

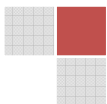
# Hydraulic Brinell Hardness Tester

**Brand: JNG**

**Model: JG-178H**



**(Photo for reference only)**



## Principle of Instrument

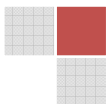
Using hydraulic principle, manual operation produces 3000kg test force. The core component is a small hydraulic system. There is a control valve in the hydraulic system to control the test force. Whenever the test force reaches 3000kg, the control valve opens and the pressure drops. According to the provisions of the American standard ASTM E110, the force should be applied 3-4 times repeatedly, so that the pointer of the pressure gauge can reach 3000kg 3-4 times, which is equivalent to the provisions of the Brinell hardness test method for 3000kg test force, 10mm ball and 10-15 seconds.

## Features

- ✓ Site test can be used in the workshop, simple operation, easy to carry, can test the hardness of large parts on site, and can be used for piece-by-piece inspection.
- ✓ Permanent indentation with 3000kg test force, 10mm ball, permanent indentation can be used for re-inspection.
- ✓ High reliability is completely tested according to the principle of Brinell hardness test, which is the same as the principle of desktop Brinell hardness tester, which can truly reflect the mechanical properties of materials or parts.
- ✓ High precision test force accuracy in line with GB, ISO, ASTM and other relevant standards, the same hardness test accuracy and desktop.
- ✓ As long as the instrument can clamped, parts of any shape and size can be tested.
- ✓ Wide range can choose a variety of test force, a variety of ball indenter, wide range, can test a variety of common metal materials.

## Application Specification

- ✓ Used for field testing of steel, non-ferrous metals, castings, forgings and semi-finished heat treated parts.
- ✓ It can be used for various large parts that cannot be tested by desktop computers, and can replace the Richter hardness tester with low accuracy and reliability in a wide range of manufacturing fields.
- ✓ The measured Brinell hardness indentation can be directly read by the Brinell indentation automatic measurement system.



### Technical Specification

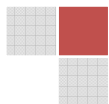
- ✓ Test force 3000kg(1000kg, 750kg, 500kg optional)
- ✓ Indenter 10mm carbide ball (5mm optional)
- ✓ Test range 32 ~ 650HBW
- ✓ Opening size height 350mm × throat depth 100mm
- ✓ Indication error conforms to GB, ISO, ASTM and other relevant standards
- ✓ The repeatability of the indication value conforms to GB, ISO, ASTM and other relevant standards.
- ✓ Test force error  $\leq 1\%$ , in line with GB, ISO, ASTM and other relevant standards
- ✓ Weight 13.8kg

### Standard Configuration

- ✓ Main Machine
- ✓ Extension Handle
- ✓ Brinell Hardness Block
- ✓ Work Bench (Flat, V type, point type)
- ✓ 20X Reading Microscope
- ✓ 10mm Spare Carbide Ball


### Standard Configuration

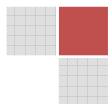
- ✓ Brinell Hardness Block (High value, Low value)
- ✓ Carbide Ball (5mm, 10mm)
- ✓ Maintenance & Repair Parts (oil, capsule, O-rings, etc)
- ✓ Service Aid
- ✓ Automatic measurement system for Brinell indentation
- ✓ Rechargeable Angle Grinder



## Optional: Brinell Indentation Optical Measurement System

### Product Features:

- ✓ The existing Brinell hardness tester mostly uses the traditional mechanical reading microscope to measure the Brinell indentation. The reading microscope has higher requirements for the operator's visual reading skills. The reading process is easily affected by environmental factors, resulting in reading value errors. After reading the indentation diameter, the indentation value needs to be manually recorded. After at least two measurements are taken to obtain the average value, the corresponding Brinell hardness value is found by manually checking the hardness comparison table.
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- ✓ Brinell hardness indentation measurement system BrinScan is an automatic Brinell hardness indentation optical measurement system developed based on Windows operating system. It can be used with any Brinell hardness tester on the market to replace the traditional mechanical reading microscope and automatically measure the Brinell hardness value of the sample.
  - ✓ Brinell hardness indentation measurement system BrinScan adopts advanced machine vision technology. The indentation left by the sample after the Brinell hardness tester is loaded with test force is photographed through a portable digital microscope, which can distinguish the indentation image in complex background and measure the Brinell hardness value of the sample. In the process of measurement, there is no need to judge the edge of the indentation, no need to record the indentation length data, no need to find the hardness comparison table, automatic measurement, automatic recording, automatic storage, and automatic generation of hardness test chart.
  - ✓ Professional testers of Brinell hardness indentation measurement system use mechanical reading microscope to manually measure hardness for about 2 minutes at a time. Multiple transmission errors will occur in the measurement process and the measurement efficiency is very low. However, BrinScan Brinell hardness indentation measurement system can easily measure indentation within 1 second without any professional and technical personnel, from the chairman of the company to the newly hired general worker.



### Product Application:

The Brinell Hardness Indentation Measurement System, BrinScan can be used in the laboratory or with a Windows tablet or laptop for use on the production site.

### Technical Parameters

Item	Details
Camera field View	3.3 x 2.2mm
Measurement Range	8 – 650HBW
Indentation Resolution	0.01mm
Hardness Resolution	1HBW
Measurement Accuracy	±1% (HBW 10/3000)
Compatible Indenter	5mm and 10mm steel ball indenter
Indentation Length	1.2 – 6.0mm
Operation System	Win7, Win8, Win10

