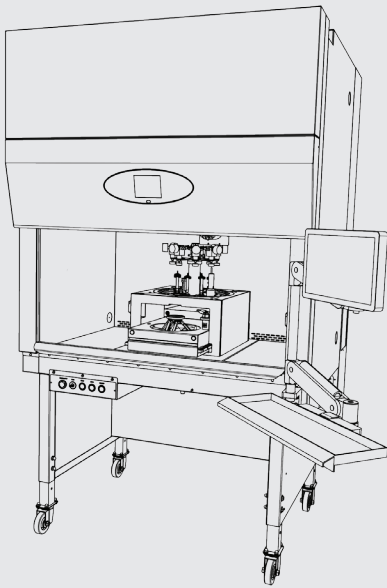




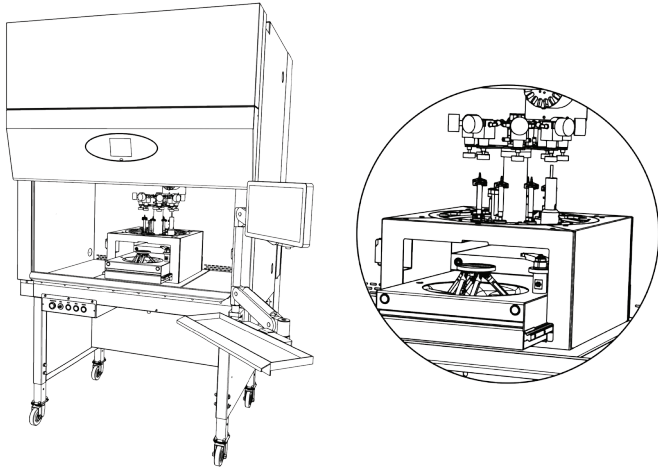
BioFactory™

CREATE THREE-DIMENSIONAL ORGANOMIMETIC MODELS FOR TISSUE ENGINEERING



BIOPRINTING TECHNOLOGY IS EXPANDING IN RESEARCH AND INDUSTRY

BioFactory™



> The BioFactory™ is a versatile and cell friendly three-dimensional manufacturing instrument allowing scientists to pattern cells, bio-molecules and a range of soft and rigid materials in desirable 3D composite structures, mimicking natural environments.

GENERAL SPECIFICATIONS

Working range	60 × 60 × 60 mm
High degree of customization	
Precision	± 5 µm
Modular printhead concept	GENERAL
Nano liter dispensing resolution, minimal dead volume	
Printing under physiological conditions	
Temperature control	from 5°C up to 80°C (substrate holder, medias)
Overall dimensions (W × L × H)	1370 × 1030 × 2400 mm

A POWERFUL TISSUE ENGINEERING INSTRUMENT TO MIMIC NATURE

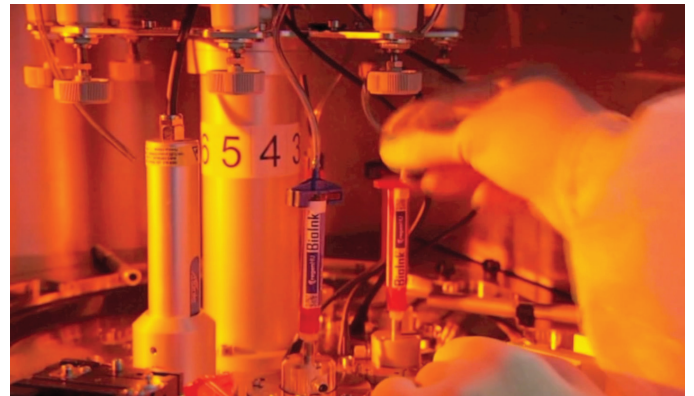
> It has been well documented that cell culture in tissue culture plates and flasks doesn't mimic the in-vivo cell growth and has poor correlation with in-vivo animal as well as human clinical data. The BioFactory™ instrument provides a powerful tool for tissue engineering to create organotypic tissues with in-vivo-like morphology that better mirrors the environment experienced by cells in-vivo. Furthermore, it better reflects cell behavior, intercellular interactions and differentiation processes.

BIOPRINTING PLATFORM

> The BioFactory™ instrument is a cutting-edge platform to explore the potential of 3D tissue engineering through bioprinting technology.
> Spatial control of cells, bioactives, and extracellular matrix in a three-dimensional cellular construct is an enabling approach to construct designed organomimetic tissues for drug discovery and regenerative medicine.

KEY ADVANTAGES

- > Printing under physiological conditions
- > Laser units for photo polymerization/ biomolecule immobilization
- > Modularity: Selection of multiple dispensing technologies
- > Biomanufacturing within a sterile laminar flow hood
- > Repeatability of micrometer-scale processes
- > Fast and easy tissue modelling via Bioprinting Suite
- > Customization options



TOOLS, OPTIONS AND ACCESSORIES

EQUIP YOUR BIOPRINTER WITH:

Laser or photo-crosslinking devices:	for hydrogel polymerization, bioactives encapsulation, signal molecule immobilization, coating or ablation processes
Printhead technologies:	for optimal processing of abroad biomaterial/bioactives portfolio: <ul style="list-style-type: none"> - cell-friendly Ink-jet; - thermopolymer extrusion; - 2 component printhead; - paste and hydrogel dispensing.
High precision temperature control devices:	for biomaterials, mediums, printheads and substrates
Electrospinning printhead:	printhead for micro & submicrometer bioarchitectures manufacturing
Software Suite:	to interact with bioprinting instrument, medical imaging, human machine interface <ul style="list-style-type: none"> - including BioCAD™, BioCAM™, BioCUT™, Industry standard interfaces (STL, DICOM, AMF, DXF)
Calibration systems:	calibration laser, needle, substrate / lab device