



**ANSYS® Professional™**

## Overview

The entrepreneur-led GEALAN Formteile GmbH and its affiliated firms GEALAN CAXsolutions GmbH and GEALAN Czech s.r.o have designed and manufactured plastic parts for more than 20 years.

GEALAN manufactures technical plastic molded parts and components for automotive and industrial applications that are designed to last over the entire lifecycle of the product or process.

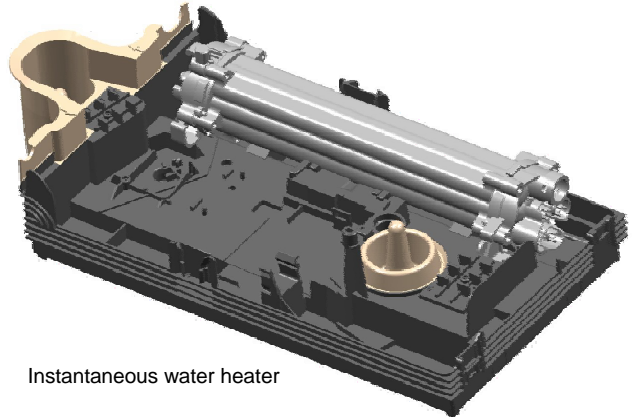
GEALAN follows through from start to finish, including the idea, concept, design, simulation, measuring techniques and testing for the following procedures: single- and two-component injection molding, PUR foam sealing process, metal inserting technology, welding engineering and production of component assemblies up to production stage. The company's products and personnel — as well as its development, service and sales — have an international reputation among part suppliers and development partners.

## Testimonial

“In order for our concept and product development teams to meet expectations — which include shorter development times, higher quality and lower manufacturing costs — it is of the utmost importance to use simulation techniques in the early stages of product design. With the help of simulation, it is possible to identify weak points sooner, and it also often allows the designer to find non-conventional and innovative solutions.

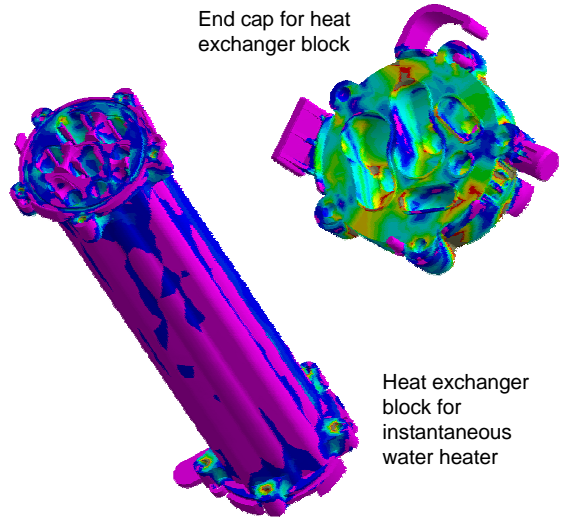
“The use of ANSYS Professional software gives our designers the ability to quickly perform complex finite element analyses on their own, so that the products meet the market requirements.”

**Christian Saunus**  
Manager Mechanical Design  
GEALAN CAXSolutions GmbH



Instantaneous water heater

End cap for heat exchanger block



Heat exchanger block for instantaneous water heater

### Challenge

- Design of assemblies subject to pressure and temperature loadings to achieve a global function
- Wall thickness optimization
- Function optimization

### Solution

Introduction of ANSYS Professional software in place of a previously used finite element system:

- Simple data transfer from CAD systems
- Ability to simulate full assemblies taking into account internal temperatures and pressures combined with external forces

### Benefits

- Decisions are made earlier in the development process, in conjunction with the customer
- Optimization of the structures and wall thicknesses
- Ability to simulate different variations of the same design