THE B.O.S.S.®

Brinell Optical Scanning System

Instant Brinell Measurement
with Authority

NEWAGE Testing Instruments, Inc.

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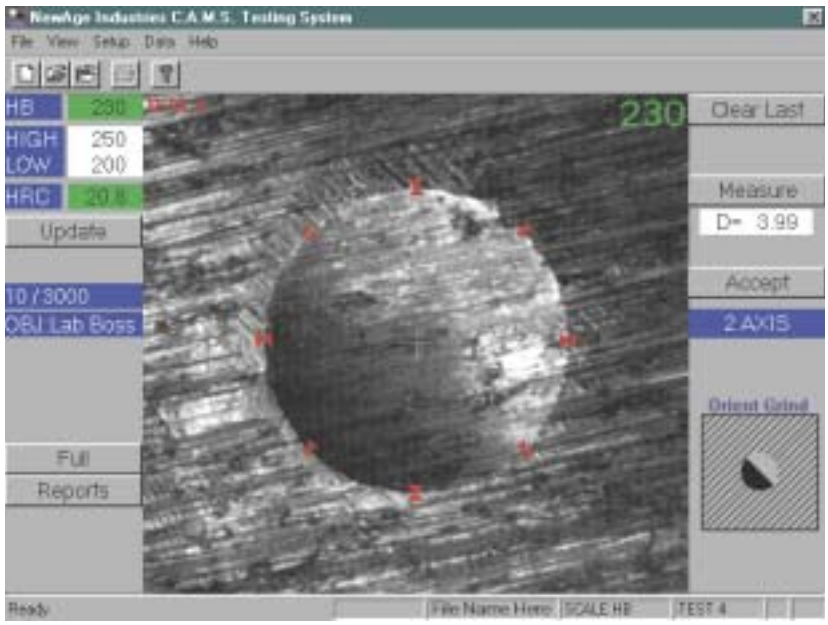
Brinell Optical Scanning System

Brinell measurement with authority

B.O.S.S. measures on ground or smooth test surfaces, dark gray iron or light reflective aluminum. Here the screen shows a measurement, result, tolerance values, and other information. ▼



The BOSS system is an automatic scanning system for measuring Brinell impressions. It is designed to make your testing program faster and more accurate. It also improves quality control management - it automatically stores data and is network capable.

Virtually eliminate operator influence

It is well known that measuring Brinell impressions can result in measurement errors of 0.1 mm between operators - the range is even greater between labs. This error can take up your entire tolerance specification. The B.O.S.S. will virtually eliminate operator influence on test results. Gage R&R evaluations show dramatically improved repeatability. With the B.O.S.S. your test results won't change with every shift change.

Make measurements in an instant

The entire test sequence is very simple. Place the scan head on the work piece and move it so part of the impression meets the center point on the screen. Press the button on the scan head. In a fraction of a second the B.O.S.S. captures an image of the impression (so operators don't have to hold the scan head still while measuring), then uses the image to measure the diameter to the nearest 0.01 mm. The system displays the resulting Brinell value, the diameter measurement, and the identified edges at eight positions. Tolerance and warning values can be entered that will cause test results to appear color-coordinated according to tolerance status or initiate an audible signal for out-of-tolerance results. Additionally, values can be converted into other scales according to ASTM E-140.

▲ *Two types of scan head are available: 1" diameter footprint or $\frac{5}{8}$" with a snap-on $1\frac{3}{8}$" base.*

◀ *The click of a button instantly captures an image of the test impression. This captured image is then used in measuring so operators don't have to hold the scan head still longer than an instant.*

Increased speed and productivity

With more speed and accuracy the capability of your entire Brinell program changes dramatically. Instead of being a rough quality control measurement to find defects, the testing can add process control functionality to quickly predict potential production problems and correct them before bad parts start streaming out the other end. The B.O.S.S. software is network capable so test results can be directed to your production control software.

A variety of B.O.S.S. models and options are available to provide fixed, mobile, or portable configurations. All versions offer the same functions, differing only in application suitability.

Customize data files

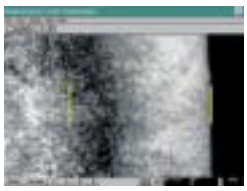
An unlimited number of data test files can be created, each containing its own preset test parameters, selected from a complete range of Brinell options even including an option for the Newage Pin Brinell. Descriptive information can also be added to each file or test result.

▲ *Statistical reports can be generated for each data file and are available in several formats including histograms and X-Bar & R charts.*

The B.O.S.S. has a wide range of statistical capabilities. Two sets of tolerances, one for warning and another for out-of-tolerance may be entered. Statistical reports, including X-bar & R charts and histograms, can be generated for each data file. Among the built-in statistical capabilities is an average mode where groups of "n" tests can be taken with the resulting average entered into the database. Operators can also capture an image of the impression in the bitmap file format.

Newage writes the B.O.S.S. software in-house - enabling the software to be customized to meet your needs with features like barcode scanning and other customer requested changes.

The B.O.S.S. provides consistently accurate readings regardless of the operator or facility. The test values don't shift when the second shift starts. Shown here the B.O.S.S. is being used to read a Brinell impression on a die block. ▼



▲ *Measuring total case depth is one of the optional programs for the B.O.S.S.*

◀ *The B.O.S.S. can be very portable. At left is a tablet-style PC in a protective case with shoulder strap.*

Retractable Scan Head Tether ▶

Computer, Enclosure, and Tether Options

The B.O.S.S. system can be used with any configuration of computer - desktop, laptop, or tablet. Newage provides a current model unit from a major manufacturer with the B.O.S.S. For more information, please contact Newage.

OS-102 Mobile Enclosure (at right): When using the Lab B.O.S.S. in factory-floor environments the B.O.S.S. enclosure enables operators to keep the computer and printer in a clean, filtered-air environment. If heat levels are too high an air conditioning accessory can be added. Inside there is room for a computer, printer, and 2 paper trays. The monitor is located on a swivel arm at 5½ feet elevation. The keyboard is outside the enclosure. If necessary, a membrane keyboard can be used.

OS-101 Retractable Scan Head Tether (at right): The tether helps prevent the scan head from being dropped. It can be mounted almost anywhere.

Mobile Enclosure ▶

NEWAGE Testing Instruments, Inc.

B.O.S.S. with Laptop PC

B.O.S.S. with Desktop PC

B.O.S.S. with Tablet PC

B.O.S.S. SYSTEM SPECIFICATIONS

Special pricing is available for purchase of a B.O.S.S. system together with a bench Brinell Tester.

Hardware Specifications

- Scan head dimensions of 2½" diameter x 6⅝" tall with 1" footprint
- Resolution to .01 mm.
- Video viewing system with solid state electronic camera
- Desktop or portable computer – IBM-compatible WIndows® operating system. See specifications at time of order. (Companies may be able to supply their own computer if it meets specifications, please call.)
- Shipping Weight: approx. 75 lbs.. (weight varies)
- Computer System Dimensions: Minimum table area required: 24" x 21" plus additional space required for test parts.
- Non-portable system electrical requirements: Clean 110/220V, 50/60HZ, 6A.

Software Specifications

- Operating System: Windows 9x, NT, 2000, or XP
- Newage software, programmed in-house
- Readout given in Brinell and diameter measurement values with ability to convert values to other scales.
- Unlimited number of files for storing test results and descriptive information.

System Description

B.O.S.S. system with video scanning head with built-in light source, Windows-based impression measurement software; late model IBM-compatible computer; software for Brinell impression measurement and calculations of conventional scales (HB30, HB5); standard test impression block for calibration; connecting cables, operating instructions.

Options

OS-102	Mobile Enclosures for B.O.S.S. desktop computer system
OS-103	Scan Head Holder-Balancer only
OS-104	Scan Head Holder-Bench Clamp Mount
OS-106	Retractable Scan Head Holder
OS-013	10' Scan Head extension cable for OS100
OS-014	20' Scan Head extension cable for OS100
HA-0158	Calibration block with certificate - typical diameter 3.5 - 4.0 mm
MT-210	Printer for use with B.O.S.S.
MS-253W	Statistical Package including Histogram and X-Bar/R charting
MS-270W	Inch/Millimeter Scale for measuring case depth with B.O.S.S.
MS-273	Image Capture - save images of test impressions as bitmaps

NEWAGE BRINELL HARDNESS TESTERS

Four models of bench/floor/portable Brinell testers are available. The Auto Brinell Series testers are frequently in-line systems with depth-of-indentation measurement, hydraulic load application, and direct load monitoring. The PB Series testers use hydraulic or pneumatic loading with direct test load monitoring for high-volume, manual testing. The NB Series uses dead-weights with semi-automatic pneumatic loading for lower volume applications and eight different loads. Two models of portables and one Brinell scope are also available.

AutoBrinell

PB Series

NB Series

Portable Pin Brinell

Newage Testing Instruments was started in 1954 with the purchase of a small company and called Newage Industries. The company's first products were metal hardness testers.

Among these testers were the first of the portable "Press-and-Read" MR Series that sold for a few hundred dollars. Thousands of these testers were sold worldwide. Today the fifth generation of this tester is being sold - in addition to 16 other complete lines of hardness testing products.

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