

# NEWAGE® 7000 Series Production Brinell Testing System

Specification Sheet  
SS-PB7000-0310  
March 2010

The NEWAGE® 7000 Series production tester is ideal for high volume Brinell testing applications. The 7000 Series was developed to answer the demand for a high accuracy Brinell tester with a large capacity and long indenter stroke that is suitable for high volume production applications. The 7000 Series is a hydraulically-actuated system that employs a high accuracy load measurement system that complies with ASTM E-10. The load system is closed-loop to ensure precise application of the load with minimal concern for overloading. A hydraulic system ensures smooth load application. A footswitch controller simplifies and speeds the elevating and lowering procedures. The 7000 Series can be supplied with a dedicated single load or with a dual load capability. Dual load models are operated via a personal computer in order to specify the applied load required. Standard capacities are 10" with the elevating screw or 16" without an elevating screw. Larger capacities are optionally available. An 8" throat is ideal for larger specimens.

Time-at-load selections of 2-, 10- or 30-seconds can be selected.

Six models are available. Four models can be supplied with versions of our B.O.S.S. system with either a single or dual load. And the B.O.S.S. systems can be supplied as our Lab B.O.S.S. with software, optical scope and desktop computer or a version that uses a tablet-style computer offering the user mobility within a busy production environment. The B.O.S.S. system permits optical measurement on the computer including a digital result of the hardness value and impression diameter. The software can also convert your result to another scale, average results, and produce comprehensive SPC reports.

## Features

- Meets ASTM E-10
- High speed, high accuracy Brinell tester
- B.O.S.S. Optical Scanning System Packages for advanced analysis and data management
- Precision load cell sensor
- Economical to operate and maintain- no proprietary pumps, valves or cylinders to deal with

## Specifications

<b>Operation:</b>	Hydraulic
<b>Load Measurement:</b>	Load Cell Sensor
<b>Load Selection (kgf):</b>	3000, 1500, 500, 250, 187.5, 62.5
<b>Time-at-Load (sec):</b>	2, 10 and 30
<b>Vertical Capacities</b>	
with Elevating Screw:	10"
without Elevating Screw:	16"
<b>Indenter Stroke:</b>	4"
<b>Indenter:</b>	10mm Tungsten Carbide
<b>Operating Temp:</b>	50°F to 120°F 10°C to 49°C
<b>Warranty:</b>	1 year



*Shown: 7000 Series with hydraulic power system.*

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### ASTM E-103 Conformance

The 7000 Series conform to ASTM E-10.

### Scales

The 7000 Series can provide hardness results for the following Brinell scales based on the indenter used and the load applied.

- HBW 10/3000
- HBW 10/1500
- HBW 10/1000
- HBW 10/500
- HBW 10/250
- HBW 5/750
- HBW 5/250
- HBW 2.5/187.5
- HBW 2.5/62.5

### Time-at-Load Selection

A dial, located on the load frame lets you select your time-at-load setting. There are three times available: 2, 10 and 30 seconds.

### Optical Measurement

The 7000 Series requires a secondary step for measuring the Brinell impression using an optical scanning system like our B.O.S.S. system or a handheld optical scope such as our HiLight Brinell scope.

### B.O.S.S. Systems

There are four different model 7000 Series testers that come with our B.O.S.S. optical scanning system.

The B.O.S.S. system is comprised of a precision optical scan head with cable that connects via USB to your personal computer with the B.O.S.S. software installed. Simply place the scan head over the indentation to be measured. The superior optics show a clear image of the indentation on the computer display. The optics may be adjusted using the software by the operator. Once the image is clearly displayed, simply press the capture button. The software determines the exact outer edge of the indentation at eight locations and provides you with an accurate indentation diameter to within 0.01mm. Measurement is instantaneous. There is no interpretation required by the user. Along with the captured image, HB value and any associated scale conversion is displayed.

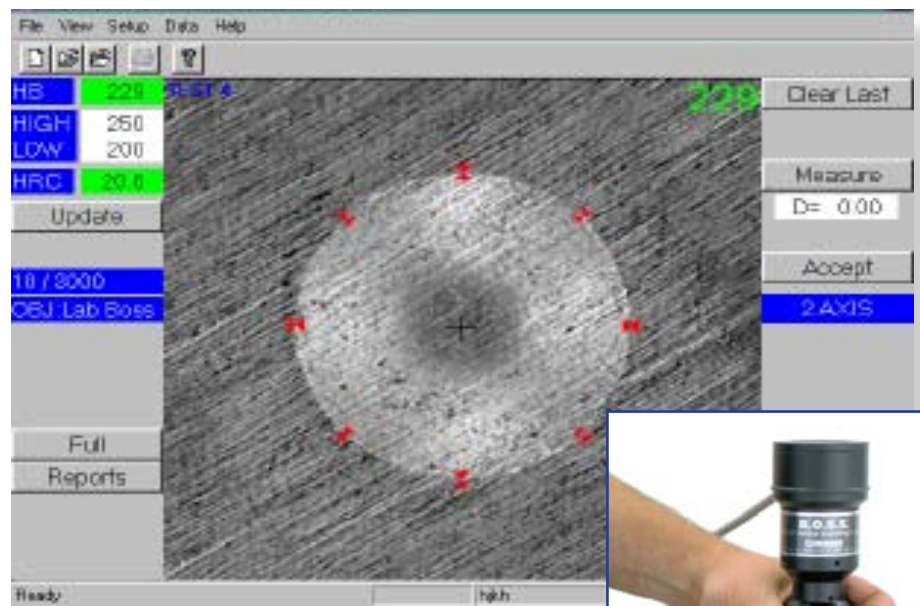
### HiLight Scopes

The NEWAGE® 5620 Series HiLight Brinell Scopes features a high-efficiency LED array for its light source, providing excellent illumination and improved readability over conventional "flash light" scopes. The LED array consists of four individual LEDs positioned to provide an even and consistent definition of the Brinell impression's edge. The 5620 Series uses a 3V lithium CR2 battery. Up to 200 hours of continuous use is typical before a battery change is required. An optional motion sensor/timer can be used to automatically turn the scope On/Off.

The 5620 Series are completely enclosed so ambient light is prevented from reaching the

test impression. The LEDs, combined with the standard 20X magnification helps insure more reliable results whether you are using the 5620 Series for measuring Brinell impressions or other applications such as total case depth on heat treated surfaces. The 20X power has a 7mm long scale with 0.5mm graduations on the reticule.

The 5620 Series is available in three models: 5620-05 with adjustable focus; 5620-05A with adjustable focus and "auto motion" on/off feature; and a special order model 5620-01 with a 0.1mm scale division resolution. All models are furnished with a CR2 (3V) lithium battery and a carrying case.



*Shown: With the optional B.O.S.S. system, users have a variety of analysis and data management tools available.*



*The patented HiLight scopes' LED array directs light at a shallow angle for optimum and consistent illumination of your indentation.*



## Ordering

### 7000 Series

Model	Description
PB7000	Production Bench Brinell Tester, single load
PB7100	Production Bench Brinell Tester, single load, with Lab B.O.S.S. System
PB7101	Production Bench Brinell Tester, single load, with Tablet Lap B.O.S.S. System
PB7002	Production Bench Brinell Tester, dual load
PB-7102	Production Bench Brinell Tester, dual load, with Lab B.O.S.S. System
PB7202	Production Bench Brinell Tester, dual load, with Tablet Lap B.O.S.S. System

### Accessories and Options

Part No.	Description
HB/3030	Indenter, tungsten carbide ball, 10mm, with certificate
HB/3031	Indenter, tungsten carbide ball, 5mm, with certificate
HB/3006	Indenter, tungsten carbide ball, 2.5mm, with certificate
BR/3030	Indenter, tungsten carbide ball, 10mm, with certificate, "Slim Style"
BR/3031	Indenter, tungsten carbide ball, 5mm, with certificate, "Slim Style"
BR-3152	Ball only, tungsten carbide, 10mm
BR-3155	Ball only, tungsten carbide, 5mm
HB/3006B	Ball only, tungsten carbide, 2.5mm
HB-109	Cap only, indenter, 10mm
HB-110	Ball holder, indenter, 10mm
HB/3007	Anvil, flat, large
HB/3009	Anvil, flat, small
HB/3010	Indenter extension, 1.5" (38mm)
AT/5510	Light, flexible arm test point for illumination
HB130B	Bench cabinet, metal for tester only
NISP20	Protective cover, vinyl, for tester only
35-450	Pocket Brinell scope, 20X, fixed focus with carrying case
5620-01	HiLight Brinell scope, 20X, adjustable focus with carrying case, 0.1mm resolution (special order)
5620-05	HiLight Brinell scope, 20X, adjustable focus with carrying case, 0.5mm resolution



Shown: The PB7100 tester with B.O.S.S. Brinell optical scanning system.

# AMETEK

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