



Bosch Industriekessel at ISH – hall 12, C80

Sustainable steam and heat solutions for industries and energy suppliers

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- ▶ Electric steam boilers, hybrid systems and hydrogen are paving the way for carbon neutrality
- ▶ Automation and digitalisation help achieve sustainability
- ▶ Interactive configuration of individual steam generators

At this year's world-leading ISH trade fair which will take place from 13th to 17th March 2023 in Frankfurt, Bosch Industriekessel will showcase sustainable steam and heat solutions for industries and energy suppliers. Bosch's boiler experts support companies around the world in matters of carbon neutrality, energy savings and system availability. "With our technologies, we are pioneers for CO₂-neutral heat production, both in industrial processes and in district heating applications. We offer electric steam boilers, hybrid systems and hydrogen boilers. At the same time, we help companies to operate their new and existing systems more efficiently, sustainably and reliably," says Sven Rathmann, Managing Director of Bosch Industrial Boilers.

New opportunities thanks to electric steam generation

Electrification is a key driving force in the shift away from fossil fuels and towards renewable energy. At this year's ISH, Bosch will present its new ELSB electric steam boiler, which will be showcased live at the stand. The ELSB is completely electric and is carbon-neutral when powered by green electricity. With 300 to 7500 kilograms of steam per hour at up to 24 bar, the ELSB covers steam processes with temperatures of up to 224 °C. The increasing expansion of renewable energies and the associated surpluses mean that electrically heated steam boilers are an attractive solution. "Demand for electric steam generation is booming. Companies from various industries and countries like Sweden, France, Germany, Hungary, Singapore and even Iceland have already bought an electric steam boiler from Bosch," highlights Sven Rathmann.

Hybrid boiler systems are another pioneering technology. Thanks to their design with an electric heater and burner, different energy sources can be used simultaneously. This

creates flexibility and reduces dependence on fossil fuels. If green energy sources are used in these systems, steam generation can also be carbon-neutral. Industrial boilers from Bosch are prepared for green fuels. The steam and heat generators can be operated with 100% hydrogen or biofuels. In addition, many existing systems are also qualified for an upgrade to renewable energy sources. At ISH, Bosch will demonstrate a heating system with a hydrogen burner. A comparable Bosch system is used, for example, at the Wunsiedel energy park in Germany, where an electrolysis system creates hydrogen from green electricity, some of which can be used in heat generation in future.

Digital and automated: Boiler house 4.0

Digitalisation and automation can also make a significant contribution to sustainability. Bosch uses its control systems which are configured and manufactured in-house for industrial boiler systems. The software in these systems automates complex steam and heat processes and ensures transparency. Intelligent analysis and recommendation for actions also offer more options for rapidly detecting energy losses, reducing fuel consumption and maximising system availability. Bosch will demonstrate this at the stand with its range of control systems.

Interactive configuration of individual steam generators

How much energy and CO₂ can a steam boiler system save? How quickly does this pay off? What opportunities does switching to alternative energy sources offer? Visitors can also generate exciting evaluations on site with an efficiency configurator. "The app configures potential energy savings based on customer-specific load profiles. Cost and cost-effectiveness comparisons with the use of hydrogen, electricity and hybrid systems can also be mapped and evaluated," says Daniel Gosse, Head of Marketing and Academy at Bosch Industrial Boilers, adding: "At this year's ISH, we will not only be showcasing technology for sustainable steam and heat production. Our experts will provide interested parties with advice about which solutions would be best suited to their infrastructure, processes and individual requirements. From industry, for industry, as it were."

Press photos: #cdb255d9, #9f926f5e, #b0996ce8

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Bosch Industriekessel GmbH, a Bosch Thermotechnik GmbH company, has been developing and manufacturing project-specific heating and process heat systems for more than 150 years. In keeping with its “Invented for life” principle, Bosch Industriekessel creates future-proof energy systems. The steam and hot water boilers increase the energy efficiency in production, buildings and district heating grids – by means of sustainable energy use and the seamless integration of Industry 4.0 applications. CO₂-neutral heating and process heat solutions with hydrogen and electrification help pave the way to carbon-neutral heating. Around the world, Bosch Industriekessel customers are offered a universal product portfolio, as well as planning support, project management and after-sales services such as maintenance and 24/7 support – all from one source.

Additional information is available online at www.bosch-industrial.com

The Bosch Group is a leading global supplier of technology and services. It employs roughly 402,600 associates worldwide (as of December 31, 2021). The company generated sales of 78.7 billion euros in 2021. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group’s strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is “Invented for life.” The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch’s global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company’s future growth is its innovative strength. At 128 locations across the globe, Bosch employs some 76,100 associates in research and development, of which more than 38,000 are software engineers.

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