



Advanced Ceramic Components for Offshore & Subsea Technologies

High Performance Materials for Rough Conditions

The High-performance Specialists – Solutions Tailored to Your Needs

CeramTec is one of the leading international suppliers of products, solutions and services for all advanced ceramics applications.

- Over 3,600 employees worldwide
- Sales: € 425 million p.a.
- Over 100 years of material, development, manufacturing and application expertise
- Main markets include automotive, medical technologies, electronics, machinery, power, environment and chemical industries

Your Advantages

- Prolonged service life for plants and machines
- Less machine downtime
- Higher availability
- Less wear
- Lower maintenance cost
- Production cost reductions
- Increased efficiency of production
- Increased safety, reliability and quality
- Certified quality
- High-performance solutions specifically tailored to your unique applications

CeramTec products and solutions made from technical ceramics deliver peak performance in offshore and sub-sea applications. With their unique material properties and performance characteristics, our advanced ceramic solutions play a key role in areas where other materials like metals or synthetics reach their limits.

Our specially designed material combinations also offer ideal solutions for extreme applications. They were developed to withstand the harshest offshore and subsea conditions such as high salt water corrosion, loads and pressures, excessive abrasion, high temperatures and extreme temperature and weather changes. They exhibit amazing wear, tensile and flexural strength, are exceptionally resistant to temperature and corrosion and have superior electrical insulation capabilities – all in a light-weight design: Advanced ceramics from CeramTec have everything it takes to keep your plants and systems running at peak performance while utilizing resources in a very effective and efficient way.

But that's not all. We are here to assist you with our engineering expertise as early as the development stage of new technologies to give you a clear competitive edge. Take advantage of our know-how to master the challenges of today and tomorrow.



Withstand More and at High Quality – More Security with CeramTec

Piezo-ceramic Components for Sensor Technologies.

Pressure sensors, Flow Meters, Level gauging systems, Distance Sensors, Acceleration Sensors, Ultrasonic Air Transducers.

Piezo-ceramic Transducers for Sonar and High-power Ultrasonic Applications.

Echo sounders, Fish finders, Level sensors, Hydroacoustics, Sonar technology, Ultrasonic material processing, Ultrasonic cleaning, Ultrasonic welding, Underwater object recognition, Non-destructive material testing.

Piezo-ceramic Components for Gas Igniters and Lighters.

CeramTec offers a wide range of piezo-ceramic components for gas ignition systems and lighters – with mechanisms that squeeze and strike.

Rocar® silicon carbides.

Seal rings for mechanical seals – used in pumps or ship propulsions with diameters up to 1,000 mm, sliding bearings for heavy duty pumps, nozzles for abrasive media, burners, ball valves inserts, hydrocyclones for sand separation from crude oil.

Ceramaseal® Hermetically-sealed Ceramic-to-Metal Feedthroughs.

Ceramaseal® Ceramic-to-Metal Feedthroughs provide for the transfer of electrical power, gases or fluids from outside a hermetically-sealed chamber to the inside. Applications for use in vacuum and ultra-vacuum environments, high temperature and cryogenic temperature conditions, high pressure environment and in contact with aggressive chemicals.

Controlling and Regulating Liquids and Gases with Ceramic Seal and Regulator Technology for pumps and valves.

As seal rings, bearings or in seal- and regulating technologies, advanced ceramic materials excel with their high strength, low wear and exceptional tribological properties. Zirconia rings are also used as thermal insulators to provide thermal decoupling.

Ceramic linings.

Everywhere where highly abrasive materials are conveyed, ceramic linings provide protection from wear and corrosion.

CeramCool® ceramic heat-sinks.

CeramCool® ceramic heat-sinks are an effective combination of circuit board and heat-sink for the reliable cooling of thermally sensitive electronic components and circuits. The heat-sinks are excellently suited for thermal management and cooling of high-power electronic systems, high-performance circuits or high-power LED lighting systems.



Advanced Ceramics grinding and mixing components for low wear. Grinding balls and linings made from advanced ceramics in various sizes provide highly efficient grinding paired with low grinding media abrasion. Ceramic grinding media are also suited for use in processes where mixing and dispersing effects play an important role.

Advanced ceramic bearing rollers. Advanced ceramic bearing rollers offer new possibilities for bearing technologies. Advantages include high wear resistance, chemical and high temperature resistance, low friction, dry running ability, low specific weight, electrical resistance and they are non-magnetic.

Aluminum titanate products. For the non-ferrous molten metals industry, they effortlessly master challenging conditions such as aggressive melting maximum temperatures of 1,000 °C and temperature differences of several hundred degrees.

Gas tight ceramic tubes and rods. Made from aluminum oxide for the transportation of aggressive and abrasive materials e.g. gases, solids or fluids in the exploration and mining industry.

CeramTec Products

- slide bearings
- seal rings with diameters up to 1,000 mm
- pistons and plungers for pumps
- impellers
- hydrocyclones
- precision rollers for valves or bearing applications
- seal- and regulating discs for liquids and gases
- bushings and axial sleeves
- nozzles
- hermetic seals
- feedthroughs
- viewports
- ceramic linings
- SPK for Metal Cutting
- tubes and rods

CeramTec Materials

- Aluminum Oxide
- Silicon Nitride
- Silicon Carbide
- Zirconium Oxide
- Aluminum Nitride
- Aluminum Titanite
- Piezo-ceramics
- Metal-Matrix Composites MMC



