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King Brinell Hardness Tester

With the advents of new requirements for quality control, accurate-reliable hardness testers are needed today more than ever. The King Brinell tester is designed to make impressions that are used to measure the hardness of metal. King Brinell hardness testers are lightweight, easy to maneuver and require only one operator, making them ideal for use as portable or bench units. Versatile enough to test virtually any size and shape of metal specimen, King testers are easy to use. The operator simply places the specimen between the anvil and the test head, cranks the test head down onto the specimen, locking the tester in place, closes the pressure release valve, and pulls the hydraulic lever until desired load is reached. The tester applies up to a 3,000 kg load on a 10mm ball, making a lasting impression, which is available for re-reading at any time. A by-pass valve is automatically activated at the calibrated load, eliminating the chance of overloading. The impression is then read and recorded by the operator using a Brinell microscope such as the King deep reading microscope or a KingScan® automatic Brinell microscope. The King Portable Brinell meets all international standards for Brinell testing including ASTM E-110, British Standard #240, Pt. 2, Sect. 1 and JIS Standards, and is calibrated to 1/2 of 1% of load on equipment traceable to NIST Standards. A universally recognized tester, the King portable Brinell has a number of advantages:

- Permanence: Impression can be checked and rechecked anytime
- Accuracy: Calculated to 1/2 of 1% loads up to 3,000kg. Breaks through surface heat treatment to get to the core of the material.
- Durability: Some King Portable Brinell testers have been working over 60 years
- Versatility: Can be used virtually any position: right-side up, upside down or sideways. Take the tester to the metal, not the metal to the tester.



Optional Adapters and Component Parts

Chain Adapter

Used for large cylinders it fits onto a standard test head and wraps around



specimens that are too big for regular tester. High strength chrome/molybdenum steel arms hold the chain to the test head and allow it to stay rigid while the chain takes the full thrust of the load. Supplied with 4' chain.

Reverse Direction Load Adapter

Used inside pipes, tubes and other interior locations that are otherwise impossible to reach. Consists of an anvil which drops into the base and contains a 10mm ball penetrator; and a reverse direction load head, which screws onto the ram.



Adapter to Hold Test Head Upright without Base

For testing large flats it enables test heads to be used under large drill presses, boring mills, arbor presses and beams that are capable of withstanding 3000 kg load.

Standard Test Head

Calibrated accurate to 1/2 of 1% load. Releases at 3,000 kg automatically. Capable of incremental loads.



2.5 & 5mm Ball Adapter



Used on softer materials or where a smaller impression is desired.

Standard Test Head with Long Ram

Same features as standard test head plus a long ram that puts impression head at end of 2" extension for easy access into recessed areas or over raised edges.



Low Pressure Test Head

Applied load and indicator dial are coordinated for softer metals. Can be calibrated to release at loads of 62-1/2 kg, 125 kg, 250 kg, 500 kg, or 1000 kg.

Low Pressure Test Head with Long Ram

Same features as low pressure test head plus a long ram that puts impression head at end of 2" extension for easy access into recessed areas or over raised edges.





Base

14" base with 14" test height opening and 4" throat is standard. Optional 6" throat with either 14" or 20" test height opening available. 20" base also available with 4" throat and 20" test height opening.

Other King Products



Microscope in case

Shown with adapter

King Brinell Microscope

Constructed from stainless steel, the rugged and optically reliable King Brinell microscope is the most versatile on the market today. Featuring a 20X pre-focused lens, the microscope has a narrow nosepiece which easily fits into tight recesses, resulting in less grinding on castings, billets and dies. For added stability when performing flat work, a slip-on base adapter is included. A side opening in the microscope allows plenty of natural light for viewing, and a cordless movable pen light can be used in dim conditions. Calibrated on equipment traceable to NIST standards, the King Brinell microscope meets ASTM E-10 specifications. It is ready to use and comes equipped with a handy storage case.

King Master® Brinell Test Block

Unique patented electro-etched surface layout grid ensures proper spacing between impressions. Five master Brinell impressions are clearly identifiable. Manufactured from de-carb free tool steel. Meets ASTM E-10 specifications. Aluminum test blocks available for lower hardness ranges.



King Reference© Brinell Test Block

Designed for use in calibrating all portable, bench and production Brinell Hardness Testers. Contains five master Brinell impressions. Made from de-carb free tool steel. Meets ASTM E-10 specifications. Aluminum test blocks available for lower hardness ranges.



Stage Micrometer

Used to check calibration of Brinell Microscope by placing the microscope on the stage micrometer and aligning the grid on the stage micrometer with the grid on the microscope. If the grids don't match perfectly, the microscope is out of calibration and should be re-calibrated. Meets ASTM E-10, and is traceable to NIST standards.



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