



NOVOTEST

Digital Brinell Hardness Tester NOVOTEST TB-B-CM



Datasheet

2022

1. Introduction

Digital Brinell Hardness Tester NOVOTEST TB-B-CM implements direct resistance to indentation under Brinell method of hardness testing in accordance with ISO 6506-2 and ASTM E10.

Application

Brinell hardness tester is used for:

- hardness testing of metal products by the Brinell scales;
- hardness testing of metals with different properties without additional calibrations;
- coarse-grain metal materials (cast iron, casted parts, non-ferrous metals and alloys);
- non-hardened steel;
- various tempered steels, hardening and tempering steels;
- products from soft metals (pure aluminum, lead, tin) and soft alloys;
- quality testing of heat treated metal parts;
- verification of calibration hardness test blocks;
- production of hardness test blocks, which can be used for calibration of portable hardness testers

Description

Digital Brinell hardness tester provides automatic electronically controlled values of loading, which allows user to simplify operations with the device, and significantly increases the accuracy and productivity of testing. Bench Digital Brinell Hardness Tester NOVOTEST TB-B-CM has high measuring accuracy, wide range of applicability in measurements.

Digital Brinell Hardness Tester NOVOTEST TB-B-CM has fully automatically test cycle: loading, dwell and unloading. As a result, the operator errors don't influence on measuring.

Motorized indenter and electronic control system allow making measurements of high accuracy. Absence of mechanical weighs reduce problems of friction and vibration sensitivity of the tester.

Also, Digital Brinell Hardness Tester NOVOTEST TB-B-CM is equipped with high-precision optical microscope for imprint-size estimation.

Imprint diameter is measured manually by the built-in microscope, then operator inputs data and see ready hardness value on LCD screen. Operating is very easy, fast and convenient, no manual tables are used..

Motorized indenter and electronic control system allow making measurements with high accuracy. Absence of mechanical weighs reduce problems of friction and vibration sensitivity of the machine.

2. Specifications

2.1 Advantages

- 10 test loads
- Has a function of loading the time of exposure, and it also has a setting of more accurate load
- Easy to change the hardness scale
- Automatic controlling the force of load
- Easy in operation

2.2 Specifications

Indenter	Hard alloy ball indenters (2,5; 5 and 10mm)
Scales	<ul style="list-style-type: none"> •HBW2.5/62.5 •HBW2.5/187.5 •HBW5/62.5 •HBW5/125 •HBW5/250 •HBW5/750 •HBW10/100 •HBW10/250 •HBW10/500 •HBW10/1000 •HBW10/1500 •HBW10/3000
Conversion to other scales	Automatically to Rockwell and Vickers scales
Testing load	<ul style="list-style-type: none"> •62.5kg (612.9N) •100kg (980.7N) •125kg (1226N) •187.5kg (1839N) •250kg (2452N) •500kg (4903N) •750kg (7355N) •1000kg (9807N) •1500kg (14710N) •3000kg (29420N)
Testing materials	<ul style="list-style-type: none"> •Steel and cast iron •Coarse-grain metal materials (casted parts, non-ferrous metals and alloys, copper and copper alloys) •Tempered steels, hardening and tempering steels •Soft metals (pure aluminium, lead, tin) and others
Hardness range	8-650 HB
Measuring time	5~60 s
Microscope zoom	20X
Microscope accuracy	0.000625 mm (0.626 um)
Minimum size of testing products	0.000625 mm (0.626 um)
Max height of test sample	185 mm (can be produced another model up to 500 mm)
Max depth of test sample	135 mm (can be produced another model up to 200 mm and with 500mm height)
Data output	<ul style="list-style-type: none"> •LCD •Built-in printer •RS-232 interface
Power supply	220V±5%, 50~60Hz

2.2 Specifications

Recommended operating conditions	•Air temperature: 0...+40 °C •Air pressure: 94 – 106.7 kPa •Humidity: up to 65%
Net weight	130 kg
Gross weight	140 kg
Package dimensions	670*470*866 mm (L*W*H)

2.3 Available options

- Indenters
- Standard hardness test blocks
- measuring microscope
- 20X lens
- Large testing table (15cm)
- Medium testing table (8cm)
- V-shaped testing table (10cm)
- Other kinds of power supply
- Bolt adjustor
- Power cable
- Fuse
- Hardness testers can be equipped with a system of scanning of imprints, which allows operator to get imprint on PC monitor and, as a result, to measure it easily.

2.4 Standard package

- Brinell Hardness Tester NOVOTEST TB-B-CM
- Hard alloy steel ball indenters (d=2.5; 5 and 10 mm – 3 pcs. in total)
- Built-in measuring microscope
- 20X lens
- Large testing table (20cm)
- Medium testing table (6cm)
- V-shaped testing table (8cm)
- Brinell hardness test blocks (3 pcs. in total)
 - HBW/3000/10(150~250) – 1pc.
 - HBW/1000/10(75~125) – 1pc.
 - HBW/187.5/2.5(150~250) – 1pc.
- Bolt adjustor (4 pcs.)
- Power cable
- Fuse (2pcs.)
- Operating manual
- Calibration certificate
- Transportation box