



SIMPLY STUNNING

EVOS[®] imaging systems

Smart systems | Easy cell imaging | Fast results

life
technologies

A Thermo Fisher Scientific Brand

Eliminating the complexities of microscopy

An EVOS® system is a must-have in your lab for cell imaging—whether you're capturing images for publication, teaching, or research. EVOS® systems were designed to allow researchers to focus on their data rather than worrying about the operation of a microscope.

From cell culture to complex protein analysis and multi-channel fluorescence imaging, EVOS® imaging systems help you perform a variety of routine and specialty applications.

Our proprietary LED light cube technology is designed to minimize photobleaching, offers >50,000 hours of LED illumination, and allows adjustable intensity—with no darkroom and no consumable costs.

Improved workflow

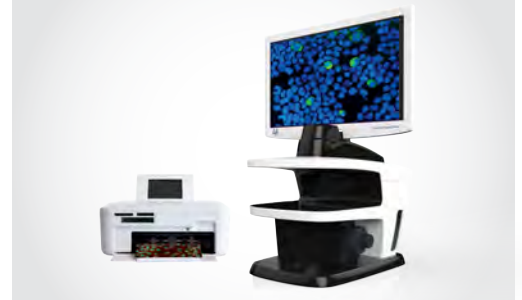
EVOS® systems are designed to work together—from the initial cell culture check (for viability and morphology) to more complex analyses such as time lapse and image tiling and stitching. An EVOS® system will allow you to spend more time analyzing images—and less time trying to capture images.



EVOS® FL Auto Imaging System



EVOS® FL Imaging System



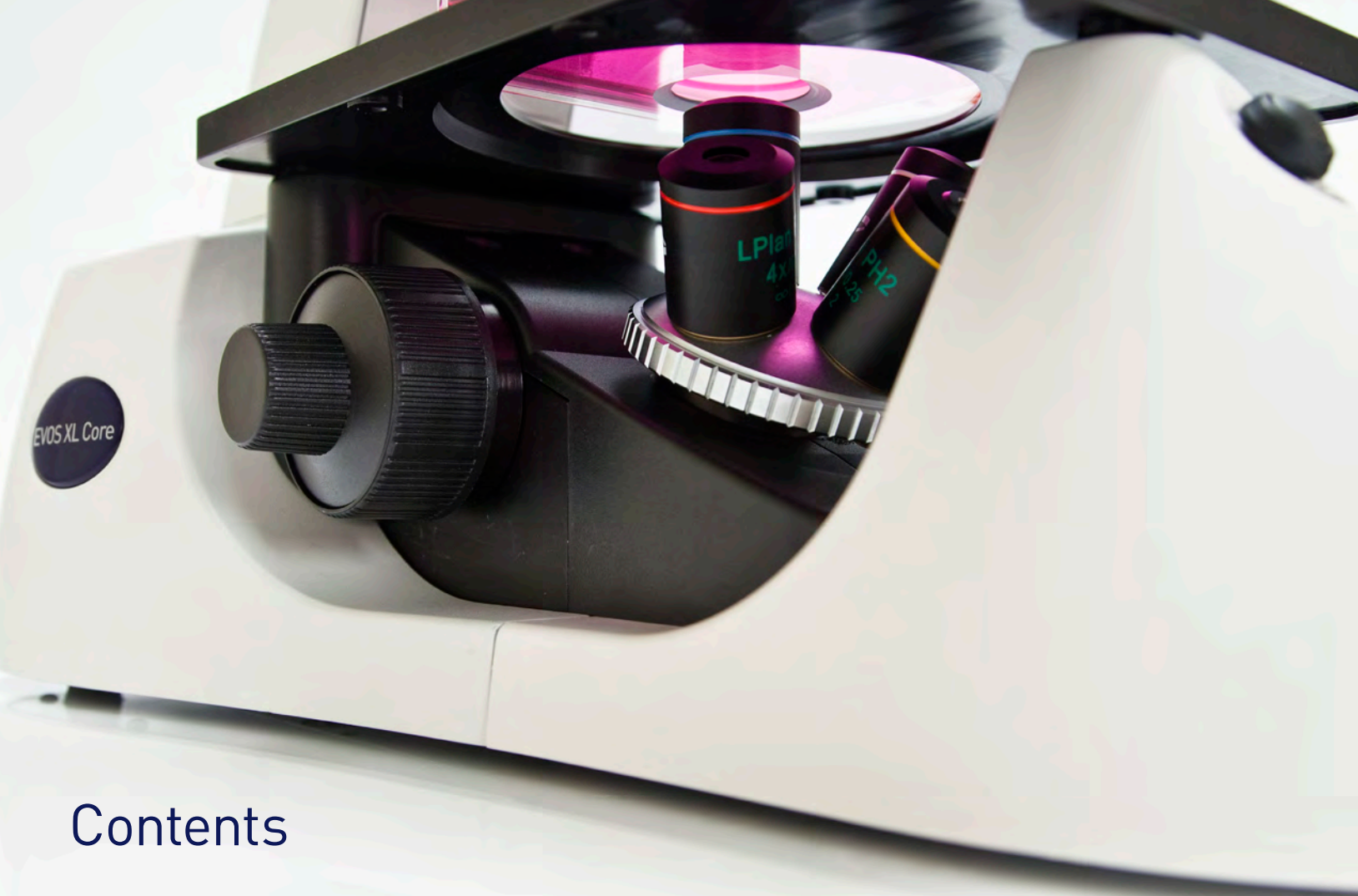
EVOS® FLoid® Imaging Station



EVOS® XL Imaging System



EVOS® XL Core Imaging System



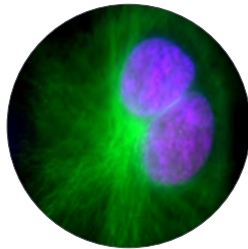
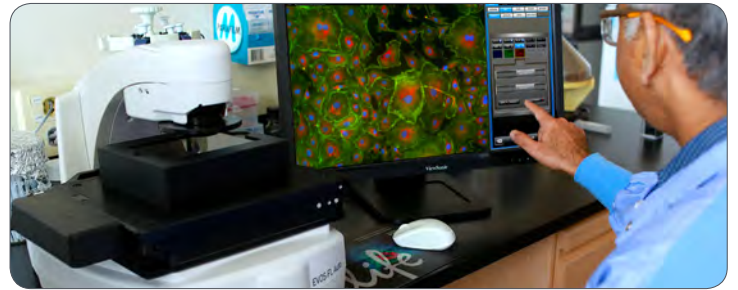
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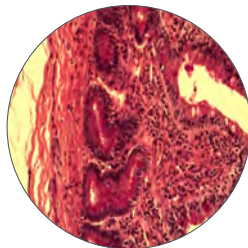
Compact and portable systems

Now you can have easy-to-use cell imaging where you want it, when you want it. Simply place your EVOS® imaging system at your desired location, flip the switch, and you'll be ready to go in typically under 2 minutes.

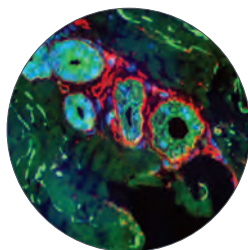
From intimate hands-on demonstrations to lecture halls, EVOS® imaging systems are the perfect system for teaching—whether your audience is large or small.



A549 adenocarcinomic human alveolar basal epithelial cells, 100x apochromat objective. Light cubes: GFP, RFP.



Human ileum, hematoxylin and eosin staining, 40x objective.



Rat skin, 20x coverslip-corrected objective. Light cubes: DAPI, GFP, RFP.

Publication-quality imaging

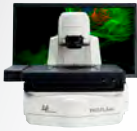




In today's competitive scientific environment, generating publication-quality images is critical to your success. To help ensure you get the publication-quality images you need, EVOS® systems give you top-of-the-line imaging components, including:

- High-quality camera and optics to capture high-resolution images
- LED illumination to produce superior signal-to-noise ratios
- Easy-to-use image capture and processing software for ready-to-publish images

Technology that's better for our environment

Traditional fluorescence microscopy light sources use mercury, a toxic carcinogen requiring special handling and disposal. By using LED light sources, EVOS® systems do not require these special steps and are thereby more environmentally friendly and more energy efficient.

EVOS® imaging systems at a glance

| | FL Auto | FL/FL color | FLoId® | XL | XL Core |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| |  |  |  |  |  |
| | Epifluorescence solutions | | | Transmitted-light solutions | |
| Simple installation | • | • | • | • | • |
| Intuitive software | • | • | • | • | • |
| High-resolution LCD display | • | • | • | • | • |
| Motorized encoded X/Y scanning stage | • | | | | |
| Manual mechanical stage | | • | • | • | • |
| Mechanical or fixed stage option | | | | | • |
| USB ports | • | • | • | • | • |
| DVI ports | | • | | • | |
| Display output | • | | | | |
| Networking capability | • | • | • | • | |
| Objective turret positions | 5 | 5 | NA | 5 | 4 |
| 20x fixed objective | | | • | | |
| Fluorescence channels | 4 | 4 | 3 | | |
| Monochrome camera | • | | • | | |
| Color camera | • | | | • | • |
| Monochrome or color camera option | | • | | | |
| Epifluorescence | • | • | • | | |
| Transmitted light | • | • | • | • | • |
| Image tiling and stitching | • | | | | |
| Automated multi-well plate screening | • | | | | |
| Cell counting | Automated | • | | • | |
| Teaching tool | • | • | • | • | • |
| Fits in hood or on benchtop | • | • | • | • | • |
| Associated printer | | | • | | |
| Multi-language user interface | | | • | | |
| Integrated reagent selection guide | | | • | | |
| Onstage Incubator | Optional | | | | |
| Z-stack capability | • | | | | |
| Time-lapse imaging | Multichannel | • | | • | |

The power of LED illumination

All EVOS® fluorescence cell imaging systems utilize LED light sources, providing high-intensity output over a short light path for the most efficient fluorophore excitation.

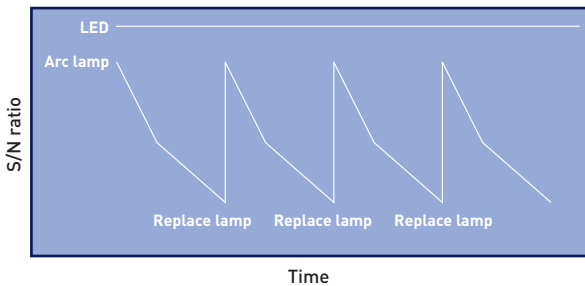
- Shorter light path enables better detection of fluorescent signals
- Continuous illumination gives consistent results
- >50,000-hour bulb lifetime helps lower your laboratory costs
- Adjustable light intensity reduces photobleaching

Revolutionary light path

By placing the LED light cube as close as possible to the objective turret, the number of optical elements in the light path is minimized. High-intensity illumination over a short light path increases the efficiency of fluorophore excitation, enabling better detection of weak fluorescent signals.

Stability comparison

Mercury and metal halide vs. LED

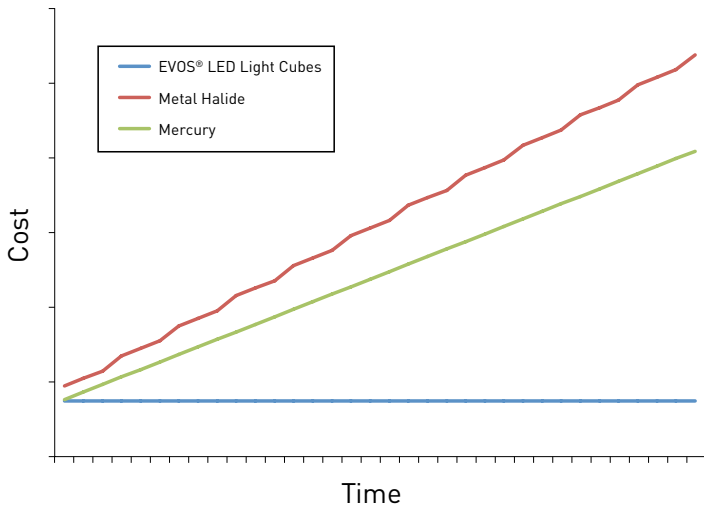


Continuous light intensity

Mercury arc lamps can decrease in intensity by 50% in the first 100 hours of operation—plus, images acquired in different sessions cannot be quantitatively compared using mercury illumination without complicated calibrations. Because EVOS® systems have continuous light cube intensity, users can rely on consistent illumination and can compare quantitative results from images acquired on different days.



Illumination costs over time



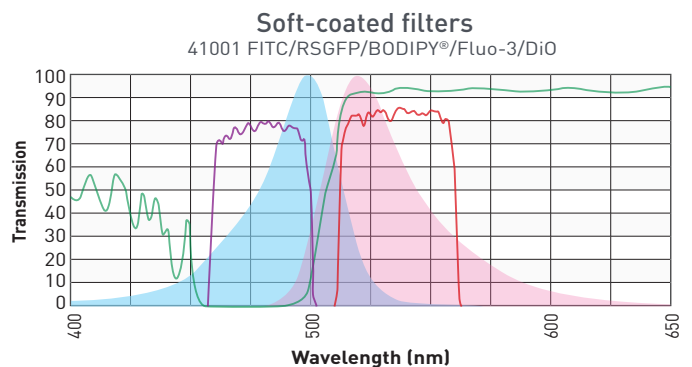
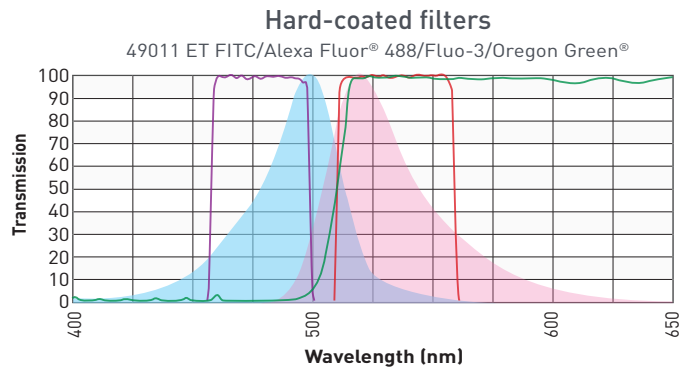
Less expensive to maintain

The LED bulbs on the EVOS® systems are rated for >50,000 hours (~17 years), compared to 300 hours for a typical mercury bulb (1,500 hours for a metal halide bulb). That means 70–75% savings in the overall upkeep of your instrument.

EVOS® hard-coated filter sets enable higher transmission efficiencies

Hard-coated filter sets are generally more expensive, but they have sharper edges and significantly higher transmission efficiencies that typically result in >25% more light transmission than traditional soft-coated filters. With the EVOS® systems' hard-coated filter sets, your light cubes cost less over time and are designed to have brighter fluorescence, higher transmission efficiencies, the ability to detect faint fluorescence signals, and better signal-to-noise ratios.

Transmission efficiency comparison



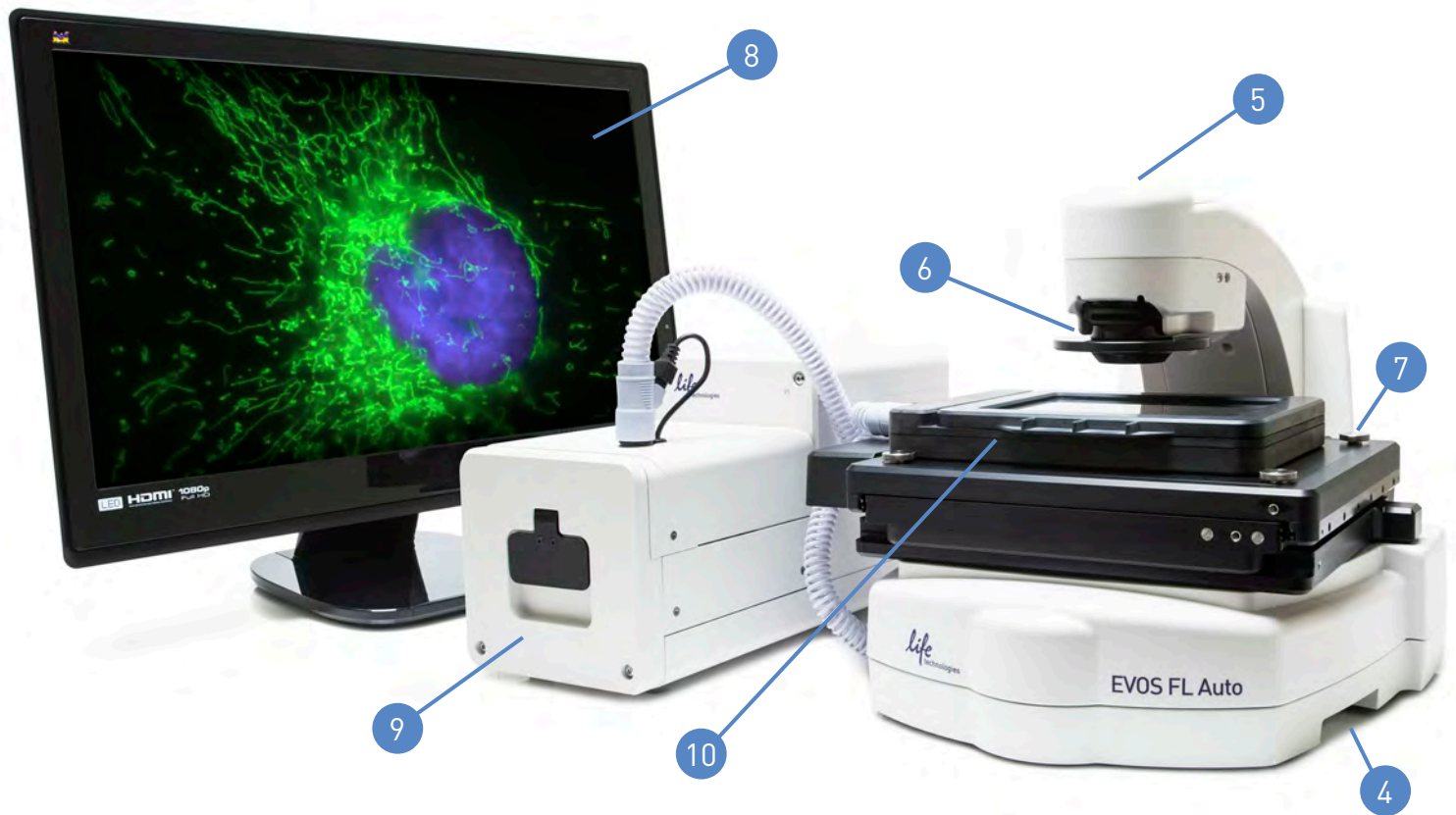
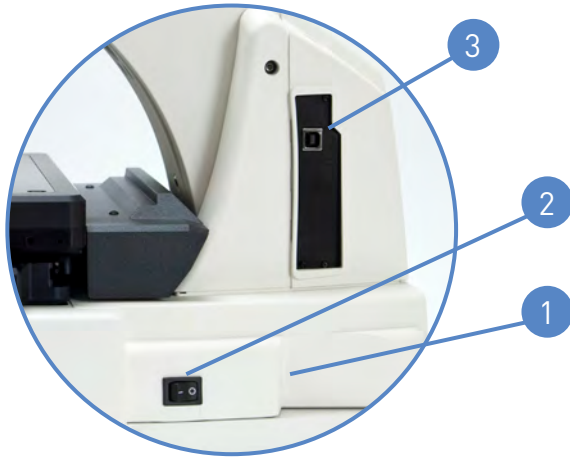
Superior transmission efficiencies are observed using hard-coated filters on the EVOS® instruments, compared to soft-coated filters. Excitation filter (purple), emission filter (red), dichroic mirror (green); Alexa Fluor® 488 excitation (blue), Alexa Fluor® 488 emission (pink).

EVOS® FL Auto Imaging System

An intuitive, affordable, fully automated system*

FL Auto footprint

1. Power input jack
2. Power switch
3. Computer port
4. Lifting handholds (for safe and easy transport)
5. Condenser (contains automatic phase annulus selector)
6. Condenser slider slot
7. Automatic X-Y axis stage
8. 22" high-resolution touch screen monitor
9. Onstage incubator (optional)
10. Stagetop environmental chamber (optional)



* No manual adjustment required (objective turret, focusing controls, light cube and camera selection, etc.).

System highlights

| Hardware | |
|----------------------------|------------------------------------------------------------------------------------------------------------------|
| Illumination | Adjustable-intensity LED (>50,000-hour life per light cube) |
| Contrast methods | Epifluorescence and transmitted light (bright-field and phase-contrast) |
| Objective turret | 5-position |
| Fluorescence channels | Simultaneously accommodates up to 4 fluorescent light cubes and transmitted light |
| Condenser working distance | 60 mm |
| Stage | Automated X-Y scanning stage; interchangeable and custom vessel holders available |
| LCD display | 22" high-resolution touch screen color monitor (1,920 x 1,080 pixels) |
| Camera | Dual (monochrome and color camera) Monochrome: high-sensitivity interline CCD Color: high-sensitivity CMOS |
| Output ports | Multiple USB ports, 1 display output with DVI adaptor (supports direct output to USB and networked storage) |
| Power supply | AC adaptor |
| Dimensions | Height: 32.2 cm (12.7 in) Width: 34.3 cm (13.5 in) Depth: 47.2 cm (18.6 in) |
| Weight | 20.0 kg (44.1 lb) |

Software

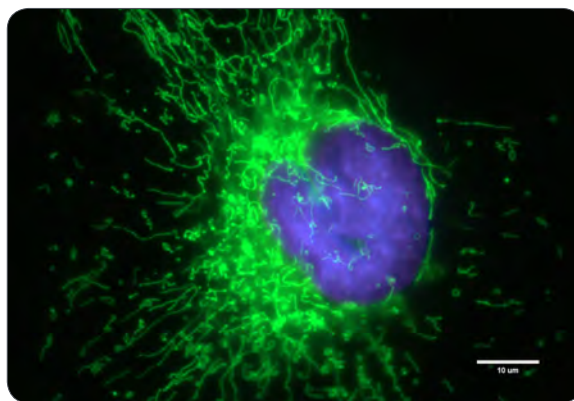
Integrated software is a key component of the all-in-one system. The EVOS® FL Auto software, accessed by a touch screen monitor, features standard functions such as a scale bar and image review tool as well as a variety of advanced imaging and analysis tools. All images acquired can be saved in JPEG, BMP, TIFF, and PNG formats.

Key software features:

- Time-lapse imaging
- Image tiling and stitching
- Automated cell counting
- Auto-focus and automated multi-well plate scanning
- Z-stacking
- Environmental control with EVOS® Onstage Incubator
- Reuse function for easy duplication of previously acquired images

Applications

The EVOS® FL Auto Imaging System is a fully automated, digital inverted multi-channel fluorescence and transmitted-light imaging system with outstanding workflow efficiency. Designed to meet demanding requirements over a broad range of applications, the EVOS® FL Auto system supports high-resolution live-cell imaging, mosaic tiling, multi-position well scanning, cell counting with thresholding, and time-lapse studies.



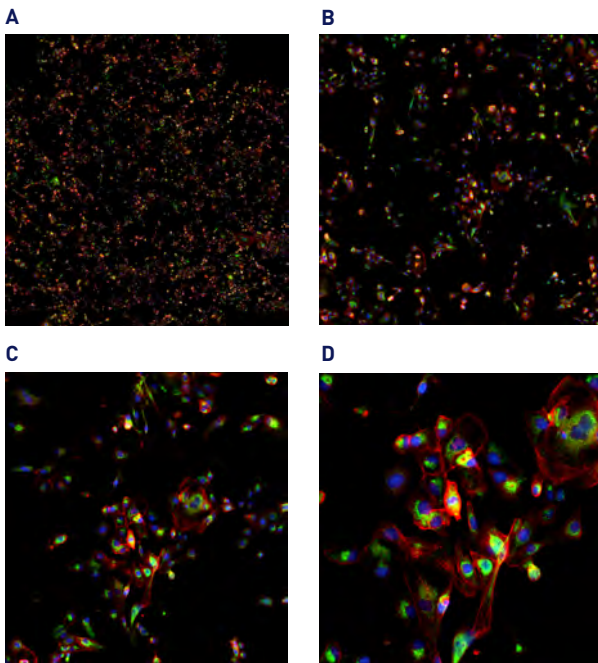
HeLa cells, 100x oil objective
Light cubes: DAPI, GFP, RFP
Reagents: NucBlue® Live (blue), CellLight® Mito-GFP (green),
CellLight® H2B-RFP

EVOS® FL Auto Imaging System—additional applications

Image stitching

The EVOS® FL Auto Imaging System allows capture of multiple images and mosaic tiling to stitch a high-resolution image of a large area. This is ideal for analyzing tissue sections or stem cell colonies, or viewing every cell in the well of a 96-well plate.

- Acquire images at high magnification and stitch for high-resolution mapping
- Batch export plate scans of large wells in one step
- Scan in bright-field, phase-contrast, or fluorescence mode
- Save individual images as well as composite images

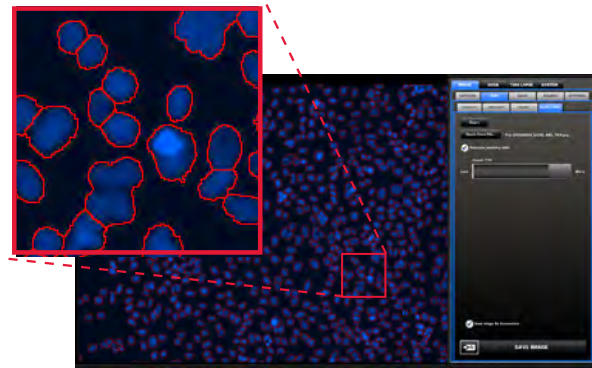


Stitched image of one well from a 96-well plate, taken using a 10x objective (A). CAKI cells were labeled with anti-OxPhos subunit V primary antibody and goat anti-mouse Alexa Fluor® 488 secondary antibody (green), ActinRed™ 555 reagent (red), and NucBlue® fixed cell stain (blue). Subsequent images are shown at 200% (B), 400% (C), and 800% (D) magnifications.

Automated cell counting

The EVOS® FL Auto Imaging System contains advanced software algorithms that allow extremely accurate cell counting. Following labeling of nuclei using a fluorescent dye such as NucBlue® live cell stain, the EVOS® FL Auto Imaging System will calculate the number of cells in a field of view, making it great for determining the number of cells in a well or dish.

- Accurate cell counting even at 4x magnification
- Adjust intensity levels with a convenient slider bar
- Easily visualize GFP expression, determine live/dead cell ratio, and count total cell numbers



Screen shot from the automated cell counting feature of the EVOS® FL Auto Imaging System. Cells were stained with NucBlue® live cell stain prior to analysis.

Z-stacking

The EVOS® FL Auto Imaging System system has the option to produce flat-focus Z-stack images. The Z-Stack Flat Focus feature collects a series of images, extracts the best-focused pixels from each image, and then returns a single focused image even if the sample is very thick.

- Images can be made into a video, montage, 3D reconstruction, or maximum-projection image
- Z-stack range can be performed automatically in fluorescence imaging mode
- Z-stack imaging can help uncover changes in cellular morphology not seen in standard wide-field microscopy

EVOS® FL Auto Imaging System and Onstage Incubator

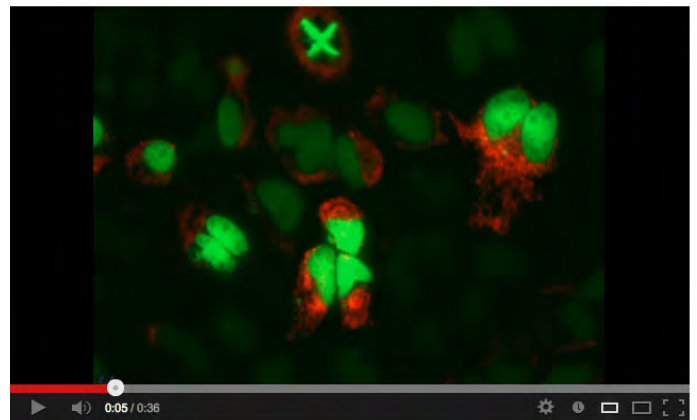
Time-lapse imaging

When combined with the new onstage incubation system, the EVOS® FL Auto Imaging System is ideal for long-term monitoring of cell cultures and time-lapse imaging at high resolution. The EVOS® Onstage Incubator is an environmental chamber enabling precise control of temperature, humidity, and three gases for time-lapse imaging of live cells under both physiological and nonphysiological conditions, making the system ideal for demanding hypoxia experiments.

- Intuitively set environmental and image acquisition parameters
- Easily maintain physiological or nonphysiological conditions with precise control
- Adjust environmental parameters while the experiment is running
- Choose from a range of vessel holders
- Save lab space with a small footprint and sleek design

Once captured, you can seamlessly create and export fluorescence or bright-field images as movies:

- Create time-lapse images of every well of a 96-well plate, simultaneously
- Acquire time-lapse images in single plane or z-stacks
- Autofocus in each channel and region of interest
- Metadata and time stamps are included with each image frame of time-lapse movies



Time-lapse imaging of dividing HeLa cells, using the EVOS® FL Auto Imaging System with Onstage Incubator. Images were captured every 12 minutes over a period of 24 hours. Cells were transfected with CellLight® Histone 2B-GFP (green) and CellLight® Mitochondria-RFP (red), and stained with NucBlue® Live ReadyProbes® Reagent (blue) prior to imaging.

EVOS® Onstage Incubator specifications

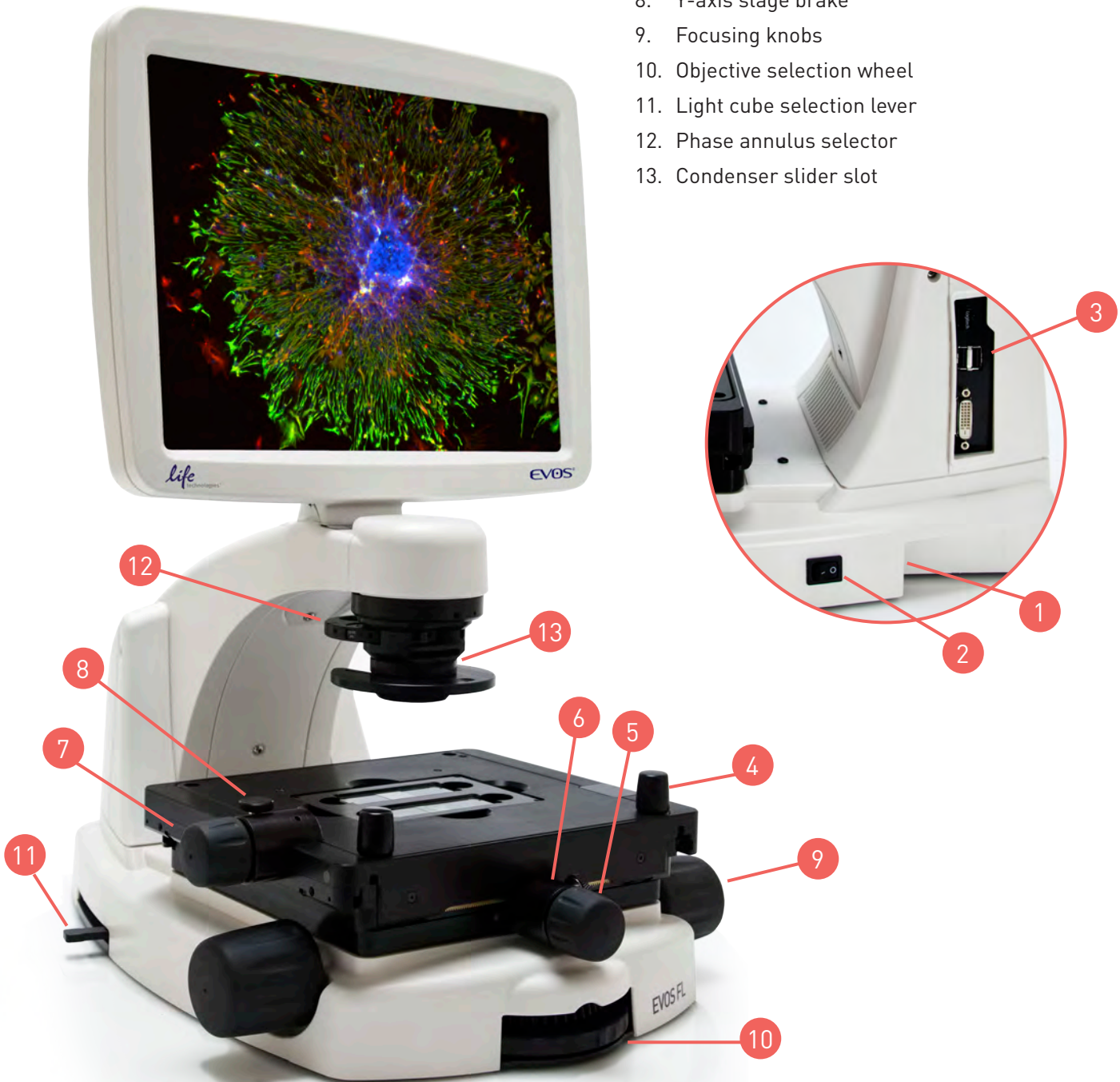
| | |
|------------------------|----------------------------------------------------------------------------|
| Compatible vessels | Multi-well plates, 35 mm dishes, 60 mm Petri dishes, T-25 flasks |
| Temperature range | Ambient to 40°C |
| CO ₂ range | 0–20% |
| O ₂ range | 0% to ambient |
| Humidity range | >80% relative humidity at 37°C |
| Dimensions (H x D x W) | 25 x 19 x 3.7 cm (environmental chamber) 37 x 16 x 20 cm (control unit) |
| Weight | 1.5 kg (environmental chamber) 10 kg (control unit) |

EVOS® FL Imaging System

Form, function, and flexibility in one

FL footprint

1. Power input jack
2. Power switch
3. USB and DVI ports
4. Coarse stage positioning knobs
5. Stage X-axis knob
6. X-axis stage brake
7. Stage Y-axis knob
8. Y-axis stage brake
9. Focusing knobs
10. Objective selection wheel
11. Light cube selection lever
12. Phase annulus selector
13. Condenser slider slot



System highlights

| Hardware | |
|----------------------------|------------------------------------------------------------------------------------------------------|
| Illumination | Adjustable-intensity LED (>50,000-hour life per light cube) |
| Contrast methods | Epifluorescence and transmitted light (bright-field and phase-contrast) |
| Objective turret | 5-position |
| Fluorescence channels | Simultaneously accommodates up to 4 fluorescent light cubes |
| Condenser working distance | 60 mm |
| Stage | Mechanical stage with X-Y axis fine-positioning controls Interchangeable vessel holders available |
| LCD display | 15" high-resolution color monitor with adjustable tilt (1,024 x 768 pixels) |
| Camera | High-sensitivity interline CCD camera (choice of monochrome or color) |
| Output ports | 3 USB ports, 1 DVI port (supports direct output to USB and networked storage) |
| Power supply | AC adaptor |
| Dimensions | Height: 57.8 cm (22.8 in) Depth: 47.0 cm (18.5 in) Width: 35.5 cm (14.0 in) |
| Weight | 15.3 kg (33.7 lb) |

Software

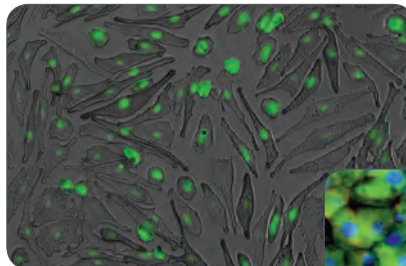
Integrated software is a key component of the all-in-one system. The EVOS® FL software features standard functions, including a scale bar and image review tool along with a variety of advanced imaging and analysis tools. All images acquired can be saved in JPEG, BMP, TIFF, PNG, and AVI (video) formats.

Key software features:

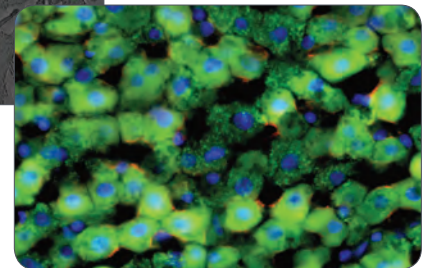
- 1-click, multi-channel overlay
- Time-lapse capability
- Cell counting capability
- Transfection capability

Applications

The EVOS® FL Imaging System was designed for a broad range of applications including, but not limited to, multiple-channel fluorescence imaging, protein analysis, pathology, cell culture, and *in situ* imaging. With positions for 5 objectives and 4 fluorescent light cubes, the EVOS® FL Imaging System provides the flexibility to help meet most imaging research applications.



Keratinocytes, 20x objective.
Illumination: overlay of GFP
and transmitted light



Rat liver, 20x objective. Light cubes:
DAPI, GFP, RFP

EVOS® FLoid® Imaging Station

Simple, budget-friendly three-color fluorescent cell imaging

FLoid® footprint

- 1. Power input jack
- 2. Power switch
- 3. Side USB ports
- 4. Front USB port
- 5. Coaxial focusing knob
- 6. Mechanical "glide" stage
- 7. Ambient light shield
- 8. Printer (optional)



System highlights

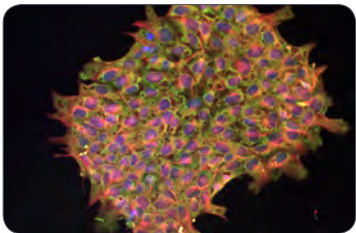
| Hardware | |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Illumination | Adjustable-intensity LED (>50,000-hour life) |
| Contrast methods | Epifluorescence and transmitted light |
| Objective | 20x fixed fluorite |
| Fluorescence channels | DAPI (blue), FITC (green), and Texas Red® (red) |
| Working distance | 5.9 mm |
| Stage | Mechanical “glide” stage with fine range-of-motion control (4 mm movement in X-Y dimensions) Universal format, compatible with all vessel types |
| LCD display | 15” high-resolution color monitor with adjustable tilt (1,366 x 768 pixels) |
| Camera | Monochrome; high-sensitivity interline CCD camera |
| Output ports | 4 USB ports (3 on side for accessories; 1 in front for data storage) |
| Power supply | AC adaptor |
| Dimensions | Height: 53.6 cm (21.1 in) Depth: 35.3 cm (13.9 in) Width: 40.4 cm (15.9 in) |
| Weight | 11.8 kg (26 lb) |

Software

The FLoid® Imaging Station makes capturing and processing three-color fluorescence images as easy as taking pictures on your smartphone. Even novice fluorescence microscopy users can follow the icons on the intuitive user interface and capture publication-quality images in a matter of minutes right at the benchtop. All images acquired can be saved in JPEG, BMP, TIFF, and PNG formats.

Key software features:

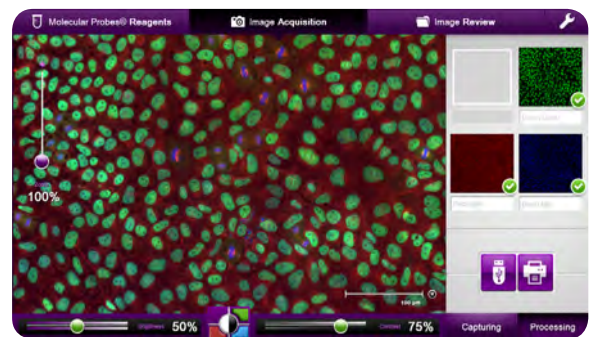
- 1-click, multi-channel overlay
- Icon-based operation
- Multiple language options
- Digital zoom



Human induced pluripotent stem cells stained with Lin28A antibody and goat anti-rabbit IgG Alexa Fluor® 488 secondary antibody (green), Alexa Fluor® 594 anti-tubulin antibody (red), and Hoechst® 33342 stain (blue).

Applications

The FLoid® Imaging Station can be used in a broad range of applications, including routine fluorescent (GFP/RFP) tissue culture visualization and imaging, and serves as an excellent entry instrument for fluorescence microscopy. The FLoid® Imaging Station is a perfect complement to tissue culture rooms, enabling quick visualization of GFP- and/or RFP-expressing cells.



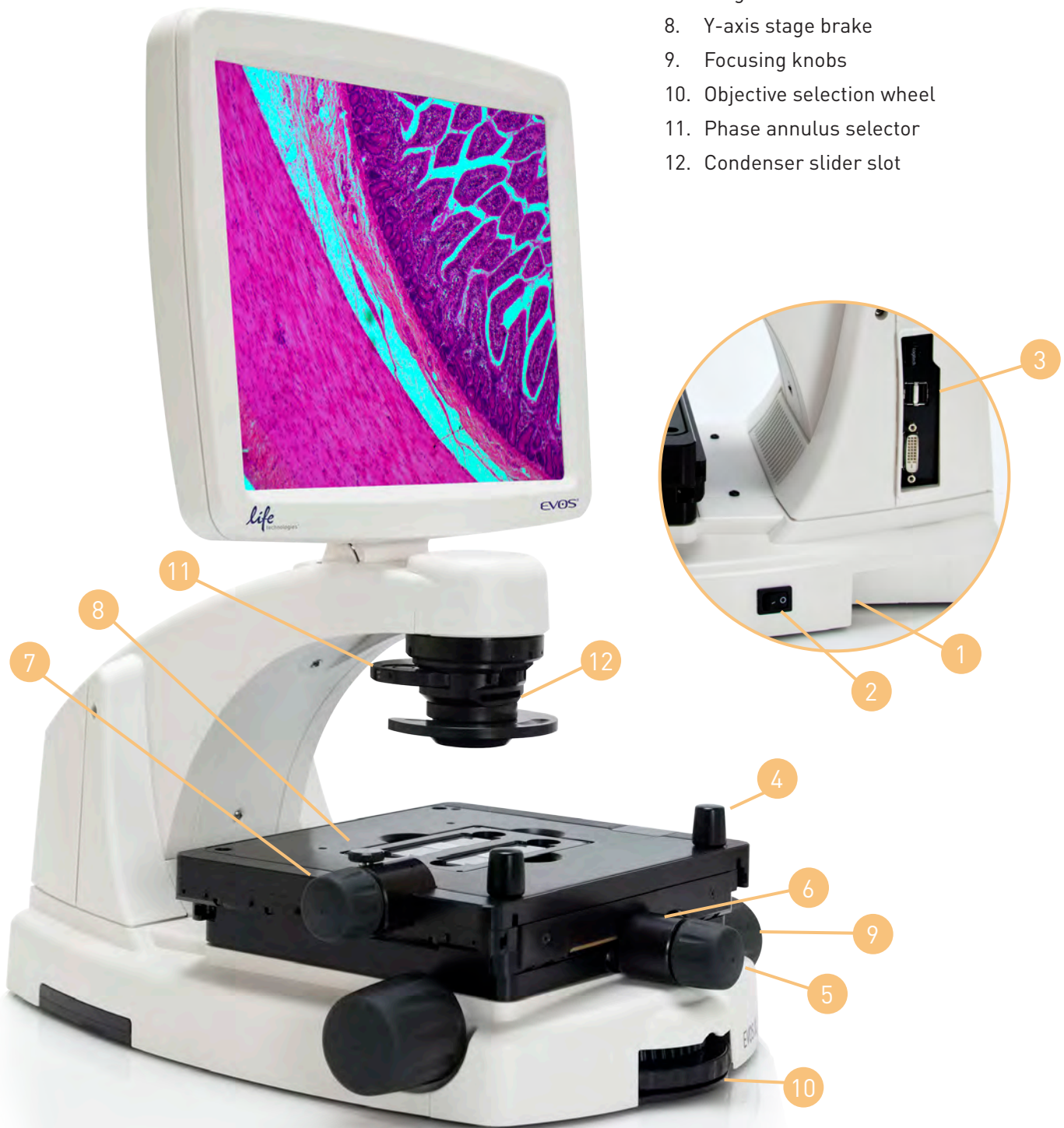
Screen shot of the EVOS® FLoid® image processing software.

EVOS® XL Imaging System

An advanced transmitted-light system designed to deliver high-definition results with the same form, functions, and features that are standard on all EVOS® systems

XL footprint

1. Power input jack
2. Power switch
3. USB and DVI ports
4. Coarse stage positioning knobs
5. Stage X-axis knob
6. X-axis stage brake
7. Stage Y-axis knob
8. Y-axis stage brake
9. Focusing knobs
10. Objective selection wheel
11. Phase annulus selector
12. Condenser slider slot



System highlights

| Hardware | |
|----------------------------|--------------------------------------------------------------------------------------------------------------|
| Illumination | LED for transmitted light |
| Contrast methods | Transmitted light (bright-field and phase-contrast) |
| Objective turret | 5-position (front-mounted control) |
| Condenser working distance | 60 mm |
| Stage | Mechanical "glide" stage with X-Y axis fine-positioning controls Interchangeable vessel holders available |
| LCD display | 15" high-resolution color monitor with adjustable tilt (1,024 x 768 pixels) |
| Camera | High-sensitivity interline CMOS color camera |
| Output ports | 3 USB ports, 1 DVI port (supports direct output to USB and networked storage) |
| Power supply | AC adaptor |
| Dimensions | Height: 57.8 cm (22.8 in) Depth: 47.0 cm (18.5 in) Width: 35.5 cm (14.0 in) |
| Weight | 15.3 kg (33.7 lb) |

Software

Integrated software is a key component of this all-in-one system. Our software features standard functions such as a scale bar and image review tool as well as a variety of advanced imaging and analysis tools. All images acquired can be saved in JPEG, BMP, TIFF, PNG, and AVI (video) formats.

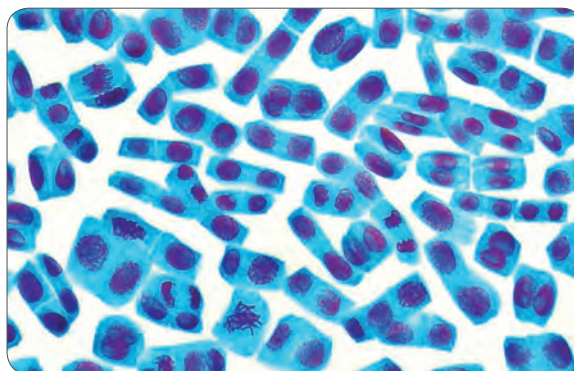
Key software features:

- Time-lapse imaging
- Cell counting



Applications

The EVOS® XL Imaging System was designed for a broad range of applications including, but not limited to, cell viability assays, stem cell growth and differentiation, stem cell passaging, hematoxylin and eosin imaging, and diaminobenzidine (DAB) imaging. The EVOS® XL Imaging System is ideal for routine cell and tissue culture, cell confluence determination, stem cell passaging, stem cell growth and differentiation, and developmental biology and tissue slice analyses.



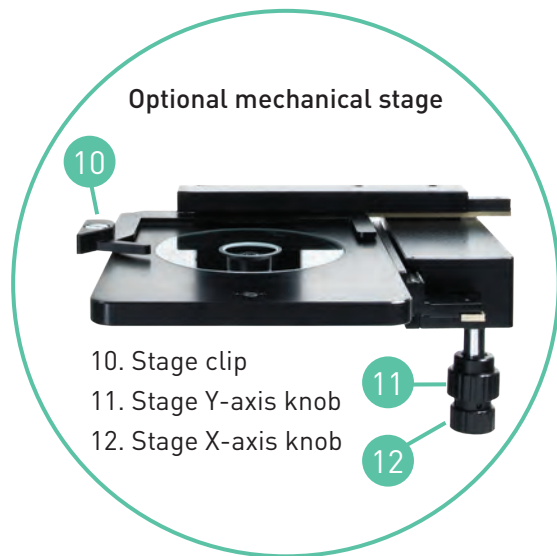
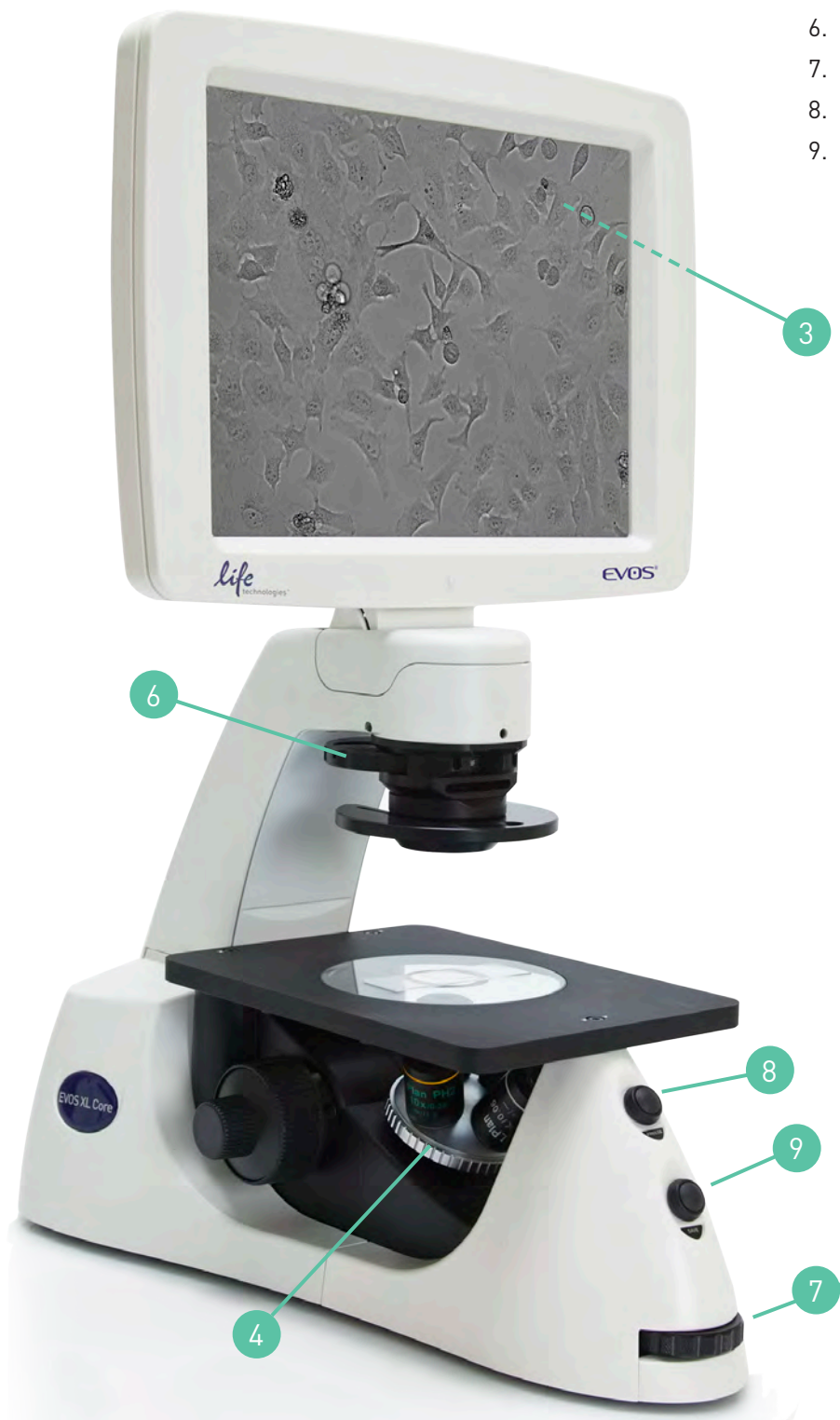
Mitosis in onion root tip, 40x objective.

EVOS® XL Core Imaging System

Compact, simple transmitted-light system perfect for use in the cell culture hood or tissue culture facility

XL Core footprint

1. Power input jack
2. Power switch
3. USB ports (back of LCD display)
4. Objective turret
5. Coaxial focusing knob
6. Phase turret
7. Illumination wheel
8. Freeze button
9. Save button



System highlights

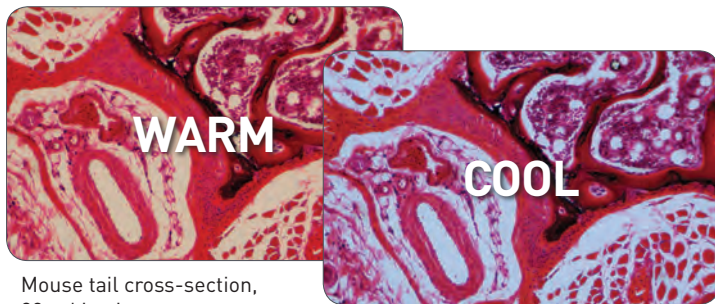
| Hardware | |
|----------------------------|-----------------------------------------------------------------------------------------------------------|
| Illumination | LED for transmitted light |
| Contrast methods | Transmitted light (bright-field and phase-contrast) |
| Objective turret | 4-position (front-mounted control) |
| Condenser working distance | 60 mm |
| Stage | Choice of fixed or mechanical stage Mechanical stage has X-Y axis controls and vessel holder framework |
| LCD display | 12.1" high-resolution color monitor with adjustable tilt |
| Camera | High-sensitivity CMOS color camera |
| Output ports | 2 USB ports |
| Power supply | AC adaptor |
| Dimensions | Height: 55.3 cm (21.0 in) Depth: 40.6 cm (16.0 in) Width: 31.8 cm (12.5 in) |
| Weight | With fixed stage: 9.1 kg (20.1 lb) With mechanical stage: 10.0 kg (22.0 lb) |

Software

Integrated software is a key component of this all-in-one system. Our software includes a variety of features such as color temperature control. All images acquired can be saved in JPEG, BMP, and TIFF formats.

Key software features:

- Adjustable saturation and contrast
- Color temperature control (warm vs. cool)



Mouse tail cross-section,
20x objective.

Applications

The EVOS® XL Core Imaging System was designed for a broad range of applications including, but not limited to, routine cell and tissue culture visualization and imaging, stem cell applications, and sample staining differentiation (such as Gram staining).



Objectives

| Plan achromat | | | | | | | | |
|---------------|------|---------|--------------|-------|-----------------------|---------------------|-----|------------|
| Magnification | NA | WD (mm) | Bright-field | Phase | Long working distance | Coverslip-corrected | Oil | Cat. No. |
| 2x | 0.06 | 5.10 | • | | • | | | 12-563-454 |
| 4x | 0.13 | 16.90 | • | • | • | | | 12-563-455 |
| 10x | 0.25 | 6.90 | • | • | • | | | 12-563-456 |
| 20x | 0.40 | 6.80 | • | • | • | | | 12-563-457 |
| 40x | 0.65 | 3.10 | • | • | • | | | 12-563-458 |
| 50x | 0.95 | 0.19 | • | | | • | • | 12-563-584 |
| 100x | 1.25 | 0.15 | • | | | • | • | 12-563-585 |

Plan achromat: Perfect for general applications; color and focus have standard correction compared to apochromat and fluorite objectives.

| Plan fluorite | | | | | | | | |
|---------------|------|---------|--------------|-------|-----------------------|---------------------|-----|------------|
| Magnification | NA | WD (mm) | Bright-field | Phase | Long working distance | Coverslip-corrected | Oil | Cat. No. |
| 4x | 0.13 | 19.70 | • | | • | | | AMEP4622 |
| 4x | 0.13 | 16.90 | • | • | • | | | 12-563-535 |
| 10x | 0.30 | 8.30 | • | | • | | | 12-563-465 |
| 10x | 0.25 | 9.20 | • | • | • | | | 12-563-536 |
| 20x | 0.45 | 7.10 | • | | • | | | 12-563-466 |
| 20x | 0.40 | 3.10 | • | • | • | | | 12-563-537 |
| 20x | 0.50 | 2.50 | • | | | • | | 12-563-586 |
| 40x | 0.65 | 2.80 | • | | • | | | 12-563-467 |
| 40x | 0.65 | 1.60 | • | • | • | | | 12-563-538 |
| 40x | 0.75 | 0.72 | • | | | • | | 12-563-587 |
| 40x | 1.30 | 0.20 | • | | | • | • | 12-563-588 |
| 60x | 0.75 | 2.20 | • | | • | | | 12-563-468 |
| 100x | 1.28 | 0.21 | • | | | • | • | 12-563-351 |

Plan fluorite: Excellent resolution resulting in bright fluorescence signal and high-contrast imaging. Helps reduce optical aberrations; color and focus have a higher level of correction.

| Plan apochromat | | | | | | | | |
|-----------------|------|---------|--------------|-------|-----------------------|---------------------|-----|------------|
| Magnification | NA | WD (mm) | Bright-field | Phase | Long working distance | Coverslip-corrected | Oil | Cat. No. |
| 1.25x | 0.04 | 5.00 | • | | • | | | 12-563-589 |
| 2x | 0.08 | 6.22 | • | | • | | | 12-563-592 |
| 4x | 0.16 | 13.0 | • | | • | | | 12-563-593 |
| 10x | 0.40 | 3.10 | • | | | • | | 12-563-594 |
| 20x | 0.75 | 0.60 | • | | | • | | AMEP4734 |
| 40x | 0.40 | 3.10 | • | | | • | | 12-563-595 |
| 60x | 1.42 | 0.15 | • | | | • | • | 12-563-590 |
| 100x | 1.40 | 0.13 | • | | | • | • | 12-563-591 |

Plan apochromat: Highest levels of resolution, fluorescence brightness, contrast, and chromatic correction compared to achromat and fluorite objectives. NA=Numerical aperture, WD=Working distance

Long working distance vs. coverslip-corrected

Long working distance

Optimized for use through vessels with nominal wall thickness of 0.9–1.5 mm (slides, flasks, microtiter dishes, etc.).

Coverslip-corrected

Optimized for use through #1.5 coverslips (approximately 0.17 mm thick). Have a higher magnification-to-numerical aperture (NA) ratio and provide higher resolution compared to long working distance.

For more information, go to lifetechnologies.com/evosobjectives

Proprietary LED light cubes

At the heart of EVOS® fluorescence technology lie the proprietary LED light cubes.* Each cube contains an LED, collimating optics, and filters. Light cubes are user interchangeable, and auto-configured by the system with plug-and-play capability. The wide variety of light cubes available provides flexibility for multiple fluorescence research applications.

Custom light cubes

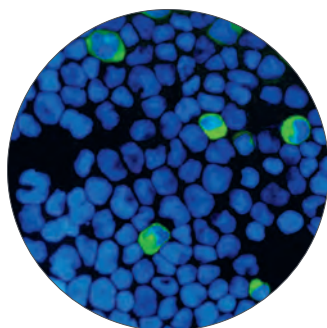
Need a light cube to accommodate your specialized fluorescent needs? Contact us to create a specialty light cube with our proprietary LED technology.

*Not available for the FLoid® Imaging Station

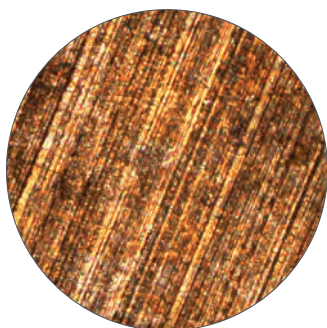
Common light cubes

| Light cube | Dye | Cat. No. |
|------------|------------------------------------------------------------------------------------------------------------|------------|
| DAPI | DAPI, Hoechst® stain, BFP | 12-563-469 |
| TagBFP | TagBFP | 12-563-571 |
| CFP | ECFP, Lucifer Yellow, Evans Blue | 12-563-472 |
| GFP | GFP, Alexa Fluor® 488, SYBR® Green, FITC | 12-563-470 |
| YFP | EYFP, acridine orange + DNA | 12-563-473 |
| RFP | RFP, Alexa Fluor® 546, Alexa Fluor® 555, Alexa Fluor® 568, Cy®3, MitoTracker® Orange, Rhodamine Red, DsRed | 12-563-471 |
| Texas Red® | Texas Red®, Alexa Fluor® 568, Alexa Fluor® 594, MitoTracker® Red, mCherry, Cy®3.5 | 12-563-474 |
| Cy®5 | Cy®5, Alexa Fluor® 647, Alexa Fluor® 660, DRAQ5® | 12-563-475 |
| Cy®5.5 | Cy®5.5, Alexa Fluor® 660, Alexa Fluor® 680, Alexa Fluor® 700 | 12-563-583 |
| Cy®7 | Cy®7, IRDye 800CW | 12-563-286 |

| Specialty light cube | Dye | Cat. No. |
|----------------------|-------------------------------------------------------------------------|------------|
| CFP-YFP EM | CFP/YFP (for FRET applications) | 12-563-572 |
| A0 | Acridine orange + RNA, simultaneous green/red with FL color | 12-563-540 |
| A0 Red | Acridine orange + RNA, CTC formazan, Fura Red™ (high Ca ²⁺) | 12-563-573 |
| White | Reflected light applications | 12-563-582 |



CHO cells transfected with eukaryotic expression plasmid, 40x objective. Light cubes: Cy®7, DAPI



Gold, 10x objective. Light cube: white

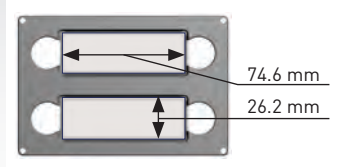
For a complete list of available common and specialty light cubes, go to lifetechnologies.com/evoslightcubes

Vessel holders and stage plates

All models

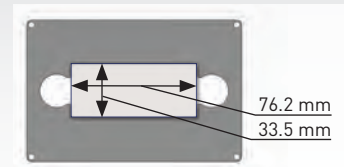
12-563-521

Holds two 25 mm x 75 mm standard microscope slides, chamber slides, etc.



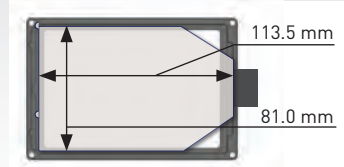
12-563-527

Holds one hemocytometer



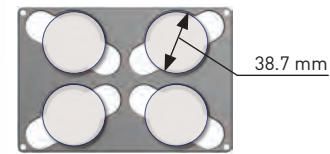
12-563-492

Holds one SPL T-75 flask; 75 cm²



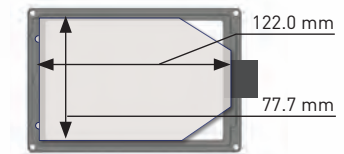
12-563-522

Holds four 35 mm Petri dishes



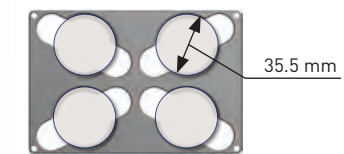
12-563-493

Holds one Greiner T-75 flask; 75 cm²



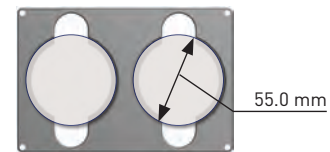
12-563-497

Holds four Ibidi® 35 mm Petri dishes



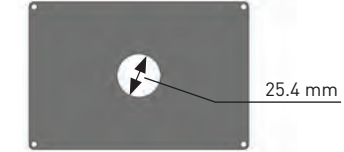
12-563-523

Holds two 60 mm Petri dishes



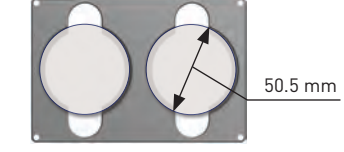
12-563-494

Universal stage insert



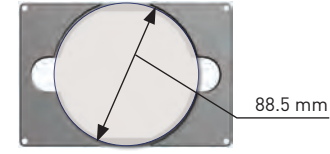
12-563-498

Holds two Ibidi® 50 mm Petri dishes



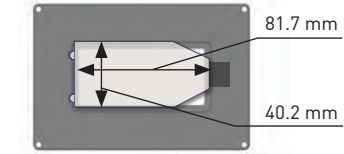
12-563-524

Holds one 100 mm Petri dish



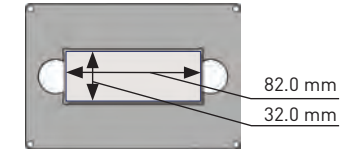
12-563-495

Holds one BD/Greiner T-25 flask; 25 cm²



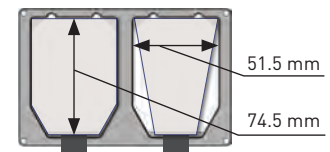
12-563-557

Holds one KOVA® Glasstic® slide 10



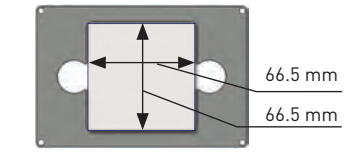
12-563-525

Holds two 25 cm² flasks; rectangular or triangular



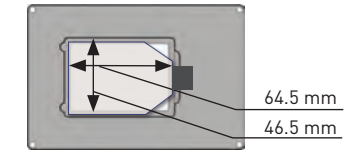
12-563-496

Holds one Nunc®/SPL IVF 4-well dish



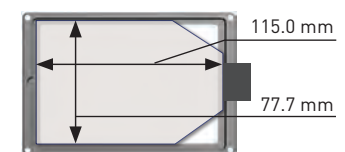
AMEPVH018

Holds one Nunc® T-25 flask; 25 cm²



12-563-526

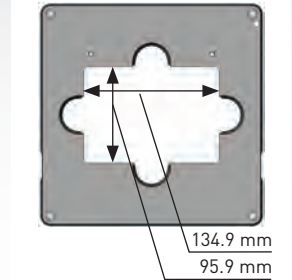
Holds one Nunc® T-75 flask; 75 cm²



FL and XL

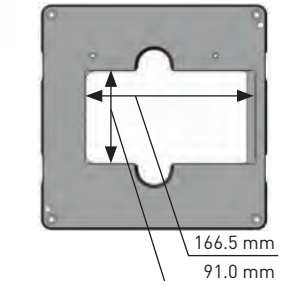
12-563-281

Stage plate for heating tray, Tokai Hit MATS-UAXKD-D



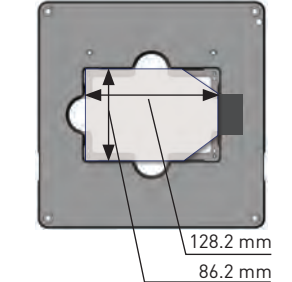
12-563-285

Stage plate for heating stage, BioFlux™ by Fluxion



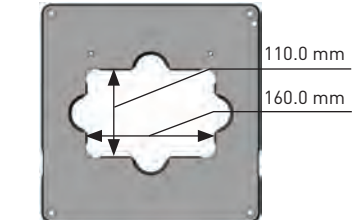
12-563-560

Stage plate for multi-well vessels; also hold one Corning® T-75 flask



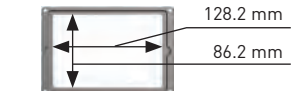
AMEP4691

Stage plate with 110 mm x 160 mm opening (Use with AMEP4692 for standard sizes)



AMEP4692

Stage plate adaptor with 110 mm x 160 mm opening for standard size



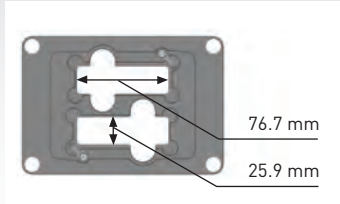
Custom vessel holders

Need a vessel holder to accommodate your specialized plate, slide, culture dish, or flask? Contact us to create a specialty vessel holder for your EVOS® imaging system.

FL Auto

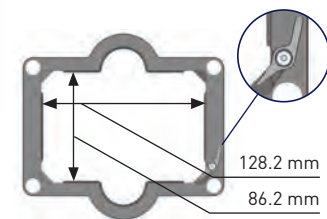
12-563-565

Securely holds two 25 mm x 75 mm standard microscope slides, chamber slides, etc.



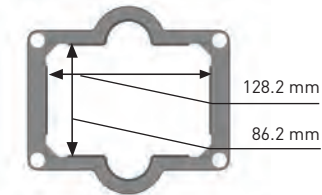
12-563-556

Intermediate plate for automated stage; securely holds multi-well vessels with convenient lever adaptor for AMEPVH001 and AMEPVH009



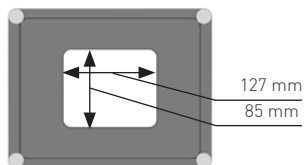
12-563-566

Holds multi-well vessels
Adaptor for AMEPVH001 and AMEPVH009



AMEPVH027

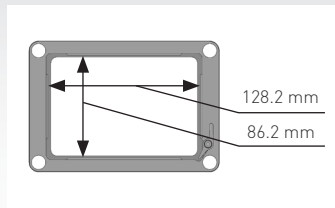
Master plate, large format, automated stage



Onstage Incubator

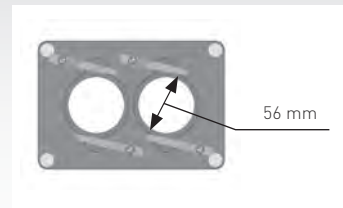
12-563-551

Securely holds one multi-well plates



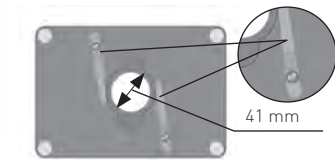
12-563-568

Securely holds two 60 mm Petri dishes



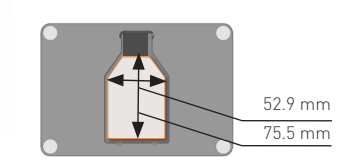
12-563-552

Securely holds one 35 mm Petri dish



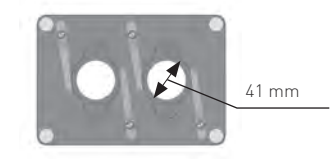
12-563-554

Holds one T-25 flask



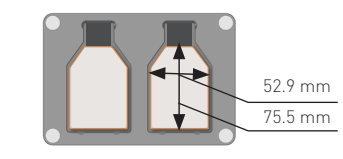
12-563-553

Securely holds two 35 mm Petri dishes



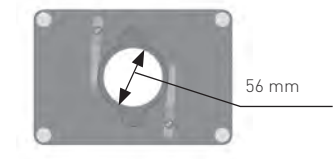
12-563-555

Holds two T-25 flasks



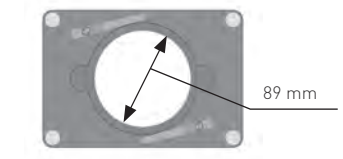
12-563-567

Securely holds one 60 mm Petri dish

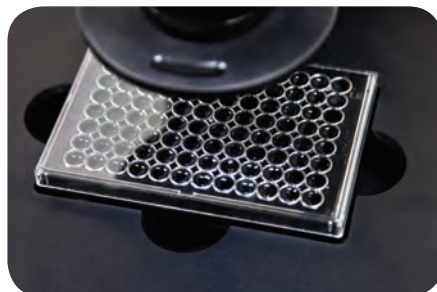
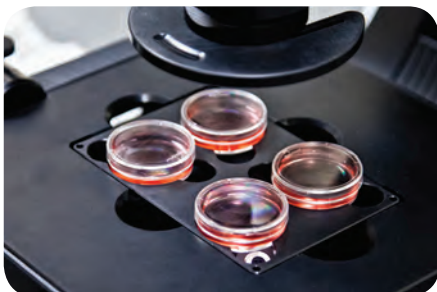


12-563-570

Securely holds one 100 mm Petri dish



For a complete list of available vessel holders and stage plates, go to lifetechnologies.com/evosvesselholders





EVOS® XL Core | EVOS® XL | EVOS® FLoid® | EVOS® FL | EVOS® FL Auto



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For customer service, call 1-800-766-7000.
To fax an order, use 1-800-926-1166.
To order online: www.fishersci.com

In Canada:
For customer service, call 1-800-234-7437.
To fax an order, use 1-800-463-2996.
To order online: www.fishersci.ca

For more information, go to fishersci.com/evos

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