

DESCRIPTION

Stereozoom microscopes are optical microscopes that give a three-dimensional (3-D) view of a sample and generally operate at low magnification. The 3-D image allows solid surfaces to be examined with greater clarity and permits the precise manipulation of samples during magnification.



What is Fusion Optics:

ACUCAL Stereo Zoom Microscope, Series ACUSZM127 offers Fusion Optics technology which puts a high resolution image at the highest possible Numerical Aperture to the right eyepiece and a large depth of field image to the left. The result is Outstanding Richness of Details and Outstanding Depth of Field. In many industrial applications, Stereozoom Microscope with this technology provide new and better possibilities of examining and evaluating microstructures of material, components and products.

APPLICATION

- Stereozoom microscopes are used in food science, marine biology, embryology, environmental science, and forensic science. In pharmaceutical and biotechnology labs, stereozoom microscopes are commonly used for magnifying biological samples such as plant tissues and organ samples.
- In Biological studies & microsurgery, geology, Zoological research work, Forensic research work, Forensic research work (Biological specimen examination) & Life Science (Fisheries).
- In Polarising studies of thin Sections, polished Sections, microfossils, mineral grains, rock samples, drill cores, micromounts, fossils) with modular zoom head for configuration flexibility.
- Wider industry applications including the examination of circuit boards and microchips. Working & inspection of Printed Circuit Boards with uneven electronics & soldering surface.

TECHNICAL SPECIFICATION

Optical System

- Greenough Plan Optics Zoom based Stereoscopic Microscope with fully Plan Apochromatic & Lead Free fusion optics providing plan field of view.
- Specialized optics that combines High Resolution and high Depth of Field for Ideal 3D Optical Images.
- All optics are anti-fungus treated and anti-reflection coated for maximum light throughput.

Observation Head : Trinocular

- Observation head inclined at 20° or 30° or 35° or 45°, rotatable at 360°.
- Inter-pupillary distance adjustment from 50mm to 75mm.
- Vertical phototube for micro photography 100-0% beam splitter switch between right eyepath and camera or Vertical phototube for micro photography Light Distribution is 50:50% for simultaneous view on Microscope & Computer
- In built interchangeable 60N 0.5x or 0.55 x or 0.75x or 1x magnification lens camera adapter with c-mount interface.

Eyepiece

- Smooth contoured finish "Comfort View" eyepiece with folding Eyecups.
- Diopter adjustment facility in both eyepieces & suitable for eyeglasses and non-eyeglass wearers.
- Eyepiece mount or Eyepiece outer barrel diameter 30mm.
- Extra Wide Field PL 10X (paired)/ F.N. 23 & FOV 23mm Bright Field Br, Focusable Foc.
- Eyepiece 10X with Field Number Or Field View 20mm, 22mm, 24mm (**Optional**).

Objective

- 1X objective Inbuilt
- 0.5X, 0.63X, 1.5X, 2.0X (Optional)

Zooming Range & Ratio : Coded Click stop Zoom 0.6 X to 5.5X with Optical Zoom ratio of 9:1, switchable Zoom click stops for easy operation & inspection at specific components.

Optical Magnification Range : 6X-55X with 10X eyepiece pair and inbuilt 1X Objective.

Working Distance : 110mm to 122 mm with inbuilt 1X Objective & without dust protection glass.

- **Resolution** : 225lp/mm to 550 lp/mm with 10X eyepiece pair and inbuilt 1X Objective.
- **Depth of Field** : 12mm with Fusion Optics
- **Numerical Aperture** : 0.167
- **Field of View (Object field Diameter)**: Maximum 38.3mm @ 10X eyepiece and 1x lens combination. Higher for fast, accurate inspection.

Mechanical Body

- Ergo Manual, fully coded transmitted Light Base with one-sided Rotter Mann Contrast.
- Diascopic White LED illumination stand suitable for brightfield, darkfield application & oblique illumination contrast by built in condenser and adjustable rotatable and slidable reflecting mirror for changing the light signal directions provides high relief observation for the colorless samples.
- Transmitted light intensity and shutter controlled via external controller unit
- Position of contrast element is coded
- Stand fitted with broad base Track stand with Integrated base with column.
- Column 250 mm with drive and handle, lifting range 145 mm, easily accommodates Petri dish/Flask etc.
- Large Focusing unit on both sides with tension & friction adjustable.
- Include 84*5mm Glass plate and Black & White plate.
- TL/RL Polarizer-diameter 45mm.
- Hand Rest Stand.
- Large Focusing knobs on both sides with tension adjustable.
- Dust protection Glass M50 with M49x0.75
- Thread M49/50 Type Objective Mounting Screw for front optics or Analyzer.
- Mount D=76mm for stemi mount/mount S-Interfaces

Illumination System

- LED light source with Maximum 50000 hours life time.
- Diascopic (Transmitted) illumination with LED lamp having long lifetime and constant colour temperature at any intensity.
- 2x sockets for IVI and illuminators LED-Regulated power supply with brightness controls & on/off/dimming.
- **Reflected Illumination System** : Spotlight illumination, 2-arm Gooseneck with 280-300 mm or better length, with 2 Hi-Power LEDs, ca. 5600K colour temperature, control panel with separate gooseneck or Episcopic White LED Segmentable Ring light with 4 segments modes: Full, half- and quarter-circle and 2-opposite quarters.
- D=53 mm for illuminators.
- **Halogen Conversion Filter** for shifting the color into the yellow range. Improves contrast for IVF. (Optional)

Electronics :

- Line voltage - Universal Input 100-240 V AC($\pm 10\%$) i.e. voltage setting of the instrument need not be changed , Line frequency 50 / 60 Hz
- Power consumption 70 VA.

Standard Accessories :

- Power Cable, Operating Manual, Dust Cover, Guarantee Card and Styrofoam Molded pack.

FEATURES

- High quality optical components, providing sharp and striking contrast image and ensure flat image at big depth of field.
- Distortion Free, without color fringes.
- Ease the tiredness with ergonomic design.
- With LED light Providing even illumination
- With complete eyepieces, objectives and accessories it is an ideal instrument for industry assembling, inspection and teaching field.
- Large Field of view and apochromatic correction
- Extended Working distance
- Efficient stray light suppression for crisp three dimensional images
- User interchangeable Apochromatic front optics
- Eyepieces to reach any magnification between 2X to 10X, and can upgrade upto 250X
- Double your resolution or enjoy large working distance upto 250 mm or above without compromising optical quality.
- Flexible with different digital cameras
- Compatible with multiple types of illumination techniques
- Designed for vibration free observation and heavy workloads, using durable and reliable mechanics.
- Continous variable zoom or in reproducible mode by activating click stops well balanced 3D impression
- Sharply focused over the whole magnification range
- Ergonomically user friendly than any other Greenough-type stereo microscope

OPTIONAL ACCESSORIES

- Wide Field Eyepieces: 15X/Ø16, 20X/Ø12 & 30X/ Ø8



Fibre Optics Illumination



Ring Illuminator



Polarizer/Analyzer

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