



From Moravia to Bahrain - the cheese journey

Olešnice cheese plant, Czech Republic

Case story

With its high hygienic standard and numerous quality certifications, Czech Mlékárna Olešnice is ideally placed to make the best of export opportunities – far and near, today and tomorrow.

The little town of Olešnice lies among meadows, fields and orchards of the southern Moravian countryside. When farmers from the surrounding hills and valleys joined forces in 1937, their co-operative dairy produced about 270 litres of milk daily. Now, more than six decades later, this quantity has risen to 100,000 litres per day, and the production range includes much more than just milk.

Jan Šlégr, Technologist of the Olešnice dairy (Mlékárna Olešnice), welcomes visitors with a broad smile and a firm handshake. He has good reason to be satisfied – his company is doing well on the market, and international certificates confirm the quality of the products he is responsible for. The dairy's products now include butter, cottage cheese, milk, and Akawi – a special type of cheese for which the dairy is internationally renowned.

Certified milk

Whatever the final product, hygienic requirements remain strict. The Hazard Analysis and Critical Control Point system (HACCP) has been compulsory for all Czech dairies by law since 1999 and sets the safety standards for food production. The dairy has also successfully applied for IFS and BRC certifications which is an even more stringent system, controlling not only health safety standards but also sensorial quality. Basically HACCP makes sure that the food product is safe for your health, while IFS and BRC also guarantee that it's pleasant on the tongue. Mlékárna Olešnice fulfills all EU requirements of veterinary and hygienic standards. Companies such as Unilever and other international food producers apply additional criteria to their suppliers. Again, the Olešnice dairy meets them all.

All the above-mentioned certificates serve as gateways to new markets and thus link product quality and high hygienic standards directly to business success.

Heart of the dairy

"Speaking of quality, no part of the dairy is more important to product quality than the pasteurizers," explains Jan Šlégr.



"If they were to stop working, we might have to shut down the whole dairy right away. Effective heating is the only way of destroying unwanted bacteria in milk".

With reliability, health and safety as their prime concerns, the dairy management decided to replace the old pasteurizers with the Alfa Laval FrontLine Heat Exchanger with Gemini plates (see sidebar). "Owing to our limited space, it was a bit of a struggle to get the heat exchangers into position. But since then, we haven't had a single problem with them," says Šlégr. According to Šlégr, the new pasteurizers have already passed a short and unintended endurance test, when pressure in the pipes briefly reached 6 bar. "The bearings in the old unit would already have blown," he believes. The two new plate heat exchangers are scheduled to run 365 days a year, 5 a.m. to 6 p.m., with different temperatures for each end product: 98°C for milk and 74°C for cheese.

Another device which helps the Olešnice dairy keep the production process running smoothly is the Alfa Laval plate heat exchanger for continuous preheating of cream in the company's butter plant.

Olešnice was the first dairy in the Czech Republic to apply this solution. "It makes it much easier to control fluctuations in the temperature of the cream entering the process. Also, switching input material is very fast now," says Šlégr.

Salty cheese for the Middle East

A typical Akawi cheese contains 8–9% salt, with 45% dry matter and a 40% fat content in the dry matter. This is also true of the Akawi cheese from Olešnice, which tastes delicious. Middle Eastern customers in particular seem to agree with this statement, since they would otherwise not buy 80% of Olešnice's entire Akawi production.

Out of the total 100,000 litres of milk processed daily, about 45,000 litres go to the production of Akawi. Processed 12 x 12 cm tiles of fresh white cheese, weighing about half a kilo each, have to be wrapped and pressed manually – Middle Eastern customers want only hand-made Akawi. To increase the shelf life, the cheese is soaked in a salt solution for about 16 hours before it is packed into large 25 kg cans. Uninformed visitors to the dairy might be surprised to learn that Akawi, after salt treatment, will keep for more than a year, even in the hot climate of the Middle East. Later on, before consumption, fresh water may be used to wash the saltiness away, although the cheese must be sufficiently solid to withstand washing without problems.

After leaving the dairy, the Akawi cheese travels to the German ports of Bremen or Hamburg. There it is transhipped to large commercial vessels which distribute the cheese to countries like Lebanon, Kuwait, Bahrain and Saudi Arabia.

High standard of hygiene with less Equipment

One of Mlékárna Olešnice's most important requirements is

to ensure a high standard of hygiene while minimising the risk of mixing the pasteurized product with the unpasteurized product in the plate heat exchangers. When the dairy had to replace the old plate heat exchangers, they had two options. The traditional method of reducing the risk is to use differentiated pressures between product and heating media or between pasteurized and unpasteurized product. This requires extra equipment such as a booster pump, valves and a pressure-monitoring system. Instead, the dairy chose Alfa Laval's FrontLine Heat Exchanger with Gemini plates, which ensure against contamination/mixing without requiring additional equipment. Another advantage is that no-one needs to record data from the milk pressure sensors for later presentation to the State Veterinary Control. Milk pressure is no longer a crucial issue.

Innovative future

Although high product quality remains the basis of a successful business, a competitive environment also calls for innovative marketing strategies. The Olešnice dairy's marketing department has introduced two new types of eye-catching milk packaging, and other novelties are in the pipeline. A few years ago, the dairy set up a special trading company to support the distribution of its products.

Today Olešnice dairy seems to have all the necessary qualifications for putting these opportunities to good use.

Alfa Laval FrontLine Heat Exchanger with Gemini plates

General description

Gemini double wall plates are designed particularly for the Alfa Laval FrontLine range of plate heat exchangers for the food industry. The Gemini plates have double walls that combine good heat transfer with increased protection against mixing of fluids which prevent the media from mixing, even in the event of a cracked plate.

Applications

Pasteurization and general cooling/heating of dairy, brewery, beverage and food products, when a mixproof design is required. The Gemini plates are also applicable for heating/cooling in the pharmaceutical industry.

Features

- Allows to work without differentiated pressures between product and media.
- Gemini plates consist of two sheets that are formed together, minimizing the air-gap in between.
- Gemini plates can be inspected when required for certain hygienic applications.
- Thickness for all Gemini plates 2 x 0.4 mm.
- Use of standard clip-on gasket.



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How to contact Alfa Laval

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