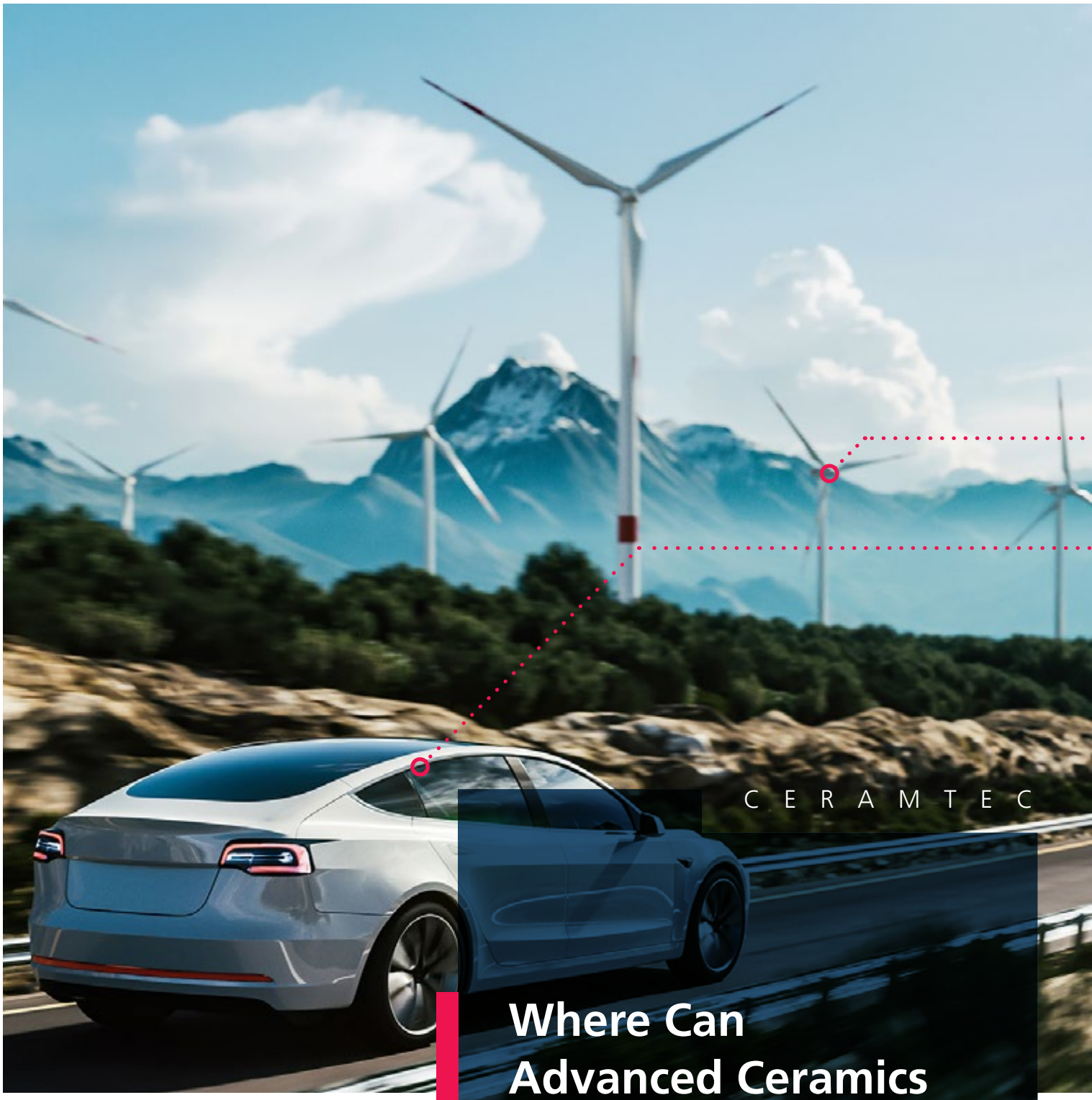
CeramTec



C E R A M T E C

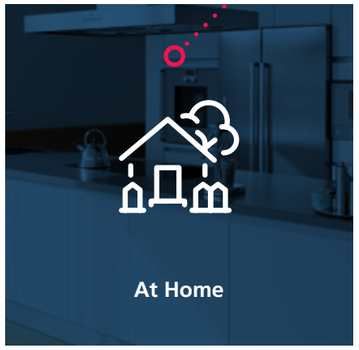
Where Can Advanced Ceramics Be Found?

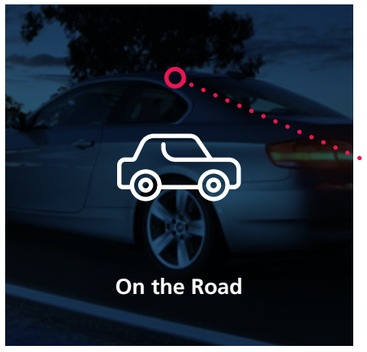
T H E C E R A M I C E X P E R T S

Wherever Peak Performance is Key.

Whether at home, in the office, in industrial manufacturing, in hospitals or on the road:

We are surrounded by products made from technical ceramics that deliver peak performance – and we usually don't even realize it.
They are used where other materials reach their limits: under enormous stress, in extreme temperatures, under current – and even in the human body. They provide reliable solutions in all types of industrial production and high-tech applications. Technical ceramics get us safely and comfortably to where we are going and provide us with clean energy using more efficient technologies. We communicate digitally on smaller devices and benefit from improved quality of life. Take a look at our brochure and discover all the places you can find advanced ceramics.





In Environmental Applications

Antifriction bearings for wind turbines

Cutting materials and tool systems for machining wind turbine components

Substrates and heat-sinks for power electronics in photovoltaic systems and wind power stations

Fuel cell components

Burner nozzles for flue gas desulfurization

Filters for water treatment

Piezo-ceramic sensor elements in biogas plants

Seal rings, bearing bushes and shells in pumps for hydroelectric power plants

Plasma chambers for coating solar cells

Ceramic mill linings for processing raw materials for glass

Bearings and bushings in drives for photovoltaic systems

Insulation rings for thermal decoupling in solar systems

Wire drawing cones for the production of power lines; rolls for rolling flat wires in photovoltaic systems

Piezo-ceramics for energy harvesting

Pipe linings and components for transporting abrasive bulk materials such as coal dust

Tensiometer cells for soil analysis

At Home

Filters for water treatment

Regulator discs in sanitary fittings for regulating water flow and temperature

Dipping formers for the production of rubber gloves for household use

Valves and seal rings in dishwashers

Diaphragm cells for chrome plating

Piezo-ceramic gas igniters

Coil bodies, fuse bodies, resistor cores and circuit boards in electronic and electrical home appliances

CeramCool heat-sinks for LED lighting systems

Seal rings for bottle caps as well as plates and doctor rings for printing PET bottles

Grinding discs in fully automatic coffee machines for grinding coffee beans

Cam discs for switching from coffee to hot milk or water

Mills for spices, cocoa; mill linings and grinding balls for food processing

Perforated plates, cutters and knives for cutting and shredding meat

Casings, thermostats and thermocouples for ranges and ovens

Catalyst carriers for the production of plastics

Evaporation elements in ambient air evaporators

CeramTec

In the Office

CeramCool heat-sinks for LED lighting systems

Resistor cores, fuse bodies, coil bodies and ceramic circuit boards for electronic circuits in PCs, cell phones, monitors and printers

Surge arresters for telecommunications systems

Ceramaseal vacu-um-tight products in telecommunications systems

Rolls, cleaner cones and dewatering blades for paper manufacturing

Wafer plates for the production of semiconductors

CeramCool heat-sinks for mainframe systems

In Everyday Life

Plates for coloring contact lenses

Accelerators in ball mills for the production of cosmetics

Piezo-ceramics as perfume atomizers

Thread guides, eyelets and friction discs for textile production

Catalyst carriers for the production of vitamin C

BIOLOX® hip replacement elements

Translucent components for braces

BIOLOX® knee replacement elements

Resistor cores, fuse bodies, coil bodies and ceramic circuit boards in consumer electronics such as notebooks, cell phones and MP3 players

Substrates for circuits in hearing aids and pacemakers

Piezo-ceramics for plaque removal

CeramTec

In Industrial Manufacturing

Gas nozzles, centering standard molds, welding rollers in welding applications and nozzles for laser processes

Integrated membranes for measurement and control technol ogy in temperature and pressure sensors

Seal rings, bearings, bearing shells, insulating rings and valves in mechanical engineering and robotics

Substrates as circuit carriers for electronic machine control

Cutting materials and tool systems for machining cast iron, hardened steels and hard-to-machine materials

Thermally and dimen-sionally stable guide elements and moving components for precision measuring machines

Wire drawing components for wire and cable production

Ceramic screws and bolts

Components for bending and forming metal as well as punching stand-ards and positioning jaws for sheet metal

Piezo-ceramic sensor elements in equipment and mechanical engineering

Piezo ceramics for ultrasonic cleaning and ultrasonic welding

Ceramic heat-sinks – also with liquid cooling – for high electronic power densities, e. g. in UV-LED systems for drying paints

CeramTec

In Metal Processing and Machining

Components for bending and forming metal as well as punching standards and positioning jaws for metalworking

Protection tubes for temperature measurement

Cores for the production of cavities in casting components

Tubes, slide valves and nozzles for guiding molten masses

SPK cutting materials and tool systems for machining cast iron, hardened steels and hard-to-machine materials

Sliding blocks for heat treatment plants

Metal matrix composite (MMC) preforms for material reinforcement and light-weight construction

Ceramic wear linings for transporting abrasive bulk materials

Gas nozzles, centering standard molds, welding rollers in welding applications and nozzles for laser processes

In Medicine

Ceramic membranes in respirators

Piezo-ceramics as atomizers in inhalers

Tubes for blood plasma

Piezo-ceramics in lithotripters

CeramCool as a heat-sink for OR lighting based on LED technology

Ceramic tubes for endoscopic devices

Accelerators in ball mills for the production of pharmaceuticals

Piezo-ceramics for ultrasonic scalpels

Ceramaseal vacuum-tight ceramic-metal components for analysis and sensor technology

Ultrasonic flow and bubble sensor

BIOLOX® knee replacement elements

Dipping formers for the production of surgical gloves

BIOLOX® hip replacement elements

Seal discs, valves, seal rings in medical device and equipment engineering

Coil bodies, fuse bodies, resistor cores and circuit boards in electronic medical devices

On the Road

SPK cutting tools for machining cast iron and hardened steels, e. g. components for brake or transmission systems

Preforms for material reinforcement and light-weight construction in engines

Cores for piston casting

Valve plates in common rail injection systems

Cyrol® Ceramic Bearing Rollers

Coil bodies, fuse bodies, resistor cores and substrates in auto-motive electronics

Bearing bushes in exhaust gas control valves

Insulation components in lambda sensors

Axial bearings/seal rings in coolant pumps

Circuit boards in oil pressure sensors for measuring oil level and pressure

Welding nozzles and centering pins for MAG welding in car body construction

CeramTape ceramic tapes for hybrids in control elements and lambda sensors

Side plates in fuel pumps

CeramCool heat-sinks for LED lighting systems

Piezo-ceramic elements as signal transmitters and receivers in distance sensors and signal trans-mitters in knock sensors

Risers for aluminum casting of alloy rims

Insulation rings in brake calipers

Cam discs in ABS modulators

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