

Invented for life



Bosch electric steam boiler ELSB

Sustainably generated steam with green electricity

- ▶ Generate up to 7.5 t/h steam highly efficiently using just electricity – no combustion, no emissions
- ▶ High steam quality, excellent dynamics, full flexibility
- ▶ Reduced expenditure: No flue gas, no fuel supply
- ▶ Application-specific design and particularly reliable operation
- ▶ Smart boiler control and seamless system integration
- ▶ Clever control: Specific use of electricity surpluses (optional)
- ▶ System equipment and service from a single source

Technical data	
Heat transfer medium	High-pressure saturated steam
Output	from 350 to 7,500 kg/h
Energy source	Electricity (400/690 V)
Max. safety pressure	up to 24 bar
Max. temperature	up to 224 °C
Max. efficiency	up to 99.6 %



Sustainable steam with green electricity

Avoid CO₂ emissions by using green electricity: Generate 350 to 7,500 kg/h of steam completely electrically with the ELSB electric steam boiler from Bosch. Particularly sustainable and a high efficiency of up to 99.6%.

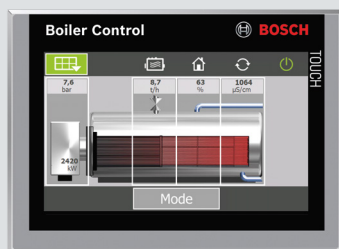
With the ELSB, you generate up to 7.5 t/h of steam per unit at a maximum of 24 bar – **with up to 99.6% boiler efficiency**. When using renewable electricity, its operation is **completely CO₂-neutral** and particularly environmentally friendly.

The electric boiler from Bosch is individually configured, manufactured and equipped **for your specific application**. Replacement components are integrated into the heating assembly as standard in order to increase long-term availability. The ELSB can also be integrated into existing boiler systems, enabling for **multivalent operation**.

The steam chamber on the ELSB produces **high quality steam** and has low residual steam moisture. Thanks to its **variable output**, the thyristor switching of the control achieves an extremely high level of efficiency across the entire load range. Furthermore, the output can be automatically adjusted to your requirements or to available surpluses in the self-generated electricity.

The ELSB electrical steam boiler **does not emit any flue gas**. Neither the chimney, the flue gas after-treatment components nor the infrastructure for the fuel supply are required at the installation site. There is also no need for approval or maintenance for the flue system. This **reduces the space requirement, as well as the duration and costs** for the installation.

In addition to the boiler equipment, Bosch offers components for water treatment, condensate management and energy saving for the ELSB. In accordance with your specific requirements, you receive a **complete system from a single source**. Bosch's industrial service is available for **pre- and after-sales advice and maintenance** of your ELSB system.

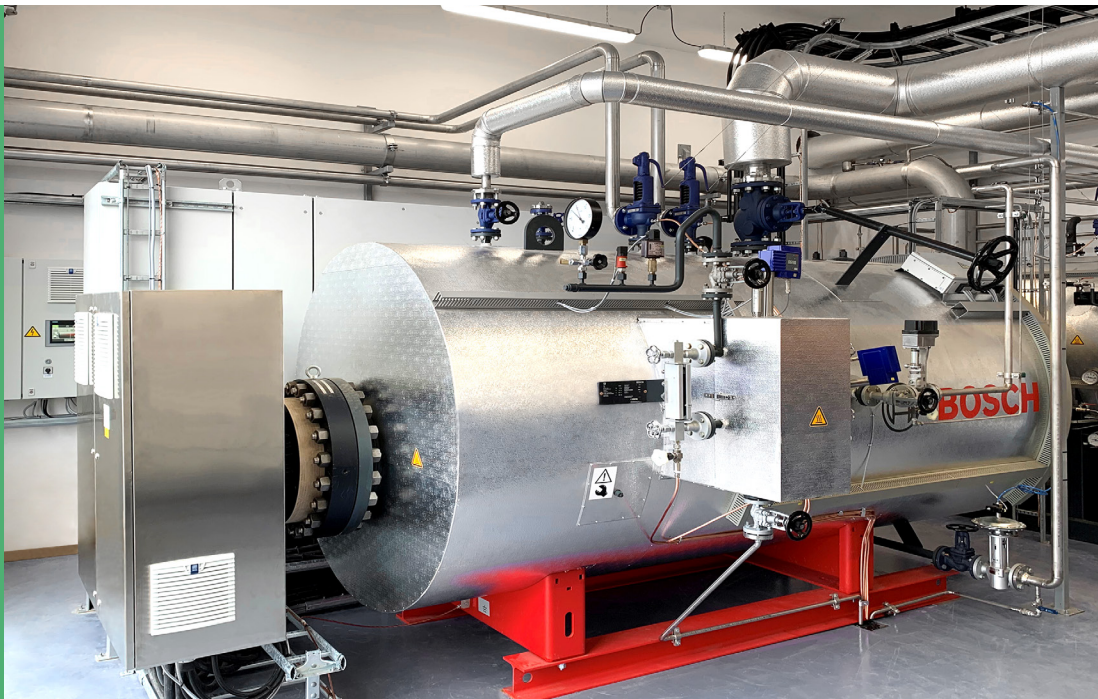


The **BCO boiler control system** lets you easily control the ELSB using a touch display. The **SCO system control** also offers the option to integrate multi-boiler systems. Both Bosch controls are compatible with all common control systems and, as an option, come with protected remote access.

CO₂-neutral steam in Iceland

100% electric and climate-neutral: this is the new ELSB steam boiler at a fish factory in Iceland. The “green” steam supports the production of sustainable packaging and contributes to climate protection in the process.

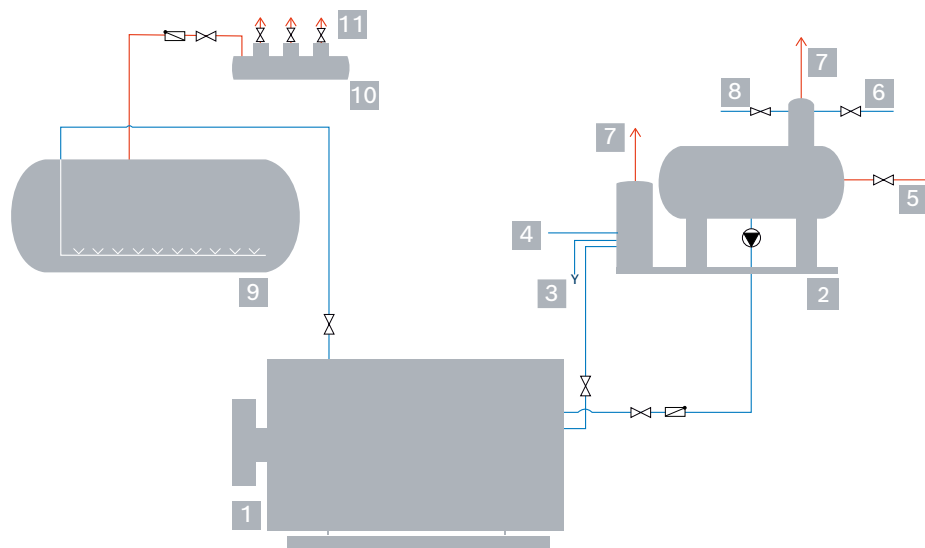
As a pilot project, the company which produces sustainable packaging for its own fish products uses an ELSB from Bosch with 4 t/h of steam. The boiler is powered by renewable sources such as water and wind, making steam generation particularly sustainable and resource-friendly.



In addition to emission-free steam generation, the Bosch plant is very impressive with its remarkably flexible operation. The electric steam boiler enables a fast and precise response to the varying demands of packaging production. Compared to a boiler with a burner, the ELSB can be operated at full load faster and has a wider control range – continuous from 0–100%. In addition, there are no pre-ventilation losses when the boiler is switched on and off. The electrical power supply and the boiler control unit (BCO) are ideally matched to the system. The BCO optimises the interaction between the

ELSB, steam accumulator and consumers in production. This ensures consistently high steam quality, efficiency and process reliability. A water service module supplies the boiler automatically with thermally treated feed water.

The ELSB electric steam boiler makes the Icelandic customer's steam processes completely CO₂-neutral, highly efficient and offers excellent dynamics. A customised and future-proof solution from Bosch.



- 1 Electric steam boiler ELSB
- 2 Water service module WSM-V
- 3 Discharge to sewer
- 4 Cooling water
- 5 Heat-up steam
- 6 Make-up water
- 7 Outlet via roof
- 8 Condensate
- 9 Steam accumulator module SAM
- 10 Steam distributor
- 11 To consumer

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