

Hardness Testers – Measuring Quality

AXE 440 – B



Designed to perform Rockwell and superficial Rockwell hardness tests, Brinell and to generate Vickers indentation.

In full compliance with international reference standards, including ASTM e ISO.

Axiotek patented laser system

The instrument is equipped with a **laser centering device (L.I.S.A.)** whose purpose is to **identify the exact point where the indenter generates the indentation**. The operation is very simple: the pointer projects two laser beams that collide in the same position thus identifying with extreme precision the center of the indentation that will be generated.

Versatile and intuitive software

- Automatic identification of proper load for each hardness scale available;
- Test times setup – from 0.0 to 99.9 sec;
- Hardness value status against selected tolerances;
- Automatic conversion of results into different selectable hardness scales;
- RS 232 C data output for computers/printers connection;
- Results and data storage (up to 3500), test data processing (statistics, test reports, standard deviations, diagrams, histograms);
- 0.1 HR results resolution;
- Automatic correction of results on round samples;

Completely automatic test cycle

Simply position the sample to be tested on the anvil and press the **START** button. **The test cycle is performed automatically:** the indenter generates the indentation and the hardness value appears on the digital screen.

Extreme performances

Secure contact with the specimen is always maintained, even in the unlikely event of any specimen movement during the operation cycle. The clamping system assures perfect stability of any test piece throughout the test cycle, even if it is oiled, rusty or dirty

Motorized vertical stroke

When testing unstable samples or deflecting parts, our system will follow the sample without losing contact thanks to its **50mm stroke for indenter and clamping hood**. Easy and fast hardness measurements on pieces with different thicknesses without acting on tester head or elevating screw.

The accuracy of the Closed Loop technology

Forces are applied electronically through load cell with **closed-loop system – frequency of 1000 pulses per second**. This guarantees an extreme accuracy, avoiding any problems related to dead-weight hardness testers. Load selection is carried out automatically using the front control panel.

The comfort of its touchscreen

The instrument is managed using the high-visibility touch screen display, which guarantees an easier use.

Reliability in any test conditions

The instrument is not influenced by vibrations or changes in temperature. This guarantees high repeatability and reproducibility of results in any test conditions, both in laboratories and directly in production departments

Workbench to support the instrument (available upon request)



TECHNICAL DATA

FIELD OF USE

for all metals: iron, steel, tempered steel, cast iron, brass, aluminium, copper and metal alloys. Heat treatment, hardening, nitriding, cementation and hardfacing. Hard and soft plastics.

PRELOAD

29.4 – 98.1 N (3 – 10 Kgf)

HARDNESS TESTS AVAILABLE

Rockwell:

HRA – HRB – HRC – HRD – HRE – HRF – HRG – HRH – HTK – HRL – HRM – HRP – HRR – HRS – HRV

Superficial Rockwell:

HRN – HRT – HRW – HRX – HRY

Brinell:

HBW1/10 – HBW1/30 – HBW2.2/6.25 – HBW2.5/15.625 – HBW2.5/31.25 – HBW2.5/62.5 – HBW2.5/187.5 – HBW5/25 – HBW5/125 – HBW5/250 – HBT2.5/187.5 – HBT 2.5/62.5 – HBT 5/125 – HBT 2.5/31.25

Vickers (only indentation):

HV0.5 – HV1 – HV3 – HV5 – HV10 – HV20 – HV30 – HV50 – HV100

TEST LOADS

Rockwell:

98.10 – 588.4 – 980.7 – 1471 N (10 – 60 – 100 – 150 Kgf)

Superficial Rockwell:

29.42 – 147.1 – 294.2 – 441.3 N (3 – 15 – 30 – 45 Kgf)

Brinell:

49.03 – 61.29 – 98.07 – 153.2 – 245.2 – 294.2 – 306.5 – 612.9 – 1226 – 1839 N – on request 2452 N
(5 – 6.25 – 10 – 15.6 – 25 – 30 – 31.25 – 62.5 – 125 – 187.5 N – on request 250 Kgf)

Vickers (only indentation):

4.903 – 9.81 – 29.42 – 49.03 – 98.7 – 196.14 – 294.2 – 490.3 – 980.7 N
(0.5 – 1 – 3 – 5 – 10 – 20 – 30 – 50 – 100 Kgf)

OPERATION MODE

Automatic

STANDARD COMPLIANT

ISO 6506-2, ISO 6507-2, ISO 6508-2,
ISO 2039, ASTM E-18, ASTM E-103

USEFUL AREA

300 mm

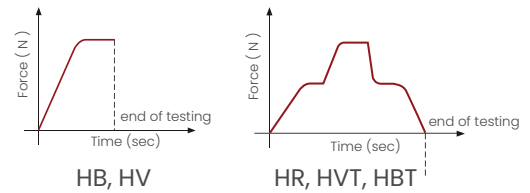
HANDWHEEL MOVEMENT

200 mm

VERTICAL STROKE

50 mm

FORCE APPLICATION



DATA OUTPUT

USB, Ethernet

DEPTH CAPACITY

194 mm

TOLERABLE WEIGHT

1000 Kg

NET WEIGHT

80 Kg

POWER SUPPLY

115/230VAC – 50÷60Hz

TEMPERATURE RANGE

From 10°C to 35°C

SOFTWARE

Monitor PC: 7"
Microsoft Windows 10®



Service & Maintenance

Our generational experience based on more than 60 years of field work allows us to answer any of your questions or concerns.

Our highly strategic geographical position allows us to support you in the maintenance of your instrument, offering you completely made in Italy spare parts.

Why choose us?

- ◉ We guarantee **100% Italian quality**.
- ◉ We believe in **true innovation**: listening to your needs and making an hardness tester that can meet them.
- ◉ We promote an **empathic design**, which ensures functionality and harmony in the interaction with measuring instruments.
- ◉ **We are pragmatic and result-oriented**: what we design and produce is the result of years of study, research and experimentation.
- ◉ **We love to accompany you step by step**, listening and advising you what better embraces your needs



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