

### HST602MW Upright Metallographic Microscope



#### **Product overview:**

This upright metallographic microscope integrates multiple observation functions such as bright field, dark field, polarization, DIC differential interference, etc., rich observation methods to meet your detection needs, and can be selected according to actual applications.

#### **Product features:**

Wide beam imaging system design, supports 25mm world-leading ultra-wide field observation, bringing you a new wide field experience.

Objective lens brightness memory function, which memorizes the brightness value of each magnification objective lens separately, and the objective lens can be automatically adjusted when switching.

Configured with coded objective lens converter, the coded objective lens converter integrates the hardware settings of the microscope with the FCL-RS image measurement software. When switching the objective lens magnification, the calibration value recorded in the software can also be automatically adjusted to eliminate measurement errors caused by forgetting to switch the software magnification.

Configured with bright and dark field semi-apochromatic objective lens to improve the optical imaging effect.

Excellent polarization system, including polarizer plate and analyzer plate, can be used for polarization

detection. In semiconductor and PCB detection, stray light can be eliminated and details are clearer. The 360° rotating analyzer can conveniently observe the state of the specimen under different polarization angles without moving the specimen.

Differential interference contrast imaging system (optional) can convert the subtle height difference that cannot be detected under bright field observation into high-contrast light and dark difference and show it in the form of three-dimensional relief, such as LCD conductive particles, scratches on the surface of precision disks, etc.

Neutral density filter linkage light and dark field observation design, the lever at the front end of the illuminator can make the switch between light and dark field observation more convenient, and has a neutral density filter linkage function. It can prevent the user's eyes from being stimulated by strong light when switching from dark field to bright field, and improve the comfort of use.

High-performance objective lens converter, adjustable objective lens turntable, adjustable objective lens center, precision bearing design, light and comfortable rotation feel, high repeat positioning accuracy, zero eccentricity after objective lens conversion.

New structural design, high-rigidity lens body structure, newly designed integrated T-type frame, all-metal high-pressure die-casting, with excellent stability, no image jitter during high-magnification observation, and better detection accuracy.

The epi-illuminator adopts the Kohler illumination system, with field diaphragm and aperture diaphragm, preset polarizer, analyzer and filter slots. A single 10W LED warm white light illumination can minimize the visual fatigue of the observer.

The field diaphragm and aperture diaphragm adopt a pull rod device with adjustable center, which can flexibly adjust the size of the illumination range and effectively avoid stray light on the image.

#### Technical parameter:

|                           |                                                                                                                                                                                            |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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: $\pm 5$ diopters, two-speed splitting ratio R:T=100:0 or 50:50 |
| Eyepiece                  | High eye point, wide field of view, flat field eyepiece SWH10X25mm (diopter adjustable)                                                                                                    |
| Semi-reflective objective | Infinity semi-apochromatic bright and dark field objective lens: 5X, 10X, 20X, 50X, <a href="#">100X (optional)</a> .                                                                      |
| Objective lens converter  | 5-hole coded adjustable bright and dark field objective lens converter (with DIC slot), the coded objective lens converter integrates the hardware settings of the microscope with the     |

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|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | <p>FCL-RS image measurement software. When switching the objective lens, the calibration value recorded in the software is automatically adjusted to eliminate measurement errors caused by forgetting to switch the software magnification.</p> <p>5-hole bright and dark field electric objective lens converter (electric/with DIC slot) (optional)</p> |
| Focusing mechanism    | Transflective and reflective dual-purpose rack, low-hand position 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, glass table: 101X101mm, moving range: 75mmX50mm, transflective and reflective dual-purpose glass stage                                                                                                     |
| Upper lighting 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.                                                                                                                                                                |
| Lower lighting system | Adaptive wide voltage 100V-240V_AC50/60Hz, transmission lamp room, single high-power 10WLED, warm color                                                                                                                                                                                                                                                    |
| Condenser             | Transmission swing-out achromatic condenser (N.A0.9), with variable aperture diaphragm, center adjustable                                                                                                                                                                                                                                                  |
| Accessories           | Photographic accessories: 0.5X C interface, adjustable focus;                                                                                                                                                                                                                                                                                              |
|                       | Sony chip FEG series 12 million pixel camera, computer imaging system FCL-RS                                                                                                                                                                                                                                                                               |
|                       | HST MIA2025 genuine metallographic image analysis software, high-precision micrometer (grid value 0.01mm)                                                                                                                                                                                                                                                  |
| Optional              | Reflection interference filter: blue $\leq 480\text{nm}$ ; green 520nm~570nm; red 630~750nm LBD                                                                                                                                                                                                                                                            |
| PC                    | Branded business computer (optional)                                                                                                                                                                                                                                                                                                                       |