Where Can Advanced Ceramics Be Found?
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-dielectric capacitors 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
- Piezo-ceramic sensor elements in biogas plants
- Tensiometer cells for soil analysis
- Ceramic mill linings for processing raw materials for glass
- Seal rings, bearing bushes and shells in pumps for hydroelectric power plants
Evaporation elements in ambient air evaporators

Catalyst carriers for the production of plastics

Grinding discs in fully automatic coffee machines for grinding coffee beans

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

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

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Fibers for water treatment

Regulator discs in sanitary fittings and cartridges for regulating water flow and temperature

Silicon carbide for the production of rubber gloves for household use

Valves and seal rings in dishwashers

Diaphragm cells for chrome plating

Piezo-ceramic gas igniters

Cell bodies, base bodies, resistor cores and circuit boards in electronic and electrical home appliances

Casings, half-caps, thermostats and thermocouples for ranges and ovens

CeramCool heat-sinks for LED lighting systems

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

Dipping formers for the production of rubber gloves for household use

AT HOME
Surge arresters for telecommunications systems

Ceramaseal vacuum-tight products in telecommunications systems

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

CeramCool heat-sinks for LED lighting systems

Rolls, cleaner cones and dewatering blades for paper manufacturing

Wafer plates for the production of semiconductors

CeramCool heat-sinks for mainframe systems
Piezo-ceramics for plaque removal

Accelerators in ball mills for the production of cosmetics

Translucent components for braces

Catalyst carriers for the production of vitamin C

BIOLOX® hip replacement elements

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

Plates for coloring contact lenses

Piezo-ceramics as perfume atomizers

Thread guides, eyelets and friction discs for textile production

Substrates for circuits in hearing aids and pacemakers

BIOLOX® hip replacement elements

BIOLOX® knee replacement elements

IN EVERYDAY LIFE
Ceramic screws and bolts

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

Integrated membranes for measurement and control technology 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 dimensionally 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 standards 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

IN INDUSTRIAL MANUFACTURING
Ceramic wear linings for transporting abrasive bulk materials

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

Sliding blocks for heat treatment plants

Metal matrix composite (MMC) preforms for material reinforcement and lightweight construction

Protection tubes for temperature measurement

Cores for the production of cavities in casting components

Tubes, slide valves and nozzles for guiding molten masses

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

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

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Ceramic wear linings for transporting abrasive bulk materials
Ceramic membranes in respirators

Piezo-ceramics as atomizers in inhalers

Tubes for blood plasma

Piezo-ceramics in lithotripters

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

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

Ceramic tubes for endoscopic devices

Accelerators in ball mills for the production of pharmaceuticals

Piezo-ceramics for ultrasonic scalpels

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

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

IN MEDICINE

Dipping formers for the production of surgical gloves

Piezo-ceramics for ultrasonic scalpels

BIOLOX® knee replacement elements

Ultrasonic flow and bubble sensor

BIOLOX® hip replacement elements

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

In Medicine
Preforms for material reinforcement and light-weight construction in engines

Ceramic bearing rollers

Valve plates in common rail injection systems

Ceramic bearing Bushes in exhaust gas control valves

Coil bodies, fuse bodies, resistor cores and substrates in automobile electronics

Transparent Ceramic PERLUCOR® as Safety- and Design Element and Protective Ceramics for vehicle armor

Bearing bushes in exhaust gas control valves

Insulation components in lambda sensors

Ceramic bearing/role 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

CeramicCool heat sinks for LED lighting systems

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

Risers for aluminum casting of alloy rims

Insulation rings in brake calipers

Cam discs in ABS modulators

Actuator-Technology and Piezo-ceramic Tapes for Injection Systems