

## Workflow-Oriented Incubation for Live Cell Imaging

- Quick and effortless installation and disassembly
- Modular system to meet every system needs
- Providing darkroom conditions and laser safety
- Quick and easy sample access
- Intuitive software with remote control



### The Modular and Flexible Incubation System

cellVivo's innovative workflow-optimizing design provides precise and user-friendly control for even the most sensitive samples. This includes the stringent control of CO<sub>2</sub> and O<sub>2</sub> levels, temperature and humidity to maintain sample integrity and focus position for extended live-cell imaging. Unique one-handed accessibility allows simultaneous handling of the incubator and specimens, minimizing exposure to the external environment.

Intelligent software enables easy set-up and ensures continuous monitoring of conditions, even remotely. cellVivo is a modular and flexible 'one size fits all' incubation system, which is fully adaptable for basic and high-end inverted microscopes IX73 and IX83. Further flexibility is provided by the various enclosure types and modules, which can even provide advanced laser-safe darkroom capabilities.



cellVivo housing with different style of side- and front panels.



Removable front panel gives flexible access to experiment set-ups.

## Environmental Control

cellVivo provides reliable temperature control, with an accuracy up to 0.05°C, as well as gas (CO<sub>2</sub> and O<sub>2</sub>) control from 0 to 20%. It exchanges the complete sample environment five times per minute for very tight condition control and 0.1% accuracy.



Olympus CB2G controller for CO<sub>2</sub> and O<sub>2</sub> control.

A stage top cover makes sure that gas and humidity conditions are directly established and tightly controlled at the vessel side for best sample integrity.

## Design

cellVivo has been specifically designed to optimize the workflow for advanced live-cell imaging.

### Open access

cellVivo incubator systems can be rapidly assembled, detached or modified without the use of tools, thus making it easy to



Stage cover for gas and humidity control.

exchange it between different imaging systems and mount it to another microscope frame. The complete front panel can be easily removed enabling full unimpeded access to the sample and experiment set up. An intelligent cable management system facilitates the addition of dedicated devices to different experiment set-ups, such as manipulators or measurement and monitoring instruments. Due to the flexible cable guiding, even motorized stages can be left untouched when the cellVivo is dismantled. The innovative design of the doorhandle with the one-finger sliding mechanism enables the user to operate the incubator and sample in parallel with one hand, minimizing the time samples are exposed to the uncontrolled external environment.



For more information, please visit  
<http://www.olympus-lifescience.com/cellvivo>

## Intelligent light shielding

Various enclosure types are available, from standard transparent housing to high-end light-shielded enclosures with incorporated safety laser-lock to protect the user from laser and UV light. The black light-shielded enclosures provide darkroom conditions for the samples, making the use of the microscope in a dedicated darkroom obsolete. A cell-friendly adjustable LED lighting and a non-reflective glass viewing window enable perfect viewing of the incubator interior.

## Modularity

The housing can be equipped with different front and side panels ranging from door-less transparent to dark, laser-safe versions including sliding doors. Depending on the microscope stage, users can choose from different bottom plates that enable access to stages with manual handles. Users can choose from up to 8 stage inserts compatible with well-plates, chamber slides, 35 mm petri dishes up to 100 mm petri dishes and many more.

## cellVivo Software

To further simplify the control of advanced live-cell experiments, cellVivo software enables easy programming and monitoring of the specific conditions required.

### Traffic light system

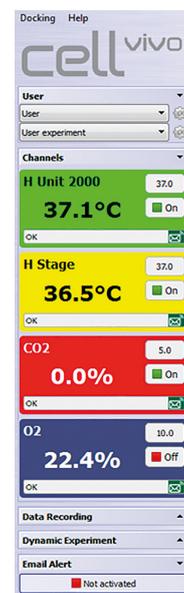
The software indicates the incubator status by a unique light system. A red device status notifies about unstable environment conditions, yellow shows viable and green represents optimal and stable conditions

### Remote control

A web interface enables monitoring of the environmental conditions via e.g. browsers or tablets. An e-mail alert will inform the user if it comes to critical conditions during incubation and the traffic light switches.

### Dynamic experiments

The software offers to register individual users and to store and reload parameter sets for dedicated sample conditions. The cellVivo incubation system can be programmed for dynamic experiments, which enable changes in temperature and gas concentrations over certain time points and periods. Even energy savings are facilitated by an option to automatically switch the incubator on and off at fixed time points. cellVivo software also includes a data logging function that monitors all important conditions during the experiments. Data can be exported for analyses and reportings afterwards.



Widget style cellVivo application, can be attached to your imaging software.

- OLYMPUS CORPORATION is ISO9001/ISO14001 certified.
- Illumination devices for microscope have suggested lifetimes. Periodic inspection is required. Please visit our website for details.
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- Images on the PC monitors are simulated.
- Specifications and appearances are subject to change without any notice or obligation on the part of the manufacturer.

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