



# Calculation and Simulation bringing certainty into concepts

At Tresch + Kieliger, our calculation services span diverse fields, employing finite element analysis and computational fluid dynamics. Collaborating with academic and industry experts, we transform conceptual ideas into concrete products, solving a variety of challenges along the way.

## Calculations

Benefit from our extensive 35 years of expertise in accurate and compliant pressure vessel layouts meeting AD2000 and ASME standards.

We commit to current guidelines and strict quality requirements, ensuring the creation of coherent calculation reports. With access to numerous norms, an extensive material library and well-founded data references, we can efficiently solve a variety of challenges.

For further insights into our successful reference projects, please feel free to get in touch with us.

## FEA

With extensive experience, we excel in finite element analysis across key areas individually or in coupled form:

- Static Stress
- Fatigue
- Heat Transfer
- Linear Dynamic
- Buckling
- Structural
- Pipe Stress

while utilizing different materials, whether they be isotropic or orthotropic, brittle or elastic, linear or nonlinear.

## CFD

Our proficiency in computational fluid dynamics is grounded in numerous projects involving the analysis of hot gas and intricate cooling channels.

Primarily, our experience encompasses the following areas:

- Steady State fluid flow
- Transient fluid flow
- Hydro-and Aerodynamics
- Heating and Cooling
- Fluid Mixing and Multiphase
- Particle Tracking

