Alfa Laval Retrofit for Aalborg boilers – waste heat recovery

Saving energy and costs with auxiliary engine exhaust gas

The waste heat in auxiliary engine exhaust gas contains a large amount of energy that can be used for steam production or to generate electricity. Retrofitting an Alfa Laval Aalborg waste heat recovery system not only lowers emissions and reduces the strain on your oil-fired boiler, but also provides quick return on investment.

What we do

As the waste heat recovery leader, we offer efficient Alfa Laval Aalborg exhaust gas economizers to take advantage of waste heat from auxiliary engines. These can supplement steam production during port stays and cargo operations, as well as during a voyage on some vessels. The results are fuel savings and reduced maintenance costs for the oil-fired boiler, along with an improved environmental profile.

Our retrofit economizers are available in both tailored and standard configurations. In addition to supplying the hardware, Alfa Laval can supervise the installation or provide a complete installation package.

Benefits

- Nearly cost-free steam production
- Reduced maintenance costs for the oil-fired boiler
- Reduced operating costs
- Reduced air emissions
- Very short payback time for the retrofit investment

Short payback time

Alfa Laval's retrofit concept is designed for fast return on investment through energy savings. The normal payback time for a waste heat recovery retrofit is 1-1.5 years, but in the best cases it can be as little as 4-6 months. The speed of payback depends on fuel prices and the number of days the produced steam is utilized.

Scope of service

Alfa Laval Aalborg retrofit economizers reclaim energy otherwise lost as heat in auxiliary engine exhaust gas. They can be applied in different ways:

- **Direct utilization of steam**
  A basic waste heat recovery system provides steam for direct use in steam-driven processes on board.

- **Conversion of steam to electricity**
  When the steam turbine is incorporated into the system, steam produced with waste heat can be used to generate electricity.

Both solutions lower fuel consumption by reducing the need to use the oil-fired boiler.

Scope of supply

Alfa Laval supplies retrofit economizers in both tailored and standard configurations:

- **Tailored systems**
  For auxiliary engines ≥1500 kW
  Mid-size and larger auxiliary engines require more attention to sizing, spacing and the configuration of heating surfaces. With these engines, the Alfa Laval Aalborg XS-TC7A is used. The economizer is available in two customizable models, both with high-efficiency smoke tubes and a high gas velocity that minimizes fouling.

- **Standardized systems**
  For auxiliary engines 450-1500 kW
  Smaller auxiliary engines allow compact solutions with low complexity. For these engines, Alfa Laval supplies the Alfa Laval Aalborg Micro. The economizer's heating surface consists of parallel tube coils arranged in a vertical cylindrical shell plate.

In both cases, Alfa Laval can supervise the economizer installation or provide a complete supply and installation package.

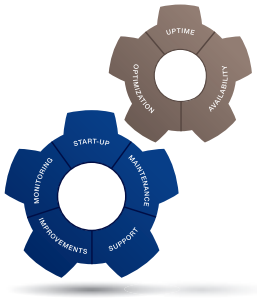
Other 360° Service Portfolio services for your equipment

- Alfa Laval Installation for Aalborg boilers
- Alfa Laval Installation Supervision for Aalborg boilers
- Alfa Laval Cleaning Services for Aalborg boilers – water washing kit
- Alfa Laval Replacement – boilers

Extending performance

with the Alfa Laval 360° Service Portfolio

Our extensive service portfolio offers all the services you need to ensure top performance, maximum uptime and operating efficiency from your Alfa Laval equipment throughout its life cycle. Our committed team's expertise and the availability of parts bring you peace of mind.



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.