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HYGIENIC LOAD CELLS FOR AUTOMATED MIXING

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Dahlhoff Feinkost GmbH, founded in 1987, produces high-quality gourmet products, not only for the discerning restaurant trade but also for the food retail trade. The company achieves optimum quality and hygiene by taking the greatest care in the selection of ingredients and by constantly monitoring the production process. All Dahlhoff operations are subject to the highest production standards, consequently all company divisions are certified according to the International Food Standard (IFS).

At its Odelzhausen plant, Dahlhoff produces various varieties of potato salad, each refined with different recipes of marinade. The quantity dosage of ingredients in the former marinade mixing equipment was carried out via flow meters, as a result, was inaccurate.

Improvement of the manufacturing process

In order to improve the manufacturing process and, in particular, maintain the dosing quantities for the respective recipes, FTS special technical solutions GmbH was awarded the contract for the development of an automated marinade mixing station. A specific challenge was that the new equipment, which consisted of a mixing tank and three buffer tanks, each with a capacity of 1500 liters, had to be installed in the same space as the old equipment.

Depending on the recipe, the ingredients - water, vinegar, rapeseed oil, liquid sugar and spices - are transported individually in a predefined sequence to the mixing tank, where they are processed into the finished marinade. This process produces approx. 1500 liters of marinade every 30 minutes, which are then pumped into one of the buffer tanks to be used for the further production of the potato salads.

Using load cells for dosing ingredients

The mixing tank and the three buffer tanks are mounted on Eilersen BL type load cells, which are directly connected to a PLC via an Eilersen interface module. All dosing operations are controlled by weight and the weights displayed on the HMI consequently correspond directly to the filling level in the tanks, enabling exact quantity dosing. The various operating screens of the HMI can be used to control and monitor a variety of pumping functions, recipe management and batch tracking. For reliable production traceability, the equipment stores a wide range of data from the last 50 production steps (recipe, batch no, which quantities from which tank, etc.) on an SD card and backs them up via the local network.

For reasons of hygiene and corrosion protection, the entire system is made from materials resistant to salt and seawater, while the electro-polished inside of the tanks largely prevents adhesion of the marinades.

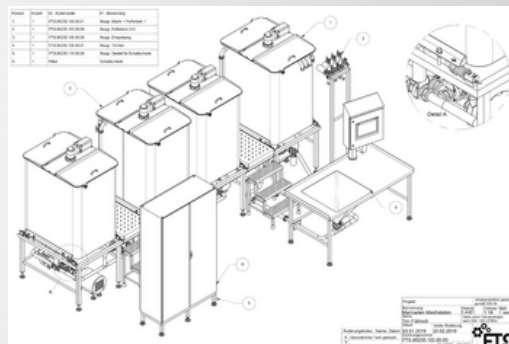
"We decided in favor of Eilersen for the selection of the load cells, as experience has shown that they are very hygienic and reliable and therefore ideally suited to this equipment," explains Tim Füllmich, responsible Project Manager at FTS.

"The Eilersen load cells used are characterized not only by their aseptic properties but also by their high resolution and accuracy. In spite of the vibrations from the agitator and pumps, the digital filter functions of the Eilersen interface module guarantees the high accuracy of the weight measurement".

Oliver John, Sales Manager of Eilersen in Germany, adds:

"Many years of experience and expertise in the field of weighing technology enable us to offer our customers exactly the solution that best meets their requirements and areas of application."

View product: [Beam Load Cell BL \(BL-Ex\)](#) and [Weighing modules](#)



1 The new marinade mixing plant consists of one mixing tank and three buffer tanks.



2 The new system had to be integrated into the existing space.



3 The tanks are mounted on Eilersen BL type load cells.



4 The BL type digital load cells are hygienic, robust and reliable.

If you would like a quote or information on the Eilersen digital load cells and robust weighing solutions, please send a request using our contact form



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