WEAR AND CORROSION RESISTANT BALL VALVES
Wear protection in the toughest operating conditions

Conventional materials in valves can reach their limits in many industrial applications. Entirely new results often arise when high-performance ceramic materials are used. Ceramics can be used to an advantage everywhere wear and corrosion resistance and high temperature stability are needed.

Cera System has the most comprehensive range of tried and tested ceramic valve products available to our customers than does any other valve supplier worldwide. Many of our ceramic lined valves can be delivered in a relatively short lead time and are often the most cost effective valves for the most demanding applications.

As the technological market leader for ceramic lined industrial valves and pipeline components, we continually open up new areas of application together with our customers. Our range of services consists of the design engineering, testing, production and delivery of such systems. And, Cera System provides outstanding after sales customer service through factory trained application engineers and field service technicians. Our system solutions enable a great economic benefit in many applications.

Due to the fact that our products are used in almost all industrial sectors, our application engineers are aware of many different application problems and are usually already aware of a solution.

Our standard products are designed for use in extreme conditions. But we are also working closely with our customers to develop new solutions while relying on our vast knowledge and experience of applying engineered ceramics to critical service valves. In the valve sector, this includes:

- Valves with multiple protective housings
- Valves with blocking media
- Valves with heating and cooling jackets
- Valves manufactured from exotic material
- Multi-ported valves
- Sampling systems

Cera System valves are used and trusted by well known companies from all over the world. Reference can be supplied as requested.
TYPICAL APPLICATIONS

**COAL FIRED POWER PLANTS:** Flue gas desulphurisation plants (FGD): Lime slurry and gypsum slurry process water with high chlorides and solids content

**STEEL WORKS:** Injection of coal powder (PCI); Injection of carbon powder in electric arc furnaces (EAF); Raw iron desulphurisation (supply of additives: CaC, MgO, ...)

**POLYSILICON:** SiCl₄, TCS, raw silicon, splitting of silicon with acids, conveying of silicon powder ...

**WASTE INCINERATION PLANTS:** HCl - prewashers, limestone suspension for pH regeneration, corrosive washing water (HF loaded)

**PAPER & PULP/dye works:** Kaolin, bentonite, fillers, dyes, bleachers, talcum...

**Paper machine:** Pulp residue, lime suspension, MgO₂, green liquor, wood particles in suspension...

**MINING:** Copper: Splitting of ore with H₂SO₄, copper residues in suspension, concentrated copper slurries (“floatation”) to the filter, pneumatic conveying of copper powder to smelter, air bleed valve on the pneumatic conveying container...

There are similar applications for zinc and other noble metals.

**PNEUMATIC CONVEYING:** All types of dry bulk material (quartz, silicon, lime, coal, glass, cement, PP pellets...)

**PETROCHEMISTRY:** FCC aluminium oxide powder as the catalyst, catalyst slurry...

**FERTILIZER:** Ammonium nitrate slurry, phosphoric acid with solids (lime), dolomite, washing water with hydrofluoric acid content...

**CHEMISTRY:** PIGMENTS: TiO₂ suspension, Ti₄Cl₄, H₂SO₄ + TiO₂, FeCl₂...
PRODUCTS AND SERVICES

BALL VALVES
Cera System offers wear and corrosion resistant ball valves for open/close and control function. The use of ceramic lined valves is sensible in all cases where standard valves reach their limits (abrasion, corrosion, temperature and pressure). A large range of metallic and ceramic materials permits solutions for almost all industrial sectors. Special applications are solved in close cooperation with our customers.

SLIDING DISC VALVE
Cera System offers wear and corrosion resistant disc slide valves for open/close and control function. With this type of construction, the media is exclusively ceramic. It is therefore suitable for highly corrosive media. Further advantages: Excellent control of small amounts containing solids - completely cavity free. The slide valve is available from DN 2 up to DN 50/5" up to 2".

CERAMIC SYSTEM SOLUTIONS
Cera System offers system solutions with ceramic components. In-house development and sales engineers ensure for the complete design of ceramic systems and create economical, customer-specific complete solutions all over the world. Product developments in the coal gasification and photovoltaic sector are only examples of numerous other industry-specific applications.

CERTIFICATES
ISO 9001:2008 • TA Luft 2000 • Pressure equipment directive 97/22/EC Module H • Fire-safe according to EN ISO 10497:2004 • Safety shut-off device according to DIN EN ISO 23553-1 • Rostechnadsor • GOST R
Cera System develops and produces customer-specific ceramic precision components in small batch sizes through to series production for the most diverse areas of application. Focal points are sealing and control discs for air conditioning, sanitary faucets as well as many other applications. Ceramic components for the sensor, food engineering and building services sectors round off our portfolio.

Cera System supplies wear resistant flexible solutions. Ceramic hoses manufactured by Cera System can be used everywhere where hoses regularly wear and must be replaced. The hose consists of ceramic rings that are vulcanised together with special reinforced rubber materials. Pressures of up to 10 bar / 145 psi are permitted.

Cera System offers wear resistant pipe elbows, Y and T parts as well as other shaped pieces. The most diverse of ceramics are used. The ceramic is solid (wall thickness approx. 6 mm / ¼”). All solutions are nominal diameter conformant, they can be assembled problem-free without having to adjust the pipelines. The clear width corresponds to the flange connection. Our speciality: the ceramic pipe elbows are actually formed in a single piece to the required angle as opposed to counter stacking multiple sections of mitered straights to form the angle. The single piece formed ceramic liner of the Cera Pipe® ceramic lined elbow eliminates multiple joints that can fail in service.