

## **Press release**

Leverkusen, Schattdorf, Allendorf, [March 4<sup>th</sup>, 2024]

### **Innovative collaboration: Dielectric elastomer actuators (DEA) ready for industrial market launch in 2024**

*Momentive Performance Materials, Inc. (Momentive), Datwyler and BSC Computer announce their collaboration and the industrial market launch of solutions focused on the innovation of 'Dielectric Elastomer Actuators' (DEA).*

Until now, the technology based on electroactive polymers (EAP) was primarily known only in the research environment. This collaboration provides an avenue to transfer the state-of-the-art technology into serial production in 2024. Working together and with key customers paves the way to integrate the technology into applications, such as energy-efficient, robust, and sustainable linear actuators. A DEA development kit was presented for the first time at CES 2024 in Las Vegas, USA, and is now available.

#### **Covering the entire value chain**

The three partner companies joined forces to cover the entire value chain, from raw materials to easily integrated DEA stacks with control modules. This ensures the individual components are ideally matched to each other and meet maximum performance and highest quality requirements for the actuators.

The base material, the electroactive polymers, is developed and produced at Momentive's Leverkusen, Germany, location. Datwyler in Schattdorf, Switzerland, manufactures DEAs in unique stacks, which will be produced in increasing quantities by mid-2024 on an in-house developed production line with automated processes. BSC Computer in Allendorf, Germany, develops and manufactures an electronic control unit that optimally supplies these actuators with the necessary high voltage and an easy-to-integrate digital interface between the linear actuator and the application. In addition, BSC Computer supports end users with the mechatronic integration of the EAP actuators into the end customer application.

#### **Continuous optimization of end applications possible**

This comprehensive solution digitizes the basic technology of "electroactive polymers." Data obtained via the control unit and the networking of products via the Internet of Things (IoT) enables partner companies to draw conclusions about the performance of the technology. This facilitates continuous and sustainable optimization of end products - from the base material to the stacks and the end customer application. The advantages of the new technology include: low energy consumption, reduced mechanical parts, reductions in component weight and volume, robust and resilient design, silent and controlled actuation operation.

"This collaboration enables us as a specialty materials manufacturer to gain insights into the use of our elastomers in end customer applications and to continuously

optimize our material. In the medium term, networking the EAP with the IoT can be the cornerstone for the digitalization of our business models," says Holger Albrecht, Vice President and Head of the Elastomers division at Momentive.

"We are thrilled to offer our expertise in industrializing elastomer-based sealing solutions for the upcoming collaboration. Our individualized solution enables the production of stacked actuators across different application areas, presenting a unique technical advancement," says Dr. Anette Wiesmath, Head of the EAP unit at Datwyler.

"With our experience in innovative low-power IoT solutions, we are closing the gap between basic EAP technology and real applications," says Jörg Hofmann, Managing Partner of BSC Computer GmbH. "Thanks to our control unit and system support, EAP actuators can be integrated quickly and easily for OEM customers and innovative product concepts can be realized, for example for lock manufacturers, industrial customers and in the automotive and medical markets."

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## **About Momentive**

Momentive is a premier global advanced materials company with a cutting-edge focus on silicone and specialty products. The company delivers solutions designed to help propel their customers' products forward—products that have a profound impact on all aspects of life, from living rooms to outer space. With every innovation, Momentive aims to create a more sustainable future. Their vast product portfolio is made up of advanced silicones and specialty solutions that play an essential role in driving performance across a multitude of industries, including agriculture, automotive, aerospace, electronics, energy, healthcare, personal care, consumer products, building and construction, and more. Watch their latest company video for a deeper look at what they do.

Headquartered in Niskayuna, New York, Momentive Performance Materials, Inc., an indirect wholly owned subsidiary of MOM Holding Company, is one of the world's largest producers of silicones and silicone derivatives.

## **About Datwyler**

In billions of syringes and in every second car around the world, Datwyler components make an important contribution to patient and driver safety. The high-tech company focuses on high-quality, system-critical elastomer components and holds leading positions in attractive global markets such as healthcare, mobility, connectivity, general industry, and food & beverage. Datwyler materializes ideas

for a safer, smarter and more sustainable world. Thanks to recognized core competencies, the company offers added value to its customers as a development partner. Its strategic priorities of profitable growth, sustainability, agility and digitalization make Datwyler an attractive partner for all stakeholders. With more than 25 production sites on four continents, sales in over 100 countries and more than 8'000 employees, the company generates annual revenue of more than CHF 1'100 million. Headquartered in Switzerland, Datwyler has been listed on the SIX Swiss Exchange since 1986 (security number 3048677).

## **About BSC**

Since 2004, Allendorf-based BSC Computer GmbH has been digitizing innovative products and services of its customers and partners based on highly energy-efficient electronics and IoT solutions. With mechatronic development and integration of energy converters, smart materials and microprocessor wireless boards in sensors and actuators as well as cloud integration and integration of data into customer-specific management systems via easily scalable and encrypted IoT edge gateways, an all-round worry-free package based on standard components is offered. In the partner network with Momentive Performance Materials, EnOcean Alliance, Aruba, universities, manufacturing partners and last but not least the solution provider itself, innovative, battery-free and secure digitalization solutions for industry, smart buildings, smart cities and consumer applications are created quickly and in a resource-optimized manner, making a significant contribution to the implementation of many UN Sustainability Development Goals.