



Higher profits and lower maintenance costs with OptiLobe rotary lobe pump

Parmalat SpA, Parma, Italy

Case story

In today's competitive marketplace, less downtime means higher profits. Italian food group Parmalat SpA set out to increase operating efficiencies and reduce maintenance through the introduction of new technology at their Collecchio factory. Replacing a progressive cavity pump with an Alfa Laval OptiLobe rotary lobe pump boosted both productivity and profits.

Based on the efficiency of existing Alfa Laval equipment, Parmalat approached Alfa Laval to help identify opportunities to improve pump system efficiency at their Collecchio factory. This production facility is vital for the preparation of raw materials for Parmalat ultra-heat-treated (UHT) milk.

One application, in particular, was earmarked for process design review. This application requires a pump operating 12 hours a day in order to transfer a milk product containing Omega 3, milk powder and chocolate milk. Naturally, this process must meet rigid hygiene requirements and therefore demands reliable operation, low maintenance and ease of cleaning.

The OptiLobe solution

Upon Alfa Laval's recommendation, Parmalat replaced an existing progressive cavity pump with an Alfa Laval OptiLobe rotary lobe pump.

This straightforward hygienic pump meets or exceeds all the characteristics of a progressive cavity pump, including minimal shear, variable viscosity handling and the ability to move a variety of viscous media at lower velocities.

To ensure the trouble-free operation, however, the OptiLobe offers a distinct feature, the "EasyFit" front-loading seal, which makes the seal easy to inspect or replace without disassembling any pipework. This enhances cleanability, simplifies access and significantly reduces maintenance downtime.

Minimal shear

OptiLobe offers shear rates that are extremely low and therefore ideal for pumping shear-sensitive raw materials. The OptiLobe provides flow rates of five cubic meters per hour that are required for the transfer of cultured media.



The OptiLobe pump has cut maintenance costs at the Collecchio plant, according to Parmalat's Gianpaolo Saccani.

Hygienic construction

The pump range meets 3A, FDA, and EHEDG requirements for high product integrity and hygienic demands of the pumped media. All wetted components that come into contact with the product are made of 316L stainless steel.



Alfa Laval's OptiLobe rotary pump provides the reliable and hygienic operation that is critical to Parmalat food processes. By replacing an existing progressive cavity pump from another manufacturer with OptiLobe, Parmalat reduced downtime and maintenance costs.

Low maintenance

After 16 months of operation, the OptiLobe has not required any spare parts replacement. This has contributed to lower total cost of ownership since maintenance costs for the OptiLobe are significantly lower than those of progressive cavity pumps.

"The OptiLobe pump is very compact and easy to operate," says Gianpaolo Saccani, Parmalat's engineer responsible for overall maintenance for all the company's plants that prepare raw materials for the UHT production lines. "But most importantly, it is really hygienic."

Cost-efficient alternative

The OptiLobe has proven to be a highly efficient and cost-effective alternative to progressive cavity pumps for Parmalat. Its success has led Saccani to consider expanding the use of the OptiLobe. Plans are underway to replace the two other progressive cavity pumps in the same production line with OptiLobe pumps. Saccani is also considering the introduction of OptiLobe pumps to other Parmalat production facilities.

Maintenance support

According to Saccani, there is another advantage with the OptiLobe pump: strong support from Alfa Laval. "By working closely with Alfa Laval and its distributor, my team and I have been able to solve other problems related to pumps of another make," Saccani explains.

Duty details

Pumped media:	Milk product
Flow rate:	5 m ³ /h
Discharge Pressure:	1.5 bar
Viscosity:	50 cP
Pumping Temperature:	20°C
Pump Speed:	350 rev/min

About Parmalat

With a presence on five continents, Parmalat S.p.A. is a multinational food group that produces milk, dairy products and fruit-based beverages. In 2007, revenues for the Parmalat Group were in excess of 3.9 billion euro.

About OptiLobe

The OptiLobe pump range has six pump head displacements ranging from 0.17 litres/rev to 0.82 litres/rev. The range handles flow rates up to 48 m³/h and differential pressures up to 8 bar. It comes in port sizes from 40 mm to 80 mm in diameter.

How to contact Alfa Laval

Contact details for all countries are continually updated on our web site. Please visit www.alfalaval.com to access the information direct.