

## About this organisation

ISATEC is an independent engineering service provider with development and system competence from the component to the complete product. Our competencies include the design and optimisation of equipment and machines, strength verification and system engineering. We have many years of experience in the field of FE calculation in the areas of statics, dynamics, vibration analysis incl. non-linearities as well as flow simulation and thermodynamics.

We have extensive know-how in the calculation and optimization of lightweight components for rail vehicles, aerospace, pressure vessels and booster structures. Our customers come from research institutes and industry in the fields of mechanical engineering, vehicle construction, lightweight construction, hydrogen applications and aerospace.

Rathausstraße 10  
52072 Aachen  
North Rhine-Westphalia  
Germany  
[www.isatec-aachen.de](http://www.isatec-aachen.de)



### Organisation type

Small or medium-sized enterprise

### Sectors



### Employees

10 up to 49

### Turnover

€2m - €10m

### Funding

n/a

### Main areas covered

Infrastructure

Certifications

Keywords

Memberships

## Overview of lightweighting expertise

|                                                                                                                                                                                    | Research | Development | Manufacturing<br>& Supply |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|---------------------------|
| <b>Offer</b>                                                                                                                                                                       |          |             |                           |
| <b>Products</b><br>Parts and components, Machines and plants,<br>Systems and end products                                                                                          | ✓        | ✓           |                           |
| <b>Services &amp; consulting</b><br>Consulting, Engineering, Simulation                                                                                                            | ✓        | ✓           |                           |
| <b>Field of technology</b>                                                                                                                                                         |          |             |                           |
| <b>Design &amp; layout</b><br>Lightweight manufacturing, Hybrid structures                                                                                                         | ✓        | ✓           |                           |
| <i>Functional integration</i>                                                                                                                                                      |          |             |                           |
| <i>Measuring and testing technology</i>                                                                                                                                            |          |             |                           |
| <b>Modelling and simulation</b><br>Crash behaviour, Loads & stress, Life-cycle<br>analysis, Multiphysics simulation, Optimisation,<br>Structural mechanics, Reliability validation | ✓        | ✓           |                           |
| <i>Plant construction &amp; automation</i>                                                                                                                                         |          |             |                           |
| <i>Recycling technologies</i>                                                                                                                                                      |          |             |                           |
| <b>Manufacturing process</b>                                                                                                                                                       |          |             |                           |
| <i>Additive manufacturing</i>                                                                                                                                                      |          |             |                           |
| <i>Coating (surface engineering)</i>                                                                                                                                               |          |             |                           |
| <i>Fibre composite technology</i>                                                                                                                                                  |          |             |                           |
| <i>Forming</i>                                                                                                                                                                     |          |             |                           |
| <i>Joining</i>                                                                                                                                                                     |          |             |                           |
| <i>Material property alteration</i>                                                                                                                                                |          |             |                           |
| <i>Primary forming</i>                                                                                                                                                             |          |             |                           |
| <i>Processing and separating</i>                                                                                                                                                   |          |             |                           |
| <i>Textile technology</i>                                                                                                                                                          |          |             |                           |

Overview of lightweighting expertise

|                                     | Research | Development | Manufacturing<br>& Supply |
|-------------------------------------|----------|-------------|---------------------------|
| Material                            |          |             |                           |
| Biogenic materials                  |          |             |                           |
| Cellular materials (foam materials) |          |             |                           |
| Composites                          |          |             |                           |
| Fibres                              |          |             |                           |
| Functional materials                |          |             |                           |
| Metals                              |          |             |                           |
| Plastics                            |          |             |                           |
| Structural ceramics                 |          |             |                           |
| (Technical) textiles                |          |             |                           |

Contacts

Mr Dr.-Ing. Ernst August Werner

[e.a.werner@isatec-aachen.de](mailto:e.a.werner@isatec-aachen.de)