EXC500p-- PATHOLOGY MICROSCOPE

EXC500hd -- HD DIGITAL PATHOLOGY MICROSCOPE

EXC500r -- RESEARCH MICROSCOPE

EXC500-LABORATORY SCOPE

VISUAL DYNAMIX

The EXC500 Pathology and Laboratory Microscope is the most optically advanced and ergonomic microscope available. A building block design allows you to customize your microscope to fit your needs, regardless of your requirements.

UNPARALLELED OPTICS

At the forefront of any Optical Microscope is the optics... and unparalleled optics is what sets the EXC500 apart. With the NIS60 optical design, the EXC500 produces images high in both contrast and resolution-with the most accurate and true color rendition available. The 60mm parfocal distance and 25mm apertures provide the highest Numerical Apertures and longest working distances available.

Enhanced glass and coatings produce images with unsurpassed color reproduction and a crisp, in focus view from edge to edge across the entire field of view.

User selectable S-APO or PLAN APO lenses provide options to best suit your requirements.

LED ILLUMINATION WITH FLY-EYE TECHNOLOGY

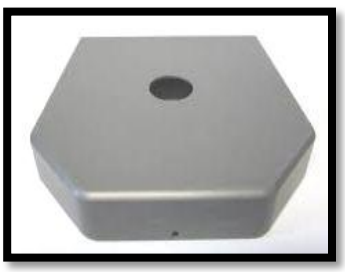
With a 30,000 hour LED array and Fly-Eye illumination design, the EXC500 produces images with constant intensity from edge to edge-regardless of the magnification. The LED is tuned to Daylight White temperature, providing a precise white background and enhancing the contrast in the samples. By having this advanced illumination system, you eliminate the constant intensity adjustment normally required when changing objective magnifications. In addition, Fly-Eye technology eliminates the annoying shadows at low power that are inherent in other microscopes.

The EXC500 is an Eco-Illumination system that automatically turns off the LED illumination when the scope is not in use. A simple touch of the conveniently located on\off button, the LED illumination turns back on at the desired intensity. The Eco-Illumination increases the life of your system and lowers power consumption.

PATENTED STAGES

The stage surface is made with a Gorilla Glass insert that is resistant to chemicals, mounting media and scratching and is an exclusive feature on the EXC500. This indestructible surface enhances the smooth movement of the slide and guarantees that the slide sits flat for the life of the scope by eliminating warping that occurs over time with soft coated stages.

The XY controls of the stage can be raised or lowered in reference to the table surface to enhance the overall ergonomics. In addition, the user can select the tension of the individual X and Y movements.



For users that wish to manipulate the specimen by hand, we offer a ceramic coated stage without mechanical XY controls. This surface ensures that the slide has smooth movement to allow for use with high magnifications.

EYETUBES

The EXC500 offers advanced Ergonomics inspired by decades of research and design improvements. Every movement made is accounted for in the ergonomic design with the focus on the user. A special consideration is given to the posture of the user when operating the microscope. Low profile 20 degree fixed angle eye tubes and eye tubes with adjustable viewing angles and heights are available to accommodate all users and are available in both binocular and trinocular photo versions.

Ergonomic Tilting Eye tube (0-30 degrees) with integrated Photo Port. User selectable 3 way light distribution: 100% visual \ 100% photo \ 20%vis-89% photo split

Ergonomic Tilting Binocular Eye tube (0-30 degrees)

Low profile 20 degree fixed Eye tube) with integrated Photo Port. User selectable 3 way light distribution: 100% visual \ 100% photo \ 20%vis-89% photo split

Low Profile 20 degree fixed Binocular Eye tube

For added ergonomics, Eye level riser modules are available. Eye-point height can be raised in 25mm increments to accommodate your normal viewing posture.

For user that wish to lower the stage of the scope to manipulate the specimen by hand, a nosepiece spacer is available. This spacer lowers the nosepiece and stage by up to 35mm to accommodate this operation in an ergonomic environment

ADDITIONAL ERGONOMIC FEATURES

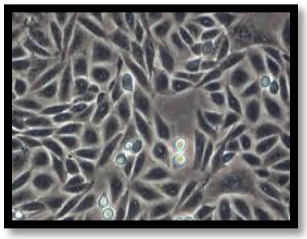
*The in-line focus design allows the user to sit at the scope and control all the various components while the hands and arms are at equal distance from the body. This allows for the neck, shoulders and spine to remain square to the scope-reducing the strain on the body. In addition, by keeping the body in correct posture and the head square, the EXC500 reduces eye strain.

*User selectable focus and stage tensions allow each user to customized the tension in the controls. In addition, the user can set a focus travel limit to ensure that their dry lenses are not accidentally dragged though immersion oil left on a slide.

OPTIONAL ILLUMINATION TECHNIQUES

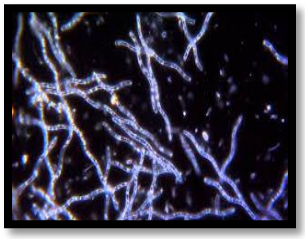
The EXC500 is a modular design that allows easy upgrading as your requirements change. By incorporating the high intensity LED and Fly-Eye illuminator, sufficient illumination is available to accommodate various techniques.

Phase Contrast



High Contrast with neutral background colorization can be viewed. This technique is suitable for observation of unstained samples or cells.

Darkfield

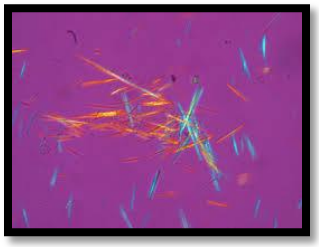


This technique enables the detailed viewing of minute structures in transparent and\or unstained samples. Both a dry and oil condenser are available.

Simple Polarization

A combination of a Polarizer and Analyzer provide crystal identification in birefringent samples.

Gout Analysis



The technique enables the identification of uric acid crystals inside an organism by changing an interference color.

NOMARSKI DIC

Differential Interference Contrast (DIC) allows unstained, transparent samples to be viewed in high resolution and contrast.

DIGITAL IMAGING MADE EASY

The EXC500 supports direct mounting of all manufacturer cameras to support all facets of digital imaging. Visual Dynamix is a universal distributor of all major camera manufactures so integrating the best camera for the application is possible.

We offer a full complement of cameras to accommodate specific imaging needs: sCMOS, CCD, EMCCD cameras mount via the direct projection port and provide a seamless documentation platform for all your needs

EXC500 with VDHD6m HD Camera

DIGITAL PATHOLOGY

The EXC500 with its NIS60 Infinity Optical design and fly-eye illuminator makes integrating a Digital Pathology system a one step process. We offer multiple solutions to accommodate every specific need for digital pathology.

-The VDHD6m High Definition camera mounts to the scope and provides a real-time viewing and teaching system. The HD camera captures images without the need for a computer for one click photo documentation.

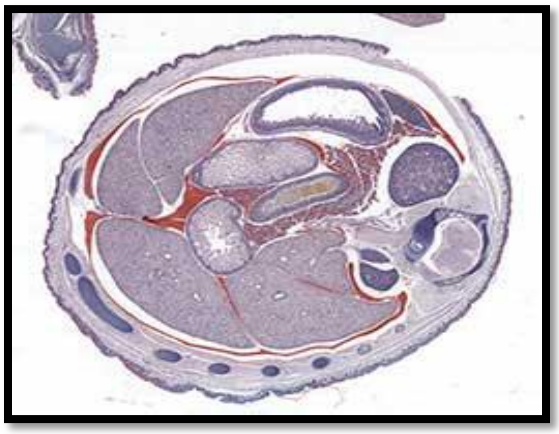
-The VDPATH system is a fully integrated system that provides a streamline process for acquisition, documentation, measuring and data base options. An intelligent objective system tells the camera and software what lens you are using so your images are always calibrated for accurate measurement. An optional bar code reader can quickly store patient data records and allow for instant recall of all case images. A remote capture button can be placed directly next to your focus controls to allow for image capture without removing your eyes from the microscope.

Software for image processing, measuring and annotations round out the system.

VIRTUAL IMAGING

Along with our partners, the EXC500 can be outfitted with an encoded, high speed motorized stage and Surveying Software to allow for whole or multiple slide scanning for larger field of view imaging. This technology allows for you to use high magnification objective lenses and create a precise mosaic.

The result: Macroscopic field of view with Microscopic resolution.



Mosaic with 340 images with 10x objective

MULTI-VIEWING STATIONS

The EXC500 can be configured with up to 20 viewing stations for teaching and consulting applications. Because of the NIS60 optical system, every viewing station offers the same field of view with precise color rendition and image quality. All viewing stations can be equipped with Ergonomic Tilting Eyetubes so each user can sit comfortably at the scope. A convenient pointer can be viewed in each eyepiece for cell identification.

EXC500 with 5 Viewing Station and VDHD6m HD Camera

EPI-FLUORESCENCE

The EXC500 Building Block design allows for the addition of Fluorescence Microscopy-a very critical diagnostic tool in any laboratory. The Fluorescence module easily integrates into the EXC500 and works in conjunction with all current components and techniques on the scope-including the S-APO or PLAN APO lenses.

There are 3 Fluorescence modules to choose from:

-4 position turret type module with user selectable "quick change" positions between 2 adjacent filter sets, as well as a "lock" position for use with a single fluorescence sample

- 6 position turret type module with smooth, positive click stops at each filter position. This module incorporates Stray light Termination technology that removes any stray light that becomes trapped between optical glass. This technology helps boost intensity of low emitting fluorescence and increases signal to noise ratios.

  This fluorescence module also comes in a Motorized version to automate the acquisition of multiple fluorescence dyes.

EXC500 with Fluorescence Module

- Direct connect module that works in conjunction with high speed LED switching devices for high speed switching of multiple wavelengths.

The EXC500 Fluorescence modules have a Universal coupling mount so that LED, Metal Halide, Mercury or Xenon sources can be used.

RESEARCH -- A CONFIGURATION FOR ALL APPLICATIONS

The EXC500 Building Block design allows the integration of peripheral components to customize a research microscope. This design permits the additional components to be added anytime--even after the initial set up. Users can select from manual or motorized components with a full range of software for device control and automated acquisition and analysis.

MOTORIZED XY STAGES

A wide variety of 3rd party motorized stages can be added to the EXC500, including an 8 slide stage for high throughput applications. Stages can be linear encoded with feedback for enhanced acquisition for experiments where accuracy and repeatability are required.

MOTORIZED Z FOCUS MODULES

Various Motorized Focus Modules can be integrated into the EXC500. These modules, used both manually and via software control, enhance the optical sectioning capabilities of the NIS60 Optics and also provide for auto-focus in samples.

PHYSIOLOGY STAGES

Translation stage components allow the EXC500 to be used for Physiology Experiments. Pillars and moveable XY tables move the EXC500 microscope in relation to the fixed sample.

LED ILLUMINATION SOURCES

Various 3rd party LED illumination sources are available to enhance fluorescence applications. Single line up to 7 line LEDs are available in a either direct connect model or a Liquid Light Guide delivery option. LEDs sources can be controlled via software for complete integration into your automated experiment.