The full effects of energy efficiency

Combined heat and power applications from Alfa Laval

Cogeneration or Combined heat and power application is a very effective and efficient form of power generation, allowing total energy utilization to reach 90%. Efficiency doesn't just come about by itself – it's the know-how behind it that produces great results.

Alfa Laval offers a complete range of cooling solutions for Cogeneration systems.

With an extensive focus on R&D, air heat exchangers (AHEs), gasketed plate heat exchangers (GPHEs) and brazed plate heat exchangers (BPHEs) have been developed to ensure lower emissions and substantial cost savings year after year due to the cost-effective, highly engineered design. It is not only about the products. Alfa Laval offers a partnership including our long experience, resources, and engineering proficiency.

Having delivered optimal heat exchanging solutions for more than a century, Alfa Laval meets a wide range of needs and offers unparalleled expertise – securing future-proof solutions that can be relied on time and time again.

AlfaBlue dry coolers

Low power consumption combined with high cooling efficiency
The AlfaBlue series is an extensive range of heavy-duty dry coolers, suitable for closed circuit cooling of various liquids.

The combination of advanced cross-fin tubes and new fin design of the innovative AlfaBlue dry coolers provide a cost-effective solution through optimal heat transfer. Units are available for both horizontal and vertical air direction and the coil configuration is optimized according to liquid flow.

The coolers can also handle two different liquid circuits, enabling lube oil cooling, LT (low temperature) and jacket water cooling, HT (high temperature) in the same unit, making the installation very compact.

The AlfaBlue series can be customized to suit specific requirements whether you need special fan motors that are explosion-proof or optimal protection against high temperatures. Units are available with different fin thickness and fin spacing.

Energy consumption and noise levels are remarkably low thanks to variable speed EC fan motors. The range is available with both copper and stainless-steel tubing, with capacities from 16 to 1,028 kW. All products are manufactured according to CE and PED rules.

Key benefits:

- Heavy-duty design with high corrosion resistance
- High cooling efficiency
- Low power consumption

Alfa-V dry coolers

Large capacities in optimized V-shape design
The Alfa-V series is a wide range of heavy duty V-type dry coolers for various industrial applications, suitable for closed circuit cooling of various liquids.

As part of the Alfa Laval air cooled dry cooler range, the innovative “V-type” design of this model provides large capacity with compact dimensions. The combination of advanced cross-fin tubes and new fin design of the innovative dry coolers provide excellent heat transfer and a cost-effective solution.

Thanks to the “V-type” design it is possible to have one circuit at one side and another independent circuit at the other side. This means that lube oil cooling, LT (low temperature) and jacket water cooling, HT (high temperature) can be utilized in the same unit, making the installation very compact.

The frame construction provides high rigidity for protection against vibration and thermal expansion, while casing and framework are highly corrosion resistant.

An innovative coil design provides excellent heat transfer. In standard execution, dry coolers are fitted with smooth copper tubing or stainless steel tubing.

Capacities range from 54 to 1,600 kW.

Key benefits:

- Large capacity with compact size
- Low power consumption
- Excellent heat transfer

Gasketed plate heat exchangers

A comprehensive range giving a flexibility of choices
Alfa Laval offers a wide range of plate heat exchangers in different sizes, optimized for specific temperature demands and capacities. Conventional Alfa Laval plate heat exchangers use heat transfer plates fitted with gaskets that seal off each channel and direct the fluids into alternate channels.

The design of the plates prevents fouling through even flow distribution, high turbulence and no stagnant areas.

The compact gasketed design makes it easy to separate the plates quickly and enables easy capacity adjustments by simply adding or removing plates whenever required.

The environmentally-efficient range is continually being updated and extended to include new technical features and design innovations.

All plate heat exchangers are available with different plate materials, stainless steel, titanium or various nickel alloys that secure corrosion resistance.

All units can be used with design pressures up to 25 or 30 bar and have capacities of up to 50,000kW.

Key benefits:

- High thermal efficiency
- Low installation and operating costs
- High performance with low hold-up volume
- Versatile, modular design

Brazed plate heat exchangers

Efficient heat transfer with an extremely small footprint
All brazed units are very compact producing exceptional heat transfer efficiency. The thin, corrugated stainless steel plates used in the brazed design are brazed together with copper. This forms a self-contained unit that can handle both high pressures and high temperatures. As a result, it can tackle large-capacity duties even if only limited installation space is available.

The brazed construction eliminates the need for gaskets, making units ideal in applications where temperatures and/or pressures are high.

The brazed plate heat exchanger consists solely of surfaces that actively contribute to heat transfer, resulting in significant increases in overall efficiency.

Units in the range are available in many different sizes and capacities, with varying plate patterns and connections for particular duties and performance specifications. Brazed units can be configured as single-pass, dual-pass or multi-pass installations, according to project requirements.

All brazed heat exchanger units comply with the European Pressure Vessel Safety

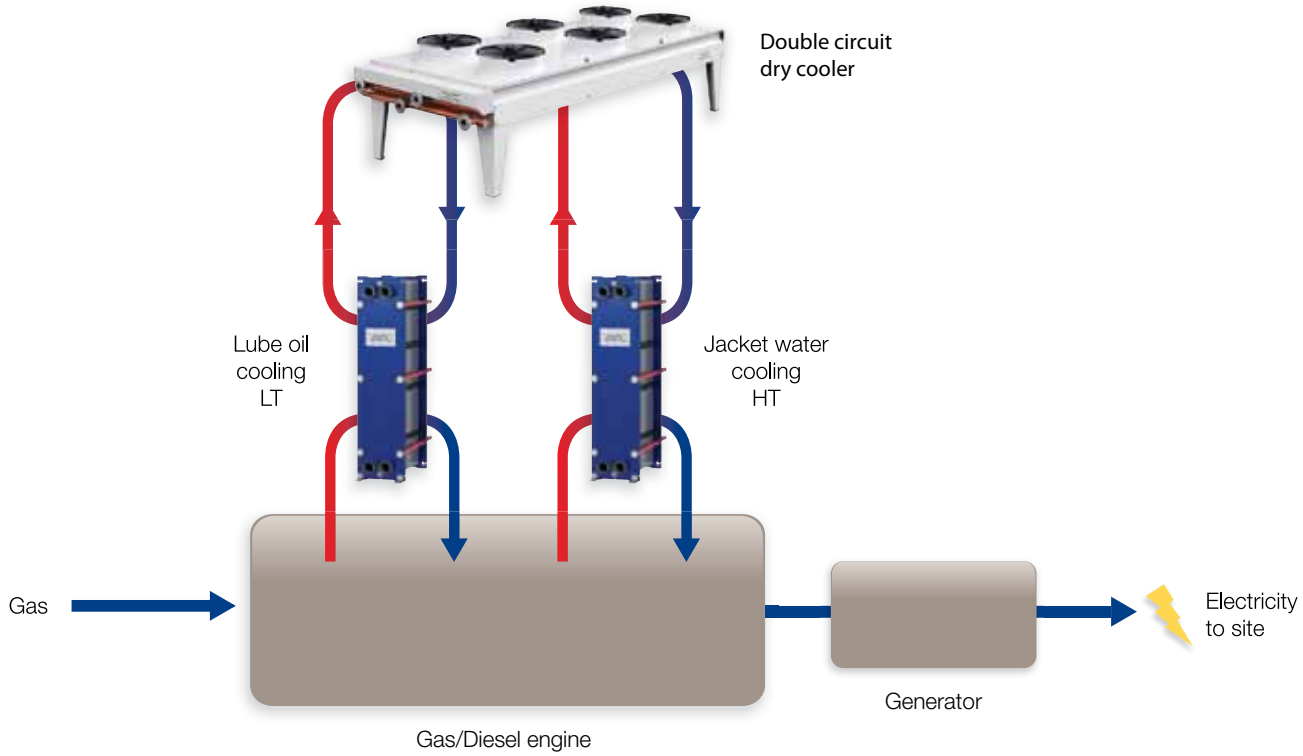
Directive, and can also be delivered according to other relevant standards and national codes, as required.

Alfa Laval brazed plate heat exchangers are available both with 316 and 304 stainless steel plates with a variety of mounting options and connections. The brazed plate heat exchanger can seal up to 30 bar pressures and can cover capacities up to 1,000kW.

Key benefits:

- For extreme temperatures and pressures
- Compact and lightweight
- High thermal efficiency
- Gasket-free, modular design

Alfa Laval components for cooling in a typical spark-ignition gas engine CHP (combined heat and power) system



Partners in performance

Alfa Laval works with a global network of sales offices and distributors who support customers locally with products, after sales and service. With Alfa Laval you can rely on genuine spare parts and knowledgeable service personnel dedicated to serving your heat transfer needs 24/7.

Alfa Laval has more than 100 sales offices and over 50 service centres worldwide.

Alfa Laval regional and national headquarters around the world.

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.