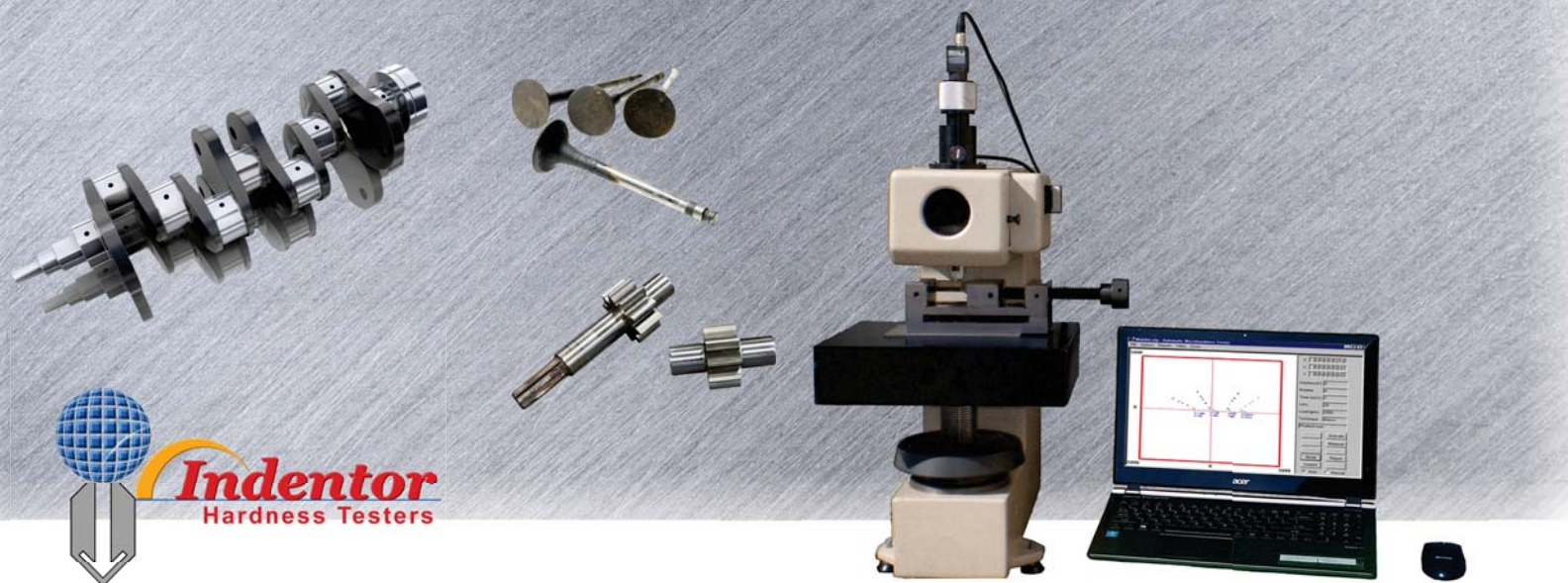


Fully Automatic, Image Analysis, Micro - Macro Vickers Hardness Tester, AHT-2010 Series



Indentor Hardness Testers

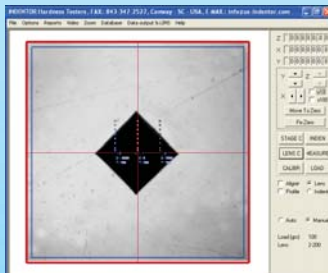
Adjustable Sample Holders:

The use of large sample holders reduces sample cutting and mounting thus eliminating unnecessary costs and improving laboratory productivity



Software:

Windows based "User-friendly" operational software with image analysis, designed to automate the hardness calculation process with graphical presentations, simplifies testing with "menu" selections that guide the operator



Benefits

- **CONSTRUCTION:** Cast iron stable construction for heavy-duty durable operation
- **LOAD:** From 10 grams to 10,000 grams, allow large range of weight combinations - EASY TO LOAD WEIGHTS - Focusing and load application is by means of a vibration free system with a stepper motor
- **OPENING:** Large opening of 135 mm allows the placement of large samples for testing
- **PRECISION MOTORIZED STAGES:** Stages of 25x25 mm or 100x100 mm travel ranges, all of which support large sample weights
- **OPTICS:** Long working distance objective with three-position zoom and straight optics, providing superior image quality with magnifications of 100X, 200X and 400X
- **ILLUMINATION:** Simple "straight through" illumination and optical system eliminating alignment problems and high power lighting
- **LINEAL TURRET:** The lens to indenter movement is automatic for measurement accuracy
- **IMAGE ANALYSIS:** Measurement with auto-focusing of indentations which enables accurate results and automatic operation

AHT-2010 Series, Technical Specifications

This automatic system is designed to considerably reduce the amount of wasted time present now in many labs when doing unnecessary cutting, mounting and testing large parts with several lines of indentations

It also reduces waste when smaller parts can be supported in the adjustable sample holder, with no need for mounting

- The tester is made of a single piece of cast iron for greater stability with large neck (opening) of 135 mm, able to support very large samples and very large sample holders
- Performs Vickers indentations using a Vickers indenter
- Fully automated micro-scale indentation (hardness) testing with computer-driven control of motorized sample stage in x-, y-, and (focusing) z-directions
- Stage precision and repeatability in the x- and y-directions is equal to or better than ± 0.01 mm (± 0.00039 inch). Z-direction (focus) precision is equal or better than ± 0.001 mm (± 0.000039 inch)
- Focusing on z-direction is fully automated and has the ability to independently and automatically auto-focus on each indentation by software control. Focusing is also able to operate under manual control as needed
- Can measure hardness on metal surfaces that are not perfectly polished
- It supports user defined and adjustable dwell time on the indentation cycles
- It provides multiple optical magnifications, with a single lens and a zoom system with magnifications of X100, X200, and X400.
- Has a load range from 10 grams to 10,000 grams (10 kilograms), and have the ability to use multiple loads using combinations of weights
- It includes necessary holder/fixture to accommodate mounted or unmounted samples. Sample holder can accommodate typical metallographic mounts that are between 25.4 mm (1 inch) and 50.8 mm (2 inch) in diameter, unmounted samples can be up to 100 mm width x 100 mm long
- It includes a certified hardness test block for an appropriate load that falls within the load range of 10 g to 10,000 grams
- It has vibration isolation feet and self-leveling capability
- The automated micro hardness tester system is controlled through USB by a desktop PC or laptop with Windows software, (Optionally the system includes in the price the computer and the LCD screen)
- The system includes control and analysis software that fully automates the hardness measuring process
- The control software allows the user to create custom indentation patterns such as straight and multi path lines, matrix and circular patterns
- The analysis software performs measurement of indentation dimensions by image analysis
- The system includes a USB 3.0 super-speed digital camera
- The analysis software can be calibrated at each included magnification
- The analysis software is capable of exporting the hardness measurements, the x- y coordinates, the distances, the indentation dimensions, and other custom data to non-proprietary open formats like .CSV (Comma Separated Values), .TXT (Text files) and .XLS (Microsoft Excel files)
- The system operates on 110 VAC-60 Hz, 220 VAC-50 HZ and single-phase power, the tester does not need an additional AC power supply; AC power is provided in the electronics box shipped with the instrument
- The system includes an operations and maintenance manual covering proper operation, routine maintenance, and troubleshooting for the system and controlling software
- THIS IS THE MOST UNIQUE TESTER IN THE MARKET IN WHICH EVERYTHING (TESTER, OPTICS, MOTORIZED STAGES, ELECTRONICS AND SOFTWARE) IS MADE BY ONE SINGLE SUPPLIER FOR RELIABLE SUPPORT, INDENTOR HARDNESS TESTERS

All components designed and manufactured in the USA by INDENTOR® Hardness Testers