



Hygienic Alfa Laval plant upgrade boosts Russian dairy capacity by 50%

Moloko, Gorodets Dairy, Nizhny Novgorod region, Russia

Case story

To increase capacity, improve efficiency and comply with safety and hygiene requirements, Moloko, one of the largest producers of dairy products in the Nizhny Novgorod region, planned to upgrade its 50-year-old dairy plant located in the town of Gorodets.

To optimize plant operations, Moloko turned to Russian engineering company and Alfa Laval master distributor Alfa L Service Limited to plan, design and implement a plant upgrade. Alfa L Service helped Moloko realize a 50% increase in throughput by upgrading process equipment and control equipment with energy-efficient Alfa Laval hygienic equipment while ensuring full compliance with EU Milk Hygiene Directives.

Strengthening a solid relationship

Although Gorodets lies about 1,200 kilometres southeast of St. Petersburg, home of the Alfa L Service office, distance is irrelevant according to Gorodets Dairy's master mechanic Mr. Gennadiy Zolotuhin.

"The people at Alfa L Service are like my next-door neighbours," confides Mr. Zolotuhin. "We have been buying spare parts, such as shaft seals, plate heat exchanger gaskets and valve service kits for Alfa Laval equipment from Alfa L Service for years. So we know the broad scope and high quality of Alfa Laval hygienic components."

Mr. Zolotuhin goes on to say that replacing the dairy's ageing equipment



Upgrading the Moloko Gorodets Dairy with hygienic Alfa Laval equipment increased plant yield by 50%, enabling increased production of whole milk, sour cream, yogurt and ryazhenka.

with more effective Alfa Laval hygienic equipment was a natural next step because he has come to trust the service-minded people at Alfa L Service, their expertise as well as the reliability of Alfa Laval hygienic equipment.

"Whenever I have a question or need assistance onsite, I just pick up the phone and call them," he says. "They always do their utmost to provide me with what I need – when I need it."

Phasing in higher efficiency

Based on a solid four-year-long business relationship with Alfa L Service and Alfa Laval, Moloko asked the company to create an upgrade plan for the dairy. Alfa

L Service recommended a three-phase upgrade. State-of-the-art Alfa Laval hygienic components were key to meeting the objectives of all three phases.

- **Phase 1:** Upgrade of milk collection facilities, storage tanks and control technology with Alfa Laval equipment, including Alfa Laval hygienic valves and energy-efficient pumps.

- **Phase 2:** Upgrade of the thermization treatment facility with Alfa Laval BaseLine heat exchangers and Cleaning-in-Place (CIP) units for the raw milk areas. Upgrade of the pasteurization facility, pasteurized milk storage and CIP, and fermented milk department with

Alfa Laval FrontLine heat exchangers, fitting tanks with energy-efficient agitators, cleaning equipment and relevant control technology.

- **Phase 3:** Automation upgrade of the remaining equipment with Alfa Laval automation technology and connection to main PLC system.

Efficient and hygienic sanitary components

Alfa L Service provided Moloko with a broad range of dairy plant solutions to improve efficiency, reduce water and energy consumption, and reduce waste. This included hygienic Alfa Laval LKH centrifugal pumps to transport dairy products throughout the plant and premium Alfa Laval FrontLine heat exchangers for use in milk pasteurization and other critical processes. Moreover, to reduce product waste, Alfa Laval Unique Mixproof valves equipped with ThinkTop control units were used in various piping systems.

50% increase in capacity

Before the upgrade, the plant processed approximately 70 tons of raw milk per day. Today plant capacity is up 50%. With more raw milk available, production of whole milk, sour cream, yogurt and ryazhenka, a baked cultured milk that is a popular Russian breakfast drink, has increased substantially as a result.



Moloko Dairy milk reception plant upgraded with Alfa Laval Unique SSV valves, LKB valves, ThinkTop valve sensing and control units, Solid C and LKH centrifugal pumps and energy-efficient agitators.



Moloko Dairy cream valve cluster with Alfa Laval Unique SSV, Unique Mixproof and LKB valves and ThinkTop valve sensing and control units.

Significant reduction in utilities and raw material

Upgrading the Gorodets Dairy delivers significant savings on water consumption and increased the utilization efficiency of both raw materials and electricity. Water savings from the new process design and equipment add up to approximately 15%. More raw milk is put to better use, reducing waste and raising product yields.

Electrical energy savings also amount to a significant 20%, thanks to energy-efficient equipment such as Alfa Laval EnSaFoil agitators, which deliver energy savings of up to 80%, and Alfa Laval LKH centrifugal pumps, which offer up to 30% or more energy savings compared to similar mid-range pumps.

Complete dairy plant solutions

With the expertise of master distributor Alfa L Service and Alfa Laval, Moloko was able to achieve the reliability, energy efficiency and level of compliance required to maintain its strong position in the domestic dairy industry in Russia.

According to Mr. Zolotuhin, being able to deliver safe, hygienic products to customers more efficiently gives Moloko the staying power the company needs to remain competitive in the domestic dairy industry today.

“Since commissioning the upgraded plant, we have seen vast productivity improvements at the Gorodets Dairy,” continues Mr. Zolotuhin. “We can count on continuous operations, thanks to the superior quality, reliability and service and support of Alfa Laval equipment, automation technology and components.”

ESE02278EN 1209

How to contact Alfa Laval

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