

Case Study - Tulip Food Company



New HVD water softening unit saves money and protects the environment

Tulip Food company produces and markets refined meat products for retailers, restaurants and caterers, the fastfood industry and for companies. Tulip are a Danish based organization who also trade internationally.

Products are manufactured in eight factories in Denmark and two in Germany. These highly specialised factories are certified to Danish and international standards for quality assurance and food safety.

The production site in Ålborg had a somewhat dated water softening unit. An initial survey revealed both water and salt consumption to be very high compared to the HVD units currently being offered.

Precise measurements were then taken and the parameters entered into a simulation program. In view of the potential cost savings calculated in this way, the management quickly decided to invest in a new system. Installation was carried out during a weekend in order to avoid any production standstills.

Technicians de-commissioned the existing unit and installed and commissioned the new system. The results corresponded



to the simulation, showing a reduction of water consumption by 90 % and a reduction in the volume of salt required per regeneration cycle of 70 %.

“Compared to the former unit, we are saving more than £25,000 each year. We used to receive a salt delivery every six weeks, now we only need one delivery every five months. Despite the low price of salt and a water hardness level of only 130 ppm, our entire investment will have paid off in just 18 months,” Gorm Kristensen, Cooling Plant Manager observes.

In addition to immediate savings in operating costs, the factory benefits from a number of other advantages, among them a simpler design.

The former unit had more than 20 different valves. The new HVD unit in contrast does the same job using just five valves. Fewer components mean less maintenance. The unit regenerates in counterflow, therefore the efficiency of the softening unit is greater than a conventional one. The hardness level ranges from 0.5 to 1 ppm. Monitoring of softener regeneration utilizes a modern solution based on continuous measurement of the waters conductivity and precise measurement of salt and water consumption.

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