



AUTOMATIC
hardness testing



Quality Solutions

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The proper solution for any hardness control issue

ERNST

BRE-AUT

automatic hardness tester



The BRE-AUT hardness tester tests the hardness based on the difference in penetration depth between preload and load, using loads and indenters requested for Brinell Standard testing. The results, after having been processed by a microprocessor, are shown on the display in Brinell values.

With this system testing time is reduced by 85% compared to the traditional Brinell method.

On request the Brinell hardness can be measured by automatic Brinell scanning system.

IMPORTANT:

The optical verification of the impression is always possible.

A very simple calibration procedure allows maintaining extremely accurate results even when testing different materials, modifying the relation between test material and indentation diameter.

Automatic sequence is given through push button, foot switch or other external impulse.

Standard type test cycle starts as follows:

- The test head moves towards the test piece, driven by an hydraulic cylinder.
- The indenter comes into contact with the test surface.
- Preload is applied.
- Then full load is applied for the time chosen by the operator.
- The measuring head returns to preload position.
- Readout of Brinell result on large graphic LCD display.

The entire test sequence takes about 7 seconds (that means testing up to 500 pieces per hour).

The BRE-AUT hardness tester has a unique automatic safety device, which in case of wrong positioning of the piece or contact with soft material (e.g. operator's hand) retracts immediately the test head, avoiding specimen wrong tests and accidents.

BRE-AUT

100 - 300



BRE-AUT 100

Technical Characteristics:

- Digital Brinell reading
- Measurable maximum height: 400mm
depth: 200mm
- Test head stroke: 100mm
- Test loads
 - Regular type:
3.000kp (29.430N)
 - Multiple loads:
500kp (4.905N), 700kp (7.357N),
1.000kp (9.810N), 3.000kp (29.430N)
- Adjustable loading time
- Standard accessories:
 - 1 flat anvil \varnothing 120mm
 - 1 eyepiece 8x for verification of
the impression diameter
 - 1 test block HB/30
(95mm x 95mm x 16mm)
 - 1 set of wrenches



BRE-AUT 300

Technical Characteristics:

- Digital Brinell reading
- Measurable maximum height: 850mm
depth: 250mm
- Test head stroke: 300mm
- Test loads
 - Regular type:
3.000kp (29.430N)
 - Multiple loads:
500kp (4.905N), 700kp (7.357N),
1.000kp (9.810N), 3.000kp (29.430N)
- Adjustable loading time
- Standard accessories:
 - 1 flat anvil \varnothing 120mm
 - 1 eyepiece 8x for verification of
the impression diameter
 - 1 test block HB/30

BRE-AUT S.O.R.

This special execution BRE-AUT S.O.R. is particularly suitable for in line testing of pipes and cylindrical parts. The system is integrated with a built-in surface preparation equipment

Thanks to the high productivity, BRE-AUT S.O.R. has been universally used for the automatic testing of oil pipes.



Technical Characteristics:

- Digital Brinell reading
- Test loads
750kp (7.357N) to 3.000kp (29.420N)
- Built-in milling machine
for test surface preparation
- Testing time
(surface preparation + hardness testing):
approx. 25 seconds
- Adjustable milling depth

BRE-AUT S.O.R. SPECIAL EXECUTION

With motorized roller line for tool joints.



BRE-AUT

B.R.G.

This BRE-AUT special execution is the proper instrument for testing pieces having large dimensions and difficult shapes (max. height 1600mm)

Thanks to the rotating arm, a radius of 180° can be covered, while the structure dimensions can be modified on request.

With the Brinell Optical Scanning System B.O.S.S., the indentation is read automatically improving the accuracy of the test.

The integrated milling device allows preparing the test area before testing.

BRE-AUT BRG is available also without surface preparation unit.



Technical Characteristics:

- Optical Brinell reading
- Test loads (on customers request) 500kp (4.903N) - 750kp (7357N) - 1000kp (9810N) - 3000kp (29.420N)
- Test surface preparation by integrated milling unit
- Maximum milling \varnothing 40 mm
- Milling from 1mm to 4mm depth
- Adjustable milling speed according to the hardness of the test material.



BRE-AUT M.A.R.

This special execution BRE-AUT M.A.R. is particularly versatile, it allows testing rounds from \varnothing 10mm up to train wheels with \varnothing 1400mm and a weight of 1100Kg.

Thanks to the test method of BRE-AUT series, BRE-AUT M.A.R. ensures high productivity permitting also the optical reading of the indentation by the B.O.S.S. Brinell optical scanning system.

BRE-AUT M.A.R. is provided with an integrated milling or grinding device for the preparation of the test point



Technical Characteristics:

- Digital Brinell reading
- Test loads
750kp (7.357N) - 1000kp (9.806N)
- Test surface preparation by milling or grinding unit
- Testing time
(surface preparation + hardness testing):
aprox.40 seconds
- Input parameters can be entered for high/low tolerance sorting, data records, statistics, hardness number readout and additional customized features as needed

BRE-AUT M.A.R.

BRE-AUT M.A.R. SPECIAL EXECUTION

Automatic in line application for testing train wheels.



- Fully automated cycle with integrated milling/grinding device for preparation of the test area
- Automatic Brinell hardness control
- Automatic Brinell optical scanning system
- Testing time
(surface preparation + hardness testing + optical scanning):
less than 60 seconds



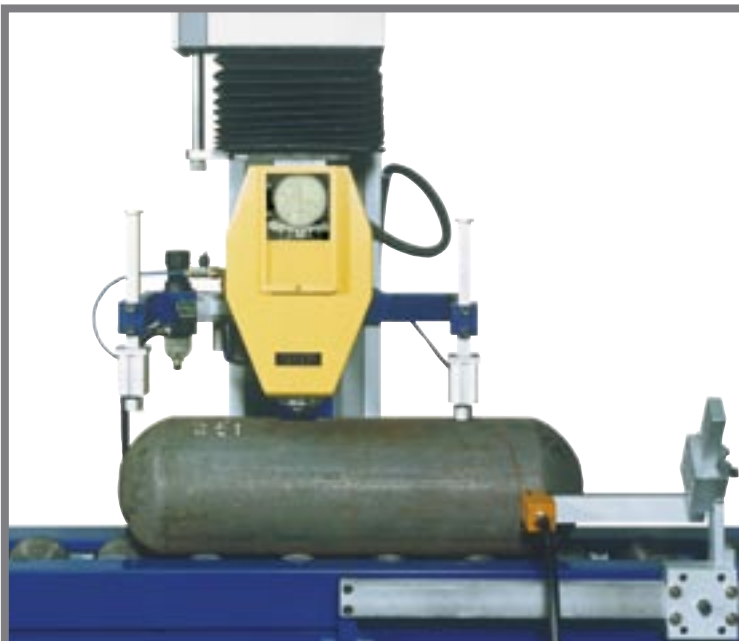
This special execution BRE-AUT M.A.R. TRAIN WHEELS is provided with a transfer system which allows charging a second wheel while first one is measured

BRE-AUT

T.D.M.

BRE-AUT T.D.M. SPECIAL EXECUTION

With motorized roller line and surface preparation by sanding.
For batch testing of bottles with \varnothing from 80mm to 350mm



Technical Characteristics:

- Digital Brinell reading
- Test loads
750kp (7.357N)
- Surface preparation by means of built-in sanding system
- Testing time
(surface preparation + hardness testing + selection):
approx. 40 seconds (1 test for each bottle)
- Preparation and testing can be carried out simultaneously on two bottles
- Adjustable sanding depth
- This hardness testing system can be integrated into a production line
- Surface preparation and hardness test are automatic
- A motorized roller way provides for the handling of the bottles
- Several hardness tests on the same bottle can be performed on request

ERNST

automatic systems: focus on new releases



The measuring of the Brinell impression occurs by optical scanning with B.O.S.S. system on industrial PC



**FOCUS ON
BRE AUT BRG - SPECIAL FOR BULKY PIECES**

It is possible to set on PC the parameters for the hardness measuring directly through the integrated keyboard or mouse

Our new releases make use of Profibus communication system. On request it is possible to implement the software for exporting data to a main data processing system



**FOCUS ON
BRE AUT MAR - SPECIAL FOR TRAIN WHEELS**



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