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## Newly launched Alfa Laval E-PowerPack converts waste heat into power, enabling energy savings and compliance

**By converting waste heat directly into electrical power, the Alfa Laval E-PowerPack is a game-changing advance in marine sustainability. An all-in-one unit for improving a vessel's Energy Efficiency Index (EEDI/EEXI) and Carbon Intensity Indicator (CII), it removes many tonnes of CO<sub>2</sub> per year – and significantly lowers fuel costs.**

### **Straight from waste heat to electricity**

Waste heat is a readily available but under-utilized energy source on board. Heat in the engine exhaust gas accounts for 50% of the energy from combusted fuel, and there is additional heat to recover from steam and liquids. With the launch of the Alfa Laval E-PowerPack, shipowners can put all these heat sources to work for savings and compliance with sustainability requirements.

The E-PowerPack uses Organic Rankine Cycle (ORC) technology to turn waste heat into clean electrical power. By means of a liquid-gas phase change, it can generate power from both high-temperature and low-temperature heat sources, ranging from engine exhaust gas at 550°C to jacket cooling water at 75°C. It is also a modular solution, allowing units with a net electrical output of up to 100 kW or 200 kW to be combined in a larger system.

“The E-PowerPack is compact, extraordinarily versatile and suitable for all vessels and fuels,” says Alfa Laval’s Danny Ingemann, Head of Global Sales. “That makes it a powerful addition to Alfa Laval’s other waste heat recovery solutions, which have supported energy efficiency for decades. By applying energy that would otherwise go lost, shipowners can save money, boost their environmental profile and stay competitive as regulations tighten.”

### **Cost-saving compliance with sustainability requirements**

By producing power from waste heat, the E-PowerPack reduces fuel consumption and use of the auxiliary engines, which provides payback in as little as 2–3 years. The same reductions improve EEDI/EEXI and CII, making the E-PowerPack a simple way to protect long-term vessel profitability.

“The E-PowerPack helps shipowners achieve the necessary index and retain a favourable CII rating for longer,” explains Ingemann. “That lets them avoid imposed operating limits, but it also supports a greener profile and potentially higher charter values. Such advantages add to the immediate E-PowerPack benefits of reduced fuel costs and emissions.”

### **An enabler for tomorrow’s zero-carbon operations**

As the marine industry continues to decarbonize, the E-PowerPack will play an even wider role. Because fuels like carbon-neutral methanol and carbon-free ammonia will be more expensive, shipowners will need savings to offset their higher costs. Moreover, solutions like the E-PowerPack will be key to using these fuels at all.

“Methanol and ammonia contain less energy than today’s marine fuels, and it will be a challenge to produce sufficient amounts for the world fleet using only renewable energy sources,” says Ingemann. “This is yet another reason for vessels to maximize their fuel efficiency, ensuring that little or none of the fuel energy goes to waste. The E-PowerPack will make a critical contribution to that balance, alongside fuel cells and other solutions that Alfa Laval has in the pipeline.”

To learn more about the Alfa Laval E-PowerPack and Alfa Laval’s approach to producing power from waste heat, please visit: [www.alfalaval.com/EPowerPack](http://www.alfalaval.com/EPowerPack)

### **For further information, please contact:**

#### **Danny Ingemann**

Head of Global Sales, Aalborg Boiler Systems and WHR solutions  
Alfa Laval Marine Division

**Phone:** +45 2223 8698

**E-mail:** [danny.ingemann@alfalaval.com](mailto:danny.ingemann@alfalaval.com)

#### **Anne Henningsen**

Marketing Communications Manager, Business Unit Boiler Systems  
Alfa Laval Marine Division

**Phone:** +45 2492 8610

**E-mail:** [anne.henningsen@alfalaval.com](mailto:anne.henningsen@alfalaval.com)

### **Editor’s notes**

#### **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

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