

PRESS INFORMATION

German Innovation Award 2022 for Subsea Technology from Bosch Rexroth

Manuela Kessler | 25.05.2022 | Lohr am Main | PI 021/22

Electric Subsea Valve Actuator SVA R2 reduces CO2 emissions and costs of subsea systems



Bosch Rexroth receives the German Innovation Award 2022 in the category “Excellence in Business to Business – Machines and Engineering” for the electric Subsea Valve Actuator SVA R2. (Image source: Lutz Sternstein)

An independent, interdisciplinary jury honored Bosch Rexroth with the German Innovation Award 2022 in the “Excellence in Business to Business – Machines and Engineering” category for their electric Subsea Valve Actuator SVA R2. The SVA R2 actuates valves in subsea installations at depths of up to 4,000 meters and is also suitable for novel process systems, for producing green hydrogen, and for carbon capture and storage applications. Compared to the hydraulic actuators previously in use, it is especially environmentally friendly, economical, and fulfills the most stringent safety requirements. It improves the energy efficiency of process systems and significantly reduces CO2 emissions.

Established by the German Bundestag and sponsored by the German industry, the German Innovation Award honors products and services from various sectors that break new ground through their added value. The focus is on the benefits for the user. Supported by the German Design Council and selected by an independent, interdisciplinary jury of high-ranking individuals from the German industry, the prize has been awarded for design, brands and innovation achievements since 1953. The Subsea Valve Actuator SVA R2 from Bosch Rexroth makes an important contribution towards a more climate-friendly operation of installed subsea systems and the scale up of innovative concepts for the energy transition.

Whether in the optimization in the process industry, the realization of capture and storage concepts of carbon dioxide (CCUS) or the production of green hydrogen at sea: The SVA R2 significantly reduces investment and operation costs. The industrialized modules are designed for in practice maintenance-free operation over 25 years.

Currently, subsea systems use hydraulic actuators controlled by large power units via hydraulic lines spanning many kilometers. Even for medium-sized systems, the line length can be up to

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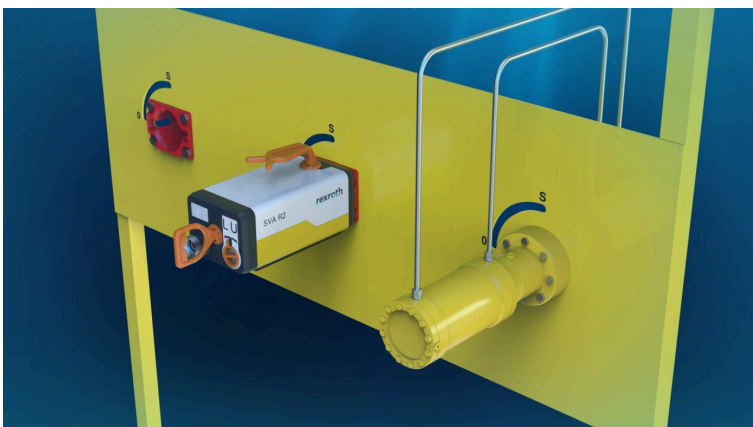
several kilometers. The SVA R2, on the other hand, only requires the power of a sensor with a 24 V DC and less than 48 W power supply via an electric cable. It accelerates the electrification of subsea process systems because it allows to remove the entire hydraulic installation without the need to install cost-intensive high voltage power lines.

The SVA R2 has similar dimensions to a hydraulic cylinder and can be retrofitted into existing installations. It is currently the only subsea electric actuator that fulfils all international and industry-specific safety standards up to Safety Integrity Level SIL3 according to IEC 61508 and IEC 61511. Real-size prototypes have successfully completed functional and safety tests. Planning is underway for the first pilot tests in subsea systems. The electric actuators are scalable in size and functions and set a milestone for sustainable process systems under and above water.

Caption, image above: Bosch Rexroth receives the German Innovation Award 2022 in the category “Excellence in Business to Business – Machines and Engineering” for the electric Subsea Valve Actuator SVA R2 (from left): Markus Kubacki, Subsea Automation Systems, Dr. Alexandre Orth, Head of Subsea Automation Systems and Dr. Bruno Schneider, Head of Engineering Systems and Solutions, Bosch Rexroth AG. (Image source: Lutz Sternstein)



The SVA R2 offers field-proven safety technology, open interfaces and a low-voltage supply. It reduces procurement and operating costs for installed und new subsea systems. (Image source: Bosch Rexroth AG)



The electric Subsea Valve Actuator SVA R2 replaces previously used hydraulic cylinders 1:1 and requires only one cable for power supply and communication. Hydraulic lines several kilometers in length along with the power units and controls are no longer required. (Image source: Bosch Rexroth AG)

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Basic Information Bosch Rexroth

As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, and Factory Automation. With its intelligent components, customized system solutions and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries, more than 31,000 associates generated sales revenue of around 6.2 billion euros in 2021.

Basic Information Bosch

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.

Press Contact

Please get in touch with our Press Contact



Manuela Kessler

Spokesperson
technology topics
+49 9352 184145

Manuela.Kessler@boschrexroth.de