



Components for minerals. Innovative wear protection concepts for maximum economy.

» Years of experience for a long service life: Coperion components for the minerals industry. We are the leading manufacturers in the global market for bulk material system components. Our in-depth, specialized knowledge in this field is not only based on a long tradition – we are learning more every single day.

THERE ARE MANY REASONS WHY COPERION IS THE IDEAL PARTNER FOR THE MINERALS INDUSTRY:

- » We have experience with more than 14,000 bulk materials.
- » In our test center we simulate wear conditions and define the optimal wear protection (DuroProtect level).
- » Coperion components are long-lasting, high-quality products for all applications.
- » Our DuroProtect levels for rotary valves guarantee maximum service life and availability.

COPERION BULK MATERIAL COMPONENTS SUCH AS ROTARY VALVES AND DIVERTER VALVES FOR:

Cement industry

- » Raw mix
- » Cement
- » Clinker powder
- » Bypass dust
- » Solid fuels

Ore processing

- » Crude ore
- » Finished products
- » Slag

Power plants

- » Solid fuels
- » Ash
- » Surrogate Fuel

Lime industry

- » Calcium carbonate
- » Dolomite
- » Lime (hydrated/
non-hydrated)
- » Solid fuels
- » Carbon dust

Construction industry

- » Render
- » Sand
- » Dry mortar

Aluminium industry

- » Alumina

Wood industry

- » Sanding dust
- » Wood powder
- » Wood pellets

Ceramics industry

- » Clay/kaolin
- » Fireproof materials

Pigment production

- » Titanium dioxide
- » Chalk
- » Talcum

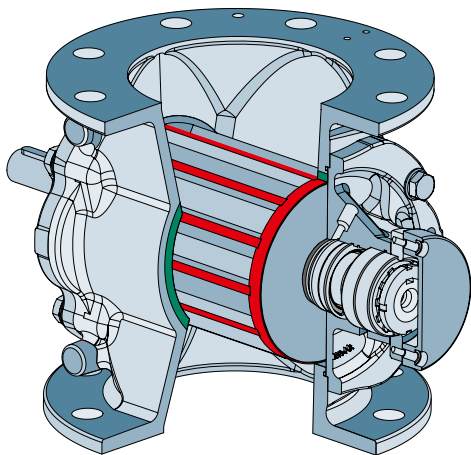


EFFICIENT CONVEYING AND DISCHARGE - COPERION ROTARY VALVES

We supply a wide range of rotary valves of different designs and various materials with individual wear protection packages.

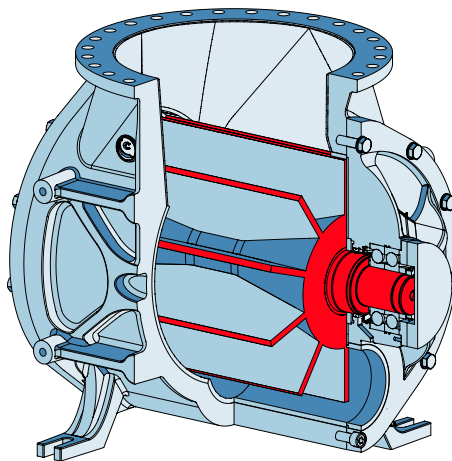
› DUROPROTECT® ROTARY VALVE TYPE ZRC FOR HIGHLY ABRASIVE BULK MATERIALS

- › Very low leakage gas rate
- › Design incorporate erosive wear protection (closed rotor)
- › Wear protection with hard chrome, tungsten carbide and ceramic reinforcement



› DUROPROTECT® BLOW-THROUGH ROTARY VALVES ZXD/ ZXQ FOR HIGHLY ABRASIVE BULK MATERIALS

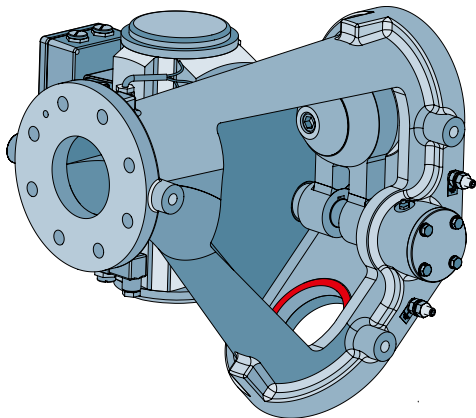
- › For dosing in pneumatic conveying systems for fine bulk materials
- › Conveying pressure up to 2 bar for very abrasive products
- › Blow through rotary valve for highest throughputs



PERFECT CONTROL OF PRODUCT FLOWS - COPERION DIVERTER VALVES

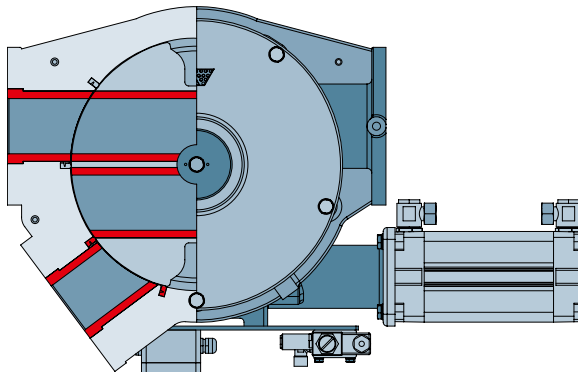
› TWO-WAY DIVERTER VALVE TYPE WRK MADE OF GREY CAST IRON FOR RELIABLE DIVERSION

- › Wear protected by a cushion of bulk material
- › Minimal number of seals and moving parts
- › Available as a diverging and converging diverter
- › Can be installed in all positions
- › 45° outlet for the connection of conventional pipe bends



› TWO-WAY DIVERTER VALVE TYPE WZK, WEAR-RESISTANT VERSION

- › Residue-free
- › Wear protection with customized pipe inserts
- › Available as a diverging and converging diverter
- › Can be installed in all positions



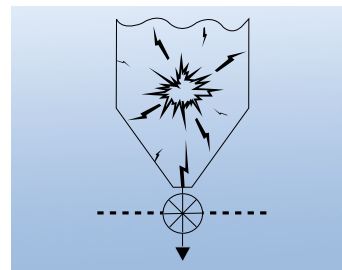
SPECIAL TECHNOLOGY FOR THE MINERALS INDUSTRY

ATEX certified versions against propagation of explosions

- › With ATEX protection system, flameproof, for dust types St 1 and St 2
- › Pressure surge-proof up to +10 bar

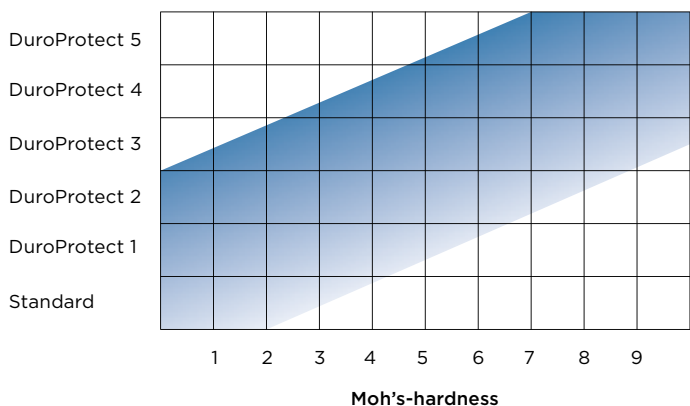
High-temperature versions

- › For reliable transport of bulk materials at temperatures of up to 450°C

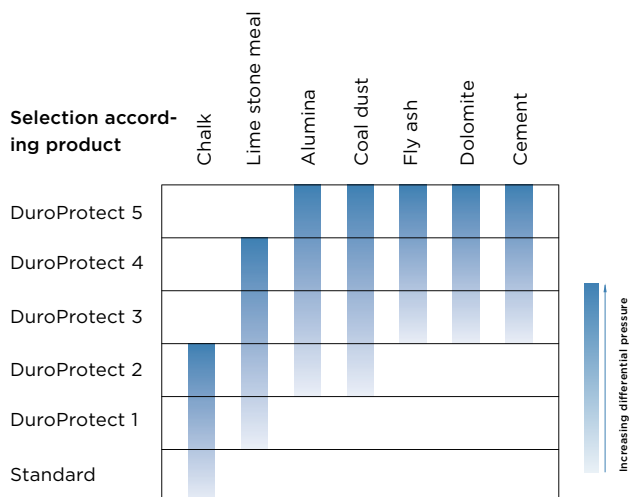


DUROPROTECT® LEVEL FOR ROTARY VALVES

Selection according Moh'shardness



Selection according product

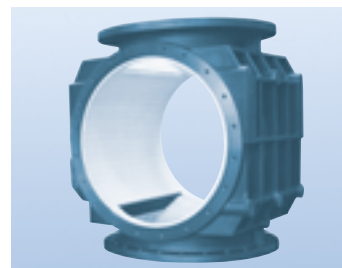


WEAR RESISTANCE CONCEPT AVAILABLE IN 5 LEVELS FOR ROTARY VALVES FOR POWDERS

Wear resistance level	Standard	DUROPROTECT® 1	DUROPROTECT® 2	DUROPROTECT® 3	DUROPROTECT® 4	DUROPROTECT® 5
Housing	Cast iron	DUROCHROM®	DUROCHROM®	DUROCHROM®	DUROCHROM®	DUROCERA®
Rotor	D-rotor mild steel	D-rotor mild steel	C-rotor mild steel	C-rotor DUROCHROM®	C-rotor DUROCARB®	C-rotor DUROCARB®
Abrasiveness/pressure difference						

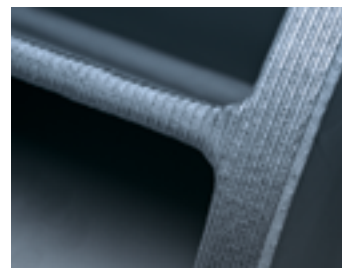
HOUSING WITH CERAMIC LINING

- › Seamless lining with fitted solid ceramics for the technically highest possible wear protection. Precise finishing ensures a reliably low leakage gas volume.



ROTARY VALVE WITH TUNGSTEN CARBIDE WELDING (NON-MACHINED)

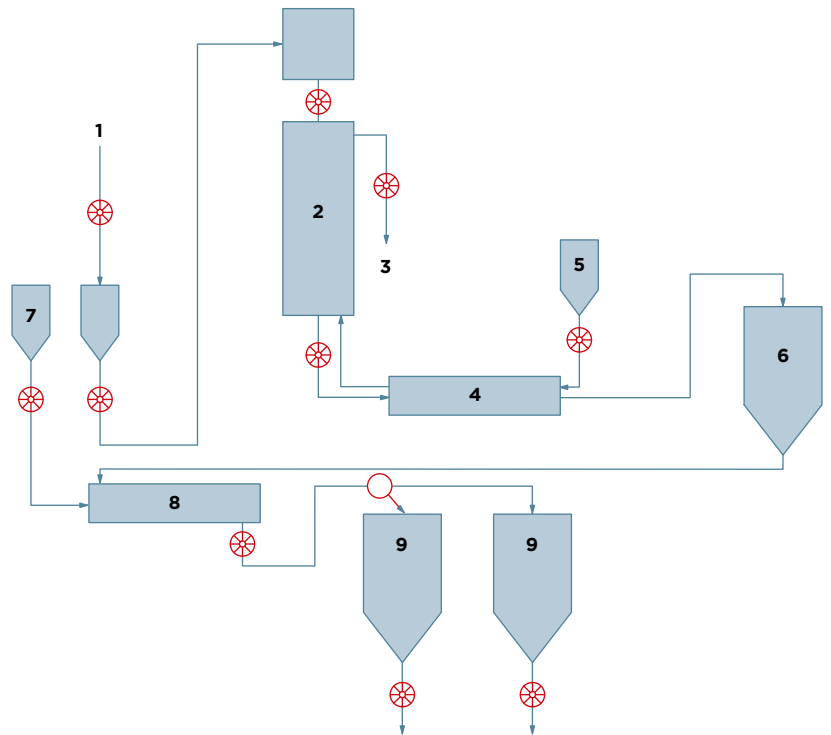
- › The tungsten carbide matrix is optimized to suit the particle size of the bulk material. This ensures a long service life of the rotor.



➤ **EXAMPLE APPLICATIONS FOR OUR COMPONENTS**

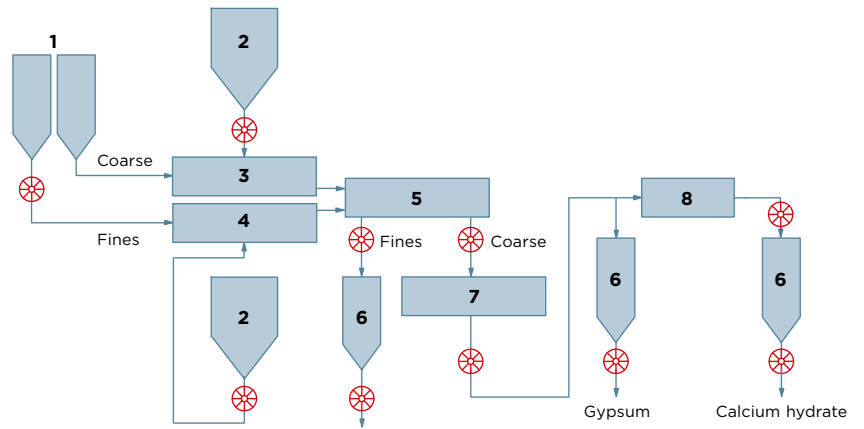
➤ **CEMENT WORKS**

- 1 Raw mix
- 2 Cyclone pre-heater with bypass dust extraction
- 3 Bypass dust
- 4 Rotary kiln
- 5 Fuel
- 6 Clinker storage
- 7 Additives
- 8 Clinker grinding
- 9 Dispatch



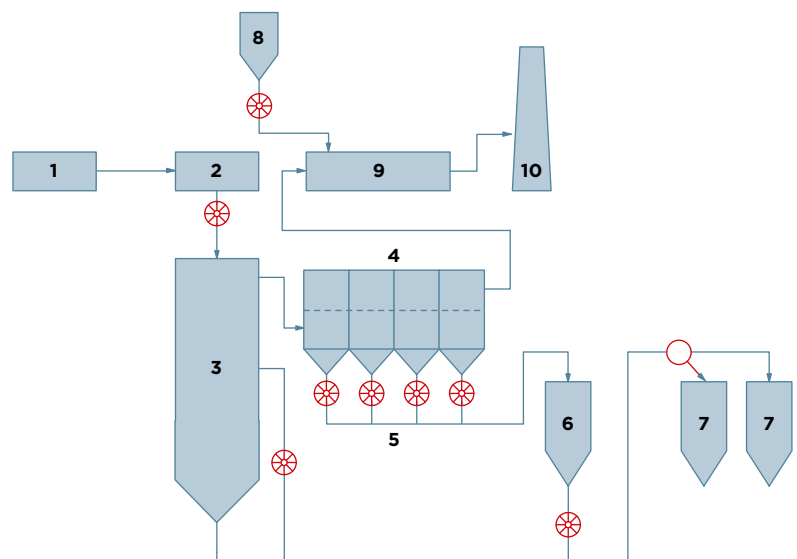
➤ **LIME WORKS**

- 1 Raw matte bunker
- 2 Solid fuel
- 3 Rotary kiln
- 4 Shaft kiln
- 5 Sieve plant
- 6 Dispatch
- 7 Grinding
- 8 Hydrating plant



➤ **POWER PLANTS FOR SOLID FUELS**

- 1 Solid fuel
- 2 Grinding
- 3 Burner
- 4 Fly ash filter
- 5 Deashing
- 6 Intermediate hopper
- 7 Ash silo
- 8 Lime
- 9 Exhaust gas cleaning
- 10 Flue



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