

## About this organisation

### Machine translation

This organisation has been machine-translated based on data provided in German.

CeramTec has been a supplier of technical ceramics since 1903 and has around 3,400 employees worldwide at production sites in Europe, the USA and Asia. Well over 10,000 products, components and parts are used in a wide range of applications. We develop and produce customised components in medium and large series from various ceramic materials tailored to customer requirements.

Technical ceramics make valuable contributions to lightweight construction and often enable the realisation of components in the first place thanks to their properties. Lightweight construction with ceramic materials. Technical ceramics are lightweight construction materials due to their low density. Numerous ceramic materials enable a wide range of applications. Be it in electronics or in mechanical and plant engineering. They offer solutions for mobility, renewable energies, digitalisation and automation as well as medical technology. Composite materials with ceramics in lightweight construction This application is a metal-ceramic composite (MMC). The advantages of both materials are transferred to one workpiece. The low weight of metal and the high performance of ceramics. Lightweight construction through additive manufacturing The 3D printing of ceramics makes it possible to produce free geometric structures with high hardness and optimum temperature and chemical resistance.

CeramTec Platz 1-9  
73207 Plochingen  
Baden-Württemberg  
Germany  
[www.ceramtec.de](http://www.ceramtec.de)



### Organisation type

Large enterprises

### Sectors



### Employees

500 and more

### Turnover

More than €50m

### Funding

## About this organisation

**Main areas covered** Automotive, general mechanical engineering, Electronics, Medical technology

### Infrastructure

**Certifications** ISO 9001, IATF 16949, DIN EN ISO 13485, ISO 14001, ISO 50001, DIN EN ISO/IEC 17025, CGMPs

**Keywords** Wear protection, Temperature resistant, Corrosion resistant, Biocompatible, Insulating

**Memberships** German ceram. Society DKG, Association of the ceram. Industry VKI

## Overview of lightweighting expertise

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|                                                                                                                           | Research | Development | Manufacturing<br>& Supply |
|---------------------------------------------------------------------------------------------------------------------------|----------|-------------|---------------------------|
| <b>Offer</b>                                                                                                              |          |             |                           |
| <b>Products</b><br>Parts and components, Semi-finished parts,<br>Systems and end products, Materials, Tools and<br>moulds | ✓        | ✓           | ✓                         |
| <i>Services &amp; consulting</i>                                                                                          |          |             |                           |

## Overview of lightweighting expertise

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|                                                                                                                                                    | Research | Development | Manufacturing<br>& Supply |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|---------------------------|
| <b>Field of technology</b>                                                                                                                         |          |             |                           |
| <i>Design &amp; layout</i>                                                                                                                         |          |             |                           |
| <b>Functional integration</b><br>Material functionalisation                                                                                        | ✓        | ✓           | ✓                         |
| <i>Measuring and testing technology</i>                                                                                                            |          |             |                           |
| <b>Modelling and simulation</b><br>Loads & stress, Multiphysics simulation,<br>Optimisation, Structural mechanics, Materials                       |          | ✓           |                           |
| <i>Plant construction &amp; automation</i>                                                                                                         |          |             |                           |
| <i>Recycling technologies</i>                                                                                                                      |          |             |                           |
| <b>Manufacturing process</b>                                                                                                                       |          |             |                           |
| <b>Additive manufacturing</b><br>3D printing                                                                                                       |          | ✓           | ✓                         |
| <b>Coating (surface engineering)</b><br>Plasma process, Sputtering                                                                                 |          | ✓           | ✓                         |
| <i>Fibre composite technology</i>                                                                                                                  |          |             |                           |
| <i>Forming</i>                                                                                                                                     |          |             |                           |
| <i>Joining</i>                                                                                                                                     |          |             |                           |
| <b>Material property alteration</b><br>Heat treatment                                                                                              |          |             | ✓                         |
| <i>Primary forming</i>                                                                                                                             |          |             |                           |
| <b>Processing and separating</b><br>Drilling, Turning, Milling, Electrical discharge<br>machining, Sawing, Shearing/punching,<br>Grinding, Cutting |          |             | ✓                         |
| <i>Textile technology</i>                                                                                                                          |          |             |                           |

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|                                                                                                                                | Research | Development | Manufacturing<br>& Supply |
|--------------------------------------------------------------------------------------------------------------------------------|----------|-------------|---------------------------|
| <b>Material</b>                                                                                                                |          |             |                           |
| <i>Biogenic materials</i>                                                                                                      |          |             |                           |
| <b>Cellular materials (foam materials)</b><br>Open-pore                                                                        | ✓        | ✓           | ✓                         |
| <b>Composites</b><br>Metal-ceramic composite                                                                                   | ✓        | ✓           | ✓                         |
| <i>Fibres</i>                                                                                                                  |          |             |                           |
| <b>Functional materials</b><br>Electrostrictive / magnetostrictive materials,<br>Piezoelectric materials                       |          | ✓           | ✓                         |
| <i>Metals</i>                                                                                                                  |          |             |                           |
| <i>Plastics</i>                                                                                                                |          |             |                           |
| <b>Structural ceramics</b><br>Monolithic ceramics, Non-oxidic ceramics,<br>Oxidic ceramics, Ultra-high-temperature<br>ceramics |          | ✓           | ✓                         |
| <i>(Technical) textiles</i>                                                                                                    |          |             |                           |

## Contacts

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Contacts

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