

Electric & Hybrid Marine Expo: Bosch presents sustainable electric drives for yachts and recreational boats

The future of electrified drives

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- ▶ Bosch supplies components and system development for boat electrification
- ▶ Proven technologies from the automotive sector ensure high profitability, reliability, and robustness
- ▶ Compact dimensions allow easy and fast system integration into the boat
- ▶ Outlook: new electric drive system platform (EDSP) – a system solution for simple, fast integration into the boat

Farmington Hills – The electrification of cars and public transport continues to grow. A next step is to drive the electrification of maritime solutions to reduce environmental pollution and better protect lakes and rivers in metropolises worldwide. This is a trend seen at shipyards and many boat manufacturers. Increasing customer demands for an eco-friendlier solution are also spurring the industry on. Bosch Engineering therefore offers electrification solutions for recreational boats and motorized yachts, enabling shipyards, shipbuilders, and system integrators to implement drive electrification quickly and easily. “With our electrification solutions we intend to play a key role in driving this change in the maritime sector. Whether boat manufacturers require an individual or platform solution, we want to offer them the optimal solution for their needs. In addition to providing original equipment, our solutions can also be used to retrofit existing fleets of boats,” explains Philipp Kurek, who is responsible for off-highway and maritime solutions at Bosch Engineering.

Highly dynamic electric drive offers new degree of enjoyment

Boat manufacturers receive individual components that they can integrate into their systems themselves. The overall system for boat drive electrification from Bosch consists of an electric motor with an optional gearbox, an inverter with an integrated DC/DC converter, and an electric control unit as the system’s core component. The motors are available in 90 and 140 kW power levels. The design

of the 400 V permanent magnet synchronous motor is characterized by a high-power density and very high efficiency. The inverter is equipped with a powerful DC/DC converter for supplying the 12 V onboard power supply system. The transmission impresses with its high efficiency and quiet, low-maintenance operation.

The compact dimensions enable boat manufacturers to easily integrate the components even into small spaces or to retrofit existing applications. The low overall weight of the components allows the maximum range of the boat to be increased. The dynamic behavior of the electric drive effortlessly drives pleasure boats and yachts and offers a new level of driving pleasure.

Outlook: Electric drive system platform – simple integration thanks to platform approach

With the electric drive system platform (EDSP), Bosch Engineering offers boat manufacturers a solution for electric boat drives. This comprises Bosch's own drive components, such as the electric motor, inverter, and transmission, as well as solutions for all other relevant components, such as the high-voltage battery, charger, and cable harnesses that come from third-party providers. Users also receive a description of all the key information they need to incorporate the technology into their boat. This includes a system guideline, component specifications, electronic control unit software, and a commissioning packet. Ultimately, the EDSP approach significantly shortens the development time to series use. With the EDSP, boat manufacturers benefit from a predefined solution that can be installed quickly and cost-effectively in recreational boats or yachts. The EDSP will be available for the US market by end of 2024.

Visitors and interested parties can find out more about Bosch Engineering's electrification solutions at **Electric & Hybrid Marine Expo** at booth 6060.

Further information:

<https://www.bosch-engineering.com/stories/stories-detailpages/marine.html>

<https://www.bosch-engineering.com/branches/ohw-overview.html>

<https://www.bosch-presse.de/pressportal/de/en/salone-nautico-venezia-venice-boat-show-bosch-presents-sustainable-electric-drives-for-yachts-and-recreational-boats-255040.html>

<https://www.bosch-presse.de/pressportal/de/en/bosch-engineering-and-x-shore-develop-new-electric-drive-system-for-the-x-shore-1-255424.html>

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About Bosch

Having established a presence in North America in 1906, today the Bosch Group employs 40,200 associates in more than 100 locations in the North American region (as of Dec. 31, 2023). According to preliminary figures, Bosch generated consolidated sales of \$16.4 billion in the U.S., Mexico and Canada in 2023. For more information visit www.bosch.us, www.bosch.mx and www.bosch.ca.

The Bosch Group is a leading global supplier of technology and services. It employs roughly 428,000 associates worldwide (as of December 31, 2023). According to preliminary figures, the company generated sales of \$99.4 billion in 2023. Its operations are divided into four business sectors: Mobility, 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 470 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At 136 locations across the globe, Bosch employs some 90,000 associates in research and development, of which roughly 48,000 are software engineers.

The company was set up in Stuttgart in 1886 by Robert Bosch (1861–1942) as "Workshop for Precision Mechanics and Electrical Engineering." The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant upfront investments in the safeguarding of its future. Ninety-four percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The remaining shares are held by Robert Bosch GmbH and by a corporation owned by the Bosch family. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust.

Additional information is available online at www.bosch.com, www.iot.bosch.com, www.bosch-press.com.

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