



Customized brewery solutions with timely project execution

Royal Unibrew, Faxe, Denmark

Most breweries know Alfa Laval's wide range of processing technologies. But the equipment is really just the tip of the iceberg. Thanks to decades of industry experience, Alfa Laval is also able to help breweries around the world design and install complete solutions customized according to their specific needs.

That record of engineering expertise and proven project management was exactly what European beverage manufacturer Royal Unibrew was looking for. They turned to Alfa Laval to deliver a complete solution for the cold block at their 120-year-old brewery in Faxe, Denmark, including a new filtration line and bright beer tank area. The success of these first installations have resulted in a growing partnership between the two companies, with a number of new projects now underway.





Royal Unibrew is a small group with an increasingly diverse product portfolio. Their operation includes both large mainstream breweries and smaller craft breweries spread throughout Denmark, Finland, Lithuania, Estonia, France and Italy.

“Royal Unibrew as a company started in 1989, but the Faxe Brewery has been in operation since 1901,” explains Anders Nielsen, Brewhouse Manager at Faxe Brewery. “The brewery produces everything from normal strength pilsners to 10%-strong lagers, and we do ales, Weissbiers and ciders.” The product portfolio also features alcohol-free products and soft drinks including the signature Faxe Kondi.

In fact, the Brewery, which was originally started to produce lemonade, has been continuously updating and expanding its offering throughout the 120-year history. Recently, however, they have faced new challenges that have necessitated undertaking a number of modernization projects.

“Like many other beverage companies, we are facing a market that’s evolving,” Nielsen says. “That demands a very diverse product portfolio and shorter series to meet a faster consumer market for new brands. So, we have to be very flexible. And with volumes increasing, capacity is another reason why we have been making changes to the brewery.”

A better solution for yield and sustainability

The Faxe Brewery’s first major project was the installation of a membrane filtration line to replace their reliance on kieselguhr filtration. The goals of the project were twofold. On one hand, the brewery wanted to improve sustainability by phasing out the use of the environmentally harmful kieselguhr. Second, and critically, they also wanted to reduce beer loss during batch changeovers to be able to better meet volume and flexibility needs.

“This was a change based on capacity,” he says. “Our old kieselguhr filters were from the 1970s, and we had reached capacity on them. We had beer losses to improve, and dealing now with 60+ brands and several changes a day, we simply needed to go for a new solution.”

However, the brewery understood from the start that the installation of the new system would be a complex project that posed a number of challenges. To help simplify the process and limit the number of potential problems along the way, they therefore decided against working with a variety of different component suppliers on their own. Instead, they would partner with one lead contractor who could provide a complete membrane filtration solution.

“The membrane plant is delivering as promised. There are, of course, always a few bumps along the way, but we worked with Alfa Laval to solve these and now everything is working fine.”

Anders Nielsen, Brewhouse Manager at the Faxe Brewery



“Our main challenge is that it’s an old brewery – it’s a brownfield – so there are a lot of manual operations, which means integration of new equipment is more difficult,” Nielsen explains. “The reason we went for a contractor that could do the whole project was due to the many interfaces. In this instance we had the filtration plant, the membrane blocks and our existing brown-field interfaces. And we needed somebody who could integrate all of these and give us one point of contact, making sure we would not have to involve too many internal resources as well.”

Keeping it on spec and on time

The project timeframe created an additional challenge. The brewery would have less than a year to choose a supplier and get the new system fully installed and commissioned in order to avoid running into much downtime during their peak production season. This made it crucial for the Faxe Brewery to pick a supplier with a proven track record of delivering according to the project specifications and doing it on time.

“When choosing a supplier, we first make sure that we’re comparing apples to apples, so that we’re looking at more or less the same solution,” Nielsen says,

“And in this case, Alfa Laval stood out because they could offer both the best timeframe and the best price. They had also supplied equipment to us before and knew our brewery, so we knew they had good inside knowledge of our plant.”

Based on the brewery’s needs, Alfa Laval engineered a completely customized filtration solution, as well as oversaw management of the project execution to ensure things could be installed correctly within the tight schedule. This included coordination with a separate supplier on the delivery of the membrane filtration blocks. Alfa Laval supplied the rest of the filtration line, including buffer tanks, routing valve clusters, cleaning-in-place (CIP) station, dosing and blending equipment, and an Alfa Laval Brew centrifuge with the patented bottom-fed Hermetic Design.

“In the end, we kept the overall timeframe,” Nielsen adds. “The membrane plant is delivering as promised. There are, of course, always a few bumps along the way, but we worked with Alfa Laval to solve these and now everything is working fine.”





A new bright beer tank area

After this initial project, Royal Unibrew selected Alfa Laval to deliver yet another complete solution for the Faxe Brewery's cold block. In this case, the brewery needed to install a new bright beer tank area.

"The reason for the bright beer installation was that one of our existing cellars had to be taken out for production of another product," Nielsen explains. "This meant we were suddenly standing without one whole cellar for bright beer. We simply had to make a new installation."

As a result, the timeframe was again a critical factor on top of other challenges. First and foremost, Alfa Laval needed to provide a solution that would prevent any risk of contamination, which meant minimizing the potential for human error and unintentional mistakes. A secondary concern was ensuring the absolute lowest levels of dissolved oxygen pick-up.

To meet all of these concerns, Alfa Laval engineered a customized and fully automated solution, including the product and CIP gas valve clusters and the top plates. "This project was also executed according to plan," Nielsen notes.

Choosing the right partner for complete brewery solutions

Following the first two successful projects, the partnership between the two companies has continued to grow. To date, Alfa Laval has also supported the Faxe Brewery with integrating the automation of their centrifuges, installing a new horap tank and supplying technology for producing non-alcoholic beers.

"After the installation, we continue to work with Alfa Laval for spare parts and service," Nielsen adds. "It's important for us that they can deliver a fast response, and they don't just come and change things. They find the reason for why things have happened, so it doesn't occur again. And they always send technically skilled, good people."

Having now taken part in several complete solutions from start to finish, Nielsen also has advice for other breweries that are considering starting these types of projects.

"The advantages of purchasing a complete solution, from our perspective, is simply due to resources internally – having one point of contact saves a lot of time," he says. "When choosing a partner, it's important that they have the ability to complete the task, both in terms of their technical solution as well as the project management. There needs to be a good team and good references. It meant a lot to us that Alfa Laval had done similar projects, so we knew they could get the job done. And throughout the projects, we have had good dialogue and problem solving together."

To learn more about Alfa Laval's comprehensive range of support for breweries, visit www.alfalaval.com/brewery.

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

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