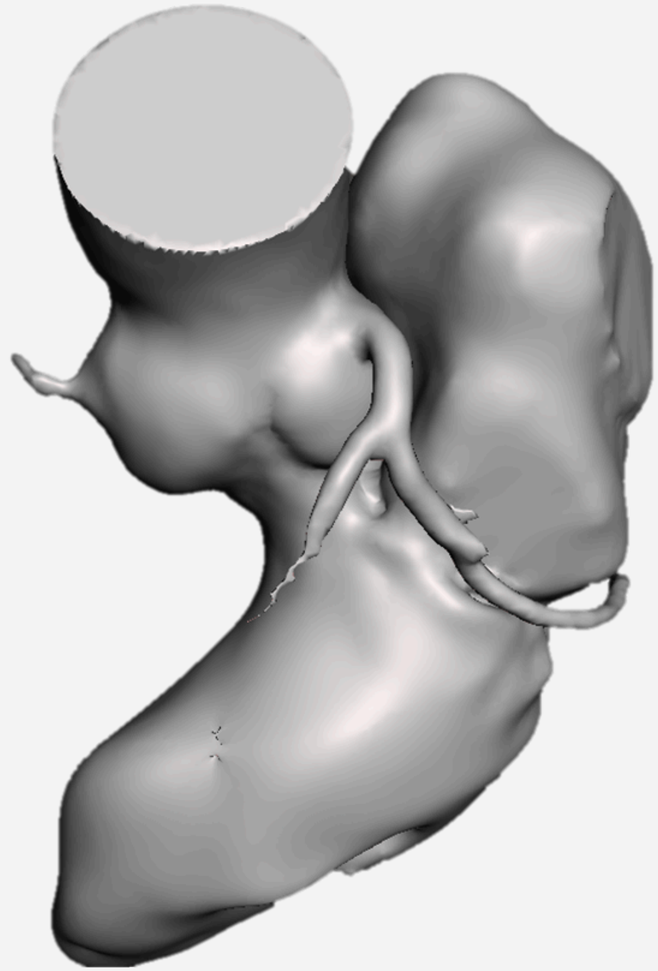
REAL IMAGING
PROCEDURAL TRAINING
DEVICE VALIDATION

PULSO SIM HUMAN - GRADE CARDIAC SIMULATION



ADVANCED CARDIIAC SIMULATION PLATFORM

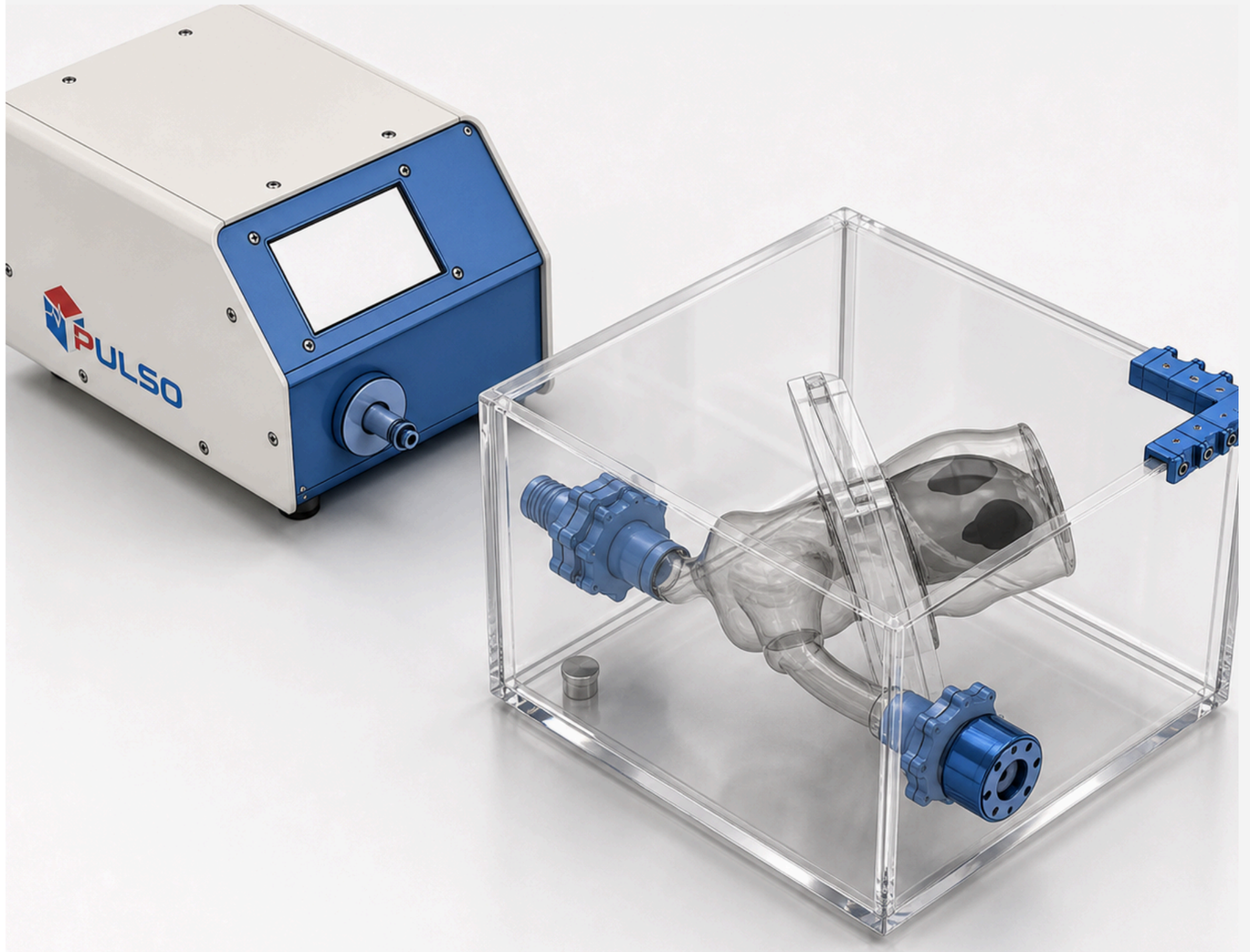
Pulso Sim is an advanced cardiac simulation platform designed for medical companies, physicians, and training centers seeking realistic procedural education and device validation. Combining pulsatile flow, human-grade anatomy, and real imaging compatibility, Puslo sim delivers an immersive and clinically relevant training experience.

STRUCTURAL HEART TRAINING

A portable structural heart simulation platform for realistic device handling, imaging, and procedure rehearsal in a controlled in-vitro environment.

APPLICATIONS

Procedural Training | Device Testing | Delivery System R&D | Medical Education



BUILT FOR TRAINING. MODULAR FOR INNOVAITON.

ADJUSTABLE CHORDAE
Customizable tension, multiple pathologies

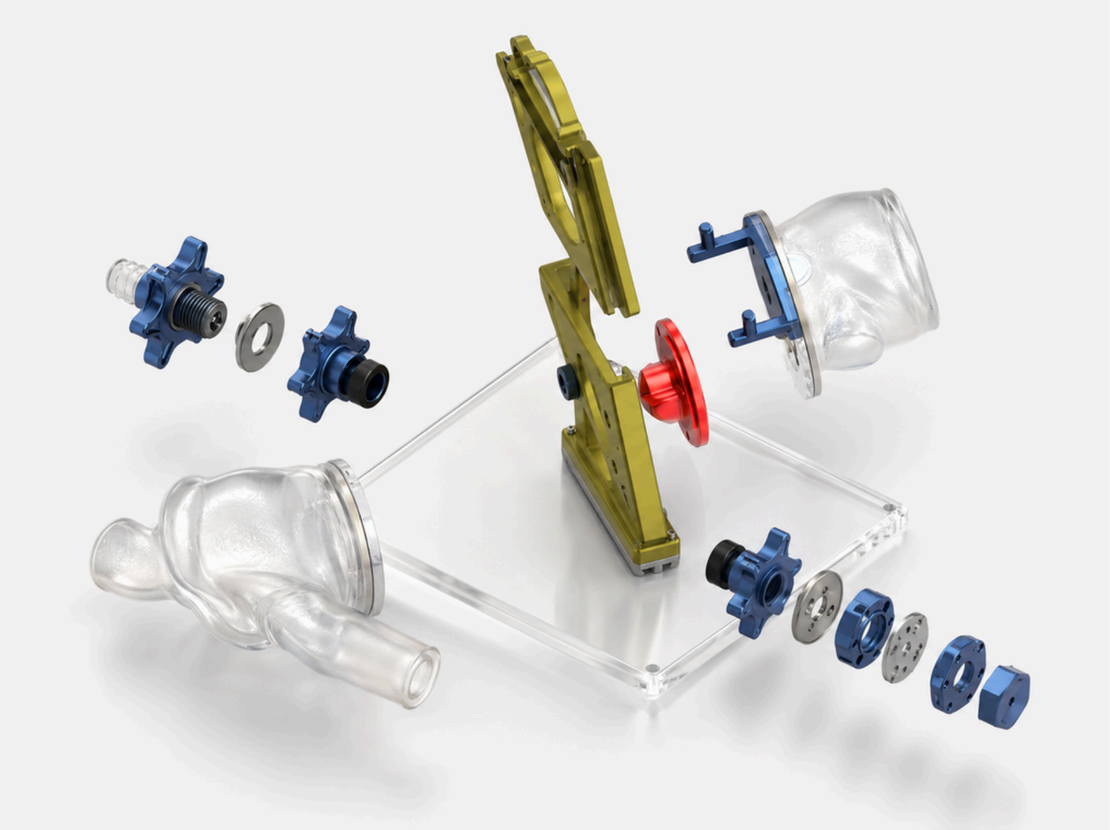
TOOL-FREE VALVE EXCHANGE
Rapid swaps of both valve and ventricle

SEMI-RIGID & FLEXIBLE ANATOMIES
Realistic navigation

NATIVE-LEAFLET MECHANICS
Matched tensile strength, puncturing and pulling forces

DUAL VIEW CAMERA SYSTEM
Top & bottom views

TEE PROBE INSERTION SLOT
Mid-esophageal and transgastric view



Pulso Sim is built on a fully modular architecture, where each component can be independently customized without impacting the rest of the platform. This enables targeted anatomical replication and pathology-specific configurations with high procedural realism.

SIMULATOR PARTS



MITRAL / TRICUSPID VALVE

- Standard valve model included — proprietary high-fidelity silicone
- Reinforced option — optimized for realistic grasping and traction*
- Integrated chordae for functional regurgitation simulation
  - Mitral: IC: 36.5mm AP: 26.5mm
  - Tricuspid: IC: 29.1mm AP : 20.4 mm

ACCESS PATHWAYS

- Configurable femoral and transjugular access
- Tissue-like friction through dedicated materials and coatings
- Optimized for realistic catheter and device navigation

PAPILLARY MUSCLE

- Custom geometries and compliance profiles
- Realistic tissue interaction and perforation behavior

ANATOMICAL MODELS

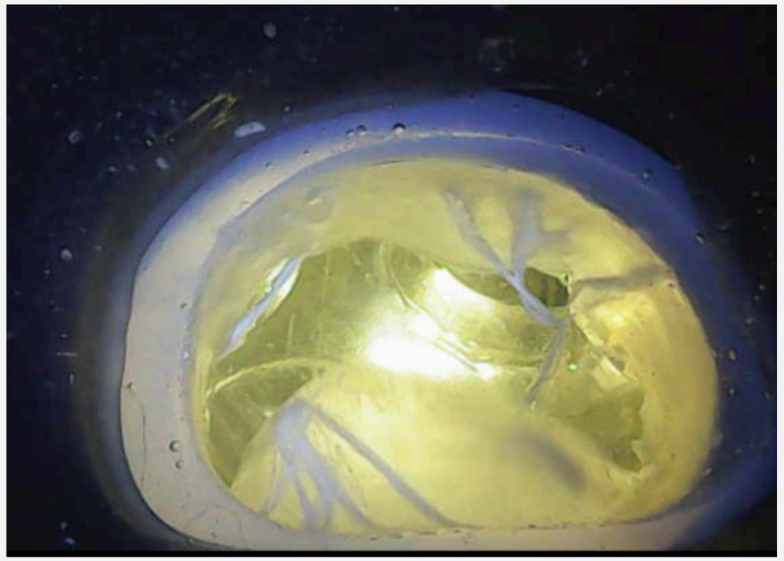
- Customizable atrial and ventricular anatomies
- Adaptable to specific morphologies and pathologies

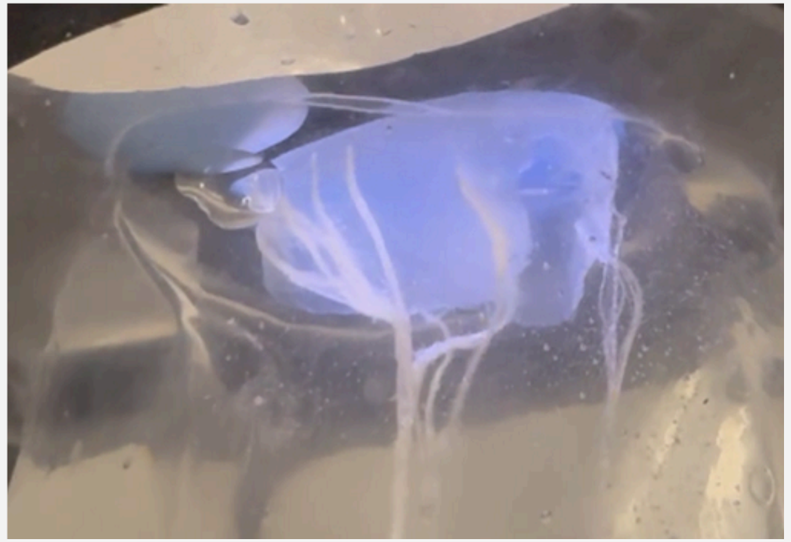
All simulator components are fully customizable through 3D modeling — including valve annulus diameter, leaflet geometry and length — to match any target anatomy or pathology.

* Lab tests conducted deonstarted a pulling force in a range of 20N, comparable with in vivo leaeflet valve data.

REALISTIC MOVEMENTS

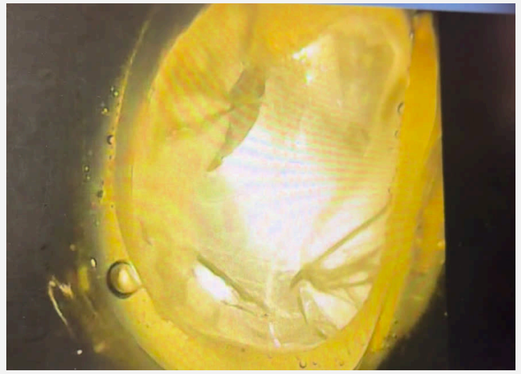






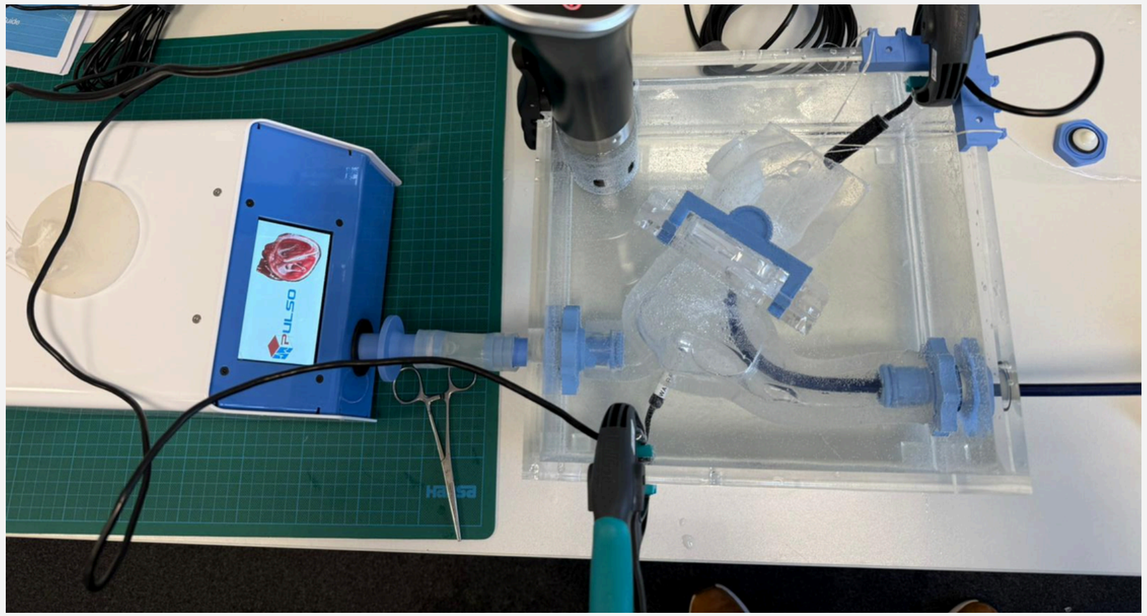
REALISTIC MOVEMENTS

TOP VIEW MITRAL VALVE



LATERAL VIEW MITRAL VALVE







BOTTOM VIEW TRICUSPID VALVE

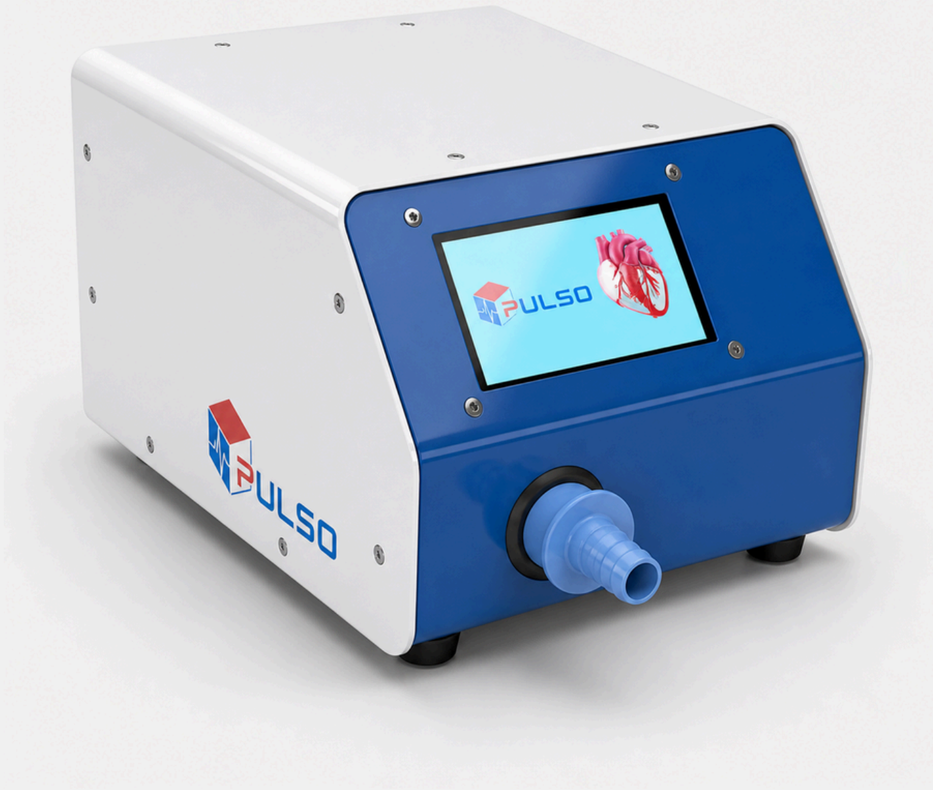
PULSATILE CONTROL UNIT

PUMP FEATURES & CHARACTERISTICS

- Dimensions : 20x 25x 20
- BPM : 30-90
- Stroke: adaptable
- Continuos operations (up to 12h)
- Portable

PULSATILE ADDED VALUE

By adjusting the stroke, the simulator can replicate functional mitral regurgitation and increase/decrease the coaptation force of the leaflets.

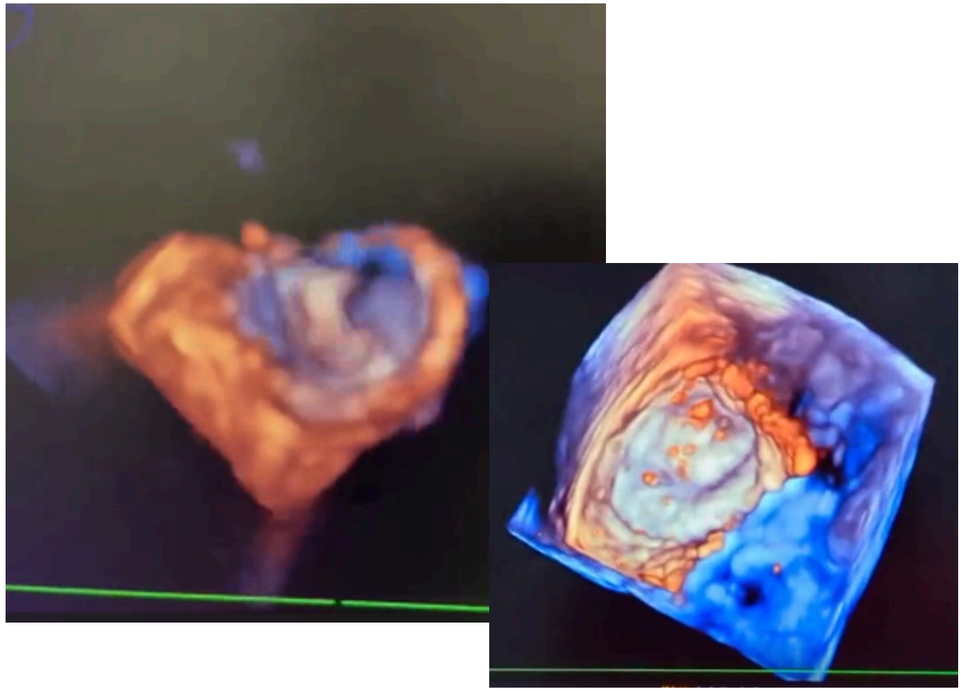


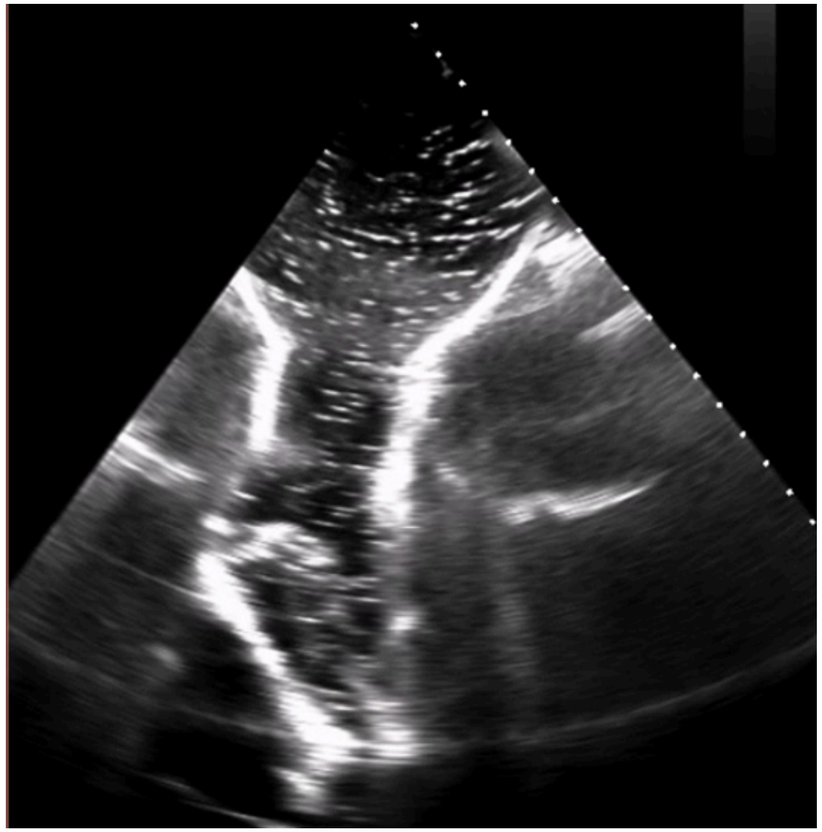
CARDIAC
SIMULATION

REAL IMAGING.

ADVANCED IMAGING INTEGRATION

2D & 3D Echo | TEE compatible | Fluoroscopy Ready | Live imaging





Pulso sim integartes with real imaging systems including TEE and fluoroscopy, enabling authentic procedural simulation and advanced imaging workflows.

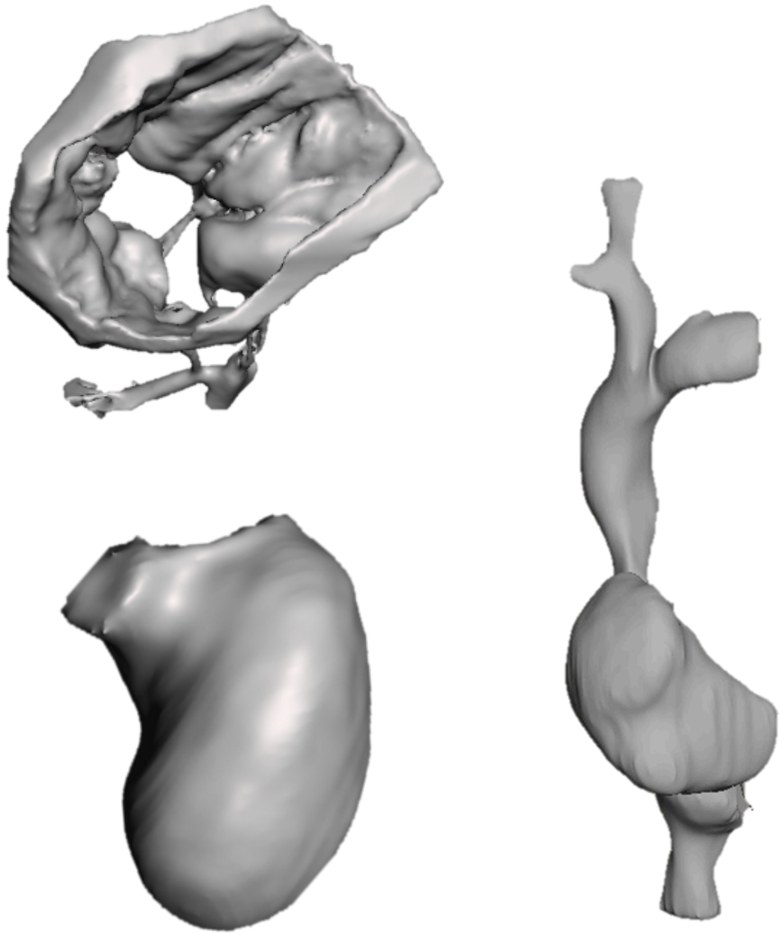
SILICONE STRUCTURES|
PATIENT- SPECIFIC MODELS|
REAL ANATOMICAL ACCESS|
TISSUE - LIKE INTERACTION

HUMAN - GRADE ANATOMY

PRECISION ENGINEERED FOR REALISM

Patient-Specific Silicone Anatomy, Ready for Hands-On Simulation

- CT-based anatomical reconstruction
- Transparent silicone models for real-time procedural visualization
- Flexible or semi-rigid options tailored to the application



LET'S CONNECT

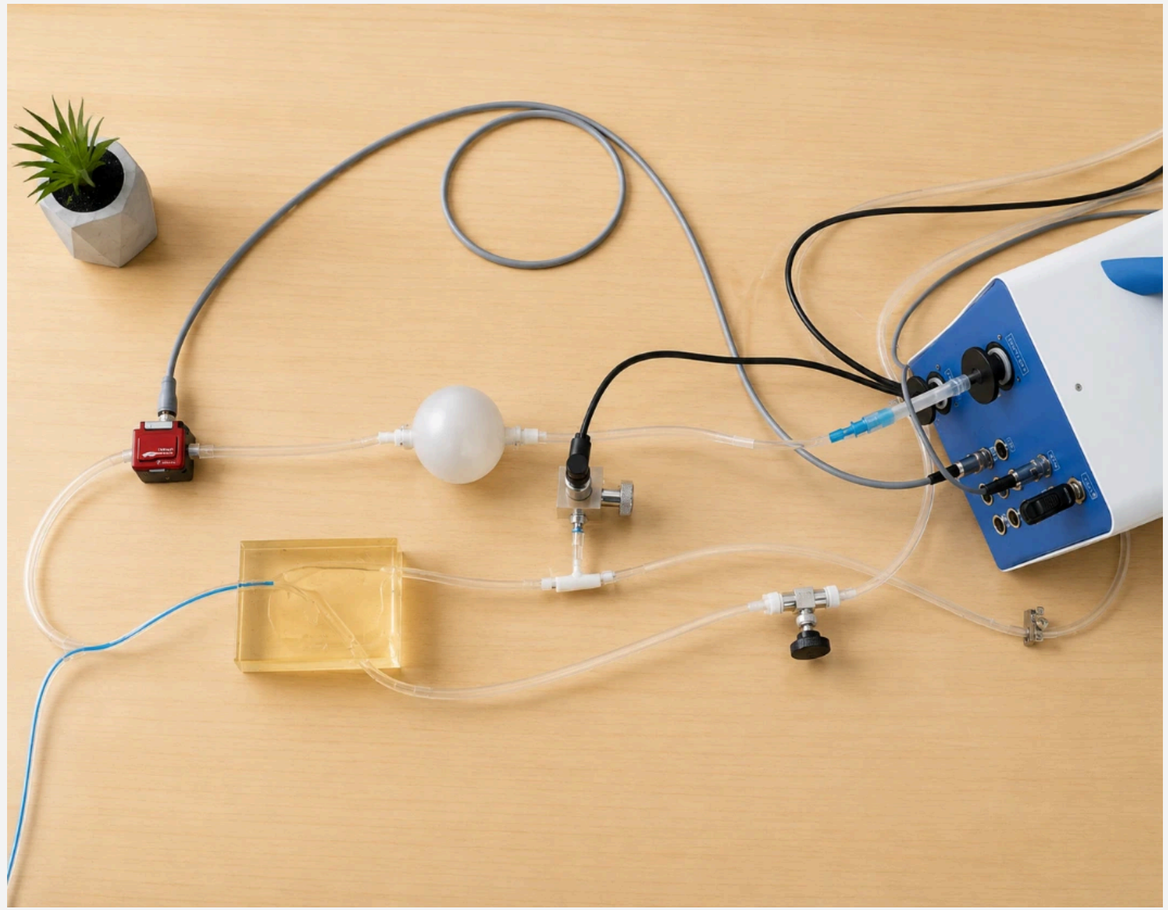
Marco Testaguzza

CEO, Pulso Technology
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marco.testaguzza@pulsotechnology.com
Follow us: https://be.linkedin.com/company/pulso-technology

Scan to visit website

PULL BACK TECHNQIUE TRAINING
ADVANCED PROCEDURAL TRAINING
PRODUCT TRAINING FOR CLINICAL STAFF

PULSO SIM CORONARY



PORTABLE CORONARY PHYSIOLOGY PLATFORM

Pulso Coronary Bench-Top is designed to reproduce controlled coronary flow and pressure conditions for device testing, physiology research, algorithm validation, and procedural training. By combining realistic mock vessels, pulsatile flow generation, pressure sensing, and blood-analog fluids, the platform provides a reproducible in vitro environment to evaluate coronary technologies before moving to animal or clinical studies.

PULSO PUMP

PROGRAMMABLE PULSATILE PUMP FOR IN VITRO STUDIES

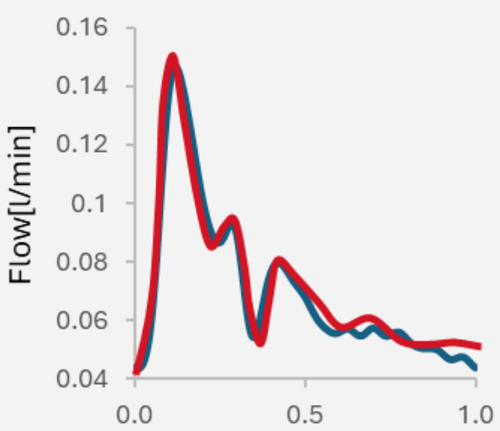


FEATURES

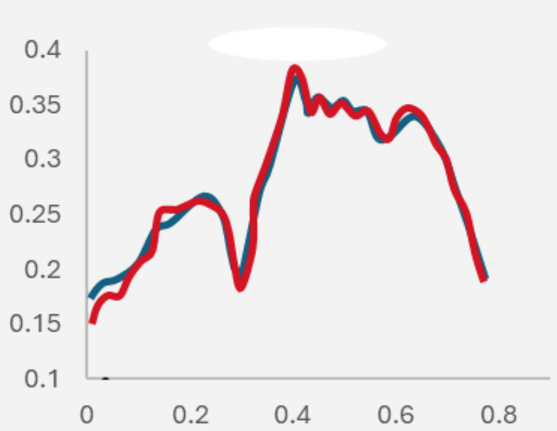
- Up to 8 sesnors display
- Real- time flow control
- Portable LCD for control
- Record/ export data
- Feedback- loop control
- No-laptop functioning

SPECIFICATIONS

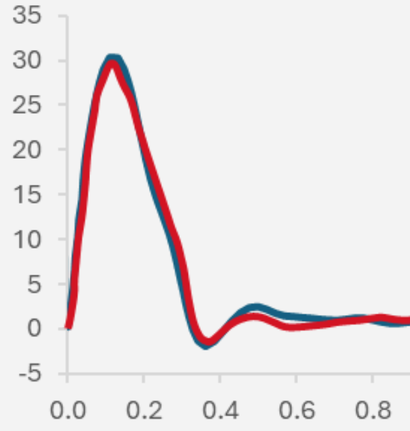
- Dimensions 55x23x23
- Weight 10Kg
- Cycle Rate 0 – 180 BPM
- Voltage 230 VAC
- Flow Rate Negative - 30 L/min



Cerebral flowrate



Coronary flowrate



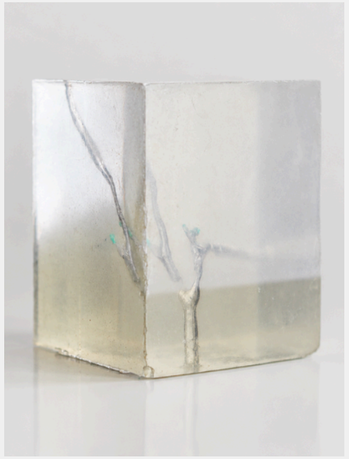
Aortic flowrate

PROGRAMMABLE PULSATILE
PUMP FOR IN VITRO STUDIES

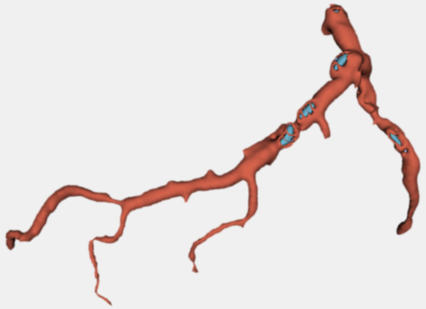
ANATOMICAL REPLICAS



Aortic models

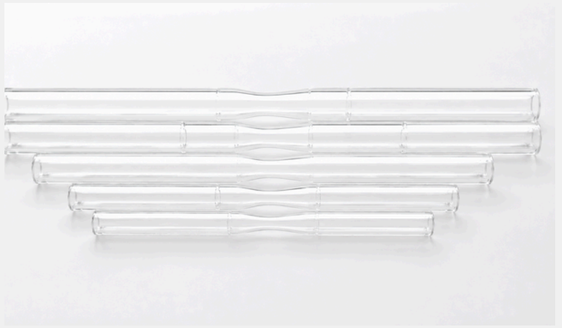


Patient specific models



CT sacn derived 3D model

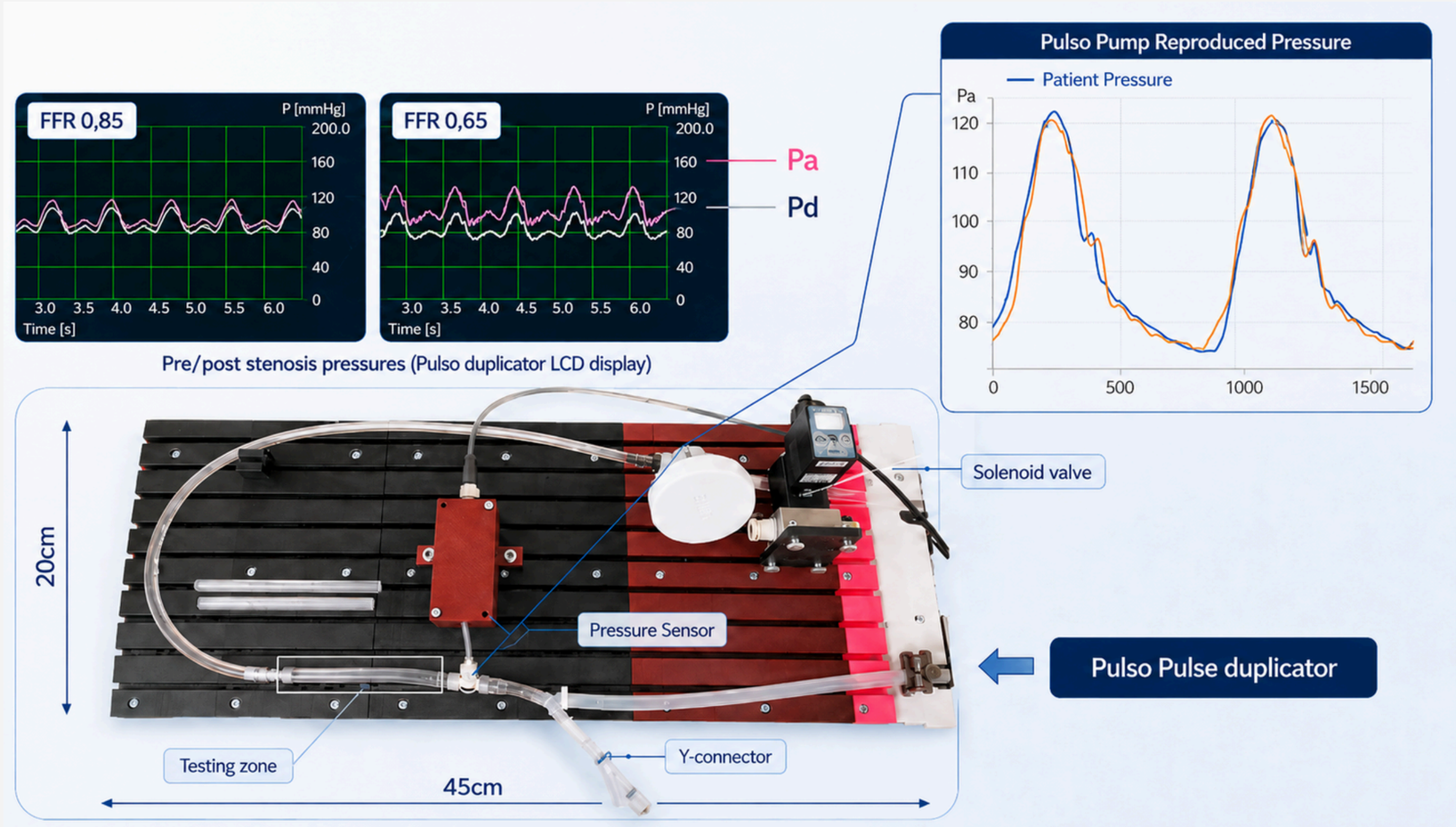






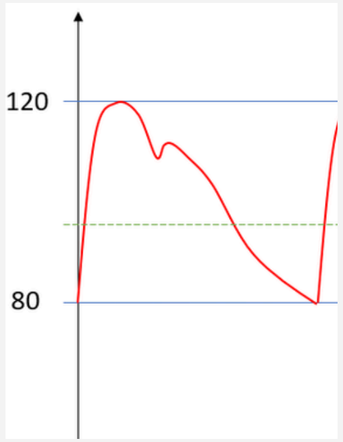
Stentable silicone models

PULSO CORONQRY PHYSIOLOGY SIMULATOR

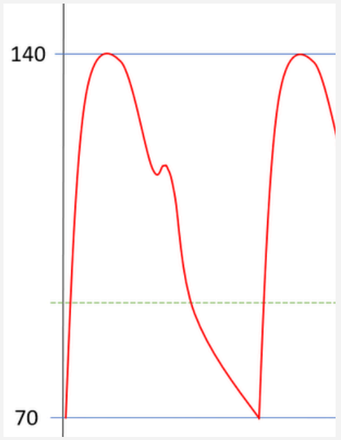


UNLIMITED PRESSURE PROFILES REPRODUCED

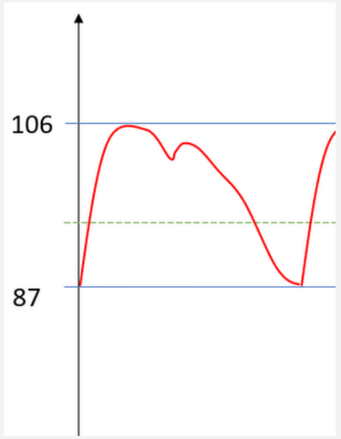
Variant 1
Normal



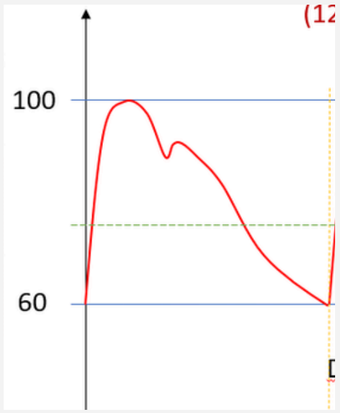
Variant 2
High systolic peak, lower diastole



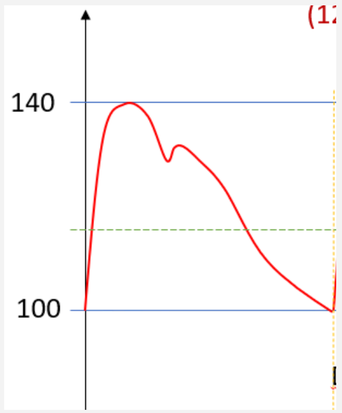
Variant 3
Lower systolic peak, higher diastole



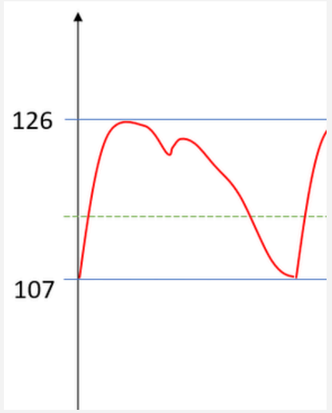
Decreased MAP



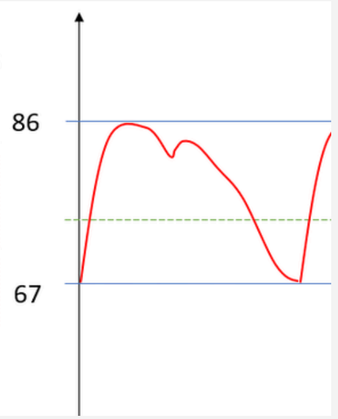
Increased MAP



Increased MAP



Decreased MAP



A REALISTIC CORONARY PHYSIOLOGY PLATFORM

- Advanced Procedural Training
- Pullback Technique Training
- Clinical Staff Product Training
- Device & Algorithm Validation



FOR DEVICES TRAINING & VALIDATION





RD platform for new technology validation

- CT-derived algorithm validation
- Angio-based computational model testing
- Pressure-wire solution benchmarking
- Controlled anatomical & physiological parameters
- Reproducible preclinical testing environment

LET'S CONNECT

Marco Testaguzza

CEO, Pulso Technology
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marco.testaguzza@pulsotechnology.com
Follow us: https://be.linkedin.com/company/pulso-technology

Scan to visit website

PULSO PUMP

High-Fidelity Flow & Pressure Waveform Reproduction

Designed for seamless integration into cardiovascular laboratories, the Pulso Pump combines advanced control, built-in instrumentation and intuitive operation in a compact benchtop platform.

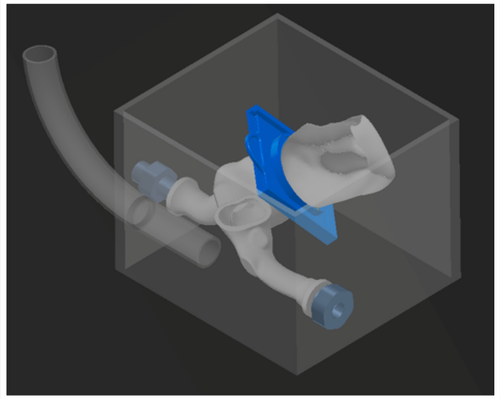
- Integrated data acquisition for synchronized pressure and flow recording
- Direct interfaces for pressure and flow sensors
- USB communication for easy connection to any computer
- Real-time visualization and data logging
- Custom waveform generation and live parameter adjustment
- Compact, plug-and-play benchtop design



BRINGING LIFELIKE VASCULAR SIMULATION TO EVERY DEVICE AND EVERY LAB



Simulation parts



Training Simulators



Services

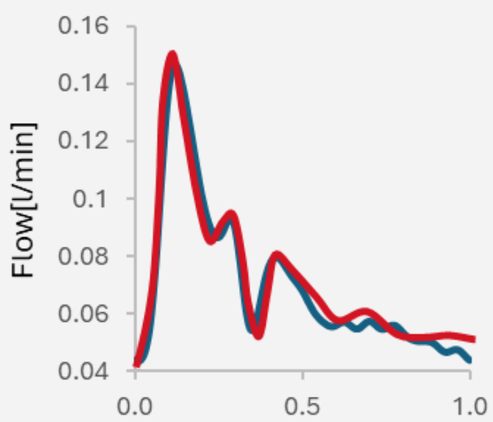
PULSO PUMP

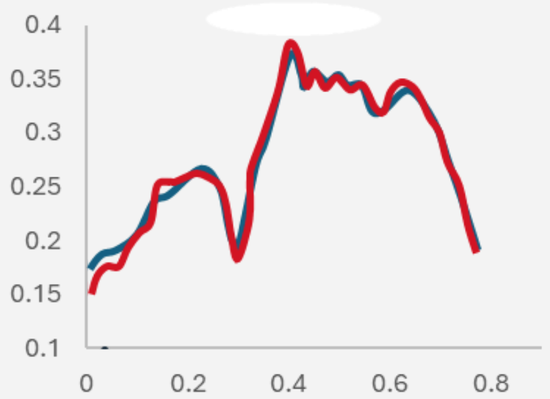
PROGRAMMABLE PULSATILE PUMP FOR IN VITRO STUDIES

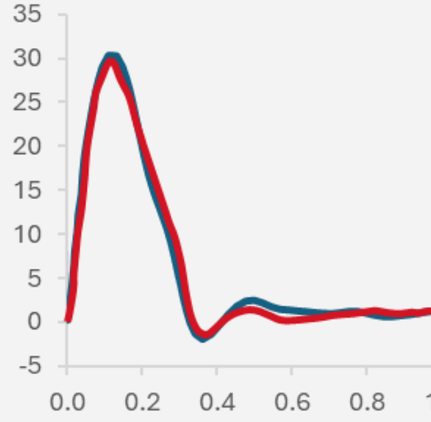


FEATURES

- Up to 8 sensors display
- Real- time flow control
- Portable LCD for control
- Record/ export data
- Feedback- loop control
- No-laptop functioning



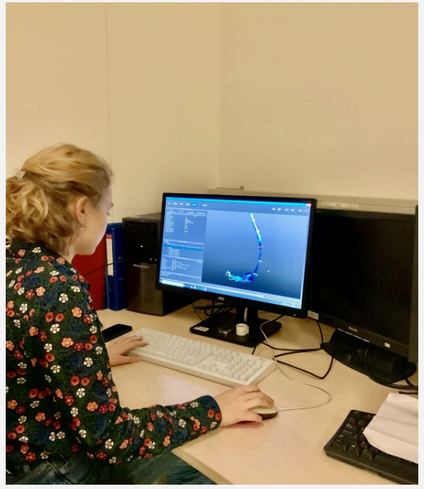




PULSO PUMP

Programmable pulsatile pump for in vitro studies





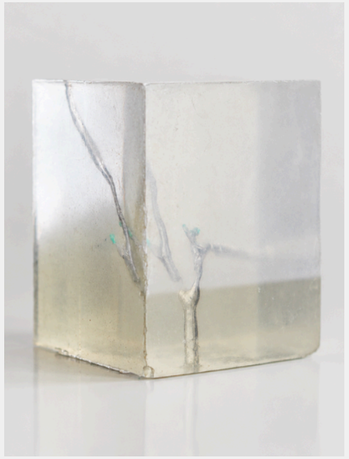


ANATOMICAL REPLICAS

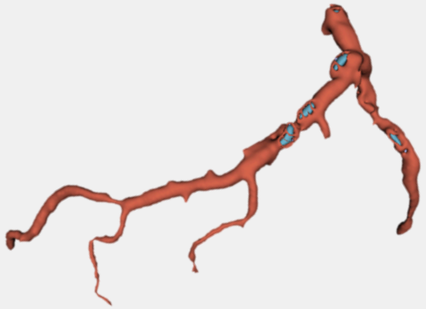
PROGRAMMABLE PULSATILE PUMP FOR IN VITRO STUDIES



Aortic models

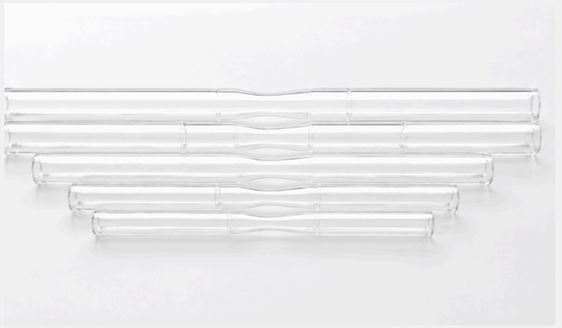


Patient specific models



CT sacn derived 3D model





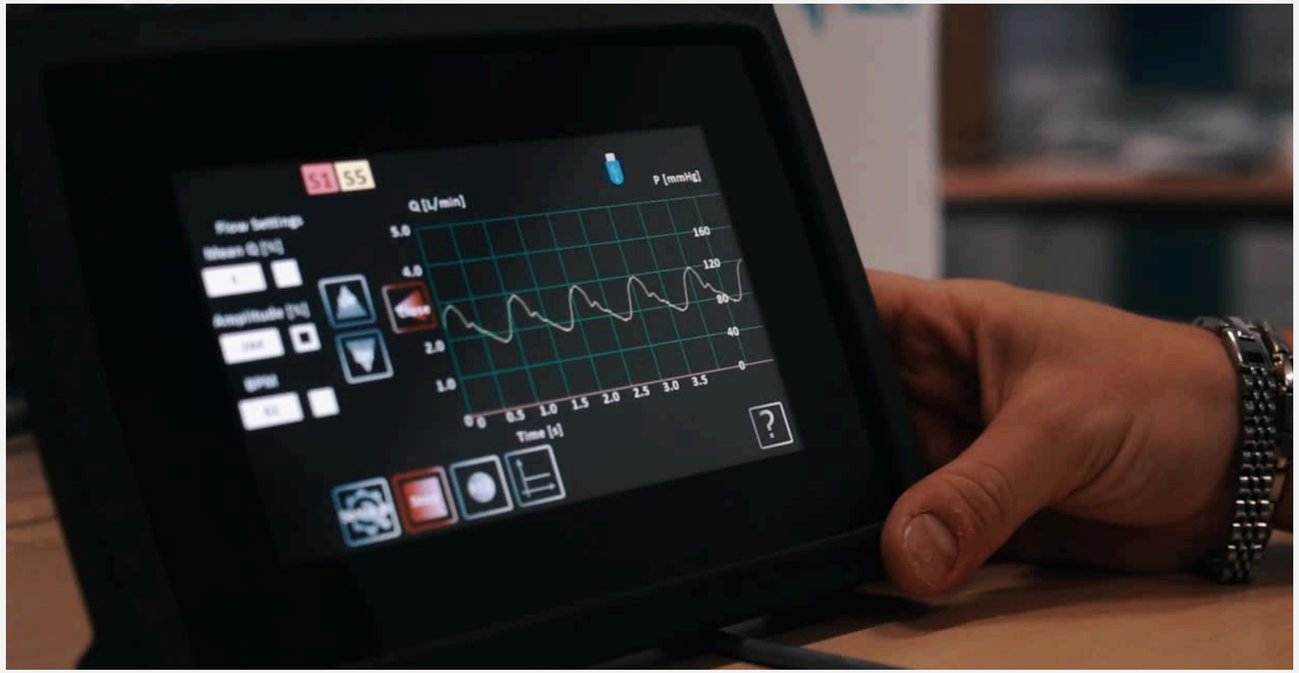


Stentable silicone models

PHYSIOLOGICAL FLOW & PRESSURE CONDITIONS

Accurately reproduce physiological and pathological cardiovascular conditions through advanced closed-loop control. The Pulso Pump continuously adapts its motion to generate highly realistic pressure and flow waveforms, even as circuit conditions evolve.

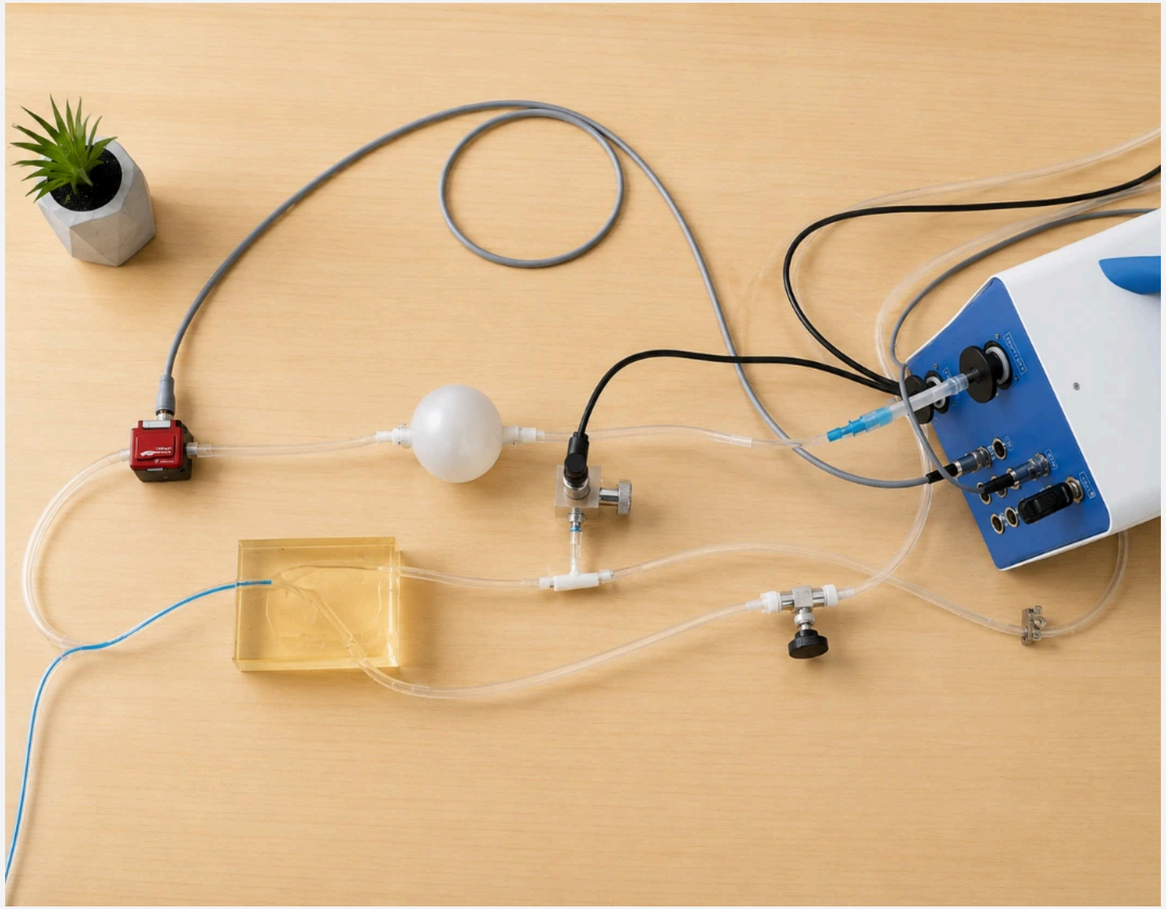
- **Physiological and pathological flow reproduction**
- **High-fidelity pressure and flow waveforms**
- **Automatic waveform tracking through feedback control**
- **Adjustable heart rate, cardiac output and waveform morphology**
- **Stable and highly repeatable experimental conditions**



PULL BACK TECHNQIUE TRAINING
ADVANCED PROCEDURAL TRAINING
PRODUCT TRAINING FOR CLINICAL STAFF

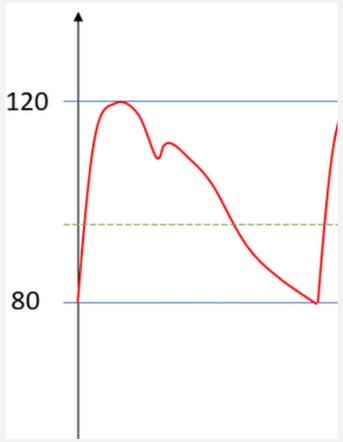
PULSO CORONARY PHYSIOLOGY SIMULATOR

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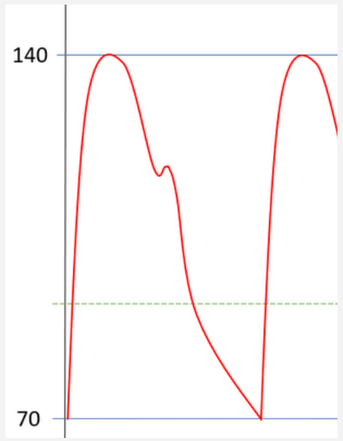


UNLIMITED PRESSURE PROFILES REPRODUCED

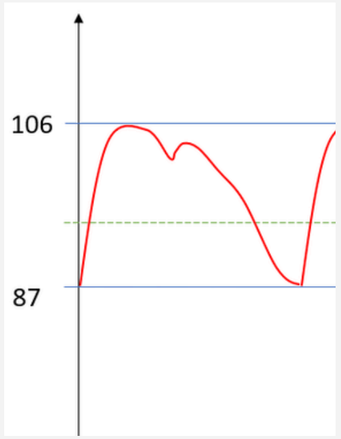
Variant 1
Normal



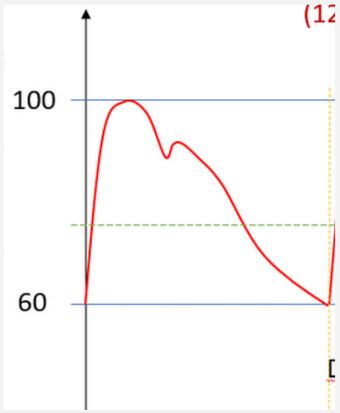
Variant 2
High systolic peak, lower diastole



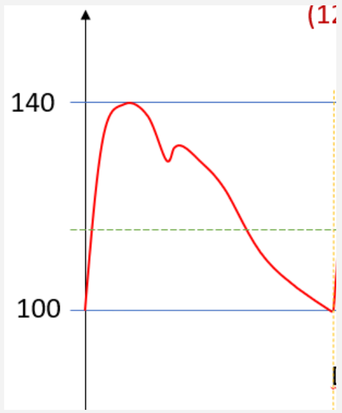
Variant 3
Lower systolic peak, higher diastole



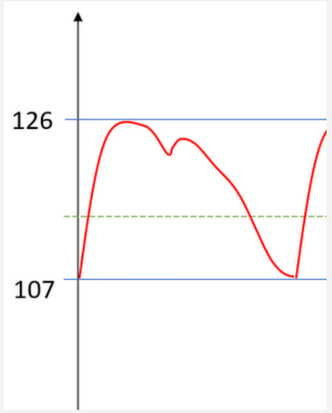
Decreased MAP



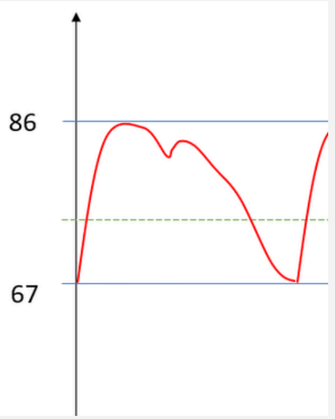
Increased MAP



Increased MAP



Decreased MAP



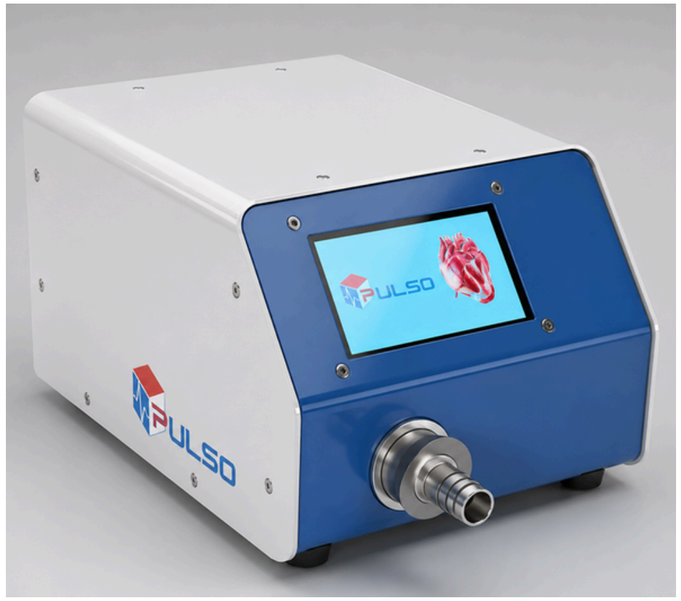
PULSO SIM - CORO - FFR/RFR/QFR/IMR







PULSO SIM HUMAN- GRADE CARDIAC SIMULATOR





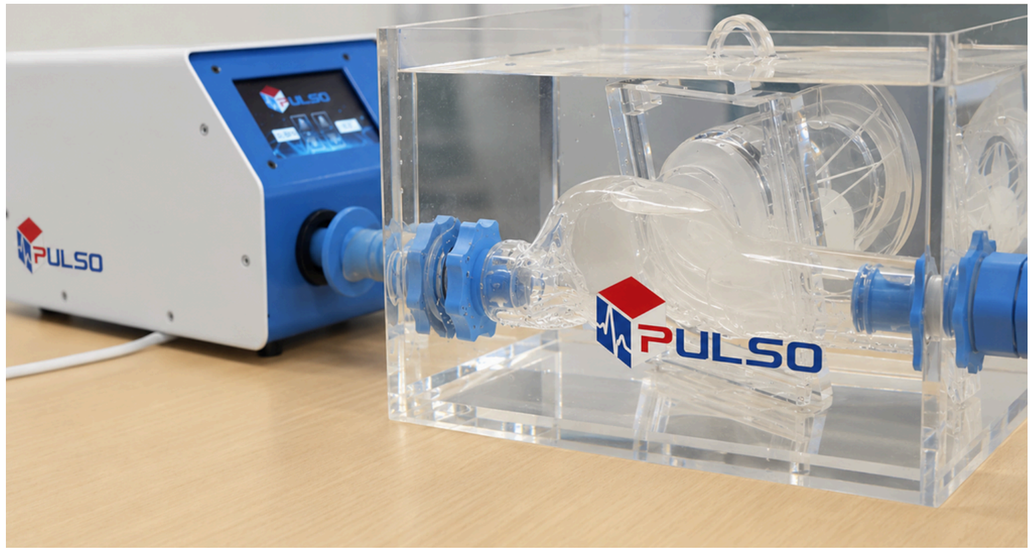
Mitral valve



Tricuspid valve

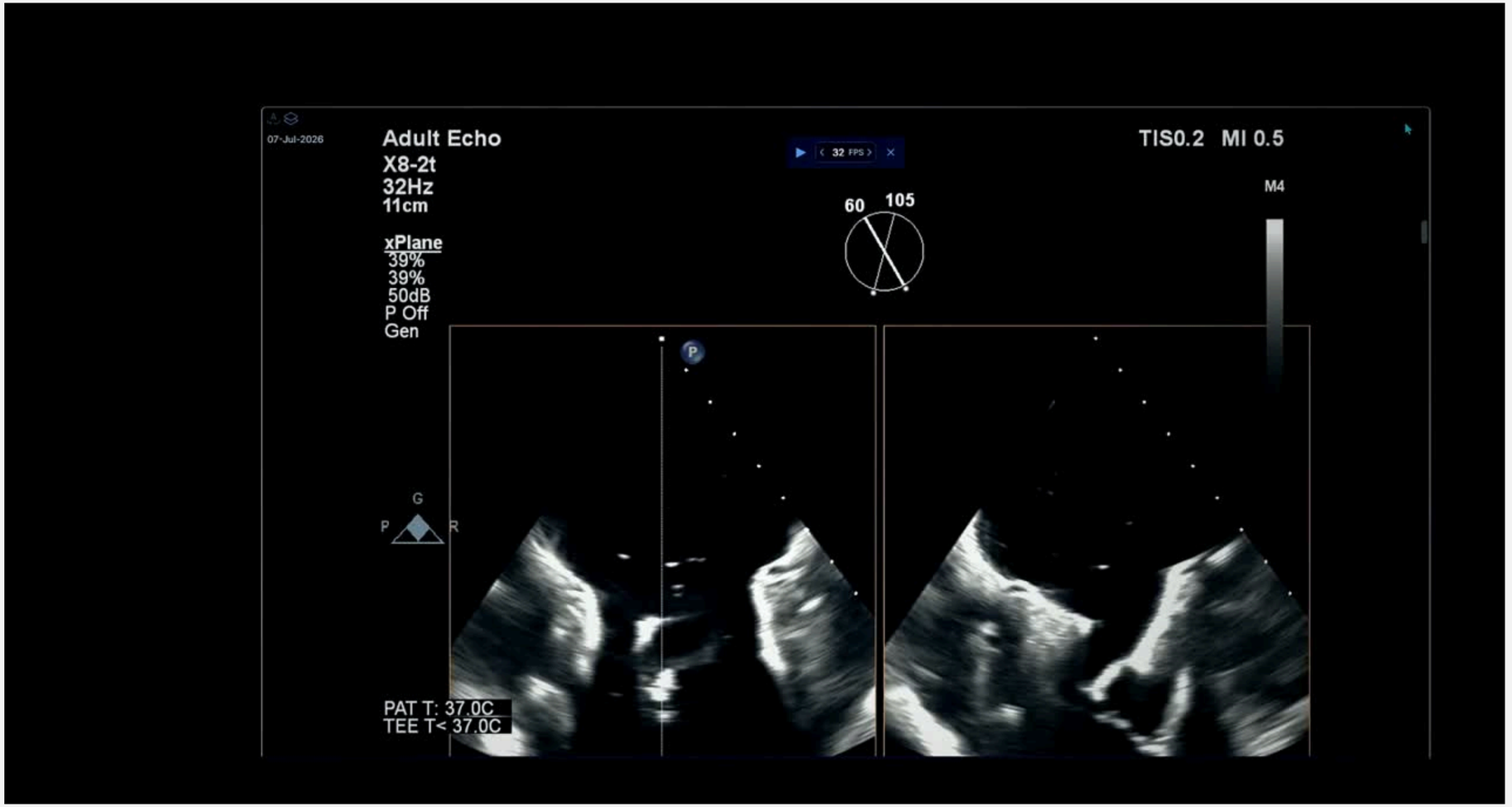
Plug-&-play design : modular and user-friendly design

Pulso Sim is an advanced cardiac simulation platform designed for medical companies, physicians, and training centers seeking realistic procedural education and device validation combining pulsatile flow, human-grade anatomy, and real imaging compatibility, Pulso sim delivers an immersive and clinically relevant training experience.



REAL IMAGING VIEW

Tee probe - 3D and 2D views



FEEDBACKS

“By using Pulso's advanced simulators, we can now offer scalable, practical training, significantly cutting costs and expanding our reach to clinicians worldwide. "

Thomas Bauer
CTO of Coremedic

“The entire setup is clean, reliable and completely leak-free giving us full confidence in our work. It provides a clear path forward for our clinical research."

Jean-Francois Argacha
Cardiologist UZ Brussels

" Pulso Sim is a realistic right-heart simulator with an integrated delivery pathway for benchtop device evaluation and future demonstrations "

Marco Gard
CTO of Startric

"Pulso helped us de-risk the project by identifying potential sources of error, defining optimal test conditions, and turning key assumptions into evidence-based decisions. "

Jose Carrillo
Medis Imaging

LET'S CONNECT

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