

HST103-AW Computerized Inverted Metallographic Microscope



Introduction:

The HST103-AW computerized inverted metallographic microscope is a high-precision instrument designed specifically for the analysis of the microstructure of metal materials. It integrates a stable microscope host, high-definition camera device, and genuine metallographic image analysis software, providing users with a comprehensive and efficient solution for metallographic structure detection and analysis.

This microscope is widely used in various fields such as metallographic structure analysis of metal materials (including pearlite, spheroidization rate, grain size, graphite morphology, etc.), teaching and research metallographic analysis, precision engineering measurement, etc. It is an indispensable and important tool in materials science, metallurgical engineering, mechanical manufacturing and other industries.

Features:

High eye point and wide field eyepiece

The design of a large field of view imaging system, with a 20mm ultra large field of view observation, brings you an unprecedented visual experience. The design of the rubber eye mask is more user-friendly for users wearing glasses, ensuring that every observer can comfortably enjoy a clear view.

Mechanical Mobile Platform

Adopting a large-sized heavy-duty platform of 180 × 150mm and a right-hand position design, it conforms to the operating habits of most people. The switching between the focusing mechanism and the platform movement operation is convenient, improving work efficiency. The ultra wide handling handle makes equipment

handling easier and smoother.

Long working distance professional metallographic objective lens

The long-distance professional metallographic objective lens has significantly improved imaging resolution and aberration correction capability through advanced optical optimization design and professional coating technology, providing a more accurate digital solution for the observation and analysis of microstructures.

Front brightness display function

The brightness pre display function uses a built-in brightness sensor to display the current brightness in real-time in front of the instrument, making instrument operation more efficient and convenient.

New intelligent ECO system

ECO infrared sensing system: When the microscope is not operated for a long time, the ECO infrared sensing system will exert its dual advantages of environmental protection and economy. The system is equipped with advanced infrared sensing technology, which can accurately monitor whether there is human activity around the microscope. Once the microscope is detected to be idle, the system will automatically cut off the power and put the microscope into sleep mode, which not only effectively reduces energy consumption but also enhances the safety of the instrument.

Full spectrum LED lighting

Full spectrum LED with a wavelength of 400nm-700nm can provide a wider spectral range, including all colors in natural light, achieving a more natural lighting effect and better displaying all the organizational structures inside the metal. Compared to halogen light sources, full spectrum LED lighting has a longer lifespan, delayed light wave attenuation, and low power and loss.

High definition Sony chip camera device

The FEG series camera device is a CMOS camera that uses SONY chip C interface and adopts image acceleration technology. It can significantly improve USB 2.0 frame rate while ensuring the original image output, making it the best choice for simple and economical microscope cameras.

FMIA2025 Metallographic Image Analysis System

Equipped with a genuine metallographic image analysis system, multiple advanced functions can be customized to make the metallographic testing process more professional, intelligent, and simplified for users.

Technology Parameters:

Component	Specifications
Observing tube	45 ° tilt, three eye observation tube, pupillary distance adjustment range: 48-75mm, unilateral visual acuity adjustment: ± 5 diopters, spectral ratio: 40:60.
Eyepiece	High eye point, large field of view, flat field eyepiece HWF 10X/20mm
Objective lens (long-distance flat field achromatic objective lens)	LMPlan 5X /0.13 WD15.5mm
	LMPlan 10X/0.25 WD8.9mm
	LMPlan 20X/0.40 WD8.7mm
	LMPlan 50X/0.65 WD5.2mm

Converter	Internal positioning five hole converter
Focusing system	Low hand position coarse fine adjustment coaxial focusing mechanism, with a coarse movement of 30mm per revolution; Fine tuning accuracy 0.002mm. Equipped with an elastic adjustment handwheel to prevent slipping.
objective table	Three layer mechanical mobile platform, with an area of 180mmX150mm, controlled by a low hand position on the right hand, with a stroke of 35mm × 15mm.
Worktable	Metal carrier platform (center hole Φ 12mm)
Lighting System	Falling beam Kola lighting system, built-in aperture light bar, adaptive wide voltage 100V-240V, 50-60Hz, full spectrum 5W LED light, continuously adjustable brightness; Front light brightness indicator bar; ECO infrared sensing system.
Adapt mirror interface	Built in 0.5X adapter lens interface (using standard C-type interface design)
color filter	Equipped with frosted glass and blue filter.
Metallographic analysis system	FMIA2025 genuine metallographic analysis software, Sony chip 5 million camera device, micrometer.