

Kammerer slide gate valves in fungicide manufacture

Brief profile of Saltigo GmbH

Saltigo GmbH is a one-hundred-percent subsidiary of *Lanxess AG*. Its main business nationally and internationally is custom manufacturing on the fine chemicals market. Specifically, its offering covers the areas of plant protection, pharmaceuticals and fine chemicals. On behalf of renowned manufacturers, the services it offers range from the development of procedural technologies and processes through to manufacturing, particularly taking into account and keeping customer know-how confidential.

Shut-off solutions in fungicide manufacture

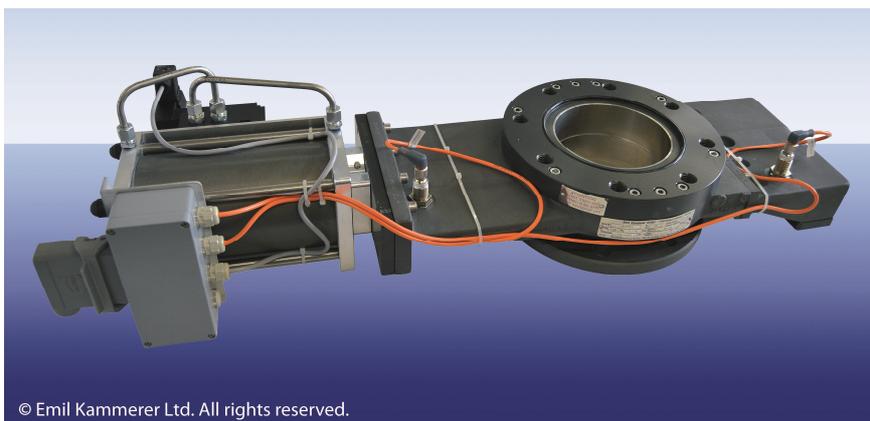
Emil Kammerer GmbH presents an example below of the use of its shut-off solutions at *Saltigo GmbH* in agrochemicals. Semi-finished products and active ingredients for plant protection are mainly produced in the corresponding plant. Some of these substances are corrosive, which can pose a challenge for plant resistance. A particularly high-quality stainless steel alloy was thus selected for the manufacture of all shut-off valves.

Fungicides and their excipients

Fungicides protect plants against harmful fungi. They can be used preventatively, and after an initial or even an advanced fungal attack. The plant protecting agents usually consist of more than 150 different active ingredients and excipients, and differ in their chemical composition and their mode of action. The task of fungicide excipients is to distribute the active ingredients evenly on and in the plants to be treated and to ensure adhesion to the plants. In this way, the excipients pave the way for the active ingredients to unfurl their effect in or on the plants. The fungus metabolism is attacked by the various substances in various places. Fungicides can be provided to the user in various ways: in a liquid, solid, foam-like, paste-like or gaseous form. These preparations are ultimately used in very different ways. For instance, they can be sprayed directly onto or into the plants, put into the soil, or the seeds can be soaked with them.

**Task to be fulfilled by Kammerer shut-off valves
Operational challenges for fungicide manufacture**

The fungicides are manufactured in a multi-purpose plant; isolation and drying takes place beginning on the 3rd floor from the top to the bottom. After the drying process, the product is put into Big Bags. The Kammerer slide gate valves are integrated into a vertical drying line at this transition point. Here, the mass is dried in a vacuum range of 40 to 100 mbar. Kammerer slide gate valves guarantee absolutely reliable impermeability and corrosion resistance, and are known for their very long service lives. In this case, the FT model was chosen. The first letter stands for the sealing system, the last for the housing form. In the case of the F sealing system, the respective sealing material is actively put under pressure. The benefit of housing form T is that it can be integrated in different positions thanks to its low construction length. Furthermore, its construction is particularly suitable for use in vacuums. This slide gate valve model enables simple repairs where required, so the manufacturing process can continue without interruption. Absolute impermeability is crucial to protect the process and the employees.



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Brief profile of Emil Kammerer GmbH

For more than 60 years, Kammerer slide gate valves have been providing reliable shut-off solutions nationally and internationally, whereby reliable technology is combined with top quality. The current product range is the result of decades of experience, an in-depth technical understanding, and an openness towards innovative developments and cooperation with customers. Innovative developments for numerous shut-off solutions are implemented continuously here to meet customer needs. A close exchange between different departments makes it possible to take an in-depth look at the existing possibilities and select the best possible solution for the respective customer facility. This process is completed with the fast implementation of the developed idea. On request, our offer also includes expert service personnel and a correspondingly well-equipped stock of spare parts.

Our product range primarily covers valves with nominal diameters of DN 25 (1") up to DN 600 (24"). All of our shut-off valves are completely sealed outwardly. Rated operating pressures range from 10^{-4} up to 25 bar, and the operating temperature range is from -20 °C (-4 °F) up to +300°C (572 °F). Usually, various types of stainless steel and the material silumin are used for the housings. The sealing materials are selected according to the technical and chemical requirements.

Shut-off solutions for requirements that go beyond the criteria mentioned above are gladly discussed in a personal discussion in order to find the best possible solution at short notice.



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