



Schubert & Salzer - Your Partner for Water Treatment

Benefit from our experience to increase your success!

Water is one of our planet's most fundamental and valuable resources. Handling it responsibly is therefore a collective task.

In the treatment of water and wastewater, nothing works without the right valve in the right place. First of all, a distinction is made as to whether the valve is used in contact with the product or whether it indirectly influences the process. The requirements may differ, but – wherever the valve is used – they are high: reliable functionality, a long life span, maintenance-friendly and exact control quality are just a few examples.

With valves from Schubert & Salzer, you make exactly the right choice. For many years we have been a reliable partner of municipal and industrial companies in the field of water treatment. The

range of applications is very broad. For example, our valves control the pressure in membrane filtration, including ultrafiltration, nanofiltration and reverse osmosis, help with the pinpoint aeration of activated sludge tanks and disinfect valuable drinking water using ozone and chlorine.

Whatever your application or challenge: with Schubert & Salzer you have a competent partner at your side. You don't just get an off-the-shelf product, you get professional support and a valve solution that is adapted to your individual needs.

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Sliding gate valves



The GS-Valve and its applications – See the movie at: controlsystems.schbert-salzer.com/en/gs-film

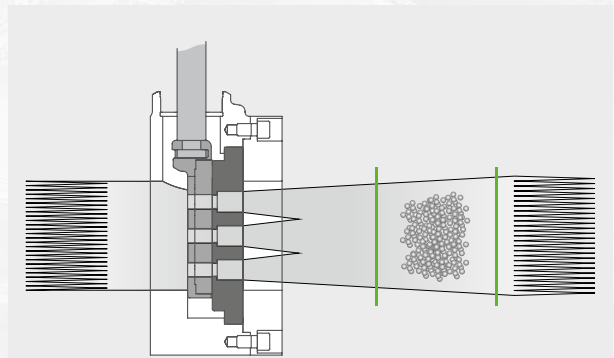
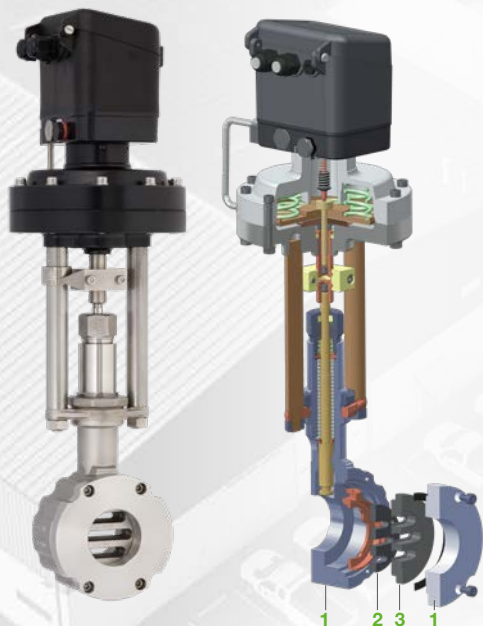
Due to their outstanding properties, sliding gate valves are used in many water treatment processes.

Their insensitivity to cavitation makes them the first choice for **reverse osmosis applications** with fresh, brackish or sea water for the production of drinking, brewing or process water – as well as for the **treatment of polluted industrial and seepage water**. Sliding gate valves are ideal for the precise control of high process and differential pressures and prevent damage to the filtration membranes, for example.

In **activated sludge tanks**, sliding gate valves optimise the oxygen content through the precise dosing of air, oxygen and ozone. At the same time, they enable significant energy savings compared to conventional solutions.

Sliding gate valves are suitable for use in **drinking water** as well as for **drinking water purification with ozone**. They meet the requirements of the Technical Instructions on Air Quality Control as well as EC Regulation 1935/2004 and are also FDA-compliant.

Mobile water treatment plants benefit from the compact design, simple maintenance and low power consumption of sliding gate valves.



Cavitation

A high rate of flow causes vapour bubbles to form, which then collapse in regions of higher pressure, causing erosive damage to valve bodies and piping. In the case of a sliding gate valve, these dangerous cavitation zones are external, or more accurately, they are located about **1 - 2 m** beyond the valve. The cavitation bubbles then collapse around the centre of the pipeline where they can cause no harm.

Summary of your benefits:

- Minimised wear and tear in cavitation applications due to optimised flow control.
- Compact design and simple installation.
- 10 times lower actuating force reduces power consumption and is climate and environmentally friendly.
- Highest control quality and response sensitivity due to intelligent positioner and fast reaction times on account of the short stroke.
- Very easy maintenance by simply exchanging the easily accessible pair of discs.
- Motors and positioners are simple to configure with the practical „DeviceConfig“ diagnostic tool.
- Reduced noise emissions.

Principle of the sliding gate control valve:

A sealing disc **(3)** fixed in the body **(1)** at right angles to the flow direction has a certain number of crossways slots of equal height. A rotationally fixed disc **(2)** with the same slot arrangement moves vertically along the fixed disc **(3)** thereby changing the flow cross section. The prevailing differential pressure presses the moving disc **(2)** against the fixed disc **(3)** and seals it.

Seat and pinch valves

Seat and pinch valves from Schubert & Salzer are reliable stop valves and precise control valves for all applications in the field of water and wastewater treatment.

They shut off water, chlorine and other liquid and gaseous media safely and without water hammer. When shutting off oxygen, ozone or ammonia, for example, they impress with a particularly high leak-tightness due to their special design.



The advantages of seat valves at a glance:

- Long service life with over 1 million cycles and high leak-tightness even with slightly contaminated media.
- Hygienic angle seat valves 7015 and 7025 with surface roughness Ra as low as $< 0,8 \mu\text{m}$.
- Special version for ozone and oxygen.
- Very simple maintenance: Body remains in the pipeline when exchanging wear parts such as valve actuators or seat seals.
- Meets the requirements of the Technical Instructions on Air Quality Control.
- All wetted polymers in accordance with EC 1935/2004 and FDA compliant.

The advantages of pinch valves at a glance:

- Straight pipe passage ensures maximum K_{vs} values.
- All wetted components are made of stainless steel, an elastomer or plastic.
- All wetted polymers in accordance with EC 1935/2004 and FDA compliant.
- Abrasion-resistant for abrasive media such as limewash or wastewater containing particles.

The advantages of sanitary valves at a glance:

- Sanitary valves are available for the manufacture and handling of pharmaceutical water and clean steam.
- All wetted polymers are FDA-compliant and conform to the requirements of the USP Class VI, the EC Regulation 1935/2004 and the EU Plastic Regulation 10/2011.
- The aseptic right angle valve type 6051 is EHEDG-certified, while the hygienic right angle valve type 6053 is optionally 3A-compliant.
- Highest purity due to dead space-free design and surface roughness Ra as low as $< 0.4 \mu\text{m}$.
- Hygienic right angle valve type 6053 in large nominal sizes from DN 65 to DN 150.



Ball sector valves

▶ The ball sector valve and its applications – See the movie at: controlsystems.schubert-salzer.com/en/bsvt-film

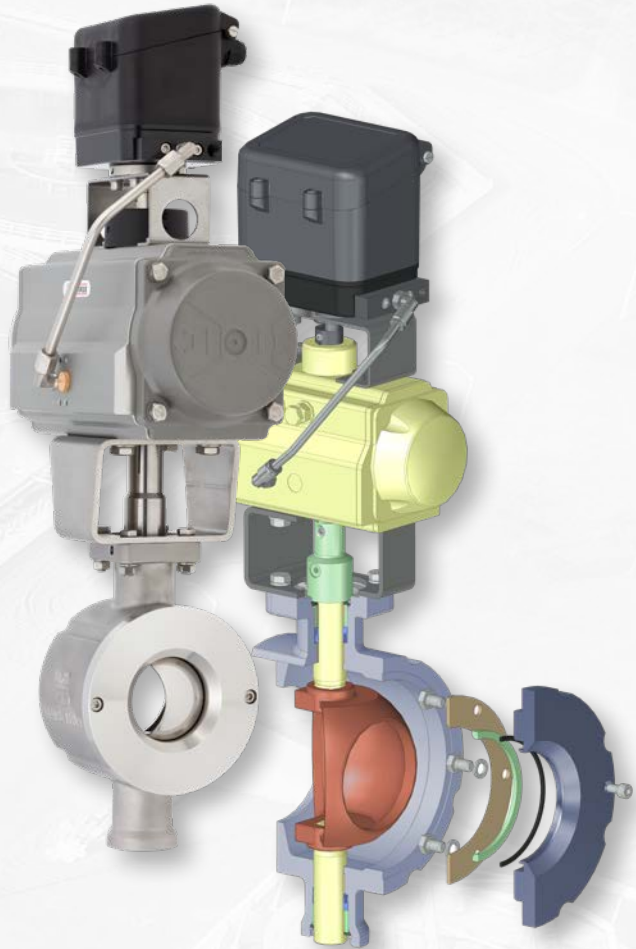
Ball sector valves from Schubert & Salzer are used wherever **very large flow rates or sludge and wastewater**, i.e. liquids with a high solids content, need to be precisely controlled or safely shut off.

Due to their particularly robust design, ball sector valves are characterised by minimal wear and exceptionally long service lives, e.g. when controlling **limewash in neutralisation tanks**.

Their extremely high flow rate combined with a large control range makes ball sector valves an interesting alternative for the precise control of air, e.g. in the activated sludge process.

Summary of your benefits:

- Compact design, simple installation.
- Elliptical flow geometry for minimal wear, seal area of the ball sector lies outside control edge.
- Central bearing of the ball sector causes particles to be wiped off and ensures a perfect seal in the valve seat.
- The special sealing principle has a self-cleaning effect.
- Highest control quality with a rangeability of 300:1.
- Bi-directional flow.
- TA Luft-certified (Technical Instructions on Air Quality Control) shaft seal.
- All wetted polymers in accordance with EC 1935/2004 and FDA compliant.
- Low actuating forces.
- Modular design of pneumatic and electric actuators, also available in Ex-version.



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