



Contherm - for the viscous, sticky and chunky

Foster Farms, Turlock, California, USA

Case story

The Foster Farms poultry company facility in northern California has abandoned the old method of cooling mechanically deboned meat with CO₂. The scraped-surface heat exchanger Contherm, from Alfa Laval, has dramatically reduced processing costs and simultaneously provided an end product of higher and more consistent quality.

Foster Farms is one of the largest and best known poultry companies in the USA. The company employs ca. 7,000 people in all, a thousand of whom work at the facility in Turlock which processes turkey products. After the fleshiest parts - the thighs and breasts - have been removed from the carcass, there is a lot of meat left that must be utilized economically and efficiently. As much as 70% of the total carcass weight is pure meat. The carcass is de-boned and the meat is ground. Among other things, the product is used in hot dogs, cold cuts and as raw material for the food industry. During the deboning process temperature is increased in the product. Strict demands apply to hygiene. To prevent the growth of bacteria, the product is cooled down from 13 to 2.5°C.

"We used to use the traditional method of cooling the mechanically deboned meat with CO₂," says Jim Theis, director of operations. "That method had a lot of disadvantages. In the long run, the cost of CO₂ was way too high, and the cooling was uneven. In practice that meant that we had to cool some of the the product so drastically that it froze, in order to be sure of getting a low enough temperature through the entire batch. That meant inconsistent quality, and sometimes production shutdowns."

The solution to Foster Farms' problem was Contherm, a cylindrical scraped-surface heat exchanger from Alfa Laval, specially constructed for heating or cooling viscous, sticky and chunky products. In the Contherm, products are chilled or heated without air contact. Its construction is well thought through – Contherm requires little floor space, cuts down on labor and needs minimum maintenance. The apparatus is also easy to clean, even though it handles demanding products. Contherm comes in various sizes and offers a number of features that can be adapted for different applications. Ammonia is the cooling medium used in the



Contherm units at Foster Farms. The combined capacity of the two units used in this application is 3,600 kilograms of product per hour.

Jim Theis is pleased: "Our two Contherm units have radically reduced processing costs. The investment paid for itself in less than 2 years. And at the same time, we have gained much better control over the cooling process. Contherm provides absolutely uniform cooling, and now we can cool all the deboned meat to exactly the right temperature, which results in an end product of both high and consistent quality. Changing over from the old system posed some problems, but we got all the support we needed from Alfa Laval, and we are absolutely delighted with the final result."

Alfa Laval is a world-leading supplier of products for a wide range of sanitary applications within the food, dairy, beverage, bio-pharm and personal care industries. Our products are developed not only to meet your exacting demands for safety, reliability, efficiency and hygiene, but also to ensure the careful handling of your products.