

Application & Innovation Center



A world of **pure innovation** awaits you

Alfa Laval has long forged close partnerships with our customers. By better understanding your applications, we continuously advance the possibilities of hygienic fluid handling and heat transfer technologies.

Our state-of-the-art Application & Innovation Center in Kolding, Denmark takes this successful collaboration to the next level.

With industry experts who can offer performance quantification and verification, you will discover unique opportunities for process optimization.

Experience tomorrow's fluid handling and heat transfer concepts for boosting yield, securing hygienic safety, reducing operating costs and strengthening your sustainable profile.



Taking your production to the **next level**

At the Application & Innovation Center, we have experienced experts to match you with **the right equipment** for your duty and the specific demands of your business.

Pumping

We can help you evaluate the impact of different pump types and pump operation on the quality of your products by conducting trials based on your actual process conditions. This makes it easy for you to select the best pump technology from our comprehensive portfolio of solutions, including:

- Centrifugal pumps
- Rotary lobe pumps
- Circumferential piston pumps
- Twin-screw pumps

Solutions are available for capacities ranging from 1 m³/hr to over 100 m³/hr.

Valve optimization

Parameters such as seal composition, valve size or the type of technology directly influence a process line's cleanability, performance and maintenance. At the Application & Innovation Center, we can evaluate the whole Alfa Laval range of hygienic valves under your specific production and cleaning-in-place (CIP) conditions. For mixproof valves in particular, the cleaning process can have a big impact on your water and chemical consumption and, as a result, your overall operational costs. We can also work with you to optimize CIP performance for mixproof valve clusters.

Cleaning

With more companies looking to increase batch turnover and run multiple recipes on the same equipment, it has never been more essential to shorten time for CIP without compromising hygiene. We work with you to optimize your cleaning processes for improved uptime, while minimizing the consumption of water and chemicals that drive operational costs. Run trials with our full range of tank cleaning technologies, in scales up to 20 m³ and with the possibility of replicating conditions in much larger tanks. With a fully automated CIP system on site, we can mimic your CIP recipe and adjust the parameters as needed.

Mixing and dispersion

Explore a wide range of mixing and dispersion solutions in capacities from 50 l to 20 m³. We can operate close to your actual production scale to avoid a change in process results during scale-up. Our technologies include:

- High-shear powder mixers for in-line dispersion of all types of powders, including gums and protein isolate
- Magnetic mixers, typically used in pharmaceutical and aseptic processing
- Rotary jet mixers for liquid blending and dispersion of gases and powders in liquid, which can also be used for CIP
- Agitators for energy-efficient mixing of liquids and for gentle agitation of particles in suspension

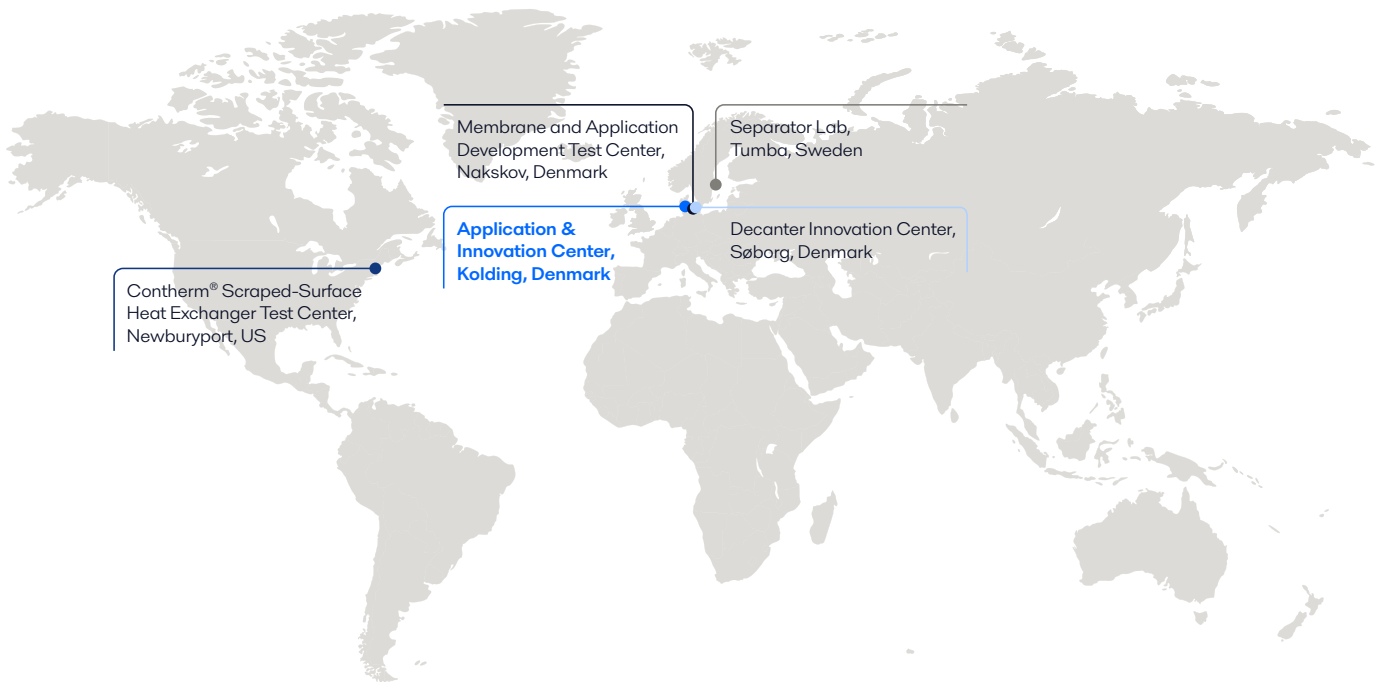
Heat treatment

The Center is equipped with a range of plate heat exchangers for capacities from 100 l/hr to 4 m³/hr. Their configuration can be customized to the specifications of your product with different sections, temperature programs and plate profiles, including the WideGap plates for products with particles. For new applications, you have the possibility to validate the design of a new plate heat exchanger, check the energy efficiency, the impact on the product or adjust the CIP program.

Fermentation and extraction

We offer possibility to run biomass fermentation trials in our 3 m³ fermenter, equipped with agitation & sparging, temperature control and monitoring of pH, oxygen and cell count. Fermentation trials can be completed with downstream processing for extraction and recovery of metabolites using equipment such as decanters, high-speed separators or membrane filtration.

Part of our global customer test center network



Application & Innovation Center in Kolding, Denmark

Industries:	Any business looking for optimization of hygienic processes, technology and sizing validation prior to investments, as well as those interested in a sustainability assessment. This includes manufacturers, integrators and systems builders in the dairy, beverage, food, pharma and home-personal care industries.
Process equipment:	The Alfa Laval portfolio including pumps, valves, tank cleaning equipment, dispersion and mixing equipment, heat exchangers, decanters, membranes, and high speed separation equipments.
Technical capabilities:	<ul style="list-style-type: none">- Ambient and cold storage for liquid and solid products- Reception, transfer and processing of fluid volumes up to 20 m³- Fluid heating and cooling- Tank cleaning with dedicated fully automated CIP station allowing optimization with customer-specific CIP recipe- Powder dispersion, liquid mixing and agitation, and gas dispersion capabilities capacities from 50 l up to 20 m³- Flexible pump setup- Valve setup with the possibility of adding valves for neck-to-neck comparison- Full automation with real-time monitoring
Health, Safety, Environment:	We follow the guidelines from ISO 45001 in relation to health and safety and ISO 14001 in relation to the environment and in addition all EU regulations as implemented under Danish law to avoid any negative impact on people or the environment.
Resources:	A dedicated team of application and technology experts are at your service.
Location:	Albuen 31, 6000 Kolding, Denmark, located 30 min. from Billund Airport
Contact:	Ready to find out more? A world of pure innovation awaits you! Visit us online at www.alfalaval.com/ApplicationKolding or send an email to Application.Kolding@alfalaval.com to learn about scheduling a visit.



"Simulating our production, Alfa Laval performed real trials to quantify possible water and energy savings. We're now saving 1.2 million litres of water every year, and our investment in new automation had a payback of only 4 months!"

– A European dairy customer



"A hygienic 'zero tolerance' production is a must today. We asked Alfa Laval to perform a cleaning trial for our home care cream cleaner in order to replace our current spray heads. In performing about 20 CIP duties per month, we found that their Alfa Laval TJ20G had a payback of only 6 months – due to the water savings alone. Furthermore, cleaning was significantly improved, with manual rework no longer necessary. We can 100% recommend contacting Alfa Laval!"

– A leading global home and personal care manufacturer



"As a mid-sized German system builder, we are under constant pressure from competition. Having conducted a trial with a HPM15 powder mixer at the Alfa Laval Application & Innovation Center, we were able to maximize the customer's xanthan concentration formula and accurately predict production cost! Alfa Laval's expertise helped us secure this important order."

– A German integrator



"We turned to Alfa Laval to reduce energy use in our fresh fermented dessert production. They recommended switching from static tunnel cooling to in-line cooling with a plate heat exchanger. Validation trials confirmed we could maintain product texture, cut cooling costs by 70%, and achieve more consistent quality. The new system also eliminated a day of immobilisation before commercial production."

– A manufacturer of fresh fermented food in Northern Europe

A world of pure innovation awaits you – visit our website today to learn more and schedule your visit!

www.alfalaval.com/ApplicationKolding





Contact Alfa Laval

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

This is Alfa Laval

The ability to make the most of what we have is more important than ever. Together with our customers, we're innovating the industries that society depends on and creating lasting positive impact. We're set on helping billions of people to get the energy, food, and clean water they need. And, at the same time, we're decarbonizing the marine fleet that's the backbone of global trade.

We pioneer technologies and solutions that free our customers to unlock the true potential of resources. As our customers' businesses grow stronger, the goal of a truly sustainable world edges closer. The company is committed to optimizing processes, creating responsible growth, and driving progress to support customers in achieving their business goals and sustainability targets. Together, we're pioneering positive impact.