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Alfa Laval launches AlfaNova[®] GL50, the first heat exchanger developed specifically for fuel cell systems

Fuel cells will play an important role in the global transition to green energy. By unleashing the energy stored in hydrogen and derivatives such as ammonia, methanol, and methane, fuel cells can accelerate decarbonization of hard-to-abate sectors like shipping and heavy industry. The key to viability is maximized system efficiency and minimized energy losses. Introduced at the Alfa Laval Net-zero launch event, AlfaNova GL50 is the first heat exchanger developed specifically for fuel cell systems.

High efficiency for the green energy value chain

“More and more carbon-neutral fuels are being created through power-to-X processes. Fuel cells provide X-to-power conversion without combustion,” says Malgorzata Moczynska, President, Business Unit Brazed & Fusion Bonded Heat Exchangers. “To get the most out of these fuels, you must minimize energy losses at every step. This is the role of the AlfaNova GL50 heat exchanger – it helps fuel cell manufacturers achieve full system potential. It’s all part of our efforts to accelerate decarbonization.”

A new focus area

Alfa Laval is committed to supporting the scale-up and commercialization of carbon-neutral energy systems. The company offers a wide range of technologies that are relevant for fuel cell manufacturers and other applications across the hydrogen value chain. The launch of AlfaNova GL50 represents a strengthened focus on fuel cell requirements.

“The time is right,” says Tue Johannessen, Vice President, Business Development Fuel Cells and Energy Storage. “There is a growing demand for net-zero solutions. We know that fuel cells are more costly than conventional engines, but the high efficiency of fuel cell systems makes them very attractive. If you can cut the total system cost even further, you enhance the

viability of your solution. With our cutting-edge innovations, high-volume manufacturing and global infrastructure, we are the ideal partner for the fuel cell industry. We provide the right solutions at the right cost level. The AlfaNova GL50 is one of many steps in this direction. We are working on several other innovations – so stay tuned.”

Exceptional performance at extreme temperatures

The AlfaNova GL50 was first showcased at the Alfa Laval Net-zero launch event in mid-February 2023. Featuring patented AlfaFusion technology, AlfaNova heat exchangers are known around the world for their robustness and ability to handle the most demanding applications. The new AlfaNova GL50 is an asymmetric gas-to-liquid plate heat exchanger, made from 100% stainless steel. It handles gas flows up to 250 m³/h and inlet gas temperatures up to 750°C with exceptional performance. This makes it an optimal choice for fuel cell systems, as well as applications such as waste heat recovery, biogas post-treatment, and cooling of hydrogen from electrolyzers.

A compact powerhouse

“It is small enough to hold in one hand, but the AlfaNova GL50 gets the job done with very low pressure drop,” says Tue Johannessen. “The ability to condense water vapor makes it ideal for systems where fuels such as ammonia or methanol require reforming.”

This is an important step in Alfa Laval’s dedicated, long-term effort to support the fuel cell industry with highly efficient, industrial-scale solutions.

For more information, visit alfalaval.com/AlfaNovaGL

For further information, please contact:

Tue Johannessen, Vice President Business Development Fuel Cells and Energy Storage

Business Unit Brazed & Fusion Bonded Heat Exchangers, Energy Division, Alfa Laval

Phone: Mobile +46761278130

E-mail: tue.johannessen@alfalaval.com

[LinkedIn profile](#)

Therese Tønning, Marketing Communications Manager

Business Unit Brazed & Fusion Bonded Heat Exchangers, Energy Division, Alfa Laval

Phone: +46 46 36 72 09

E-mail: therese.tønning@alfalaval.com

[LinkedIn profile](#)

This is Alfa Laval

Alfa Laval is a world leader in heat transfer, centrifugal separation, and fluid handling, and 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 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.

Alfa Laval has 17,900 employees. Annual sales in 2021 were SEK 40.9 billion (approx. EUR 4 billion). The company is listed on Nasdaq Stockholm.

www.alfalaval.com