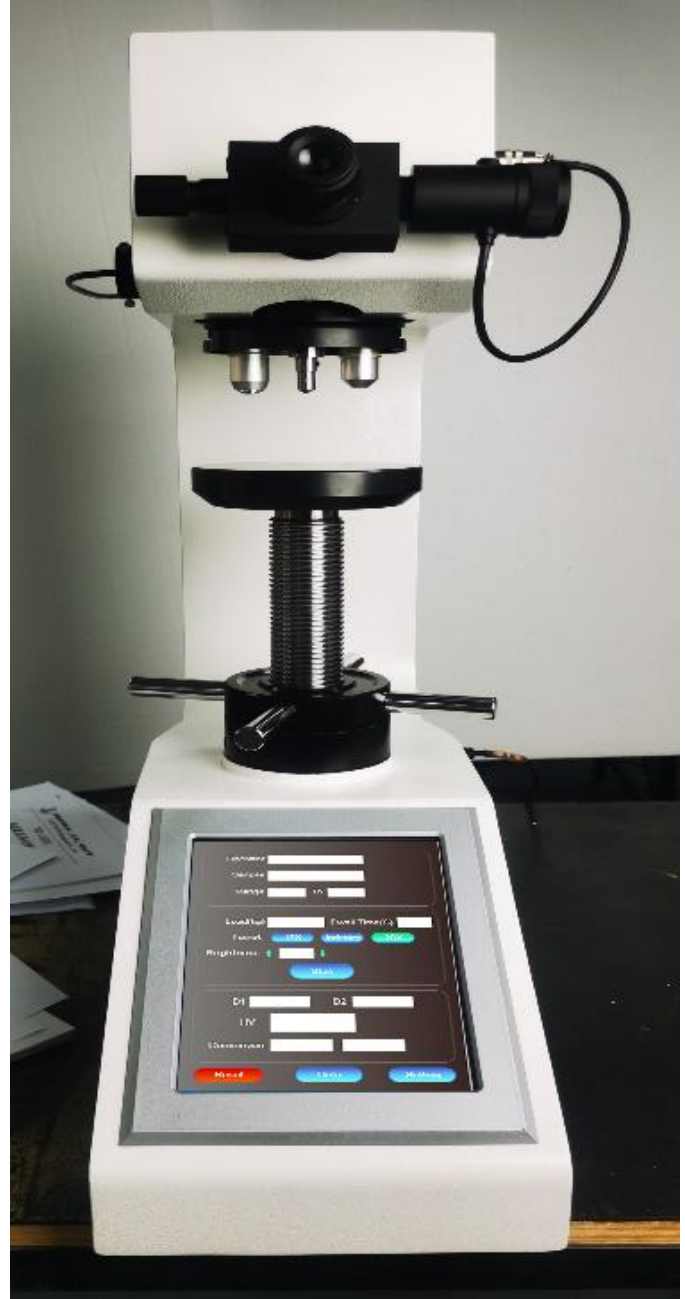
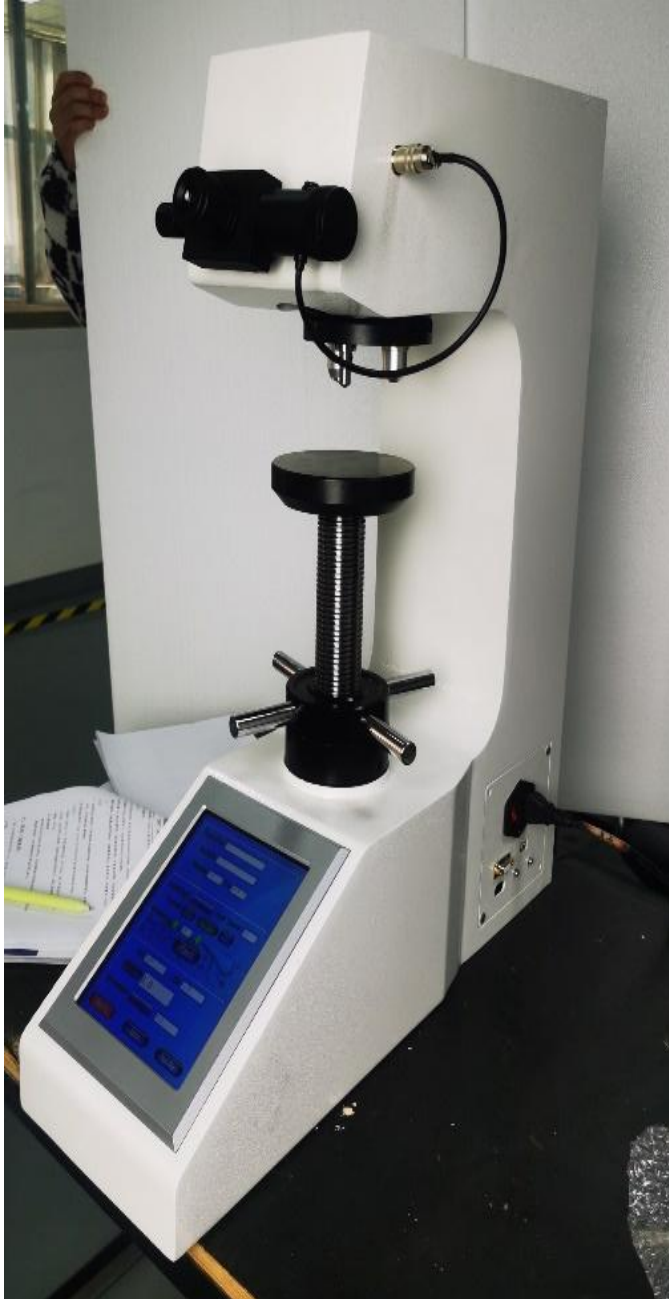


Standard Block



Length Scale

# Machine Real Photo





# 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)

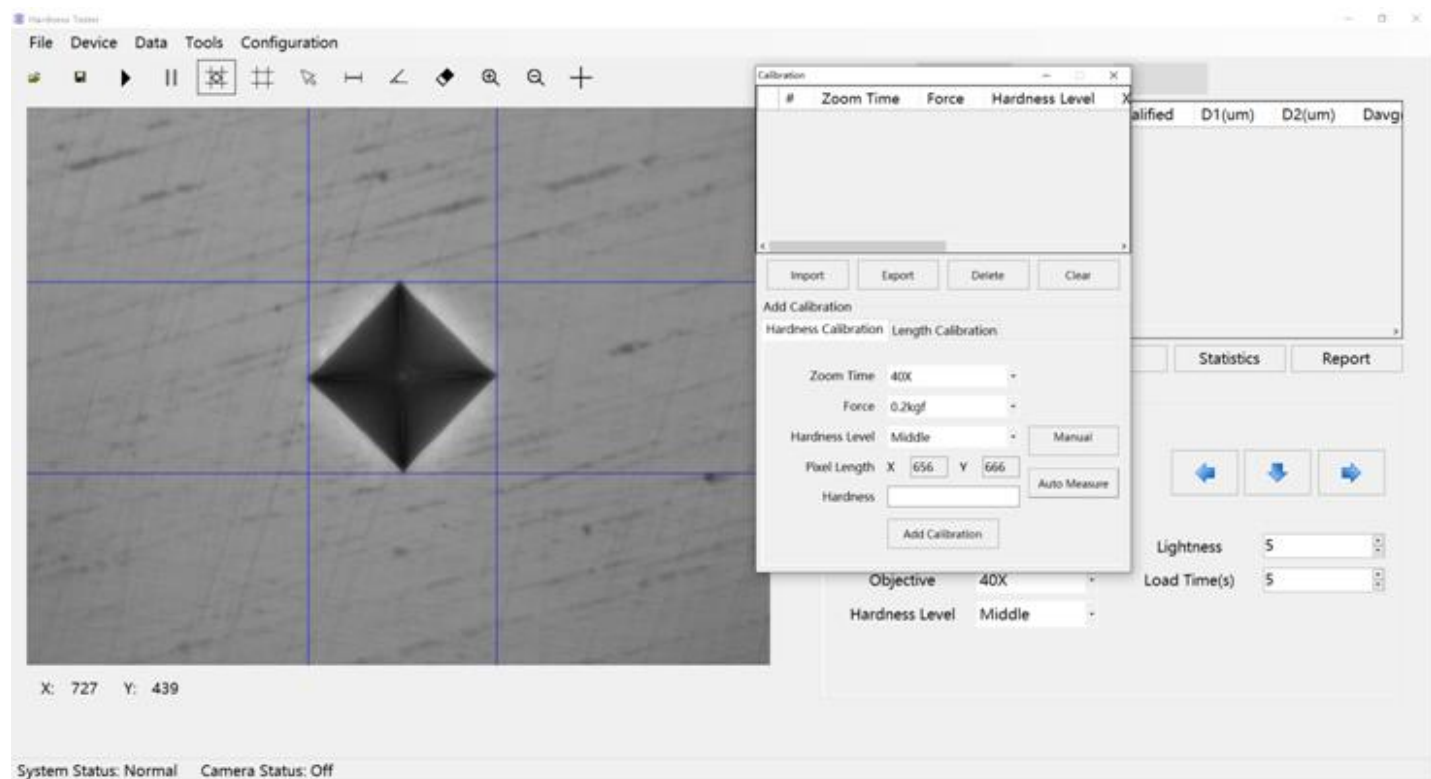
The measuring system can be matched with a variety of vickers machines.

Suitable for micro vickers and vickers hardness testers. Maximum test force can be 1, 5, 10, 30, 50 and 120Kg.

Clear image with automatic and manual measurement.

Calibration using micrometer or hardness block.

The test report can be customized by users and all test data will be saved.

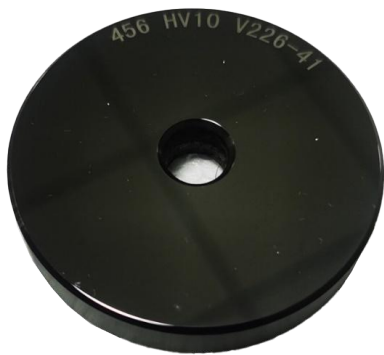


### Standard Configuration:

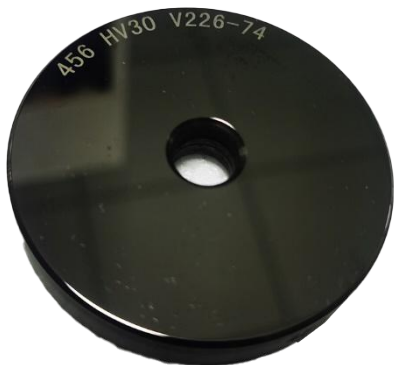
Name	Description	Qty
Camera	5 million pixels	1
Adapter	Connect the machine and camera	1
USB Flash Disc	Includes software and instruction manual	1
Dongle	/	1

# 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



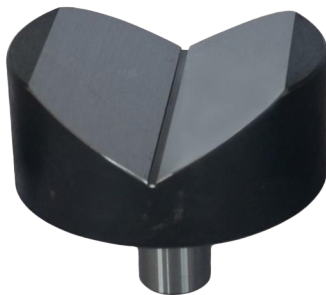
Vickers Hardness Block



U disk



Flat Test Anvil



V-shaped Test Anvil



Touch Pen