



**AALBORG** **CSP**  
- Changing Energy

Alfa Laval Aalborg Header-coil A/S

# INCREASED RELIABILITY AND EFFICIENCY OF ENERGY STORAGE AND PTX SYSTEMS

with header-coil heat exchangers from Alfa Laval Aalborg Header-coil A/S



## HEADER-COIL HEAT EXCHANGERS

The demand for reliable and efficient heat exchanger solutions grows as energy storage is becoming increasingly important.

Our header-coil heat exchangers are designed to withstand the thermal stresses, transient operation and cyclical load patterns typical for CSP, energy storage and PTX plants. It is further optimized for high duty applications e.g., Carnot battery, SMR and AMR. The operational benefits include:

- ✓ Rapid ramp-up and high thermal performance
- ✓ Leakage-free design
- ✓ High long-term reliability
- ✓ Low approach point
- ✓ High availability and profitability
- ✓ Low operation and maintenance costs

## NEXT GENERATION ENERGY STORAGE

Alfa Laval Aalborg Header-coil A/S is a strategic joint venture (JV) cooperation between Alfa Laval and Aalborg CSP A/S.

The collaboration aims at addressing the increasing global need for reliable heat exchangers and salt systems for long duration energy storage applications thereby enhancing competences, product development, and application knowledge in the header-coil heat exchanger technology.

The JV will, likewise, drive the advancement of e.g., steam generation systems, molten salt heat exchangers, PTX-salt systems, Carnot batteries for thermal-electrical storage and power blocks for the next generation of long duration energy storages ultimately enabling a future 100% renewable energy system.

## RENEWABLE ENERGY ON DEMAND

The growth of fluctuating renewable energy sources requires flexible, low-cost and efficient energy storage solutions.

Several solutions are currently being developed, many of which will be reliant on heat exchangers as core components. These solutions include Carnot batteries, Power-to-salt systems and molten salt storage for coal conversion. There are multiple benefits of energy storage including:

- ✓ Stable and cost-effective energy supply
- ✓ Balance between supply and demand
- ✓ Added system flexibility
- ✓ Security of supply
- ✓ Energy independence
- ✓ Supports sector coupling



**HEAT EXCHANGERS**

OIL-TO-SALT  
HEAT EXCHANGERS

THERMAL OIL  
STEAM GENERATORS

MOLTEN SALT  
STEAM GENERATORS



**ENERGY STORAGE SOLUTIONS**

POWER-TO-SALT  
SYSTEMS

CARNOT  
BATTERIES

COAL  
CONVERSION



**Want to know more  
about our solutions?**



Alfa Laval Aalborg Header-coil A/S

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