Schubert & Salzer Control Systems GmbH
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World's first: First three-way ball sector valve for the ideal control of flow rates

With the world's first three-way ball sector valve, Schubert & Salzer Control Systems achieves particularly high volumetric flow rates that are virtually identical in all directions.

In many industrial processes, three-way valves perform the important function of mixing or splitting flowing media. Schubert & Salzer has now developed the first three-way ball sector valve for the ideal control of the flow rate of liquids and gases.

"Our approach of using the ball sector design for three-way valves is completely new. In this way, we achieve about 20% higher K_{VS} values than three-way valves with a conventional design", explains Reiner Wolf, Head of Mechanical Design and Development at Schubert & Salzer Control Systems. These extraordinarily high flow rates are achieved through the special design of the ball sector and the valve body. The resulting straight flow in one direction and the minimised flow deflection in the other result in the very high and almost identical K_{VS} values.

Excellent control behaviour

Superior control accuracy is ensured by the optimised contour of the ball sector and its backlash-free bearing, together with the actuator and positioner. The positioning angle of 90 degrees enables a very large control range to be achieved. The rangeability is 300:1.

The forces of the flowing media are completely absorbed by the bearing shafts of the three-way ball sector valves, which is why pneumatic or electric actuators require only very low actuation forces. The relatively low actuator torque also remains almost constant over the entire actuation range. Changes in differential pressure therefore have hardly any effect on the control accuracy of the three-way ball sector valves.

The actuator can be attached to the upper or lower shaft end. This results in a particularly high degree of flexibility in adapting to different installation situations.

Optionally available with digital positioner

Especially in combination with the digital positioner type 8049 from Schubert & Salzer, the three-way ball sector valves can maximize their control potential. In addition to an Ex and FM version, the controller can

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also be equipped with IO-Link. This provides extensive status data for analysis and predictive maintenance.

Three-way ball sector valves offer particularly high added value in the temperature control and mixing processes of the steel, chemical, food and beverage industries as well as in power generation, the manufacture of plastic and rubber products and for use in test benches.

About Schubert & Salzer Control Systems:

As a fast-growing high-tech company, Schubert & Salzer Control Systems develops, produces and distributes highly precise industrial control and stop valves which are applied in process engineering. Based in Ingolstadt, it offers customers quality products "Made in Germany" directly or through subsidiaries in the Benelux, England, France, India and the USA as well as more than 40 international partners.

Valves from Schubert & Salzer are amongst the most efficient on today's market when it comes to energy consumption, durability and noise pollution. Their compact design and high control quality ensure low installation and maintenance requirements as well as high operational and process reliability with exceptionally long service lives.

The valves are used in the chemical and pharmaceutical industry as well as for the production and processing of food and beverages, and also for the manufacture of plastics, steel, paper and glass, as well as in the textile industry. Wherever liquid, vaporous and gaseous media have to be controlled and shut off, Schubert & Salzer Control Systems offers a tailor-made solution.

More information: controlsystems.schubert-salzer.com

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