Sustainable efficiency

Increase reliability and profitability with Alfa Laval air-cooled heat exchangers

Improve the sustainability of your plant

Effective cooling of gases and liquids is a critical part of many industrial processes. Choosing the right equipment is essential for a sustainable operation – both in business and environmental terms. With the right cooling system you cut resource consumption, ensure long-term operating reliability and minimize maintenance.

Alfa Laval offers both the know-how and the technology you need to optimize your cooling processes. We have been designing and manufacturing cooling systems for over 50 years and can provide you with the perfect solution for your process cooling needs.

Our three technical platforms give us the flexibility required to engineer systems that are optimized according to a wide range of factors, such as cooling requirements, ambient temperatures, water supply, energy cost and process medium.

With Alfa Laval as your partner you get a robust cooling system that benefits both your business and the environment – that's what we call sustainability.

Please contact your local Alfa Laval representative or visit www.alfalaval.com to learn more.

- Lowest process fluid outlet temperature
- Compact size
- Low power consumption
- Minimal water consumption

Maximum cooling

Alfa Laval Niagara Wet Surface Air Coolers (WSAC®) are fully customized closed-loop cooling and condensing systems. Thanks to the WetSurface technology, WSAC systems offer a unique combination of high cooling performance, low operating costs and compact size. Alfa Laval Niagara WSACs are used in a wide range of industries such as oil & gas, refining, petrochemicals and power.

Lowest process fluid outlet temperature
An Alfa Laval Niagara WSAC uses evaporative cooling to reject heat from a process stream. The WetSurface technology makes heat transfer much more efficient than in a traditional air-cooled heat exchanger, resulting in a more compact system and lower power consumption. WetSurface technology also has the benefit of having a single approach to the wet bulb temperature, thereby lowering the output temperature of the process fluid more than is possible in other types of systems, for example cooling tower systems.

Minimal water consumption
A WSAC system can operate with higher cycles of concentration than cooling towers, i.e. the cooling water can be reused more times, and water of low quality, such as blowdown water from a cooling tower, treated wastewater or seawater can be used as makeup water. This means that water costs are significantly lower for a WSAC.

Full flexibility – wet or dry operation
Alfa Laval can supply HybridCool systems with sections for both dry and wet cooling, allowing operators to choose operating mode depending on ambient temperatures, thereby minimizing water consumption.

WetSurface
Maximum cooling efficiency and lowest possible outlet temperature.

FlexWater
A WSAC can operate on recycled water of low quality such as blowdown water.

HybridCool
Combined wet and dry bulb cooling for minimized water consumption.

ALOnsite
Global, onsite service by skilled engineers.

www.alfalaval.com/wsac

- Wide range of models, tailored for different applications
- Vspeed variable fan drive minimizes power consumption
- Robust design
- Easy to service

Leading energy efficiency

Alfa Laval ACE air-cooled heat exchangers are ideal in installations where water is unavailable or costly. Alfa Laval offers a wide range of models that can be tailored to your requirements. The patented Vspeed variable fan drive means that energy consumption is substantially lower than that of traditional air coolers. Common applications are in the oil & gas, and power industries.

Wide range of models
Alfa Laval's ACE range comprises six different models, offering numerous combinations of vertical or horizontal air flows, single or multi fan configurations, drive systems, cooling capacities, etc. Based on your specific requirements, our engineers will configure a system that gives you high performance and low OPEX.

Low operating costs
Alfa Laval's patented Vspeed variable fan drive automatically adjusts the fan speed according to the cooling requirements and ambient temperature, avoiding process fluid overcooling and liquid fallout. The result is substantial energy savings if compared to traditional air coolers that usually operate according to worst-case conditions at all times.

Easy service
All Alfa Laval air-cooling systems are designed for quick and easy maintenance with good access to parts such as tube bundles, fan motors, etc.

Alfa Laval also offers on-site assistance by our network of service engineers. We can help you with all types of service and improvements. We are just a phone call away.

Vspeed
Automatic fan-speed adjustment for minimal power consumption.

HyperFin
Slitted fin design maximizes heat transfer. See next page.

HybridCool
Combined wet and dry bulb cooling for minimized water consumption.

ALOnsite
Global, onsite service by skilled engineers.

Vspeed variable fan drive minimizes power consumption.

www.alfalaval.com/ace

- Fully customized design
- Handles very high temperatures and pressures
- Vspeed variable fan drive minimizes power consumption
- Available in many materials

For the toughest applications

Alfa Laval Olmi air-cooled heat exchangers are fully customized systems used in duties with high temperatures and pressures. These systems are the preferred choice for demanding positions in downstream oil and gas processing, refining and petrochemical industries, combining unmatched operating reliability with low maintenance requirements and minimal energy consumption.

Reliable uptime
Alfa Laval Olmi dry air-coolers are engineered-to-order systems used in applications with extreme operating conditions. Our experienced engineers take on the most complex design challenges and can assist in all aspects of the design phase including fluid dynamics, fatigue prevention and recommending the best materials for the optimum balance between OPEX and CAPEX.

Alfa Laval Olmi systems are manufactured according to the highest quality standards and are rigorously tested prior to delivery to ensure a long, trouble-free service life. The heat exchangers can be certified according to all leading standards and codes.

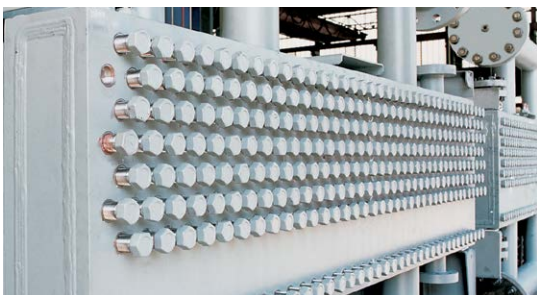
Efficient design
Alfa Laval's HyperFin slitted tube fins improve the air flow closest to the fin surface. This increases heat transfer efficiency, allowing the unit to be smaller than traditional air heat exchangers. The HyperFin design has a minimal effect on the turbulence of the air flow and thus minimizes impact to the airside pressure drop and power consumption of the fan.

Vspeed
Automatic fan-speed adjustment for minimal power consumption.

HyperFin
Slitted fin design maximizes heat transfer.

HybridCool
Combined wet and dry bulb cooling for minimized water consumption.

ALOnsite
Global, onsite service by skilled engineers.



Alfa Laval Olmi unit with tubes in duplex and alloy 6Mo.

www.alfalaval.com/olmi-air

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

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

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