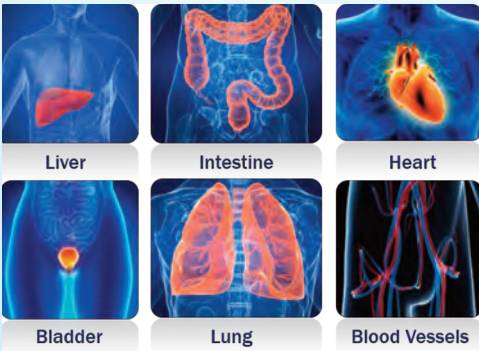


IVTech In-vitro technologies

IVTech offers a new generation of compact, user-friendly and transparent cell culture chambers to improve the outcomes of in-vitro research and refine cell and tissue models.

With IVTech, you can now implement and visualize dynamic and multi-organ in-vitro models, getting closer to the in-vivo environment.

With IVTech, you can simulate different tissues and image your cells in real time, maintaining the same protocols used in traditional cell culture experiments.

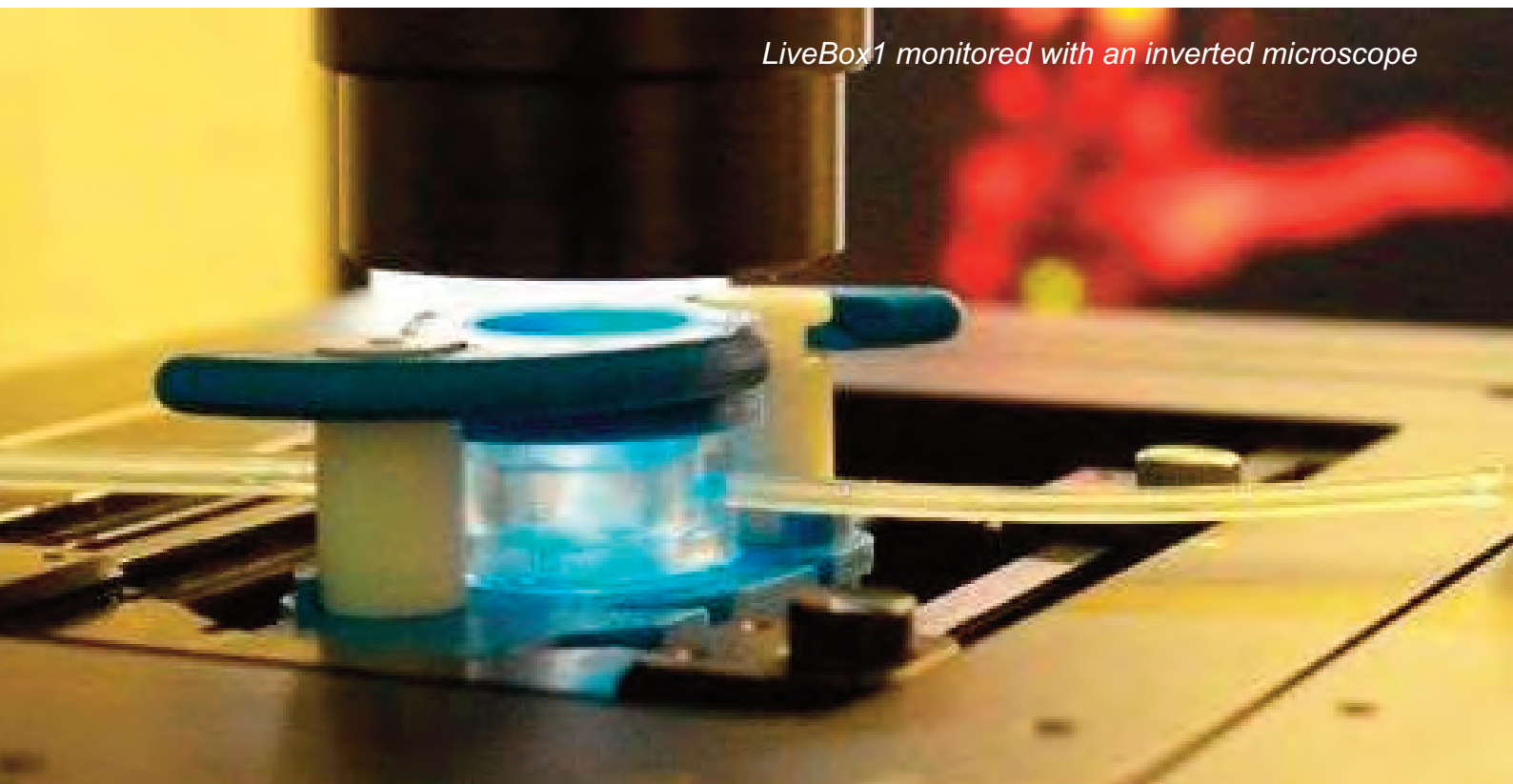


Few examples of in-vitro models developed using IVTech products



LIVEBOX FEATURES

- The wet volume of LiveBox chambers mimics that of a 24 multiwell plate, allowing the use of the same protocols established for traditional cell culture supports;
- LiveFlow permits the circulation of the culture media from the mixing chamber to the LiveBox chambers.
- LiveBox chambers are optically transparent and designed to fit with the majority of microscope stages, enabling real time monitoring and imaging during cell culture experiments (Figure 2);
- Cell constructs can be easily collected from the LiveBox units at the end of the experiment for post-culture analysis, including staining or any other sample processing;
- IVTech systems are reusable, limiting the waste production and contributing to maintain a green environment.
- The modularity and connectivity of IVTech systems allow the implementation of multi-organ in-vitro models to study the cross-talk between different tissues or organs;
- IVTech products are highly versatile and allow customers to study different tissues or organs and can be customized on the basis of customer needs



LiveBox1 monitored with an inverted microscope

PRODUCTS

LiveBox1



LiveBox1 is a transparent chamber designed for interconnected dynamic cell cultures. LiveBox1 is featured with a flow inlet and outlet for the perfusion of cell culture media. The clamp system provided with the LiveBox1 assures the watertight closure of the system in both static and dynamic conditions (up to 1 mL/min).

Wet volume: 1.5 ml Suggested flow rate (ml/min): 0.1-0.5

LiveBox2



LiveBox2 is a transparent chamber, developed for in-vitro models of physiological barriers (e.g. lung and intestinal epithelium). LiveBox2 is designed for inter-connected dynamic cell cultures and it is equipped with two flow inlets and outlets, and a holder to house a porous membrane. The clamp system provided with the LiveBox2 assures the watertight closure of the system in both static and dynamic conditions (up to 0.5 mL/min in apical or basal compartments).

Suggested membrane diameter and thickness: 25 mm, 0.1 mm

LiveFlow



LiveFlow is a compact and low weight peristaltic pump, compatible with the incubator environment. Two removable heads drives up to two independent circuits/head. LiveFlow is equipped with a drawer able to house up to four bioreactors to perform four independent experiments in parallel. The user-friendly interface permits an easy set-up of the system, with two independent heads with a flow rate between 100-450 $\mu\text{L}/\text{min}$

Dimensions [w x l x h, cm]: 21.5 x 16 x 14.5

Power supply (by provided cable): 12 V; 7.2W

Flow rate range [$\mu\text{L}/\text{min}$]: 100-450

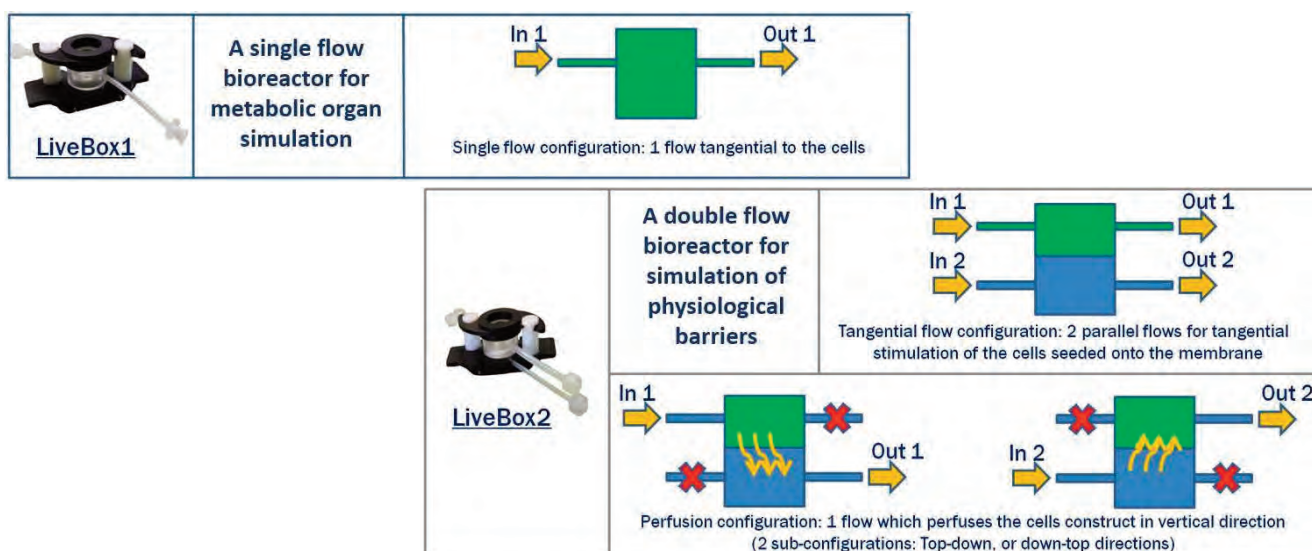
Weight: 1,2 Kg

LIVEBOX CONFIGURATIONS

IVTech innovative cell cultures chambers can be used in several configurations in order to meet different experimental specifications.

Here are all the configurations that can be implemented using LiveBox chambers:

- LiveBox1 -> a 2D/3D tissue model can be implemented using a single flow configuration. Flow lines are tangential to the cell construct placed onto the basal surface of the chamber.
- LiveBox2 -> 2 different configurations:
 - Tangential flow configuration, suitable for physiological barriers simulation. The apical and basal chambers are perfused by 2 different and independent flows. The flow lines are parallel to the membrane surface.
 - Perfusion flow configuration, suitable for 3D cells construct perfusion. Flow lines cross the cells construct in the vertical direction. Two sub-configurations can be implemented, based on the flow direction: top-down or down-top configurations.



Ordering Information

Cat#	Product
k01	Live Box 1 (LB1) kit 1 LB1 equipped with glass discs, 1 clamp systems, PDMS tubes, luer lock connectors and a mixing chamber to realize a fluidic circuit, 1 extractor
k02	Live Box 2 (LB2) kit: 1 LB2 equipped with glass discs, 1 clamp system, PDMS tubes, luer lock connectors and 2 mixing chambers to realize two fluidic circuits, 1 extractor
p01	LiveFlow 1 Peristaltic pump, 1 drawer
SK01	Starter kit1 1 LiveFlow, 1 LB 1 kit
SK02	Starter kit2 1 LiveFlow, 1 LB 2 kit

ed0/2609016