

KSE: Celebrating 50 years in dosing, weighing and automation

Automation, flexibility, and quality control

A growing number of recipes, ingredients that are difficult to dose and high-quality standards. These factors do not only require high-quality equipment from the feed market, but also production concepts that are ready for the future. KSE has 50 years of experience in the design, supply and implementation of both modular machinery and software. "We are convinced that these two go hand in hand," says René Smulders.



René Smulders and Riemer Posthumus indicate that KSE focuses on both automation and machinery.

The current management of the half-century old KSE consists of Riemer Posthumus (CEO), Maarten Heesakkers (CFO) and Jos Cosijns (CPO). Together, these three men have gained extensive experience both within and outside the industry. The organization of KSE consists of three business units: ALFRA (equipment and other hardware), Process Automation (PROMAS ST-software) and Projects & Consultancy. The focus is continuously on innovation, according to Riemer. "The animal nutrition industry is and remains an important market for us. Surely, we have a large installed base in this market for which we want to provide excellent service, so that installations continue to perform well for years, but we also see that the developments in the Dutch feed industry are often way ahead of international developments."

International projects

Approximately 80 percent of deliveries are therefore destined for companies outside of the Netherlands. "For example, several years ago, we saw that in the North American market many plants still date back to the 1950s and 1960s and area mainly built for bulk production. Actively approaching these companies has since led to several projects in this region." KSE therefore expects the U.S. market to continue to professionalize and innovate at an accelerated pace in the coming years. "Moreover, we are now also seeing this trend in Asia and Latin America."



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New developments

Co-owner René Smulders continues: "We have always had a strong focus on both industry and technology, working to improve system quality and innovate the market with new solutions and technology. In doing so, we have always focused on both machinery and automation because we are convinced that these two go hand in hand."

ACT system

With the Automatic Container Transfer (ACT) system, a large transfer capacity can be achieved with just a few containers because different contamination groups can be transferred on the same line. The modular construction of this solutions also offers greater flexibility during the production process. In addition to dosing from containers, conveying batches by using containers is also an important addition to the product portfolio.

Flexible silos

Rieder adds that ALFRA's flexible silos provide efficient storage for discharge of poorly flowing, cohesive and/or compressible materials. "The flexible silos are also ideal for raw materials that easily cause bridging. They contribute to consistent dosing and weighing results and prevent production loss."

Micro dosing

The ALFRA FCCD container dosing system offers a flexible solution for the micro dosing of ingredients. The system features a weigher-in-weigher system for high accuracy and flexibility when

dosing dry powders, granules and pellets. This technology allows dosing directly from interchangeable containers instead of silos into the weigher, which simplifies the micro dosing process because fewer silos are required and a limited building height is not a problem.

Container cleaning

During a tour of the recently built production facility, we pass a cleaning line for containers. Here René explains that the "weigher-in-weigher concept," which was already known for small components, has now been extended to the medium and large ranges. The cleaning system, Clean-in-Place (CIP), was developed to clean and disinfect the dosing containers located on top of the movable dosing machine for medium and small components, so that it can be safely used for the next batch. "The need to dose a large dosing range of a larger component was the reason for this."

Automation

An important activity of KSE is process automation, which focuses on controlling the compound feed, premix, or pet food plant. The system covers the entire process, from intake to outloading and is linked with ERP to the plant control. Integration with other software packages such as recipe optimization software and ERP are mandatory nowadays. "Because continuous learning is one of our core values, we analyze what is happening in the market and incorporate it into our software package," says René. "With a service department that is available 24/7 worldwide, we can dial in

remotely and help the customer troubleshoot issues." This technology has also proven itself abundantly during the pandemic, when travel restrictions made it impossible to visit customers in person."

ALFRA dosing algorithm

ALFRA's dosing optimization program uses an advanced learning algorithm to determine product flowability and adjust is to an optimal throughput. This improved accuracy saves on raw materials and reduces batch times, increasing dosing results by another 20 percent. ■

History in a nutshell

KSE was founded mid-1973 by Adriaan Smulders with a clear focus on service. Soon, the first customer in the animal feed industry followed: Coppens Diervoeding. Thanks to KSE's good relationship with Coppens, they landed a contract for the automation of a new plant in Helmond 15 years later, where the first version of PROMAS ST software was put into operation. When taking over ALFRA in 1997, dosing and weighing equipment was added to KSE's product portfolio. Adriaan Smulders has been the driving force within KSE for 50 years, supported by his two sons Erik and René. They are now the joint owners of KSE. Nowadays, father and sons have a supervisory role and remain involved with KSE in the background.