Mikrosize®

# MVicky-10

## Digital Macro Vickers Hardness Tester


## Contact us

**Mikrosize Precision Instrument Co.,Ltd**
A-4035 RuiFeng Business Expo, Wuhu City, China , 241000.
Web:www.mikrosize.com
Email: mikrosize@mikrosize.com

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# Feature and Application

## Product Feature

- MVicky-10 digital Vickers hardness tester adopts a new aluminum alloy die-casting process, with a sturdy and stable shell, novel and beautiful appearance. It adopts a direct drive loading mechanism, which has stable force and high testing efficiency. Equipped with the digital eyepiece, it can visually display the test force, indentation length, dwell time, conversion scale, date and time, etc. on the touch screen.
- During operation, simply measure the indentation and press the eyepiece button to automatically get the hardness value and display it on the screen.
- The main body adopts a new aluminum alloy die-casting process, which is sturdy and stable, novel and beautiful.
- It uses special material lifting screw, the hardness reaches 35~40HRC after heat treatment which is wear-resistant. And the worm gear and worm structure makes the lifting more stable.
- It adopts closed loop load cell loading system, and the motor is directly driven to vertically load the test force, which makes it more stable.
- The turret speed is faster and the testing efficiency is high. Both the loading motor and the turret motor are imported motors with exquisite structure, low noise, and stable performance.
- The machine body adopts a modular cover, making the maintenance more convenient.
- With three objectives for measurement, the turret realizes automatic recognition and switching between the objectives and the indenter.
- It adopts LED light source for more durable use.
  8 inch HD color touch screen, with adjustable angle, more user-friendly operation.
- Equipped with Vickers and Knoop testing modes, supporting the conversion of various hardness scales, real-time conversion and on-demand switching.
- It supports upper and lower limit settings, and provides out of tolerance discrimination prompts.
- Real time storage of hardness test results, data classification, optional deletion, automatic calculation of maximum, minimum, and average values, and equipped with RS232 interface for users to connect to PC for output.

# Feature and Application

## Product Application

- Suitable for ferrous metal, non-ferrous metals, IC thin sections, coatings, ply-metals; glass, ceramics, agate, precious stones, thin plastic sections etc.; hardness testing such as that on the depth and the trapezium of the carbonized layers and quench hardened layers.

# Product Details


| | | | |
|---|---|---|---|
| 1.Eyepiece | 2. LED Light | 3. Indenter | 4.X-Y Test Table |
| 5. Lifting Screw | 6. Emergency Stopbutton | 7. Hand Wheel | 8.Cover |
| 9. Touch Screen | 10. Objective 10X, 20X, 40X | 11. Up Cover | |


Operation interface

LED light, One indenter, Three objectives

# Interface Introduction


**1: Display the current scale and the test force. Press this area to select the test force.**
**2: Display the date and time.**
**3: Display the indentation length D1 and D2. Press the eyepiece input button to confirm the indentation length value.**
**4: Display the current hardness value.** **5: Display the recent test results.**
**6: Display the dwell time. Press to set the dwell time.**
**7: Display the total amount of the hardness results of the current scale, press to enter the data statistics interface.**
**8: Display the folder where the current data is located, press to enter the folder selection interface.**
**9: Display the real time test force.** **10: Press to get into settings interface.**
**11: Start key, press to start testing.**
**12: Press to adjust the brightness of the light source within the field of view.**
**13: Turret selection. Press to select the indenter or the objective to rotate it to the front working position.**
**14: Before the first startup measurement, adjust the engraved line inside the eyepiece and press this key to set zero.**
**15: Display the hardness value of conversion scale. Press to select the other conversion scale.**

# Technical Specification

| | | |
|---|---|---|
| **Model** | | MVicky-10 |
| **Test Force** | **Kgf** | 0.3kgf, 0.5kgf, 1kgf, 2kgf, 2.5kgf, 3kgf, 5kgf, 10kgf |
| | **N** | 2.94N,4.90N, 9.80N, 19.6N, 24.5N, 29.4N, 49N, 98N |
| **Test Mode** | | HV/HK |
| **Test Range** | | 1HV~3000HV |
| **Hardness Resolution** | | 0.1HV |
| **Loading Method** | | Automatic (Loading/Dwell/Unloading) |
| **Turret** | | Automatic Shifting |
| **Data Output** | | RS232 Interface |
| **Hardness Reading** | | 8 inch Color Touch Screen, Automatic Data Storage |
| **Conversion Scale** | | HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRHW, HRKW,HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HV, HK,HS, HBS, HBW, HLD |
| **Data Storage** | | 6 folders, each 1000 sets data |
| **Eyepiece** | | 10* Digital Measuring Eyepiece |
| **Objective** | | $10^x$,$20^x$,$40^x$ |
| **Total Magnification** | | $100^x$,$200^x$,$400^x$ |
| **Effective Field of View** | | $10^x$: 800um, $20^x$: 400um, $40^x$: 200um |
| **Min. Measuring Unit** | | $10^x$: 0.25um, $20^x$: 0.13um, $40^x$: 0.06um |
| **Dwell Time** | | 0~99s |
| **Light Source** | | LED |
| **Digital X-Y Test Table** | | Size: 120x120mm; Travel: 25x25mm; Resolution: 0.001mm |
| **Max. Sample Height** | | 175mm |
| **Throat Depth** | | 140mm |
| **Power Supply** | | AC220V,50Hz |
| **Execute Standard** | | GB/T 4340, ISO 6507, ASTM E92, JIS Z2244 |
| **Dimension** | | 495x575x670mm |
| **Net Weight** | | 35kg |

# Standard Delivery

| Name | Qty | Photo |
|---|---|---|
| Instrument Mainframe | 1set | / |
| 10* Digital Measuring Eyepiece | 1pc | / |
| Standard Hardness Block | 2pcs | / |
| Level | 1pc | / |
| Screw Driver | 2pcs | / |
| Power Cable | 1pc | / |
| Usage Instruction Manual | 1copy | / |
| Accessory Box | 1pc | / |
| Horizontal Regulating Screw | 1pc | / |
| Inner Hexagon Spanner 2.5mm,3mm | 4pcs | / |
| Fixed Reflection Polarizer | each 1pc | / |
| Fuse 1A | 2pcs | / |
| Anti-dust Cover | 1pc | / |