

## Press Release

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### **Ecoclean meets current and future challenges with diversification Answers to the transformation processes in the industry**

**The economy is undergoing a transformation that poses challenges for many areas of industry. New products and various megatrends require adjustments to manufacturing technologies as well as to the range of products and services. Ecoclean GmbH is proactively addressing this change through greater diversification of the solution portfolio for industrial component cleaning and the new business area of hydrogen technology.**

Energy transition, sustainability, demographic change, mobility, automation and digitization, and security - these megatrends are resulting in technological and social changes. And at an increasingly rapid pace. This development demands increasingly higher flexibility and agility from companies. This is also evident in the field of industrial parts cleaning: Whereas yesterday it felt like the automotive industry was setting the standards in terms of cleanliness requirements, today it is completely different industrial sectors, each with its own specific requirements. Ecoclean, one of the world's leading suppliers of equipment and systems for industrial component cleaning, surface treatment and automation, is responding to these changes with a future- and market-oriented diversification strategy. The course for this was already set several years ago with corresponding financial and personnel investments. As a result, new solutions for high-tech industries can now be offered in addition to equipment and systems for tasks in the previous industrial sectors, such as the automotive and supplier industry, mechanical engineering, joining technology, the jewelry and watchmaking industry, and the aerospace industry.

## **High Purity - Cleanliness in the third dimension**

This includes, for example, the semiconductor industry and its suppliers. To be able to manufacture ever smaller and more powerful microchips by means of EUV lithography, extremely high demands are placed on the components for the production equipment in terms of purity. In addition to ultra-fine particulate residual impurities in the nanometer range and extremely strict specifications regarding filmic contamination, outgassing rates for organic substances and residual moisture as well as "prohibited" substances/elements play a quality-critical role here. Likewise, stringent cleanliness requirements must be met for vacuum technology components for the UHV, XHV and UCV range - for example in high-power laser systems, high-tech measuring, and analysis equipment. Precision optics, micro-optical parts, and sensor systems, among others for semi-automated and autonomous driving as well as digitization applications in industry, also require a very high degree of cleanliness for lasting fault-free function. For these challenging tasks, Ecoclean offers industry and application-specific solutions from pre-cleaning to intermediate and final cleaning connected to or integrated in a clean room. For the design of process and plant technology, the company has its own High Purity Test Center with a validated clean room and corresponding measurement technology.

## **Turnkey solutions for medical technology - MDR and FDA compliant**

High cleanliness requirements have always been commonplace in medical technology. With the introduction of the European Medical Device Regulation (MDR), the requirements for cleaning medical devices such as implants, instruments, and equipment, as well as for qualification, documentation, and traceability of the processes, have become even stricter. In the meantime, the U.S. Food & Drug Administration (FDA) is planning to harmonize its quality system regulation with the MDR, so that uniform regulations will apply regardless of market access. To solve the very different tasks in medical technology in a requirement-oriented, efficient and sustainable manner, Ecoclean not only offers a complete and globally available portfolio of qualified cleaning systems. Cooperation with renowned partners also

enable the realization of turnkey projects with corresponding packaging and cleanroom solutions. Software specially developed for medical technology, RFID technology and audit trail ensure that all specifications regarding component identification, documentation and traceability are completely fulfilled. In addition, the company's experts provide support with qualification (IQ, QQ and PQ) on request. Thanks to the company's comprehensive medical technology and regulatory know-how, combined with extensively equipped technology centers including a cleanliness laboratory and validated cleanroom, the technically and economically optimal solution can be devised for every cleaning task. It can be easily duplicated for further production sites, which accelerates qualification and commissioning.

## **Green hydrogen - energy source of the future**

By entering into the development, manufacture and sale of electrolyzers for the production of green hydrogen and solutions for its use, the company is opening up a new business area. To this end, Ecoclean and the Zentrum für Sonnenenergie und Wasserstoff-Forschung Baden-Württemberg (ZSW) have pooled their expertise in the joint project "EcoLyzer BW". Based on the robust and well-tested system technology for alkaline pressure electrolysis developed by the ZSW and Ecoclean's expertise and decades of qualification in process engineering and industrial production technology, electrolyzers are designed as a modular system with compact standard modules. With power classes initially ranging from one to ten megawatts, they enable the simple and cost-efficient construction of electrolyzers that can be adapted to a wide range of applications, for example in industry, mobility, energy supply for neighborhoods and storage of regeneratively generated, surplus energy from wind power and photovoltaic plants. A first solution in this area was completed in September 2023 with a test rig for alkaline pressure electrolysis. It will make it possible to test and validate electrolysis stacks with an output of up to 500 kW and a diameter of 1,200 mm.

Through this diversification strategy, Ecoclean is helping to meet the challenges associated with disruptive developments as well as various megatrends.

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Photo: Ecoclean\_Diversifikation



With the changes in numerous industrial sectors, the tasks in industrial parts cleaning are also changing. This requires manufacturers to diversify their product and service portfolios more strongly.

Photo: Ecoclean\_HPO-Medtech



High-tech industries such as the semiconductor supply industry, precision optics and medical technology require product and industry-specific cleaning and turnkey solutions for the highest cleanliness requirements.

Photo: Ecoclean\_EcoLyzer Teststand



An initial solution in the new electrolyzers business area was completed in September 2023 with a test rig for alkaline pressure electrolysis.

Pictures: Ecoclean GmbH

## **SBS Ecoclean Group**

*The SBS Ecoclean Group develops, produces, and markets forward-looking machinery, systems and services for industrial part cleaning and surface treatment applications. These solutions, which are among the best in the world, help companies around the globe to manufacture their products efficiently and sustainably in high quality. Customers come from the automotive and supplier industry, as well as the broad industrial market - from medical, micro, and precision engineering through mechanical engineering and the optical industry to power engineering and the aviation industry. Ecoclean's success is based on innovation, cutting-edge technology, sustainability, customer proximity, diversity, and respect. The Group has twelve locations in nine countries throughout the world and employs more than 900 people.*

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