

EXi-300 INVERTED MICROSCOPE



In designing this new microscope, our engineers started with a list of requirements that have never been incorporated in to one microscope. A compact design: simple operation to reduce the strain on users: advanced optical performance: two camera ports: expandability: and all at a price that any lab can afford.

THE RESULT: THE NEW EXi300

UNPARALLELED OPTICAL DESIGN

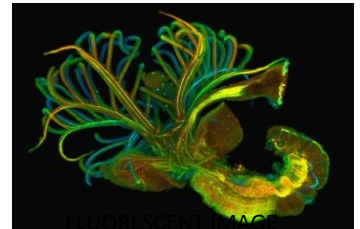
Unparalleled optics is what sets the EXi300 apart. With the NIS60 optical design, the EXi300 produces images high in both contrast and resolution-with the most accurate and true color rendition available. The 60mm parfocal distance and 25mm apertures provide the highest Numerical Apertures and longest working distances available. True sample reproduction and documentation is now possible.

WIDE RANGE OF OPTICS

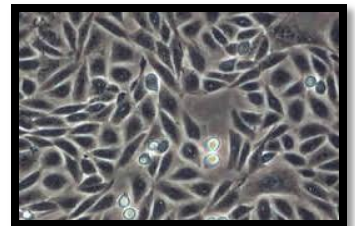
The EXi300 has the longest optical path in the industry, allowing for a wide range of optics to match your specific requirements. Built on the NIS60 Optical system, the lenses boast the highest numerical apertures with the longest working distances available.

Phase contrast methods do not require specimen staining, making it an ideal technology for observing living cells and organisms.

-S PLAN FLUOR DM Phase Extra Long Working Distance lenses have single coatings that produce the best transmission for fluorescence applications and the highest Numerical Apertures provide the best image quality in all lighting techniques. These lenses offer Extra Long Working distances to be used with any sample preparation, as well as correction collars to allow for optical correction of any aberration cause by sample media. These lenses are universal so are the perfect choice for labs that have multiple sample preparations in dishes, flasks, well plate or slides.



-Plan Achromat ADL Phase Long Working Distance objectives provide the highest relief contrast in the industry. The Apodized Phase technology improves the phase imaging by eliminating the halos around the cells that standard phase systems produce



PHASE CONTRAST IMAGE

-Plan Achromat Phase Long Working Distance objectives are the most economical grade of lens and provide detailed contrast with cells that have limited structural detail.

-Hoffman Modulation Contrast Objectives provide life like 3-D imaging of cells. This technique provides high contrast images that also show the finest of detail. This technique is most desirable for applications where detail is need, like micro-injection or time lapse, live cell imaging.



HOFFMAN MODULATION IMAGE

LED ILLUMINATION

With a 25,000 hour LED array that is pre centered and pre aligned for Koehler Illumination the EXi300 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.



PHASE CONDENSER

The Long Working Distance condenser provides a free working distance of 70mm to allow access to the specimen and also permits the use of larger dishes and roller bottles. The High Numerical Aperture of 0.30 provides crisp illumination for all light techniques and the iris diaphragm improves depth of focus and contrast.



The 3 position phase slider comes pre-aligned so there are no requirements to align phase rings with objectives. There are positive click stops to ensure that the phase rings come into correct focus. There is one phase ring that matches the 3 most used phase objectives so there is NO required movement of the phase slider when changing your objectives.

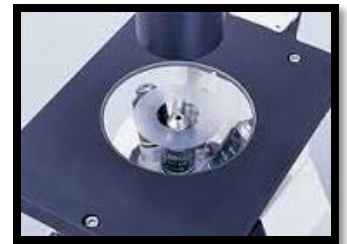
There is an open position to allow the scope to be used for brightfield applications and an auxiliary position to accommodate an additional phase ring for custom applications.

EFFICIENT PLATFORM STAGE

The EXi300 stage is a low profile design that is 180mm high, providing an ideal height for a lab bench and an perfect height for a comfortable, ergonomic environment in both a seated and standing posture.

The stage is oversized to allow additional surface for type of sample but sleek enough to fit into a safety hood. The surface is hard coated, making it durable but smooth to allow easy movement of the sample.

There are selectable inserts for the stage, including a transparent insert that allows you to easily identify the objective being used as well as adjust any correction collars as needed. A glass insert option minimizes thermal expansion and specimen drifting.



There is an optional attachable mechanical XY stage to firmly hold well plates and a variety of inserts to accommodate dishes, flasks, slides and hemocytometers.



COARSE\FINE FOCUS KNOBS

The coaxial coarse and fine focus knobs, located up-front and close to the operator make operating the scope more efficient and ergonomic. The fine focus provides a graduated movement to accommodate high magnification imaging, up to 100x oil.

There is an tension adjustment to allow the user to adjust the focus pressure that suits their preference.



EASY TO ROTATE NOSEPIECE

The 5 position nosepiece provides additional clearance and access to allow the user to rotate it from either side. The side mounted design ensures that your objectives will not touch the sample upon rotation, reducing potential damage and eliminating any refocusing when changing magnifications.

The nosepiece has positive, vibration free click stops to ensure that your objectives are parfocal and parcentric.



COMFORTABLE VIEWING EYETUBE

The Viewing head is inclined at 45 degrees, providing a comfortable viewing angle while either standing or sitting at the scope. The eyetube is Siedentoph design with a larger Interpupillary Range to foster a strain free and ergonomic viewing environment.

High eye point eyepieces come in multiple magnifications to improve the total magnification range of the system. All eyepieces have a focusable diopter to allow for each user to obtain a crisp focus, regardless of any stigmatisms or for users that wear glasses during use.



DIGITAL IMAGING MADE EASY

The EXi300 is the only microscope in this class to offer 2 integrated photo ports to allow you to mount two Digital cameras to the scope simultaneously. This allows you to have a color camera to work with any phase or stained tissue images and a Monochrome camera to capture your fluorescence images.

The 2 camera ports allow the mounting of cameras based on the light path distribution that best meets your needs. 100% visual, 100% photo and an 80%photo\20% visual split options are available.

Two camera ports also allow you to mount a camera where it is most convenient for your work flow. The front mounted camera port places the camera out of the reach for applications that require constant sample movement or manipulation. The top mounted port allows for heads up displays to be mounted to the scope.



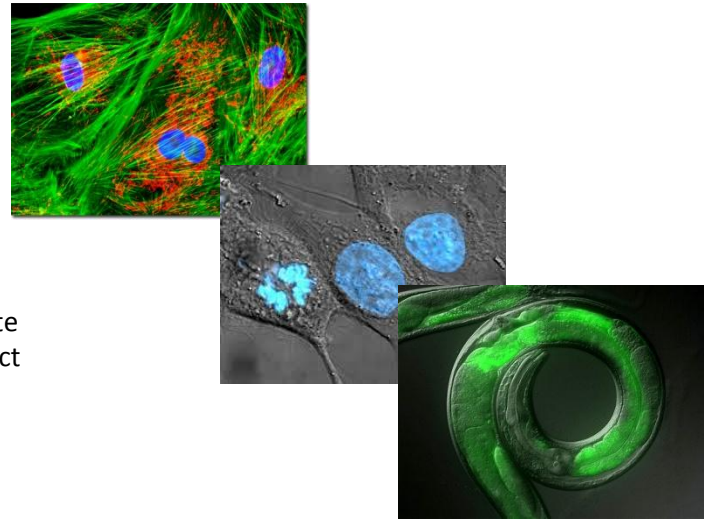
i300 with VDHD6m Camera

EPI-FLUORESCENCE

The EXi300 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 EXi300 and works in conjunction with all current components and techniques on the scope-including the Plan Fluor Phase or Plan Achromat Phase lenses.

The Fluorescence module is a 2 position slider but can accommodate applications from a single wavelength up to 7 wavelengths. The Direct connect module works in conjunction with high speed LED sources for high speed switching of multiple wavelengths. There is also a direct LLG module to accept light guide sources.

The EXi300 Fluorescence modules have a Universal coupling mount so that LED, Metal Halide, Mercury or Xenon sources can be used.



EASY UPGRADING FOR RESEARCH APPLICATIONS

The EXI300 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 EXI300 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 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.

