

Mikrosize®

uBRV-187.5/250 Digital Universal Hardness Tester



Contact us

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Feature and Application

Product Feature

- Equipped Brinell, Rockwell, Vickers test methods for more variable hardness scales.
- Closed-loop control system with high precision load cell, - no need to install weights.
- 8" Touch screen, easy to operate.
- Eyepiece with digital encoder, measuring D1, D2 value,
- LCD directly display D1, D2 value and hardness value.
- Directly select the hardness scale, test force automatically changes in test parameters.
- Auto test force correction, auto test force compensation, greatly improving test force accuracy.
- Can be calibrated according to standard hardness block or length scale.
- The test force can be automatically corrected by standard dynamometer.
- The hardness values of brinell, rockwell and vickers can be converted.
- Automatic hardness conversion according to standard GB/ASTM.
- Password protection for setting parameters, more samples and test information.
- U-disk of measurement data is saved in EXCEL format for easy editing and processing.



Product Application

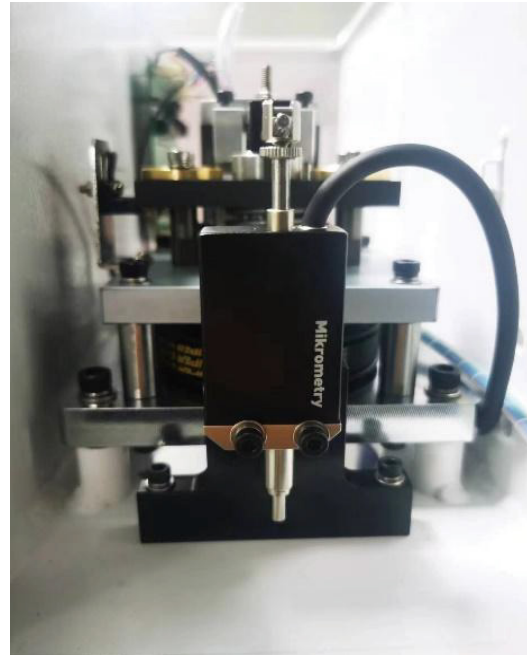
- Suitable for hardened and surface hardened steel, hard alloy steel, casting parts, non-ferrous metals, various kinds of hardening and tempering steel and tempered steel, carburized steel sheet, soft metals, surface heat treating and chemical treating materials etc.

Product Details

- Equipped Brinell, Rockwell, Superficial Rockwell, Vickers test methods for more variable hardness scales. Closed-loop control system with high precision load cell, no need to install weights.



Variable Hardness Scales



Displacement Sensor



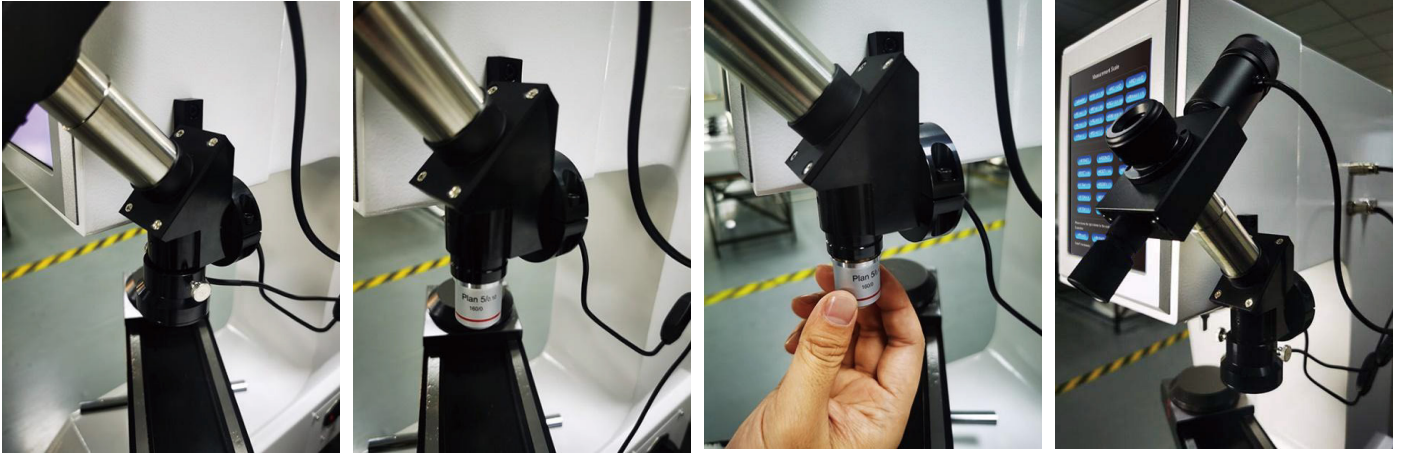
Indenter Structure



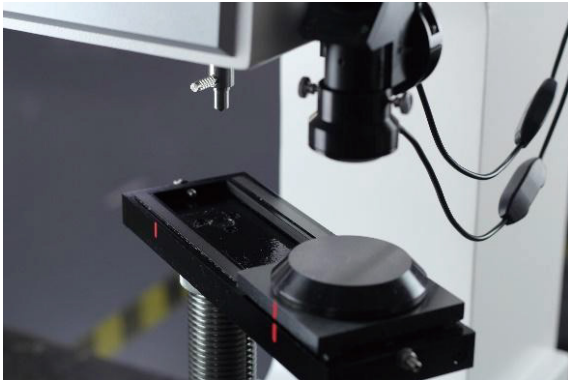
Load Cell above Indenter

Product Details

Eyeiece & Objective



Objective Structure



Objective above Test Table



Eyepiece Structure



Objective Structure



Objective Lensr

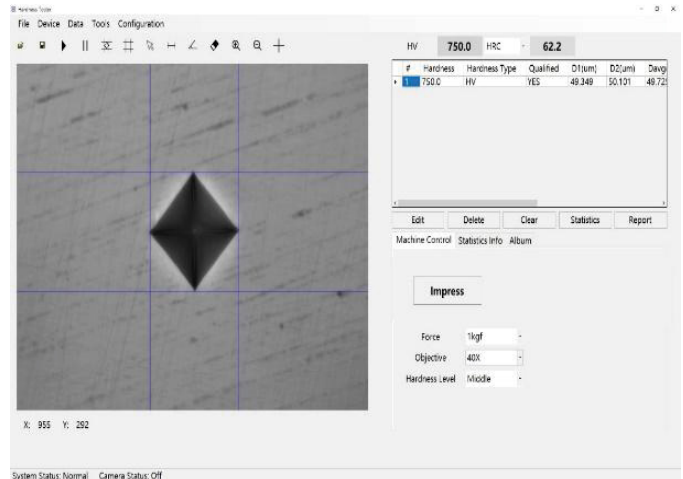
- Objective: 2.5X (for Brinell), 5X (for Vickers) (10X, 20X for optional), eyepiece: 15X. Eyepiece with digital encoder, measuring D1, D2 value, LCD directly display D1, D2 value and hardness value.

Product Details

Data Output



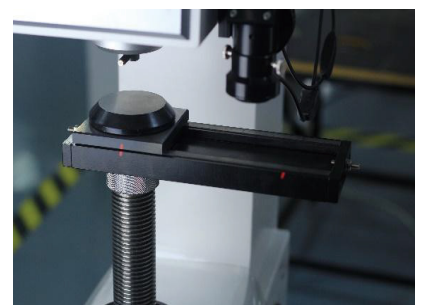
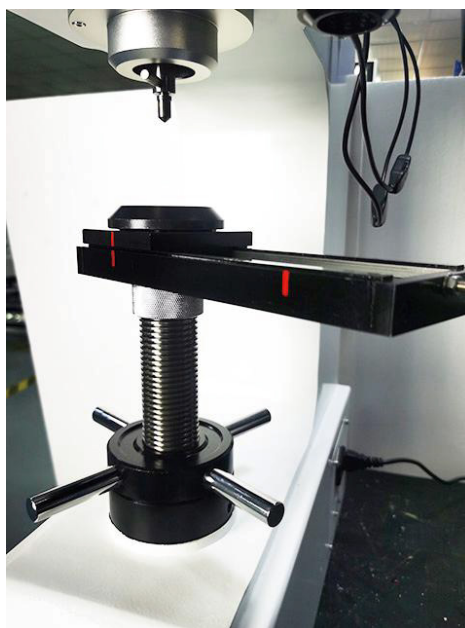
U-disk Interface



Measurement Software(Optional)

- U-disk of measurement data is saved in EXCEL format for easy editing and processing, LCD display or optional hardness measurement software.

More Detailed Photos



Operation Interface

Operator

Sample

Range To

Load(kg)

Dwell Time(S)

D1 D2

HBW

Conversion

Brinell Main Interface

Measurement Scale for the Brinell

Brinell Scale uBRV-187.5

Measurement Scale for the Brinell

Brinell Scale uBRV-250

Operator

Sample

Curvature

Range To

Hardness Type

Conversion Type Value

Dwell Time(S)

Hardness Value

Rockwell Main Interface

Measurement Scale for the Rockwell

Rockwell Scale uBRV-187.5

Measurement Scale

Please choose the right indenter for the scale you choosed.
Explanation

Scale/Force/Indentor Scale/Force/Indentor

Rockwell Scale uBRV-187.5

- 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.

Operation Interface

Operator

Sample

Range To

Load(kg)

Dwell Time(S)

D1 D2

HBW

Conversion

Vickers main interface

Measurement Scale for the Vickers

Vickers scale

Calibration

Magnification:

Loda(kg) :

Pulses : X Y

Hardness Value

Brinell,Vickers Calibration

Calibration

Scale:

Standard Hardness Value : Measured:

Low

Medium

High

Rockwell Calibration

Ordering Information



uBRV-187.5 Digital Universal Hardness Tester (Brinell , Rockwell, Macro Vickers)

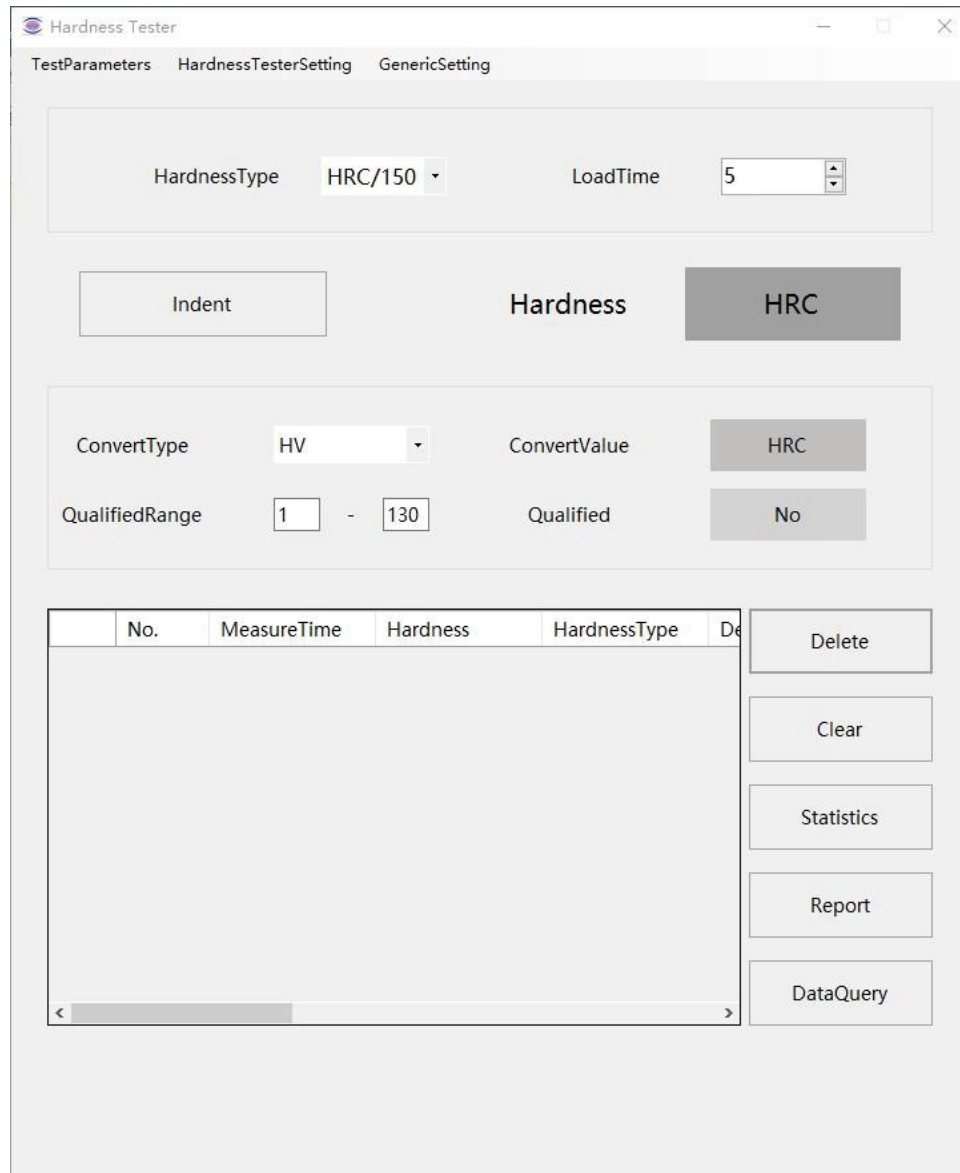
uBRRV-187.5 Digital Universal Hardness Tester(Brinell , Rockwell, Superficial Rockwell ,Macro Vickers)

uBRV-250 Digital Universal Hardness Tester(Brinell , Rockwell, Macro Vickers)

uBRRV-250 Digital Universal Hardness Tester(Brinell , Rockwell, Superficial Rockwell, Macro Vickers)

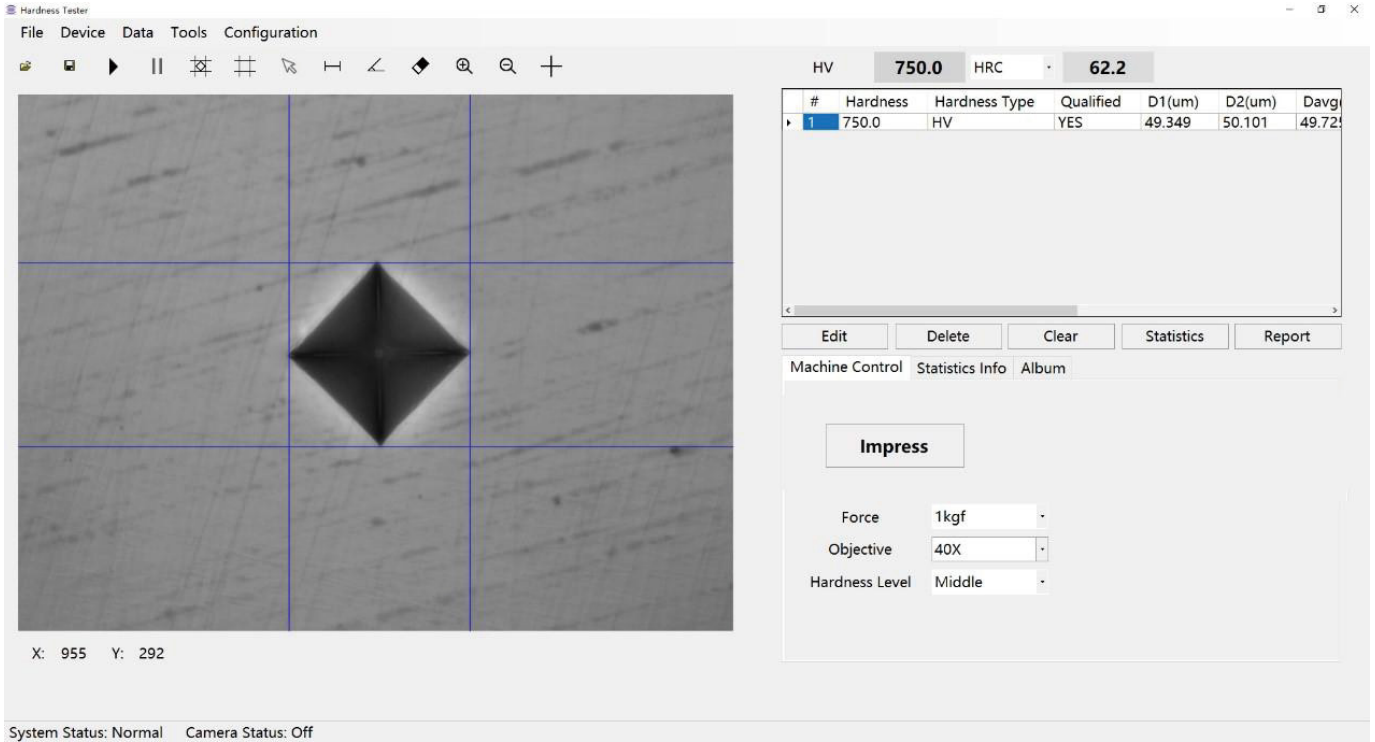
Product Details

Optional Measurement Software

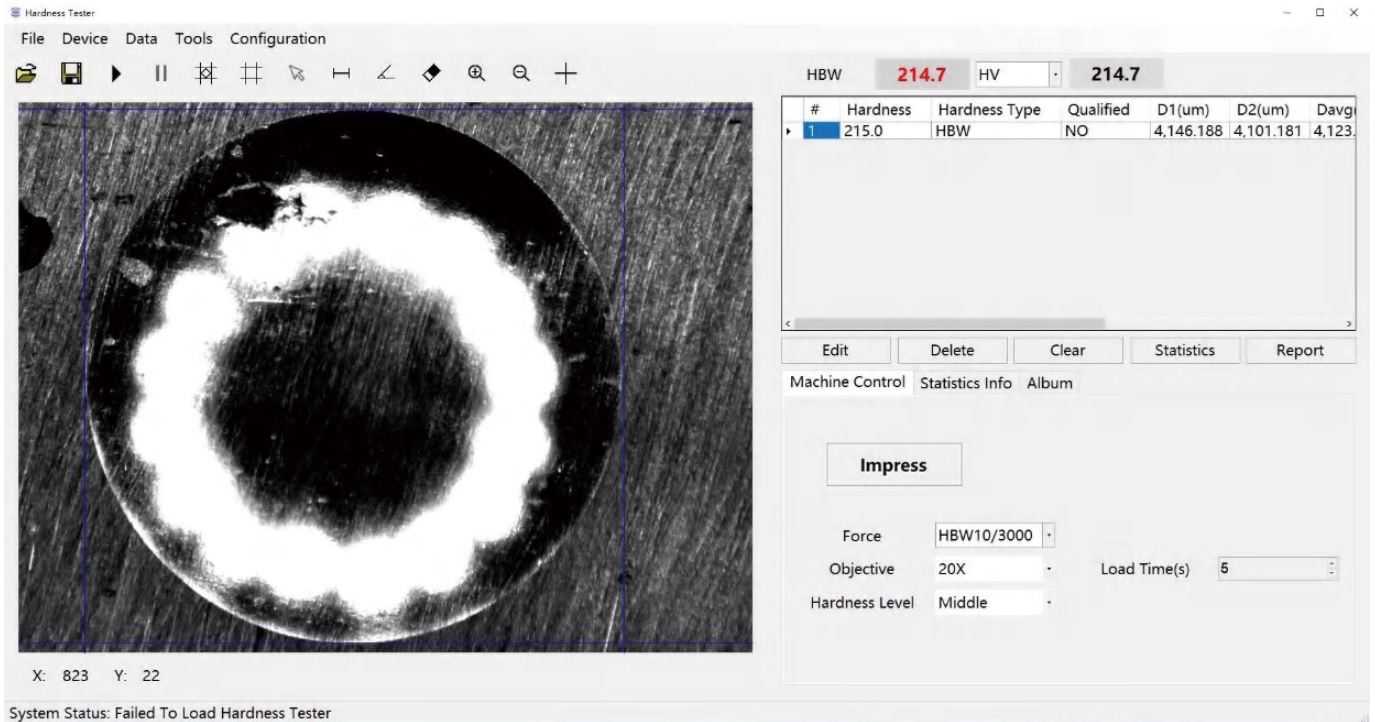


- The 1.3-megapixel camera has clear images, and the indentation measurement is automatic/manual.
- Calibration using micrometer or hardness block calibration, automatic calibration.
- Computer automatic measurement image analysis, hardness software accurate correction and gradient diagonalization.
- Hardness is converted to other hardness according to national standard and ASTM; Hardness statistics and hardness exceeding alarm.
- Automatically generate test report, all test data saved forever, easy to historical inquiry.

Product Details



Vickers Measurement Software Interface



Brinell Measurement Software Interface

Technical Specification

Model	uBRV-187.5/uBRRV-187.5	uBRV-250/uBRRV-250
Initial Test force	Rockwell: 10kgf(98.07N) , Superficial Rockwell: 3kgf(29.4N)	
	Rockwell:60kgf,100kgf,150kgf	Rockwell:60kgf,100kgf,150kgf
	Superficial Rockwell: 15 kgf, 30 kgf, 45 kgf,	Superficial Rockwell: 15 kgf, 30 kgf, 45 kgf,
Total Test force	Brinell:5kgf, 6.25kgf, 10kgf, 15.625kgf, 30kgf, 31.25kgf, 62.5kgf,100kgf, 125kgf, 187.5kgf	Brinell:5kgf, 6.25kgf, 10kgf, 15.625kgf, 30kgf, 31.25kgf, 62.5kgf,100kgf, 125kgf, 187.5kgf,250kgf
	Vickers:5kgf, 10kgf, 20kgf, 30kgf,40kgf(392N), 50kgf, 60kgf, 80kgf,100kgf, 120kgf	Vickers:5kgf, 10kgf, 20kgf, 30kgf,40kgf(392N), 50kgf, 60kgf, 80kgf,100kgf, 120kgf
Force Error	< 0.5%	< 0.5%
Brinell Scale	HBW1/5, HBW2.5/62.5, HBW1/10,HBW2.5/15.625, HBW1/30,HBW2.5/31.25, HBW2.5/62.5,HBW10/100, HBW5/125,HBW2.5/187.5	HBW1/5, HBW2.5/6.25, HBW1/10,HBW2.5/15.625, HBW1/30,HBW2.5/31.25, HBW2.5/62.5, HBW10/100, HBW5/125, HBW2.5/187.5 HBW5/250, HBW10/250
Rockwell Scale	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH,HRK, HRL, HRM, HRP, HRR, HRS, HRV	
Superficial Rockwell Scale	15N, 15T, 15W, 15X, 15Y, 30N, 30T, 30W, 30X, 30Y, 45N, 45T, 45W, 45X, 45Y	
Vickers Scale	HV5, HV10, HV20, HV30, HV40, HV50, HV60, HV80, HV100, HV120	
Hardness Resolution	0.1HBW, 0.1HR,0.1HV	0.1HBW, 0.1HR,0.1HV

Technical Specification

Indication Accuracy	Brinell: $\pm 2.5\text{HB}$, Rockwell: $\pm 0.1\text{HR}$, Vickers: $\pm 2\text{HV}$
Repeatability	Brinell: $\leq 3.0\text{HB}$, Rockwell: 0.5HR , Vickers: $\leq 2.5\text{HV}$
Magnification	Rockwell: 0.5HR , Vickers: $\leq 2.5\text{HV}$ Eyepiece: 15X, Objective: 2.5X(for Brinell), 5X(for Vickers)(10X, 20X for optional) Total Magnification: 37.5X, 75X Brinell: 37.5X, Vickers: 75X
Minimum Measuring Unit	0.1 μm
Dwelling Time	0-60s
Hardness Range	Brinell: 8~650HBW Rockwell: 20~100HR Vickers: 8~2900HV
Data Output	LCD display, U disk
Test Height	Rockwell: 350mm, Brinell /Vickers: 280mm
Test Throat	200mm
Executive Standards	ISO 6508, ASTM E-18, JIS Z2245, GB/T 230.2 ISO 6506, ASTM E10-12, JIS Z2243, GB/T 231.2 ISO 6507, ASTM E92, JIS Z2244, GB/T 4340.2
Dimensions	Machine Size: 560*350*800mm, Packing Size: 730x450x910mm
Weight	N/W: 70kg, G/W: 99kg
Power	AC220V+5%, 50-60Hz

Standard Delivery

Name	Qty	Photo
Lighting (Internal Lighting, External Lighting)	Each 1pc	/
Rockwell Diamond Indenter	1pc	
Vickers Diamond Indenter	1pc	
Eyepiece 15X	1pc	/
Sliding Test Table	1pc	/
U-disk, Touch Pen	Each 1pc	/
Level	1pc	/
Power Cable	1pc	/

Standard Delivery

Name	Qty	Photo
Certificate, Warranty Card	1copy	
Hardness Test block(HRC High, HRC Low, HRB, HBW2.5/187.5, HV30)	Each 1pc	
Brinell Carbide Ball Indenter(2.5, 5mm)	Each 1pc	
Rockwell Carbide Ball Indentor 1.5875mm	1pc	/
Objective (2.5X, 5X)	Each 1pc	/
Large, Medium, V-shape Test Anvil	Each 1pc	
Fuse 2A	2pcs	/
Adjusting Level Screw	4pcs	/
Dust-proof Cover	1pc	/