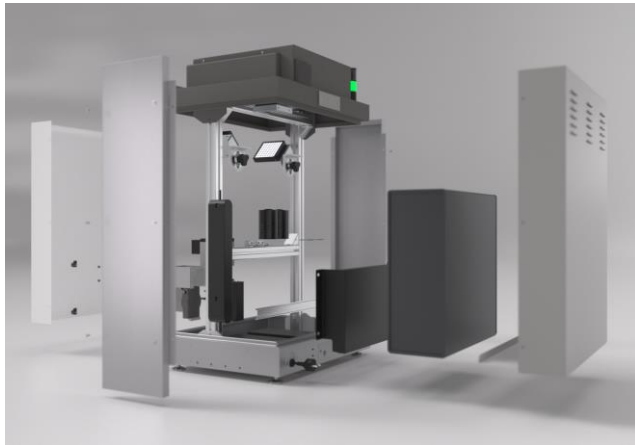


A new era of contractility measurement

Fully automated, high-performance functional characterisation of 3D engineered human heart or skeletal muscle tissue: 24 tissues at a time, inside a sterile and fully controlled chamber.



DiNAQUBE™ · closed measuring platform · patent WO2025140985A1

Sterile analysis

Two-camera video-optical recording of 24 EHTs in 90 s, non-invasive and every contraction resolved.

Controlled environment

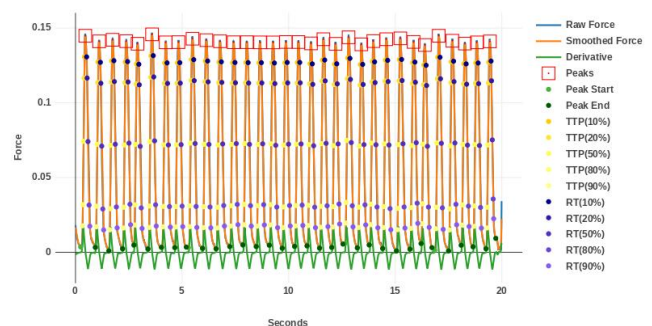
Incubator-like chamber with CO₂, O₂ and N₂ inlet plus humidity and temperature sensors.

High level of automation

Software-controlled tray, sensors, QR-code reader, physical-AI readiness, automated data pipeline.

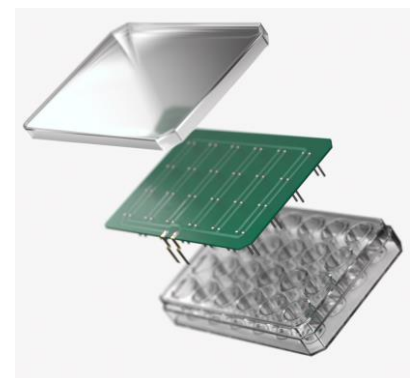
User-independent, fully automated

- AI-based figure recognition: no manual tracing, no operator drift
- Fully automated functional characterisation of contractility
- GLP-compliant acquisition with automated processing, storage and analysis
- AI-driven analysis including quality checks and tissue classification



MEASUREMENT · BRIGHTFIELD · PACING · FLUORESCENCE

- Readouts per tissue: peak detection with raw, smoothed and derivative traces, leading to more than 20 contractility parameters and more than 80 meta information
- Integrated electrical stimulator with sufficient output to pace all 24 EHTs in parallel
- Rate-controlled protocols: contractility read out at any paced frequency
- Measurement of fluorescent dyes, such as calcium transients, by video-optical recording



The data pipeline

Storage and Integrity

- Raw data, derived parameters and meta-information written straight to the database
- Data integrity and security by design
- Export in various formats
- On-prem or DiNACLOUD™ infrastructure

DiNALYTIQS™

- Web-based retrieval and analysis of human tissue data
- Customizable reporting and AI-driven quality control
- Integration of multiple resources, including omics
- AI-assisted classification and comparison of measurements

DiNACLOUD™

- GLP-compliant data storage
- Souverain cloud-based data analytics & storage
- Scalable and centralized data infrastructure
- Enterprise-grade data protection
- Reliable support & accessibility