

White paper
Optimize™ by Alfa Laval

Paving the way for water-smart industries

Accelerate production sustainability
with enhanced processes



The time is now

The world calls for action – fast.

For years, the global community has talked about climate change and resource scarcity in a world expected to reach almost 10 billion people in 2050.

To meet the challenges, the world has united around the UN's Sustainable Development Goals (SDGs).

The 17 Goals imply urgent action before 2030. Parallel to the SDGs, the first ever universal and legally binding agreement – the Paris Agreement – has been adopted by the global community to limit global warming to well below 2°C, preferably to 1.5°C.

But what about water? While climate change has become the predominant denominator of sustainable development, water tends to play second fiddle. Nevertheless, water is vital for all life on earth, and the fulfilment of the 17 Sustainable Development Goals are highly dependent on improved water management.

Now is the time to act. There is no reason to wait.

The technology is readily available to obtain substantial water and energy savings. And the good news is that resource savings go hand in hand with cost savings.





Regulation drives sustainable business practices

Around the world, national, regional and local governments are putting the SDGs and the Paris Agreement into action through new regulative frameworks.

In the EU, for instance, the new Taxonomy Regulation establishes six environmental objectives that will govern sustainable investment, financing and business practices going forward.

The Taxonomy will govern investments and heavily influence business development across all sectors in the coming years. Sustainable water use is one of the six objectives.

EU Taxonomy: The six key criteria of sustainability

1. Climate change mitigation
2. Climate change adaptation
3. Sustainable use and protection of water and marine resources
4. Transition to a circular economy
5. Pollution prevention and control
6. Protection and restoration of biodiversity and ecosystems

The industry is ready to unlock the potential

Not only the global community and governing bodies are concerned with sustainable development. Sustainability and environmental, social and governance (ESG) issues strongly affect how companies do business.

There is a growing understanding that climate and sustainability risks equal investment risks.

Amidst this general awareness, industries increasingly recognize water efficiency as a strategic priority and look for ways to reduce the water consumption, show water stewardship and champion innovative solutions to fresh water challenges.

Linking sustainability and business KPIs

In the food and beverage industry, water has emerged as a key sustainability parameter in line with the overall scope of the SDGs and regulative initiatives.

Best-in-class water usage ratio, improved water efficiency, water stewardship and lowered water intensity are just some of the terms that characterize the ongoing development and are used to measure and disclose information about targets and progress year on year in the companies' sustainability reporting. Most major players in the industry have set up clear goals for reduction of carbon emissions and water usage.

This overall, corporate focus on sustainability, water and energy efficiency translates into policies, governance and targets, which again trickles down into the organization and becomes part of local KPIs, e.g. for water and energy savings at factory level.

In other words, the food and beverage industry is ready to talk sustainability, evaluate their water footprint and take action.

At Alfa Laval, we have a strong track record in providing sustainable solutions and helping our customers save energy and water. By doing this, we enable our customers to meet expectations to sustainable business practices and help them fulfil consumer demands for sustainable solutions.

Alfa Laval has developed solutions for energy and water efficiency for the last decade. Sustainable solutions are our playing field, our core business – from highly water and energy efficient components to turnkey solutions.

We enable our customers to become water smart.





Do more with less – it is all about efficiency

Water-efficient technologies

Companies are fundamentally changing the way they address water and increasingly invest in water efficient technologies. Where energy efficiency has long been recognized as the smart path to reducing the carbon footprint, water efficiency is now equally recognized as the most profitable approach to cut the water footprint and put a stop to water waste.

Water efficiency provides competitive advantage.

Implementing water-efficient measures saves water, energy and costs related to procuring, pumping, heating, circulating or treating water. Water efficiency is about smart thinking and continuous improvements based on facts. Water efficiency management is a systematic approach to monitoring water usage, finding the critical hot spots and investing in upgrades.

Do more with less

Efficiency gains support the company's growth strategy, allowing plants to do more with less. Efficient water usage saves money, especially since water efficiency technology is typically affordable with a short payback time.

Water is fundamental to operations in the food and beverage industries. And water efficiency is needed everywhere. Also in plants, where water is recycled and reused, because water recycling comes at a cost. The cost of energy and equipment. In other words, water efficient operations save costs for power, cleaning media and treatment of effluents.

Get started – get water smart

The true cost of water comprises several parameters, for instance procurement, pre-treatment of water, heating and pumping cost, recycling of water and water for Cleaning in Place and treatment of effluents. In all processes, the choice of equipment defines the water efficiency.

The efficiency of components like pumps and valves has seen tremendous improvements, while new automation possibilities have emerged. Replacing legacy components with new generation technology holds great potential for improved water efficiency.

To make the most of investments in water and energy efficiency, you need to know where the effort pays off. Where is the biggest consumption, where are the losses, and where is the biggest potential for improvement?

This insight is where the efficiency journey starts and why Alfa Laval has introduced Optimize™, which takes a structured approach to water and energy efficiency. Optimize provides facts and insights that allow well-informed decisions and actions that help meet sustainability goals and reduce total cost of ownership.

Why water management and efficiency matters to a range of stakeholders use case

- Provides license to operate – legally and socially.
- Fulfills customer requirements to sustainable business practices upstream and downstream.
- Supports stakeholder perceptions that the company uses water resources responsibly with less negative impact on the local environment.
- Protects values and assures investors and markets that the company is here today and tomorrow.

What's to be gained with Optimize?

Financial

- Reduced energy and water costs
- Low risk investment and short pay-back time
- Reduced repair costs

Operational

- Reliable operations
- Roadmap for continuous improvements
- Consistent approach and benchmark
- Low failure rates
- High uptime
- Proactive approach to maintenance and upgrades

Sustainability

- Improved water efficiency
- Reduced CO2 emissions
- Leadership in sustainable production
- Meet consumer expectations

The roadmap to water-smart operation

Optimize consists of three simple steps:

1. Optimize onsite survey

Alfa Laval technicians make a tour of the plant to identify points where an upgrade, replacement or addition can bring substantial improvements in water and energy efficiency.

2. Optimize report

Based on the findings, Alfa Laval prepares a report with recommendations to upgrades, replacement or system additions, outlining potential savings and pay-back time.

3. Optimize upgrades

When the overall plan for upgrades is in place, Alfa Laval ensures that the improvements are implemented with no or minimum disturbance in the production.

With the Optimize report in hand, the installation is thoroughly documented with information about current consumption and current cost as a solid baseline for improvements. The report provides recommendations for future-proof upgrades that can help save water and costs, while improving the water and energy footprint of the plant.

A step-by-step implementation plan for component replacement, upgrades or modifications makes the task feasible and financially viable within the yearly budget framework.



Unlock the sustainability of your business

Accelerate production sustainability with enhanced processes. Sustainable food and pharma manufacturing begins with optimized processes. By making every process step as reliable and efficient as possible. And eliminating wasteful handling of water, energy, and product. Achieving real sustainability at the very core of your business.

Optimize™ by Alfa Laval accelerates your sustainability efforts by enhancing your existing processes. Together we can optimize your processes to accomplish more with less, without straining your operation or budget. Enabling substantial savings in water, energy, and chemicals to make your business part of a truly sustainable future.

Ensure competitive pricing of your product, by:

- Reduce waste and emissions
- Secure safe, efficient, and hygienic production
- Get the most from your raw materials

Optimize™
by Alfa Laval

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This is Alfa Laval

Alfa Laval is active in the areas of Energy, Marine, and Food & Water, offering its expertise, products, and service to a wide range of industries in some 100 countries. The company is committed to optimizing processes, creating responsible growth, and driving progress – always going the extra mile to support customers in achieving their business goals and sustainability targets.

Alfa Laval's innovative technologies are dedicated to purifying, refining, and reusing materials, promoting more responsible use of natural resources. They contribute to improved energy efficiency and heat recovery, better water treatment, and reduced emissions.

Thereby, Alfa Laval is not only accelerating success for its customers, but also for people and the planet. Making the world better, every day. It's all about Advancing better™.



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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