



Contributing to the local culture

Byrne Dairy relies on Alfa Laval LKH Prime to support thriving business Case story

In 1933, Byrne Dairy's horse-drawn wagons began delivering glass bottles of milk to homes in Central New York. From these early beginnings, this fourth generation family-owned company has grown to become a major producer and distributor of Greek yoghurt, conventional yogurt, sour cream, milk, cream, ice cream and a variety of other dairy products.

Byrne Dairy receives its milk from over 250 local family farms in Central New York. Thanks to the rich dairy tradition in this area, these farms are only an average of 35 miles from one of the four Byrne Dairy sites. They receive around 50 million pounds of milk each month.

The ideal, authentic plant culture

The company's newest cultured plant is located in the town of Cortlandville, NY on a 133-acre former dairy farm. This plant was completed in early 2014 with the first product going out the door in March of that year. The plant runs five to six days a week to keep up with demand. At the new plant, they make a number of different types of yogurt, including authentically strained, Byrne Hollow Farm Greek yoghurt, and cup set styles, as well as buttermilk and sour cream. Products are now both sold under the Byrne Dairy name as well as private labeled for several major yogurt manufacturers and large retail store chains. 600,000 pounds of products are produced in a typical week.

Mike Sima, Senior Process Engineer explains the Byrne Dairy culture further, "It's a family owned company and the employees are continually impressed with how willing the Byrne family is to invest in the company's improvements consistently. Byrne's president is very ingrained in the facility on a day-to-day basis, and knows everyone by name, meeting with employees often."

This open communication helps to support process improvements too. Sima said, "Due to an ongoing method of continuous improvement, Byrne Dairy has made some significant leaps and bounds in operational efficiency and throughput. In fact, we recently reported a 25% operational efficiency increase on one of the product lines."



Together with the LKH pump family, the Alfa Laval LKH Prime makes an immediate impact

Maximizing efficiency in all processes is critical to Byrne Dairy's success. The facility now relies on an Alfa Laval LKH Prime pump as a key component supporting production. Originally, Byrne Dairy added the Alfa Laval LKH Prime pump as a quick solution to a production issue. An existing pump in the plant had stopped working, and the Alfa Laval LKH Prime pump was already in house, and ready to be installed as a trial. It was then installed to temporarily minimize the impact of the existing pump that was down. Specifically, the Alfa Laval LKH Prime serves as a Clean-In-Place (CIP) return Pump to evacuate the cultured product fillers, and then move the CIP solution back to the wash center. Almost immediately upon installation, Byrne discovered its superior performance as compared to the previous pump. In fact, Byrne actually had to slow the pump down because it was doing too good of a job. By installing a variable motor, the pump was dropped down to 70-75% of its original power, which was ideal for the process.

The family of Alfa Laval LKH pumps was already well known to Byrne Dairy. They had experience with many different Alfa Laval LKH family pumps and other products, so they were confident that it could tackle the job. Sima said, "At Byrne Hollow, about 80% of our pumps are of the LKH family. However, our other Byrne facility in nearby East Syracuse contains 85-90% Alfa Laval valves and 95% Alfa Laval LKH pumps."

Alfa Laval LKH Prime versatility and reliability – with a 30% energy savings!

The pump's versatility is also helpful at Byrne Dairy. Although Byrne Dairy uses the Alfa Laval LKH Prime pump primarily as a CIP return pump, the plant runs a significant amount of product and as part of the production process the plant's filler needs to be regularly cleaned.

Sima felt the design and air screw technology compared favorably to traditional liquid ring pumps. He commented, "This pump had absolutely no problem priming itself. I believe that any other pump in this job would have struggled." He added that they may not have been able to successfully clean the filler with a different pump.

In addition to performance, Byrne has noticed about 30% energy savings attributed to the Alfa Laval LKH Prime. Sima commented, "Byrne Dairy is now able to get a better, more consistent return flow while using less energy."

The pump has been installed about a year and a half. No service has been required yet, but it is designed to be easy to service and maintain, and shares the same seal

as other Alfa Laval LKH family pumps installed. They feel the noise level is very low in general though they don't have another liquid ring pump with which to compare it. Byrne Dairy is still using an older pump in another area at the plant. Sima commented, "Going forward, we would definitely consider getting an additional Alfa Laval LKH Prime pump and consider using one as a process pump."



Alfa Laval LKH Prime installed at Byrne Dairy

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com