

# SteamGen™ 4



*The best turn down ratio on the market  
10 – 100 % load in 3 minutes. Low furnace load – low emissions*



**Aalborg Engineering**

*understanding energy*



**“The best available technology on the market”**

## A Lifetime Investment

Aalborg Engineering specializes in the design and supply of steam boiler systems. Our objective is to become the preferred partner for customized boiler plants.

We will lead the way in ensuring the success and profitability of our customers projects, by providing highly efficient, reliable and competitive energy solutions within the agreed time of delivery. Proximity to customers and markets, optimization of know-how and experience, proven technology, excellent business practices, long term cooperation with pre-selected and well-known suppliers, are all important aspects of our partnership philosophy.

Our products are directed towards customers who require a high degree of adjustment in order to fulfill the technical, operational, and/or other requirements that are

crucial to the success of their projects. We always offer an optimized solution that includes numerous possibilities to develop and change the system’s configuration, so that it can be adjusted to a varying demand for energy.

Our Package Boilers are based on reliable solutions. Each individual boiler design is unique and offers the level of customization, know-how, flexibility, efficiency, environmental protection, installation, operation and maintenance required for your plant.

Aalborg Engineering recognizes that your investment is considered a lifetime investment.

## Your Lifetime Partner

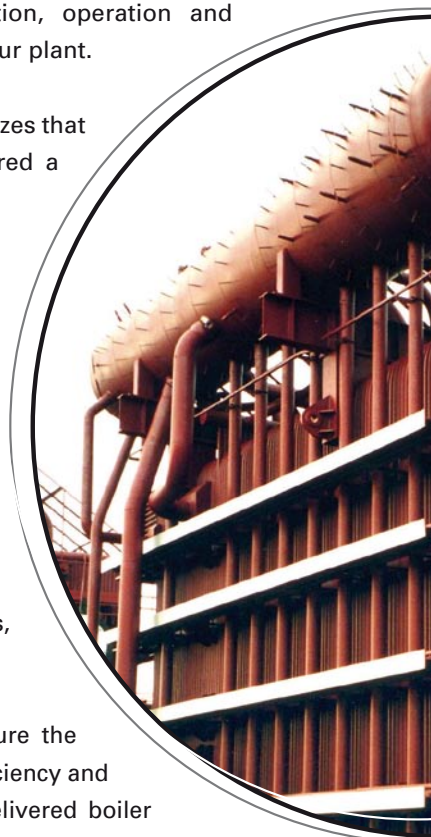
Our objective of becoming your lifetime partner for customized boiler plants, stems from our focus on proactive consultancy throughout the entire project. We ensure our customers are updated with regards to the ongoing development of the project. We consider it an added value that we offer suggestions about possible improvements or other solutions, instead of indiscriminately following the customer’s specifications.

Essentially, our partnership philosophy is all about trust. With company values such as credibility and professionalism, we endeavor to secure reliable consultancy for the customer. Combined with our company’s commitment to excellent business practices and conduct, this will enable us to continue expanding our principles of partnership in the future.

Our brand is closely linked to our technology, which is known for being unique, safe, robust and effective. We frequently offer solutions, which no one else can offer.

Furthermore, we also measure the boilers’ performance and efficiency and complete tests on all our delivered boiler systems. Our specially-developed software is continuously upgraded based on the latest knowledge from existing boiler solutions.

As a result, we are able to deliver solutions with the utmost performance and efficiency, at any given time.







## SteamGen™ 4

A SteamGen™ 4 solution applies where there is a demand for steam, power, or a combination of the two. Many industrial companies world-wide would benefit from this type of solution.

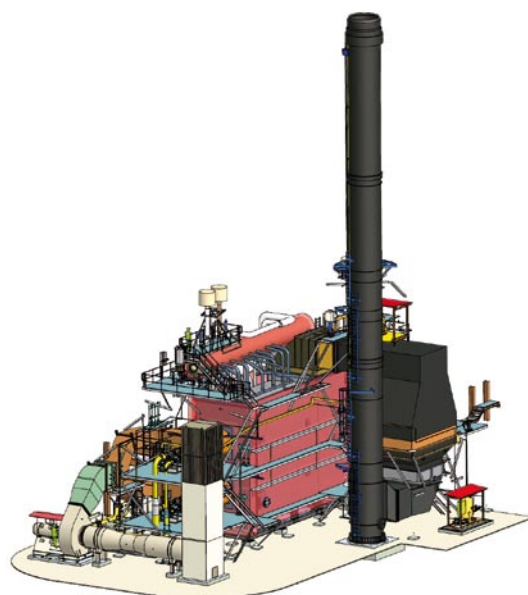
SteamGen™ 4 is a horizontal single drum package boiler. For applications within the high-pressure industrial package boilers, we are proud to say that this is the best available technology on the market.

Before the single drum design was available, the industry standard was a technology, which had some obvious disadvantages. As the industry became more and more dependent on a reliable steam supply with higher efficiency, lower emissions, faster load change rates, decreased assembly time, and lesser maintenance, it was necessary to find a new approach to the overall basic design.

The SteamGen™ 4 combines all these requirements and adds to this several other features, which make the boiler even more superior.

Our design has several unique features: It is of a modular construction and fully-welded (no expanded tube to shell connections). It has water-cooled membrane walls and low furnace load and emissions. There is a highly-efficient and fast start-up and load change rate. The boiler is also fully-drainable. Furthermore, it is easy to clean the heating surfaces and remove soot.

The SteamGen™ 4 boiler is designed according to internationally recognized boiler codes such as PED/EN.



3D rendering of SteamGen™ 4 for Shell, Qatar.



Svanemølle Værket, Copenhagen with two SteamGen™ 4 (pic. DONG Energy)

# SteamGen™ 4

## – Product Overview

### Design Data

Steam capacity	15-250 t/h (typical range)
Operating pressure	10-150 bara (typical range)
Steam temperature	Saturated - 540 °C (typical range)

### Product Features

Fast start up and response time  
Fully welded  
The design is modular built  
Water cooled membrane walls  
Low furnace load  
Low emissions  
High efficiency  
Low water content  
A well defined circulation system  
No radiant superheater  
Fully drainable  
Easy cleaning of heating surfaces  
Stand-by heating

### Customer Benefit

▶ Large turn down ratio  
▶ Less maintenance  
▶ Secure transport, safe and fast erection  
▶ High combustion temperature  
▶ Low emissions, stable circulation ratio  
▶ Environmental friendly energy source  
▶ Less fuel costs  
▶ Fast start-up and load change rates  
▶ Accurate performance  
▶ Long lifetime and improved temp. control  
▶ Limited risk of frost damage  
▶ Limited down time for manual cleaning  
▶ Operational boiler at all times

### Product Range

With the SteamGen™ product range, Aalborg Engineering can customize any complete boiler or heat recovery plant with all relevant types of equipment:

- **SteamGen™ 4** – Industrial package boiler
- **SteamGen™ 6** – High fired HRSG
- **SteamGen™ 8** – HRSG for combined-cycle power plant
- **SteamGen™ 10** – HRSG for industrial process gas
- **Auxiliary systems**



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