

Non-alcoholic brewing success with Alfa Laval De-alc

With global demand for non-alcoholic beer on the rise, Royal Unibrew saw a clear opportunity to expand its production. To achieve a high-quality 0.0% ABV brew that meets consumer expectations, the brewery needed a solution that could deliver an exceptional alcohol-free beer cost-efficiently.

With a long-standing relationship built on trust and innovation, Royal Unibrew turned to Alfa Laval.



After successful trial runs using an Alfa Laval De-alc de-alcoholization module rental unit, the brewery invested in and integrated the De-alc into its production lines. Doing so enabled Royal Unibrew to scale up alcohol-free beer production and meet evolving consumer expectations – all while protecting product quality and profitability.

Scaling up for commercial success

With rising demand for non-alcoholic beer, Royal Unibrew needed higher quality and greater volumes, something traditional methods could not deliver. After extensive R&D and successful trials with an Alfa Laval De-alc rental unit, they made a strategic move – scaling up to a full-size De-alc 50 system with a production capacity of 50hl/h.

The upgrade wasn't just about boosting capacity – though the new setup now delivers five times the output of the pilot unit. More importantly, it preserves the taste, aroma and mouthfeel of full-strength brews, providing an authentic beer experience to health-conscious consumers – without the alcohol.

Gentle process, full sensory experience

Removing alcohol without compromising the essence of beer is one of the biggest challenges of 0.0% brewing. Many systems strip away the nuances that define a great brew. The Alfa Laval De-alc de-alcoholization module uses a low-temperature, single-pass stripping process that gently removes alcohol while retaining the beer's full sensory profile.

The De-alc delivers an authentic beer character, whether producing a crisp pilsner or a smooth lager. In just a year, Royal Unibrew's 0.0% pilsner sales surged 273%, prompting them to expand their alcohol-free product line, proving that investing in quality pays off.

Efficiency that boosts the bottom line

Beyond superior flavour retention, the De-alc offers outstanding efficiency and sustainability benefits. Built for reliable performance, De-alc has few moving parts, minimizing its maintenance needs. Royal Unibrew also reduced its environmental footprint and improved operations since De-alc uses less than 0.4 kW/hl of energy.

De-alc optimizes heating and cooling to gently remove alcohol from beer with minimal energy use, cutting emissions and operating costs. It also reuses water from the vacuum pumps to dilute the separated alcohol. With ongoing support from Alfa Laval, Royal Unibrew is well-equipped to meet today's demands and future growth.

Smart investments drive growth

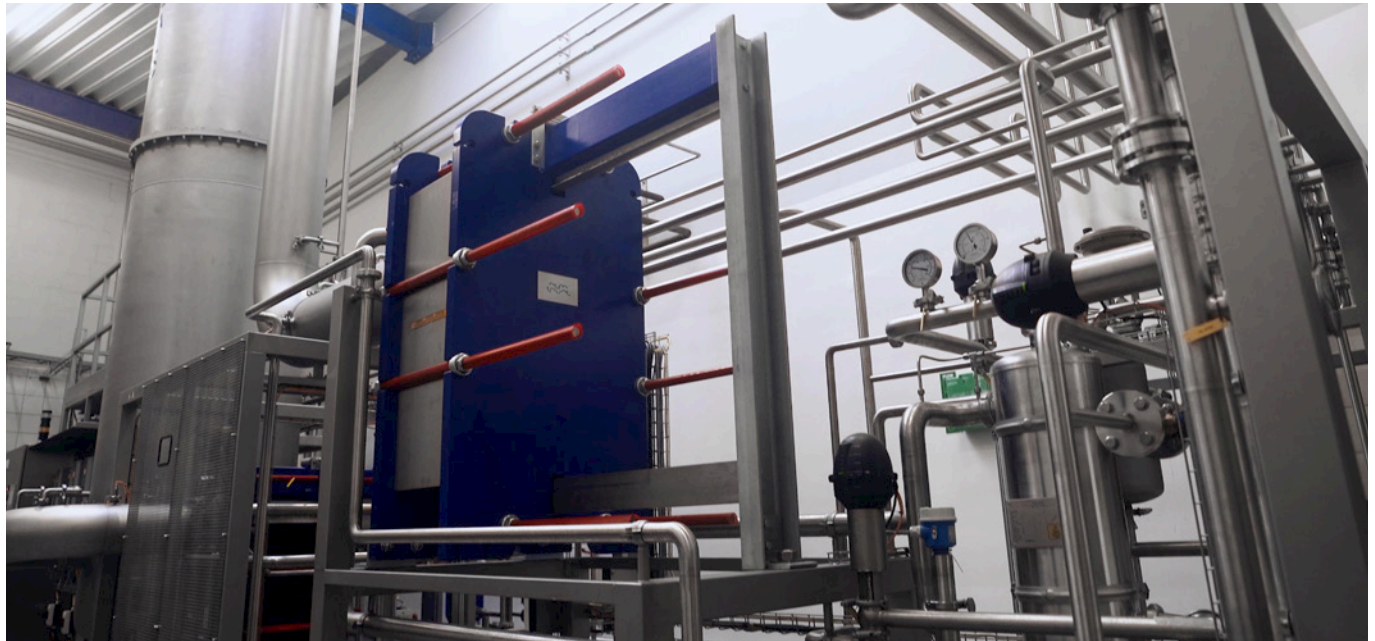
Royal Unibrew's priorities were clear: produce premium-quality 0.0% beer at the right capacity while maximizing efficiency.

The Alfa Laval De-alc module delivered on all fronts – enhancing flavour, boosting throughput and sustainability, and significantly reducing operating costs.

A key advantage is the integrated plate heat exchanger, which recovers up to 90% of the heat from the outgoing alcohol-free beer to preheat the incoming beer. This heat recovery and reuse reduce energy use, lower costs, and support sustainability efforts by reducing waste.

Future-ready

"As with many beverage companies, we are facing a market that's evolving," says Anders Nielsen, Brewhouse Manager at Royal Unibrew. "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."



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Alfa Laval provided the De-alc, as well as engineering services, including automation services for seamless integration into Royal Unibrew’s control system. These services ensured smooth operation and process optimization, reducing manual intervention and enhancing efficiency.

The demand for non-alcoholic beer is here to stay, but today’s consumers expect more than just an alcohol-free option. They want full flavour and premium quality. With the right technology, breweries can meet these expectations while driving efficiency and sustainability.

Royal Unibrew’s success with the De-alc proves that investing in advanced de-alcoholization technology isn’t just about keeping up with trends – it’s about setting the pace for the future of brewing – without compromising on taste, efficiency, or sustainability.



The Alfa Laval De-alc module provides a cost-effective and energy-efficient solution for removing alcohol from beer in a single pass. Its fully integrated system handles beer degassing, vacuum stripping, alcohol condensing, and culinary steam generation – ensuring premium taste with minimal energy consumption.

At a glance

Royal Unibrew’s results with Alfa Laval De-alc de-alcoholization module:

273%
increase in 0.0%
pilsner sales

Increased alcohol-free
production capacity
by 5X

Less than
20 kW
of energy use

Up to
90%
heat recovery

Low maintenance and
minimal
wastewater

Full flavour
retention across
beer styles



Contact Alfa Laval

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

Alfa Laval reserves the right to change specifications without prior notification.

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