



Lean ethylene

Raising profitability in olefin plants



Boost plant efficiency

Ethylene manufacturing requires a constant focus on efficiency. Maximizing production and minimizing operating costs is crucial in order to stay competitive.

Alfa Laval is the perfect partner for making your plant ethyLEAN. We have long been a supplier of know-how and technology for petrochemical industries and refineries across the globe.

Our deep application knowledge and strong local presence give you the support you need, from initial planning to commissioning and continuous service.

10 MW recovered heat equals:

Fuel or steam:

€3,000,000/year

Reduced cooling water consumption:

880 m³/h

Reduced CO₂ emissions:

17,500 tonnes/year

Assumptions

- Steam price (10 bar) = €20/tonne
- 8,400 operating hours/year
- Fuel (natural gas) contains 48 MJ/kg
- Cooling water $\Delta T = 10^{\circ}\text{C}$

If you would like to learn more, please visit our website:

www.alfalaval.com/ethylene

or contact your local Alfa Laval representative. Contact details can be found on www.alfalaval.com.



Save energy

Economical use of process heat is crucial for ethylene producers. You can make full use of your energy with Alfa Laval's compact heat exchangers. They offer exceptional thermal efficiency – up to five times higher than shell-and-tubes.

Efficient energy recovery reduces fuel or steam consumption. It may even be possible to close down your auxiliary boilers and operate the entire plant on heat produced in the cracker.

If you already run your plant without auxiliary boilers, there may be opportunities to sell more steam to neighbouring plants. Making your plant more energy efficient means you have more steam to sell.



Reduce bottlenecks

Limitations in heating or cooling capacity can often be resolved by using more efficient heat exchangers and by recovering more heat. This reduces the load on the heating and cooling systems and the extra capacity can be used for increasing production.

The compact size of Alfa Laval heat exchangers means they offer an easy way to increase capacity where floor space is limited. Heat integration considered impossible with shell-and-tubes, can often be realised using compact heat exchangers thanks to their high thermal efficiency.

More efficient heat exchangers can also increase compressor capacity. The more you cool the gas, the more the gas volume is reduced.



Increase uptime

Alfa Laval heat exchangers are built to withstand the toughest conditions. Our transfer line exchanger ranges are specifically designed to eliminate common problems such as cracked inlets, coking and eroded welds. This makes frequent repairs and unplanned shutdowns things of the past.

Another important factor in maximizing uptime is minimizing time spent on maintenance. The high turbulence in Alfa Laval's compact heat exchangers makes them much less prone to fouling than shell-and-tubes.

When our heat exchangers eventually need cleaning, they offer easy access and fast cleaning. With our Cleaning-in-Place (CIP) equipment, you don't even have to open the heat exchanger to clean it.



Less environmental impact

Environmental legislation in many parts of the world makes it necessary to address issues such as CO₂ emissions and cooling water usage.

Reduced emissions are a natural consequence of saving fuel. If operating under a cap-and-trade system this directly translates into monetary gain.

Capacity problems caused by restrictions on cooling water usage and return temperatures can often be solved with better heat recovery in the plant. Instead of cooling off the heat, it is put back into use, for example by using it to preheat boiler feed water.

Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineering solutions.

Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

How to contact Alfa Laval

Contact details for all countries are continually updated on our web site. Please visit www.alfalaval.com to access the information.

