

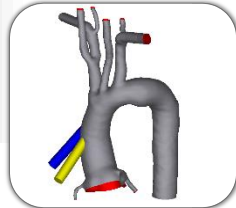
Grafts & Cannulas

We focus on your needs and provide modular services according to your requirements: advanced engineering support, modeling consulting, design analysis, and design optimization. Our services are based on our years of experience in numerical simulation and medical device development. Together with our partners from industry, academia and healthcare we help you to bring your device to the market – faster, less expensive, and more successful.

Fitting Studies

- **Virtual implantation** in MRI & CT-based geometries

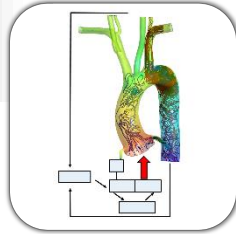
Device positioning in **patient-specific topologies** serves as a starting point for further analyses, e.g. in- & outflow grafting.



Physiological Control

- **Lumped parameter + CFD modeling** for realistic, patient-adapted boundary conditions with high resolution flow visualization

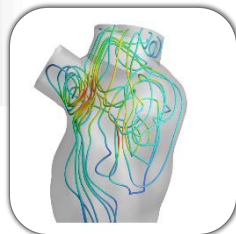
Our in-house developed **multiscale computational framework of VAD support** allows the simultaneous investigation of localized hemodynamics along with the influence of the device on the entire cardiovascular system.



Patient-Device Interaction

- **Fluid-Structure Interaction** of highly deformable systems

Thorough analysis of the **hemodynamics in a beating heart** provides insight into the complex intraventricular flow field under physiological and pathological conditions.



Risk Assessment

- Estimation of **blood damage** and **thrombogenic potential** of your device

Cooperation with **partners from healthcare and academia** allows to point out weaknesses and formulate improvements and concepts for your device.

