



April 2019

Alfa Laval's new gas-to-liquid plate heat exchanger portfolio promises a revolution for gas cooling duties

Alfa Laval is once again redefining the possibilities of thermal transfer, with the launch of an entirely new portfolio of gas-to-liquid plate heat exchangers. Engineered specifically to meet the needs of gas cooling duties, the compact technology can handle exceptionally high temperatures and the challenges of simultaneously working with both gas and liquid media.

“Cooling duties involving gas media are a challenge for many businesses, who have traditionally been forced to settle for bulky and inefficient shell-and-tube technology,” explains Fredrik Ekström, President Business Unit Brazed & Fusion Bonded Heat Exchangers, Energy Division at Alfa Laval. “Our new gas-to-liquid plate heat exchangers change all that. Not only do they offer much greater thermal efficiency, their footprint is around 75% smaller than shell-and-tubes used in the same applications.”

A heat exchanger that can handle more

While Alfa Laval has long had a comprehensive offering of efficient brazed plate heat exchangers, the new portfolio takes their product range a step further. Thanks to a revolutionary “dimple” plate design in a patented asymmetric configuration, the new units are optimized to handle the distinct challenges of dealing with gas media.

“This design enables very low pressure drop in applications that have very disproportionate flow rates between the two media,” says Staffan Nordström, Senior OEM Manager, BU Brazed & Fusion bonded Heat Exchangers at Alfa Laval. “Additionally, while a standard brazed plate heat exchanger supports media temperatures up to 225°C, the gas-to-liquid portfolio can handle gas temperatures of 750°C without suffering thermal fatigue.”

New possibilities in critical applications

Thanks to these technological advancements, the gas-to-liquid portfolio offers particular advantages when used in waste heat recovery applications. Alfa Laval has already proven these capabilities with a number of early customers, and the technology has quickly become well-established within combined heat and power (CHP) thanks to the combination of a high condensation rate with high thermal efficiency.

“There are a number of other applications that we believe will strongly benefit from this innovative technology,” adds Staffan Nordström. “In particular, we see great possibilities for air compressors as well as charge-air coolers.”

Two ranges to meet specific customer needs

The initial launch of the gas-to-liquid portfolio will feature two product ranges with models in various sizes. The GL range features a countercurrent channel arrangement to optimize thermal efficiency. The GLX range has a cross-flow arrangement and is designed with open inlets and outlets on the gas side to provide the lowest possible pressure drop.

“We can help customers select the range and model that makes the most sense for them, based on their specific application and operating conditions,” Staffan Nordström says. “But no matter which they choose, we are confident that they will quickly see what an absolute revolution this technology truly is!”

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[GL product page \(NEW!\)](#)

[GLX product page \(NEW!\)](#)

Editor's notes

About Alfa Laval

Alfa Laval is a leading global provider of specialized products and engineering solutions based on its key technologies of heat transfer, separation and fluid handling.

The company's equipment, systems and services are dedicated to assisting customers in optimizing the performance of their processes. The solutions help them to heat, cool, separate and transport products in industries that produce food and beverages, chemicals and petrochemicals, pharmaceuticals, starch, sugar and ethanol.

Alfa Laval's products are also used in power plants, aboard ships, oil and gas exploration, in the mechanical engineering industry, in the mining industry and for wastewater treatment, as well as for comfort climate and refrigeration applications.

Alfa Laval's worldwide organization works closely with customers in nearly 100 countries to help them stay ahead in the global arena. Alfa Laval is listed on Nasdaq OMX, and, in 2018, posted annual sales of about SEK 40.7 billion (approx. 4.0 billion Euros). The company has about 17 200 employees.

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