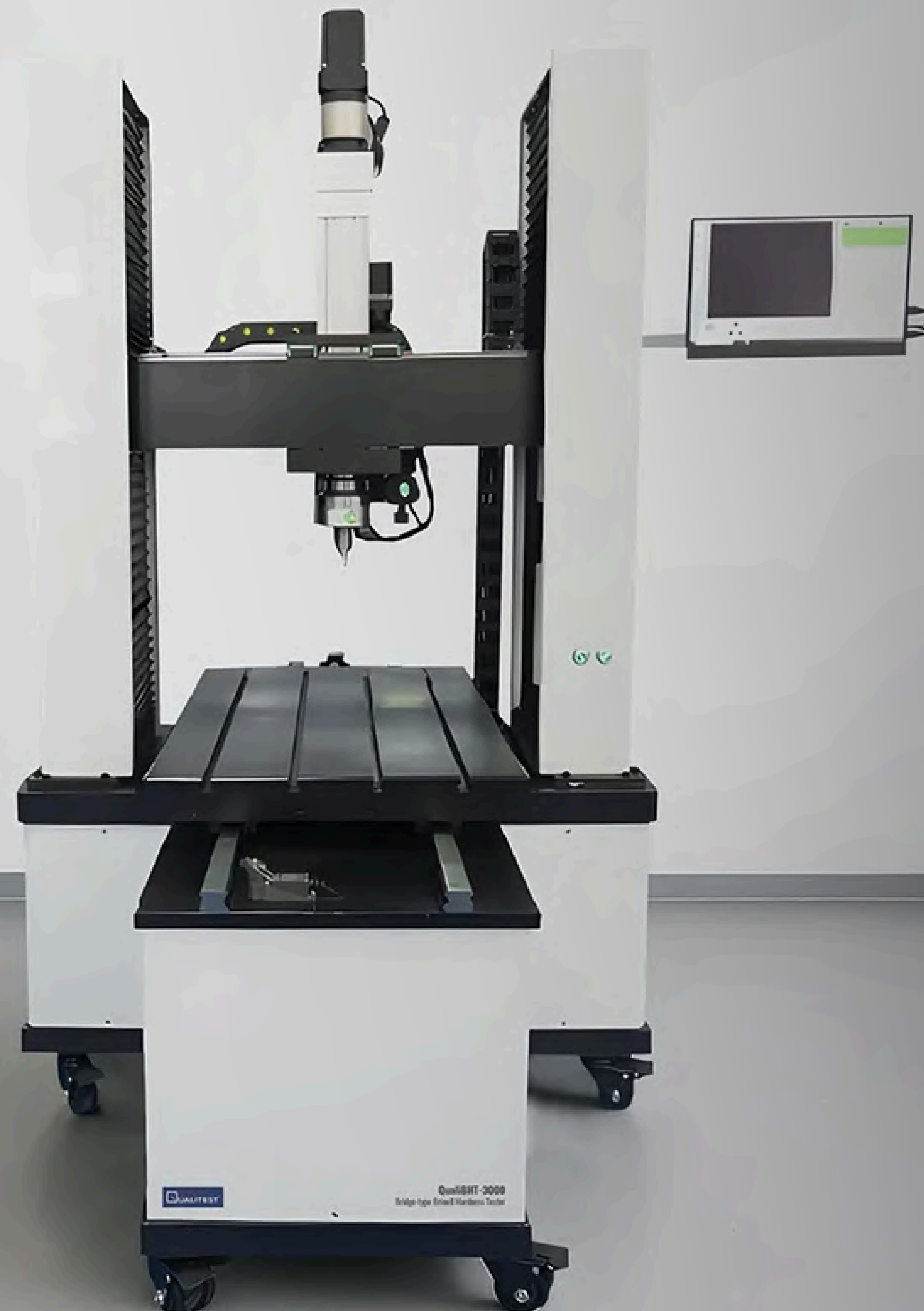




# BRIDGE-TYPE BRINELL HARDNESS TESTER

QualiBHT-3000



# Bridge-type Brinell Hardness Tester

## QualiBHT-3000

The QualiBHT-3000 Bridge-Type Brinell Hardness Tester is **engineered for precise hardness testing of a wide range of materials, including ferrous and non-ferrous metals, alloys, and various steel types**. Utilizing the Brinell method, which provides the largest indentation among standard tests, it offers high sensitivity to internal material inconsistencies and delivers accurate results across a range of **5–650 HBW**.

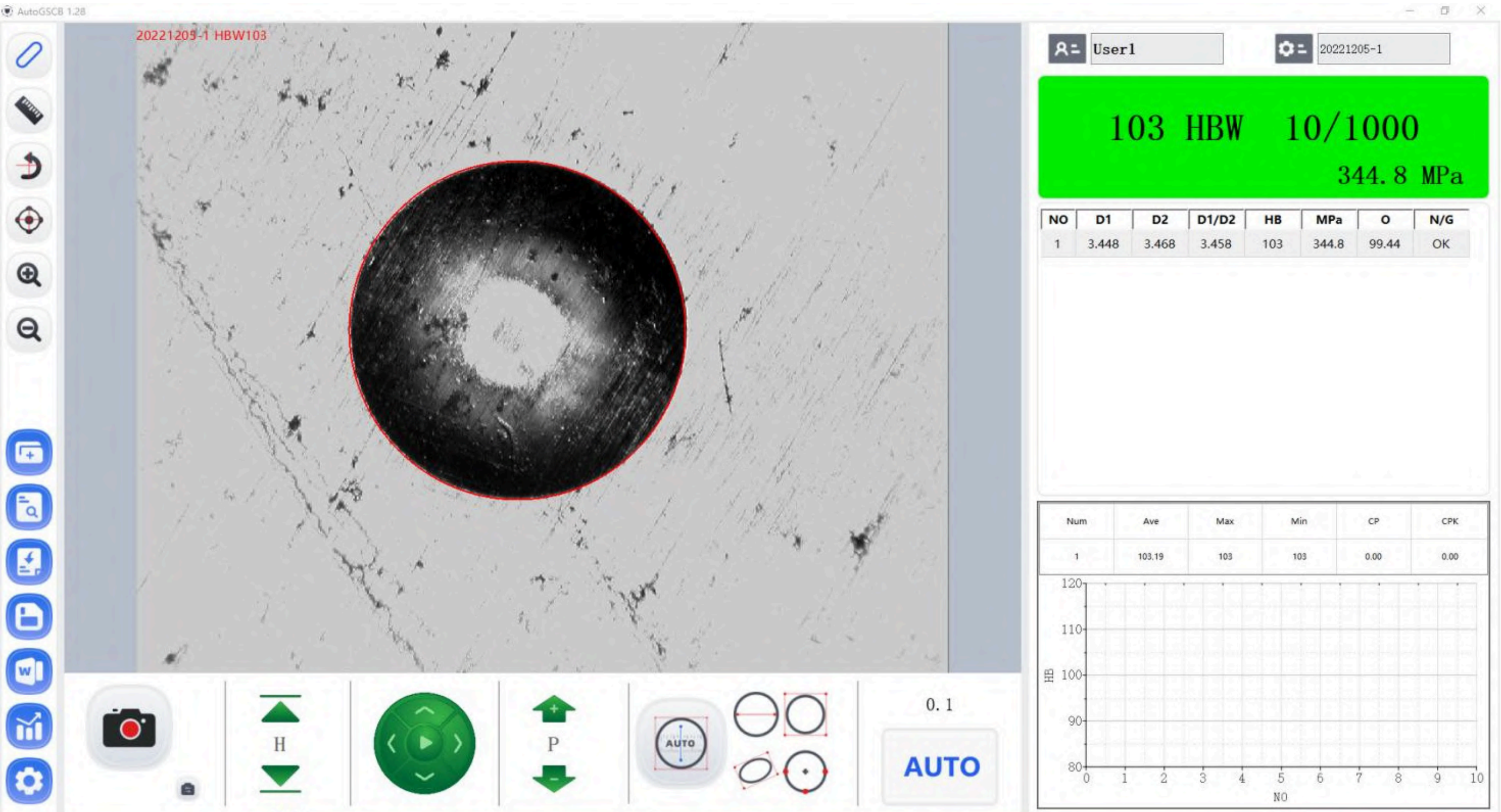
The system features a rigid frame for stability, a servo-driven movable worktable, and an advanced lifting mechanism with ball screws and guide rods for smooth vertical adjustments. Equipped with image-based measurement and a CNC control unit, the tester allows for automated, computer-controlled operation, making it ideal for testing large or irregularly shaped workpieces with consistent precision.





# CONTROL SYSTEM & SOFTWARE OPERATING

The numerical control system is composed of several integrated components, including a PLC, servo motor, driver, load sensor, and signal converter. During operation, the load sensor continuously monitors the applied force and transmits real-time data to the control board. The control board then processes this input to precisely adjust the servo motor’s movements, ensuring the test force remains stable and accurate. This closed-loop control mechanism allows the system to automatically correct any deviations, maintaining the applied force within a tightly defined tolerance range for consistent and reliable test results.



# AUTOMATIC MEASUREMENT SYSTEM

## High-Resolution Imaging & Touchscreen Control

Features a 500W pixel CMOS industrial camera (Sony chip) mounted on the beam, paired with an all-in-one touchscreen computer for intuitive control and real-time feedback.

## Flexible Measurement & Hardness Conversion

Supports multiple automatic measurement methods, including full-circle and three-point options, with full compatibility across standard hardness scale conversions.

## Integrated Data Storage & Smart Search

A large-capacity database saves all test results and images automatically, with advanced query functions by operator, time, product name, and other parameters.

## Customizable Report Output & Printing

Enables easy export of test reports in Word or Excel format, with support for direct printing via external printers for streamlined documentation.

## USB & Network Connectivity for Expansion

Includes USB and Ethernet ports for external device access, allowing seamless integration with networks and extended data management options.



# FEATURES/ADVANTAGES

## Versatile Testing Capabilities

The tester supports 10 levels of test force and 13 Brinell hardness scales, suitable for various metal materials. The scale can be easily switched with a single input and is compatible with three ball indenters for flexible testing.

## Reliable and Efficient System Design

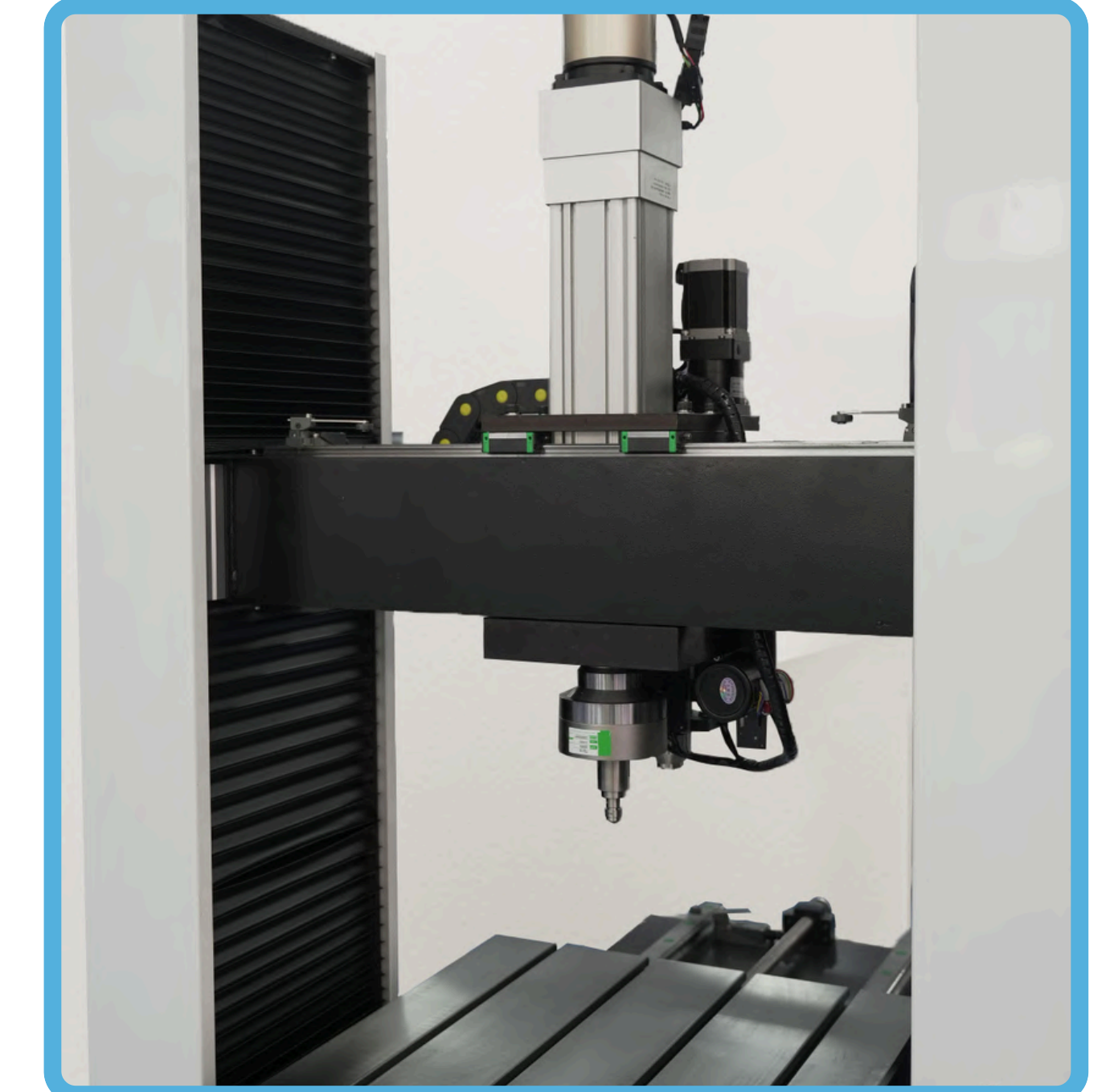
Utilizes a standard industrial-grade electric cylinder for loading, ensuring high efficiency and a low failure rate. The system also includes a microcomputer running Windows 10 for full PC control and functionality.

## Fully Automated and Accurate Measurement

Equipped with an integrated image processing system and servo motor-driven lifting mechanism, it delivers high-precision automatic measurements with smooth operation, low noise, and fast response.

## Smart Operation and Data Management

Features wireless remote control for easy operation, supports data storage with automatic max/min/average calculations, and allows selective deletion of test results for better data management.





# TECHNICAL SPECIFICATIONS

| SPECIFICATION                | DETAILS                                                                                                                                              |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                        | QualiBHT-3000                                                                                                                                        |
| Test Force                   | 612.9N(62.5kg), 980.7N(100kg), 1226N(125kg), 1839N(187.5kg), 2452N(250kg), 4903N(500kg), 7355N(750kg), 9807N(1000kg), 14710N(1500kg), 29420N(3000kg) |
| Indenter Type                | Hard alloy ball diameter: $\varnothing$ 2.5mm, $\varnothing$ 5mm, $\varnothing$ 10mm                                                                 |
| Loading Method               | Automatic (fully automatic loading, dwell, unloading)                                                                                                |
| Operation Mode               | Automatic press, test, one key complete                                                                                                              |
| Hardness Reading             | Computer digital screen to obtain hardness value                                                                                                     |
| Dwell Time                   | 1-99s                                                                                                                                                |
| Max Height of Test Piece     | 500 mm                                                                                                                                               |
| Distance Between Two Columns | 600 mm                                                                                                                                               |
| Language                     | English & other                                                                                                                                      |
| Effective Field of View      | 6mm                                                                                                                                                  |
| Hardness Resolution          | 0.1HBW                                                                                                                                               |
| Min. Measuring Unit          | 4.6 $\mu$ m                                                                                                                                          |
| Camera Resolution            | 500W pixel                                                                                                                                           |
| Voltage                      | 380V,50HZ/480V,60HZ                                                                                                                                  |
| Machine Dimension            | 1200 x 900 x 1800mm                                                                                                                                  |
| Net Weight                   | 1000Kg (2204 lbs)                                                                                                                                    |





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## Connect with us

Contact our **QualiTeam** today to find out how we can help your organization **select the most suitable testing solution** for your application, requirements, and budget.

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