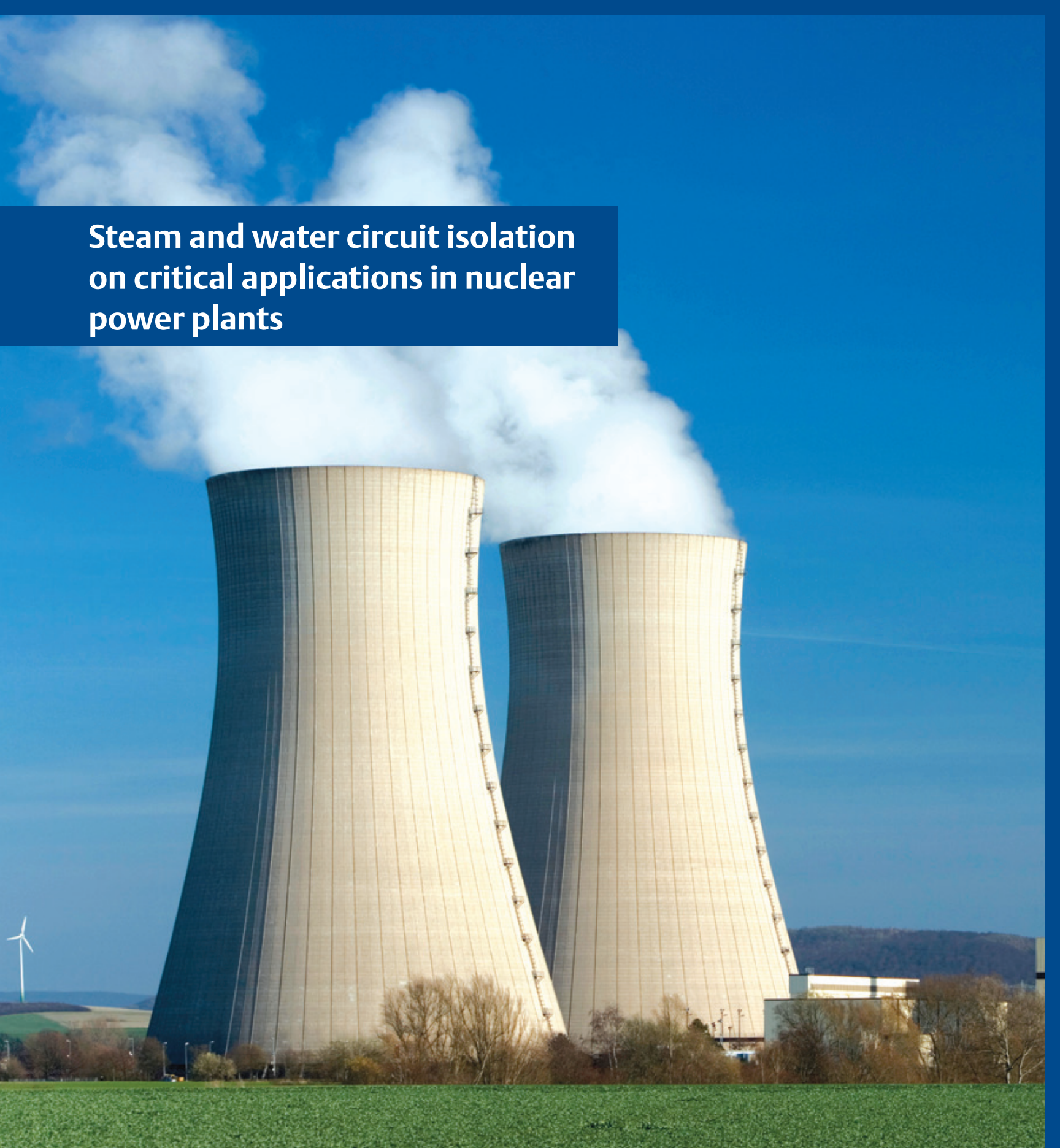


A photograph of two large, white, hyperboloid cooling towers of a nuclear power plant. They are emitting thick white steam that rises into a clear blue sky with some light clouds. The towers are situated behind a line of bare trees, and a green field is in the foreground. In the far distance, a wind turbine is visible on the left, and some industrial buildings are on the right.

Steam and water circuit isolation on critical applications in nuclear power plants

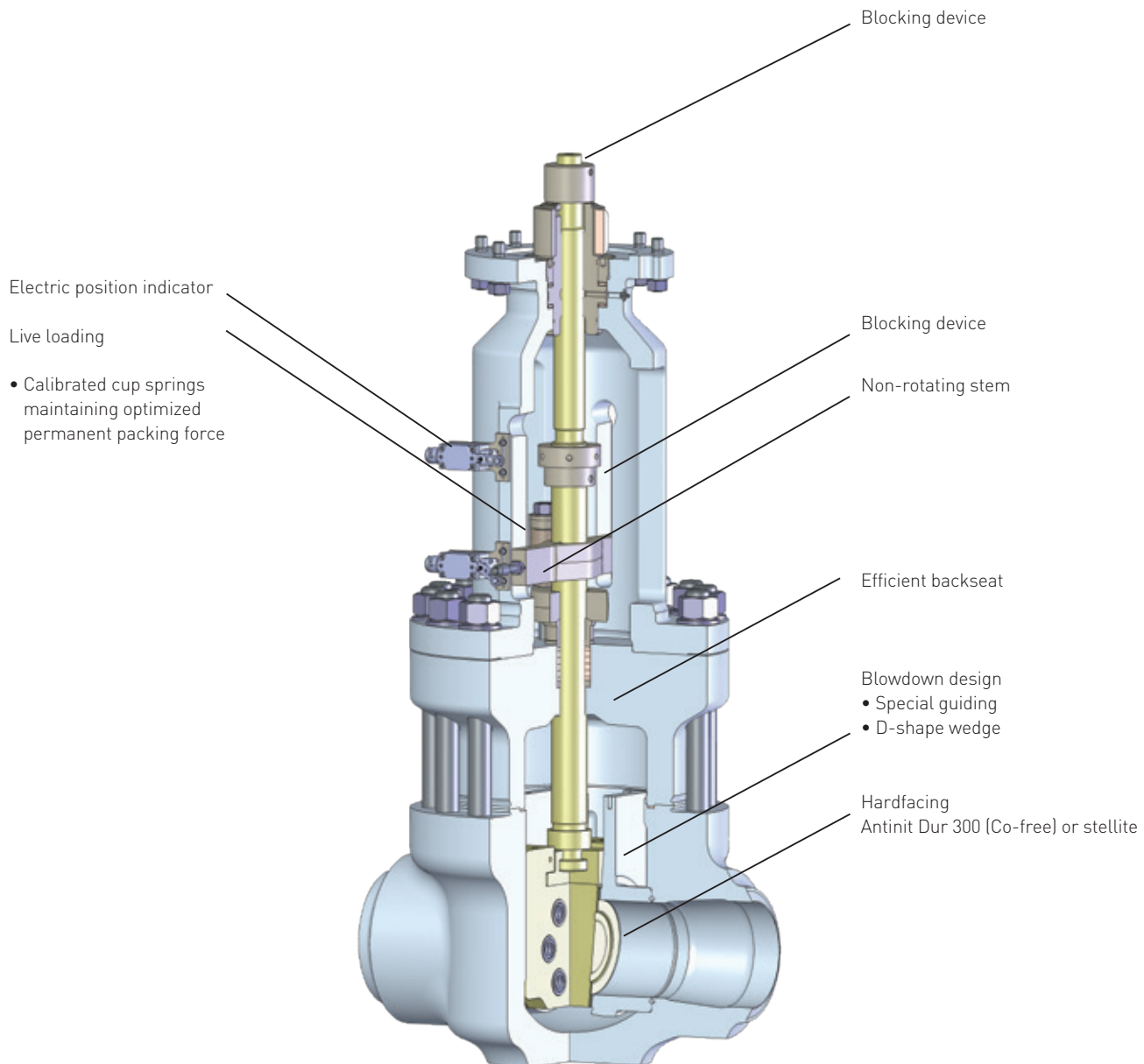
Sempell Gate Valve GPS5+

Engineered for steam and water circuits, the high pressure GPS5+ brings uncompromising reliability to critical applications.



HIGH PRESSURE GATE VALVE GPS5+

The range of high pressure motor-operated gate valves are specially designed for steam and water circuits. They offer greater reliability under extreme conditions in safety related applications.

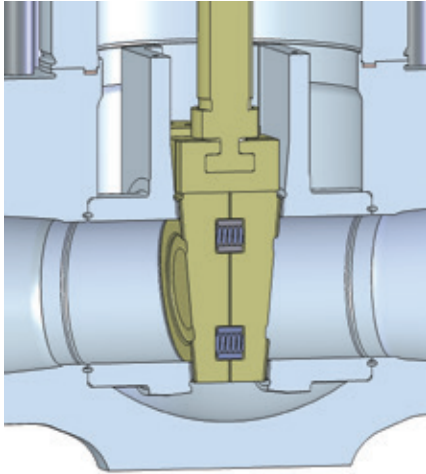


SEPELL GATE VALVES

WHAT IS THE INDUSTRY LOOKING FOR?

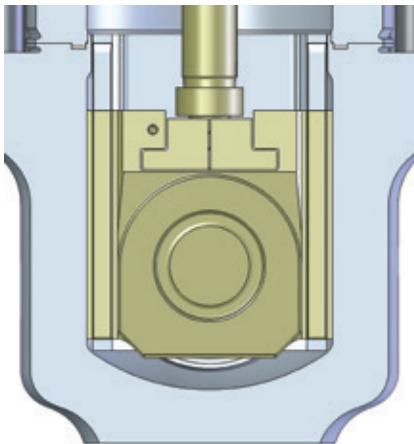
- To operate under postulated accident conditions when opening and closing is required under high differential pressures
- Ability to withstand actuator switch-off failure
- Superior leak tightness
- The exclusion of thermal binding and tilting
- Low maintenance

The GPS5+ design is an advanced position-seated split-wedge gate design. Compared to standard wedge gate valve designs, the GPS5+ is limit switch controlled, which means the disadvantages associated with parallel slide gate valves and torque seated wedge valves are eliminated.



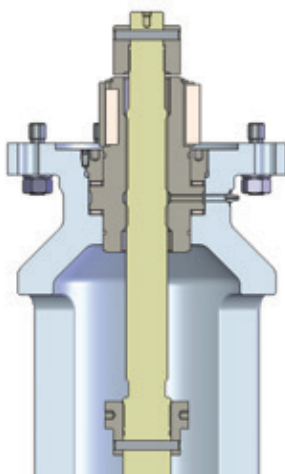
SPLIT WEDGE DESIGN ELEMENTS PREVENT THERMAL BINDING EFFECTS

- The split wedge design featuring two separated wedges held from apart by compression springs
- A permanent gap excludes a thermal binding between the wedge plates and the body
- There is lower occurring wear compared to the standard flex-wedge thanks to Sempell's limit switch controlled design. The sealing force is induced by system pressure.
- The position seating eliminates major operability concerns present in the wedge gate design
- Seat tightness is ensured at extremely low system pressures by compression springs between the split wedges, in both directions, up to the system pressure required to ensure the tightness level equal to a torque seated wedge type gate valves design



WEDGE GUIDING AND D-SHAPE TO OVERCOME DISC TILTING

- Disc tilting occurs during operation at flow conditions, the disc tilts when the downstream wedge is forced off center into the inside diameter of the valve body seat
- During the stroke, the leading edge of the wedge reaches a specific point where the wedge tilts into the body seat - stress is created between the wedge and the body seat, causing the hardfaced seating surfaces to gall
- The 'd' shape eliminates the potential for disc tilting - after the transfer point is reached and the wedge slips onto the seat surfaces, the disc is fully supported across the body seat and can't tilt, even under the most severe blowdown conditions



BLOCKING DEVICE

- Protects the wedge assembly against uncontrolled forces of the actuator at switch-off failure
- Controlled closed position of the wedge with limited wedging forces - guarantees the integrity at switch-off failure
- Prevents the cover against loads coming from actuator as reaction forces at switch-off failure
- Protects the stem against high buckling forces at switch-off failure
- Guarantees protection of the compressed gasket and specified tightness at switch-off failure

The high pressure GPS5+ brings uncompromising reliability to critical applications.

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