

HST301-EW Computerized Upright Metallographic Microscope



Product Overview:

The HST301-EW computer upright metallographic microscope provides customers with cost-effective metallographic analysis and industrial inspection solutions with excellent imaging system and comfortable operation experience. The structure adopts the observation tube with the best comfortable angle of the newborn bed, which can relieve the tension and fatigue of users in long-term working state and ensure the best observation state. The scale on the observation tube is convenient for users to adjust the optimal pupil distance range by themselves.

The HST301-EW computer upright metallographic microscope integrates a stable microscope host, a high-definition camera device and genuine metallographic image analysis software, which can provide users with a full range of efficient metallographic structure detection and analysis solutions.

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

Brightness memory function

The brightness memory function can memorize the lighting brightness when using each objective lens, and automatically adjust the light intensity when different objective lenses are switched.

All series of semi-apochromatic brightfield objectives

The objectives use high-transmittance lenses and advanced coating technology to truly restore the natural color of the sample. The semi-apochromatic design has excellent chromatic aberration correction performance, which improves the contrast and clarity of the observed image.

High Definition Sony Chip Camera

The camera is a C-mount CMOS camera with a Sony CMOS sensor, an ideal metallographic microscope camera for high-quality brightfield, darkfield, polarized, low-light and fluorescence lightfield microscopy imaging, suitable for materials science applications.

Image stitching

The image measurement software can be realized by moving the stage. The process of manual image stitching can realize the image stitching function of different magnifications to obtain a clear image with a large field of view.

Real-time depth of field fusion

The depth of field synthesis function in the image measurement software allows you to rotate the microscope to fine-tune different depth of field points while the camera immediately expands the depth of field of the microscopic image in real time. The details of the entire frame are clear at a glance, and you will never see blurry images again!

Technical Parameters

Name	Specification
Optical system	Infinity chromatic aberration corrected optical system
Observation tube	30° tilt, infinity hinged three-way observation tube, pupil distance adjustment: 50mm~75mm, single-side diopter adjustment: -2/+8 diopter, two-speed splitting ratio R:T=100:0 or 50:50
Eyepiece	High eye point and wide field of view flat field eyepiece SWH10X/23mm (diopter adjustable)
Objective	Flat field semi-compound metallographic bright field objective 5X/NA0.15 WD15
	Flat field semi-compound metallographic bright field objective 10X/NA0.30 WD8.4
	Flat field semi-compound metallographic bright field objective 20X/NA0.45 WD3.0
	Flat field semi-compound metallographic bright field objective 50X/NA0.75 WD3.0

	Flat field semi-compound metallographic bright field objective 100X/NA0.90 WD1.0 (optional)
Objective lens converter	High-precision internal positioning 5-hole bright field converter, brightness memory function.
Focusing mechanism	Low-hand position coarse and fine coaxial focusing mechanism, coarse adjustment stroke 30mm, fine adjustment accuracy 0.001mm . With adjustment tension device to prevent slipping and random upper limit device. With platform position up and down adjustment mechanism, maximum sample height 40mm.
Stage	Double-layer mechanical moving platform, low-hand position X, Y direction coaxial adjustment; platform area 240X175mm, work surface: 135X125mm, moving range: 75mmX50mm, can be equipped with metal stage for reflection.
Reflected illumination system	Adaptive wide voltage 100V-240V_AC50/60Hz, reflective lamp room, single high-power 10WLED, warm color, Kohler illumination, with field diaphragm and aperture diaphragm, center adjustable,
Polarizing component	Analyzer, polarizer.
Other accessories	Photographic accessories: 0.5X C-mount, adjustable focus;
	Sony chip FEG 12-megapixel camera, computer imaging system FCL-RS
	FMIA2025 metallographic image analysis software, high-precision micrometer (grid value 0.01mm)
Computer	Branded business computer (optional)