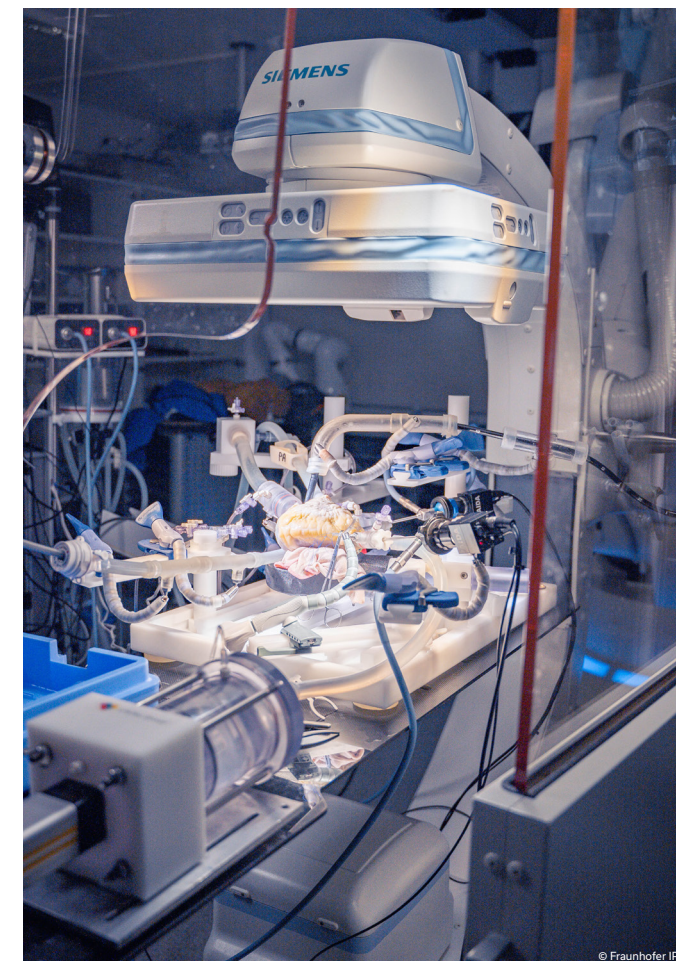


## Cardiac BioSimulator Platform

Suitable for assesment of devices, procedures, image guided therapy and skills training

The Cardiac BioSimulator is a passive heart platform for functionality and feasibility assessment of surgical and interventional devices and procedures on cadaveric heart tissue. Moreover, the platform can also be utilized as a training tool to allow surgeons, cardiologists and radiologists train virtually any procedure in a highly realistic setting, including the actual haptic feedback similar to the in vivo situation.



### FEATURES



#### Controlled hemodynamic conditions

The system enables the control of essential hemodynamic parameters such as pressure and flow. A pulsatile pump allows the application of desired heart rate, stroke volume and systolic fraction, while pre- and afterload systems allow the tuning of the pressures.

#### Recording capabilities

Record everything you do! All data, from hemodynamic performance to cardioscopic video or 3D ultrasound, everything can be recorded simultaneously to review the full intervention.



#### Cardioscopy

The intracardiac endoscopic views can be acquired in any feasible location in the heart, allowing you to clearly and in real-time visualize the device deployment in high resolution.

#### Clinical imaging compatible

The system is compatible with standard clinical imaging modalities; relevant transesophageal and transthoracic ultrasound views can be made, and the system can be compatible with Fluoroscopy, CT as well as MRI.

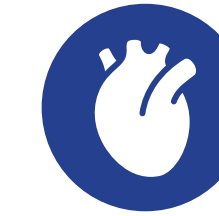


#### Left and right heart models

Studies can be performed on either the left or right side of the heart. We even have 4-chamber capabilities available.

#### Transseptal access

Allows you to enter from the superior or inferior vena cava and perform procedures on the left side of the heart through a transseptal puncture.



#### Highly realistic anatomies

As the Cardiac BioSimulator uses real hearts, the anatomy is as in-vivo. The Cardiac BioSimulator can fit hearts from different species, even human cadaveric if necessary. Also the vascular access pathways can be adapted to animal or human.

#### Modular system

The Cardiac BioSimulator can be customized to have a simple and effective model that fits your needs. This includes different layouts to accommodate external equipment, imaging needs or device-specific requirements. Modular add-ons are available to provide extra functionality.



RESEARCH, DEVELOPMENT, TRAINING  
AND DEMONSTRATIONS

We offer a Cardiac BioSimulator customizable to suit your needs. Whether you prefer to have **very accurate measurement capabilities** during the **pre-clinical development phase**, or if you prefer to mainly use the simulator for **training and demonstration** purposes, e.g., to educate your end-user on a realistic training environment. We can provide you with either a **fully equipped** or a more **portable** version of the Cardiac BioSimulator, where we do not compromise between the options on functionality related to the studies you envision.



WHAT'S IN IT FOR YOU?



Preclinical research

Our approach to preclinical research provides in-vivo like assessments without the ethical burden of using live animals in an early stage. This helps to reduce the early acute studies and ensures you're better prepared for animal studies later on.



Steep learning curve

With more freedom in cardiac access, experimental protocol and measurement options, plus the robust low-risk nature of BioSimulator environments, you will learn more in a shorter timeframe.



Time and cost efficient

BioSimulation will greatly speed up your development pathway, and de-risk your subsequent animal and clinical phases - which will save you time and cost.

SERVICES



Contract services

We offer different types of contract activities, from supporting you during your pre-clinical development phase, up to support during exhibitions or workshops to showcase your newly developed tool or device.



BioSimulation Technologies

We also offer the BioSimulation equipment itself. By means of rental or purchase, these come with extensive training by our knowledgeable operators with additional technical support if needed.



Nice people to work with

You can rely on our experienced team to provide the BioSimulation environment, so you can focus on your device technology.

Interested in  
more information?  
**Contact us!**

We're more than happy to answer any questions  
you may have.

Call at +31 40 2989393 or send an e-mail to  
[info@lifetecgroup.com](mailto:info@lifetecgroup.com)



Do you want to  
know more about our  
Cardiac BioSimulator?



“At the phase we're in, we learned more  
in one day on the Cardiac BioSimulator  
than during a year of animal studies”

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