

OMNITEST
universal hardness tester



The proper solution for any hardness control issue

ERNST

OMNITEST

Omnitest is a universal hardness tester for test methods such as Rockwell, Superficial Rockwell, Brinell, Vickers (and Knoop on request).

Particularly suitable for laboratory use and for all those companies whose fundamental production concern is quality.



The special internal and external structure of the stand eliminates deflection during testing

OMNITEST - THE UNIVERSAL

Omnitest performs hardness testing with loads from 9.804 N to 2451 N (1-250 kp) and permits a fast and easy selection of the test procedure. All procedures comply with the standards DIN & ISO EN 6506, 6507, 6508, 2039, BS and ASTM.



Omnitest is equipped with an integrated PC with a Windows XP operating system, high resolution (2 mega pixel) USB camera, with LED light source. Fully automatic testing of all indentations with the option to operate manually. Test results are displayed on 12" LCD display.

Omnitest can send test results to a printer or to a local network at any time. The indentation image can be captured and memorized, with the possibility to be recalled even long after the issue of the test protocol net transmission.

5 languages available: English, German, French, Italian and Czech. Further languages on request

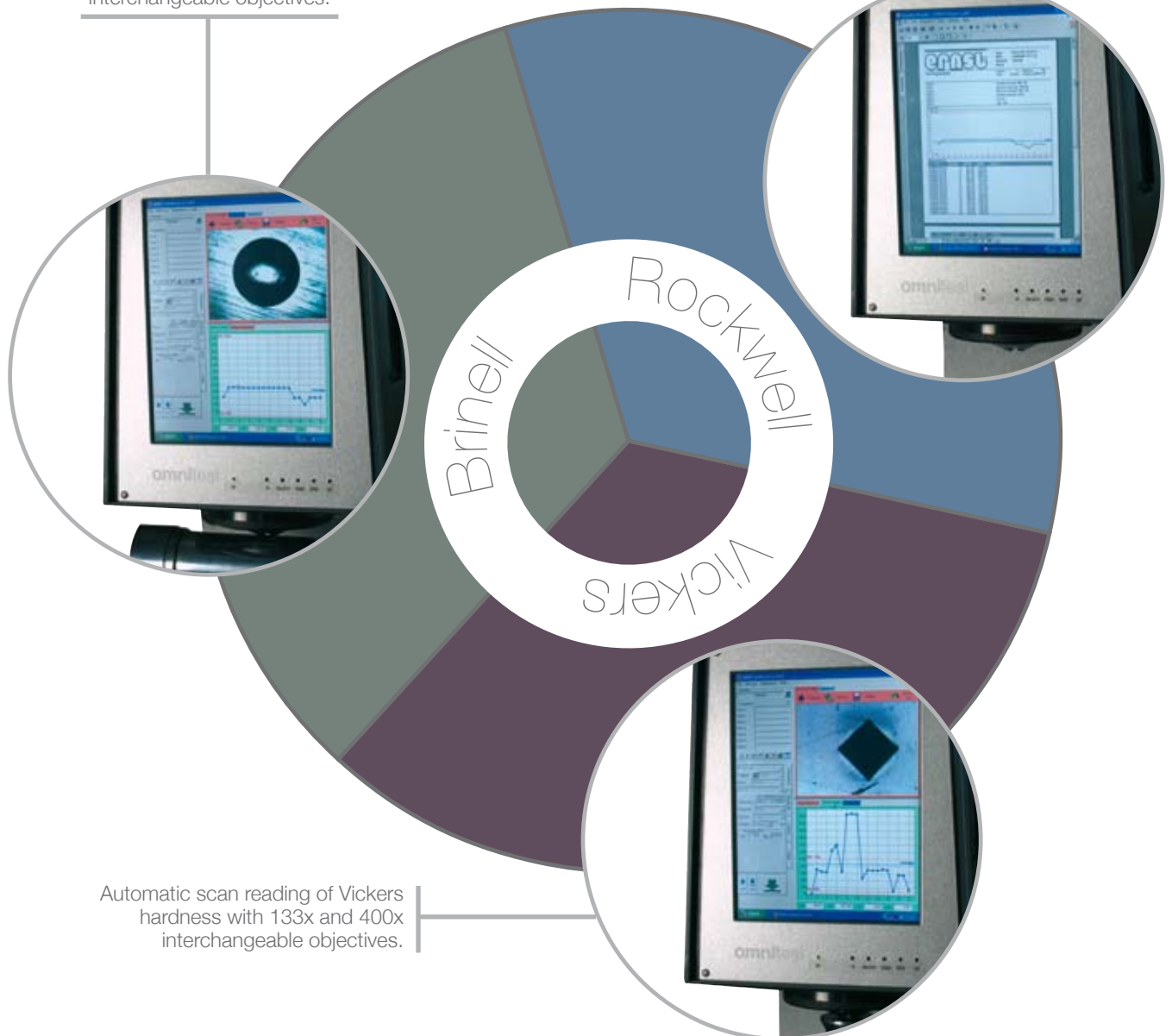
It is possible to manufacture different types of anvils and fixing devices, to suit customer needs.

OMNITEST - CHARACTERISTICS

- Integrated PC with Pentium 4, 40 Gb hard disk, Windows XP
- 12" LCD screen
- Software for Omnitest Universal Hardness Tester
- Automatic scan reading of Brinell or Vickers indentations
- Automatic software for Rockwell and Superficial Rockwell reading by means of an electronic probe for depth measurement
- Load choice, speed and application time are automatically defined according to the standards.
- Storage of test results
- Automatic testing process with display of the test method.
- Automatic correction for round surfaces, according to DIN – EN – ISO – ASTM.
- Statistics with immediate graphical and numerical display of result.
- Min. and max. hardness values, average, standard deviation, cp and cpk coefficients.
- Histogram.
- Conversion into Rockwell A, B, C, D, E, F, G, H, R, Brinell and Vickers scales, according to ISO 18625.
- Protocol printout in A4 with data and logo of the operator.
- Protocol in ACCESS format for export to another PC or to Excel.
- Possibility to enter alphanumeric data via LCD screen.
- Possibility to connect a remote keyboard and mouse.
- The system is built to accommodate future additions and upgrades,

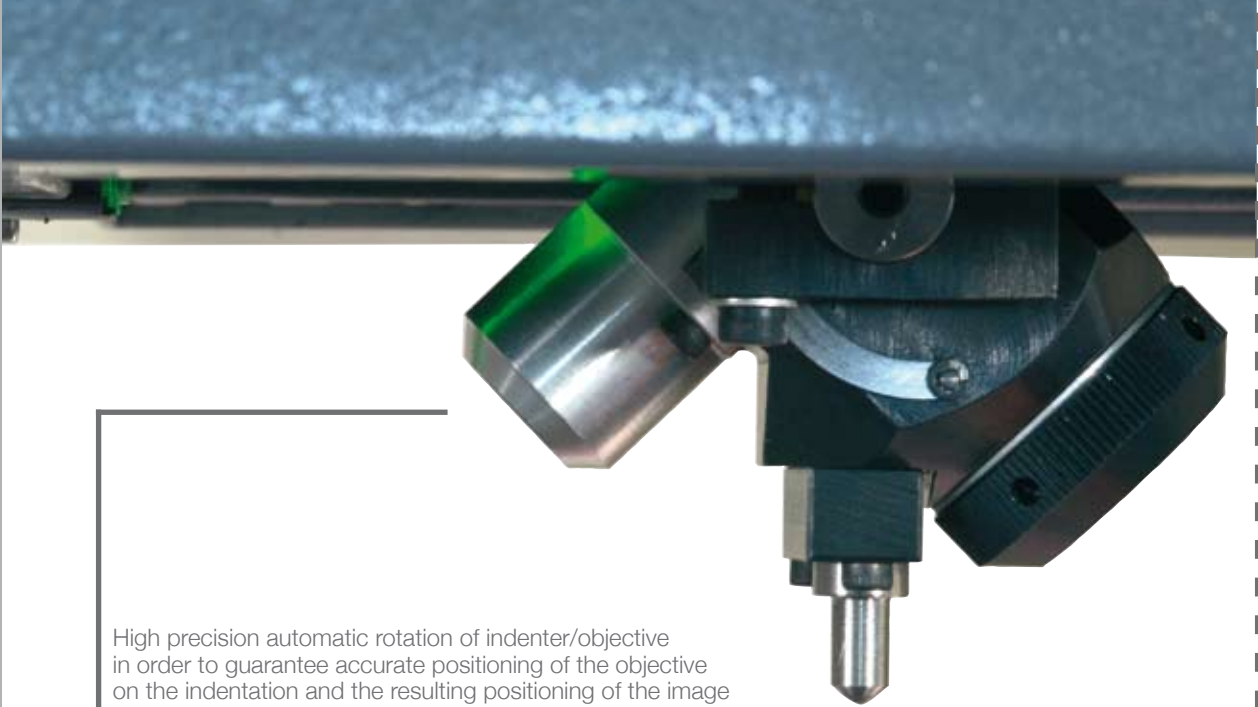
Automatic scan reading of Brinell hardness with 35x and 133x interchangeable objectives.

Possibility of Rockwell and Superficial Rockwell testing with loads from 15 kp to 150 kp (148 N to 1481 N)



Automatic scan reading of Vickers hardness with 133x and 400x interchangeable objectives.

OMNITEST - universal hardness tester



High precision automatic rotation of indenter/objective in order to guarantee accurate positioning of the objective on the indentation and the resulting positioning of the image on the screen.



The adjustable clamping cap permits fast testing.

The base assembly for positioning the specimen, with special thread, is very precise and eliminates deflection and bending during testing.

OMNITEST - TECHNICAL DATA

Standardized procedure:

Vickers	DIN EN ISO 6507, ASTM E-384
Brinell	DIN EN ISO 6506, ASTM E 10
Rockwell	DIN EN ISO 6508, ASTM E 18

Test loads:

Vickers	1, 2, 3, 4, 5, 10, 20, 30, 40, 50, 60, 80, 100, 120 kp
Brinell	1, 2.5, 5, 6.25, 10, 15.625, 25, 30, 31.25, 62.5, 100, 125, 187.5, 250 kp
Rockwell and Superficial Rockwell	Preload: 3-10 kgF Load: 15, 30, 45, 60, 100, 150 kp

Indenters:

Vickers	Pyramidal indenter 136°
Brinell	Ball indenter 1 mm, 2.5 mm, 5 mm, 10 mm
Rockwell	Conical diamond indenter 120°, Ball indenter 1/16", 1/8", 1/4", 1/2" (on request)

Optical testing device:

From 35x to 400x with interchangeable objectives (400x on request)
LED lighting source

Dimensions:

Max measurable height	290 mm
Max measurable depth	250 mm
Weight	250 kg

Test load application:

DC motor via closed loop by means of force transducer
Test load selection by LCD screen
Automatic rotation to indenter/objective

Results displaying:

Numeric on LCD (with automatic storage)
Graphic capability for result analysis with variable scale

Connections and power supply:

Interface	RS232 and USB standard
Standard power supply	230 V, 50 Hz (220 VA) Other power supplies on request

CE conformity

STANDARD ACCESSORIES

Rockwell diamond indenter: diamond 120°
Vickers diamond indenter: pyramidal 136°
Brinell ball indenter: ball 2.5 mm
Rockwell ball indenter: 1/16"
35x objective
133x objective
Flat anvil 120 mm Ø
Flat anvil 60 mm Ø
V-anvil for rounds 3 – 12 mm Ø
V-anvil for rounds 12 – 90 mm Ø
Special key for easy indenter removal
Set of wrenches
Wooden accessory box
Vinyl dust cover

ACCESSORIES ON REQUEST

400x objective
Knoop indenter
1 mm Ø indenter
5 mm Ø indenter
10 mm Ø indenter
Rockwell indenter 1/2"
Rockwell indenter 1/4
Rockwell indenter 1/8
Set of 3 Yamamoto HRC hardness
test blocks with EN 10004 calibration
V-anvil for rounds up to 200 mm Ø
Flat anvil 200 mm Ø
Thin specimen attachment type 1 (0.4 – 3 mm)
Thin specimen attachment type 2 (0.02 – 0.5 mm)
Thin specimen attachment type 3 (0.02 – 8 mm)
Bench support
Software for Knoop testing
Protocol on Excel
Printer
Printer cable
Remote mouse
Remote keyboard

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