

KALREZ® O-rings: The ideal solution at all levels

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Cera System is a world-leading manufacturer active in the area of designing, developing and producing system solutions involving ceramic components. The business relationship between Angst+Pfister and Cera System is still young. Nonetheless, Cera System decided to entrust Angst+Pfister with an order that requires the utmost know-how. For its CeraValve® sliding disc valve, Cera System needed a gasket for deployment under extreme conditions. The KALREZ® O-ring selected by Angst+Pfister “walks through fire” thanks to its enormous resistance to heat.



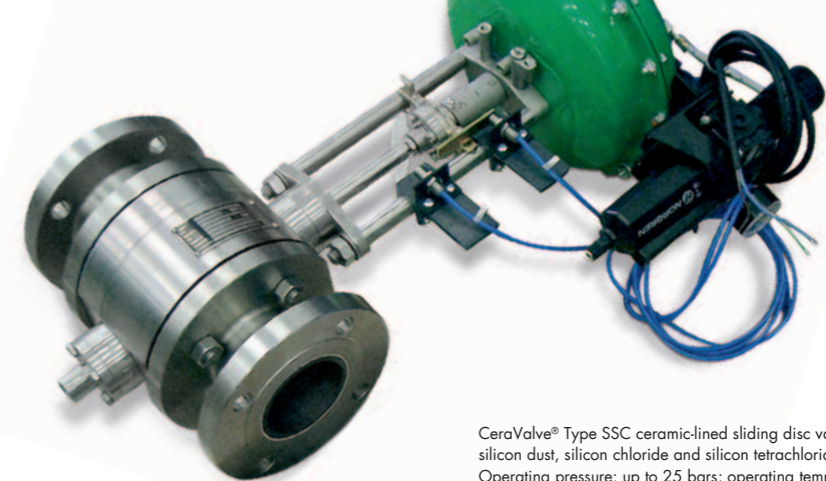
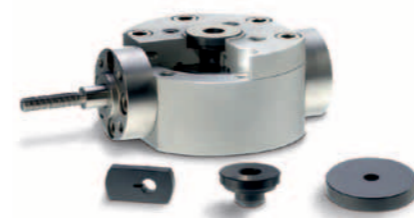
KALREZ® O-rings withstand temperatures of up to 300°C.



Cera System’s range of products includes ceramic-lined industrial valves. The CeraValve® Type SSC is a high-precision sliding disc valve used in contact with very corrosive and abrasive media. The valve performs shut-off and flow control functions. The CeraValve® Type SSC sliding disc valve is designed for use under extreme conditions: neither high switching frequencies nor enormous chemical and mechanical strains can be allowed to compromise the valve’s durability, and the valve must be absolutely gastight and devoid of dead space. Those are the first primary deployment parameters for the CeraValve® Type SSC sliding disc valve.

O-rings – a solution that’s right for the market

Cera System generally employed O-rings as gaskets for comparable shutoff valves. The deployment parameters described above already demand a lot from O-rings as is, but the CeraValve® Type SSC poses an extra “hot” specification in the literal sense of the word. Instead of facing an upper temperature limit of 180°C that is typical for similar valves, the CeraValve® Type SSC sliding disc valve is designed to operate at deployment temperatures that reach above 300°C.



CeraValve® Type SSC ceramic-lined sliding disc valve for silicon dust, silicon chloride and silicon tetrachloride. Operating pressure: up to 25 bars; operating temperature: above 300°C.

Cera System thus assigned Angst+Pfister the task of finding a sealing technology solution that would work absolutely reliably and durably even under the extreme conditions that prevail in the SSC valve’s deployment environment. At first, the specialists at Angst+Pfister ran through a number of different solution approaches. But they quickly came to the conclusion that potential alternatives to O-rings – such as an expansion joint, for example – wouldn’t be feasible from a competitive cost standpoint.

O-rings that “walk through fire”

The Angst+Pfister specialists then closely exchanged thoughts and ideas with the product developers at Cera System, bringing their full expertise into play: their longstanding experience in the field of elastomers, their vast knowledge of materials and their sophisticated engineering know-how. “The communication, the exchange of ideas and the advice from Angst+Pfister were outstanding.” Those are the words used by Heinz Albert, technical director of research/development/design at Cera System, to describe this developmental phase. After a precise analysis of the deployment parameters, the groundwork was laid for Angst+Pfister to devise an optimum solution. Angst+Pfister decided to equip the CeraValve® Type SSC sliding disc valve with O-rings made from an alternative KALREZ® compound.

In addition to their chemical resistance, the KALREZ® O-rings specially customized for Cera System’s application purposes particularly stand out for their ability to securely withstand even the extremely high temperatures that occur in the deployment environment for CeraValve® Type SSC sliding disc valves.

High parts availability gives customers an advantage

The excellent technical support alone that Angst+Pfister provided was of great value for Cera System, but the Angst+Pfister Group offers another plus – exceptionally high availability of the O-rings – that underscores why it is the ideal partner for Cera System. High-performance KALREZ® O-rings typically are not held in stock in large quantities. But that’s not the case at Angst+Pfister. Our supremely extensive O-ring inventory and our first-class procurement logistics guarantee absolutely reliable and rapid parts availability.

This benefits Cera System not just in terms of valve production. The high availability of the O-rings also gives the company clear competitive advantages especially in the area of replacement parts procurement for repair and overhaul work, for example.

Angst+Pfister – skill and diligence in the service of customers

The Angst+Pfister Group solved the task assigned by Cera System with flying colors. The perfectly worked out sealing technology solution amply meets the high quality standards that Cera System uncompromisingly imposes on its products. A nice added

bonus for Cera System is the immediate availability of a variety of KALREZ® compounds. To round out the package, Angst+Pfister supplies the developed solution at a very attractive price.

It probably won’t be long before the next joint projects are embarked on. As Heinz Albert sums up: “Diligence matters precisely when high-grade products like KALREZ® O-rings are put into use. Angst+Pfister’s specialist expertise is very important here.”

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