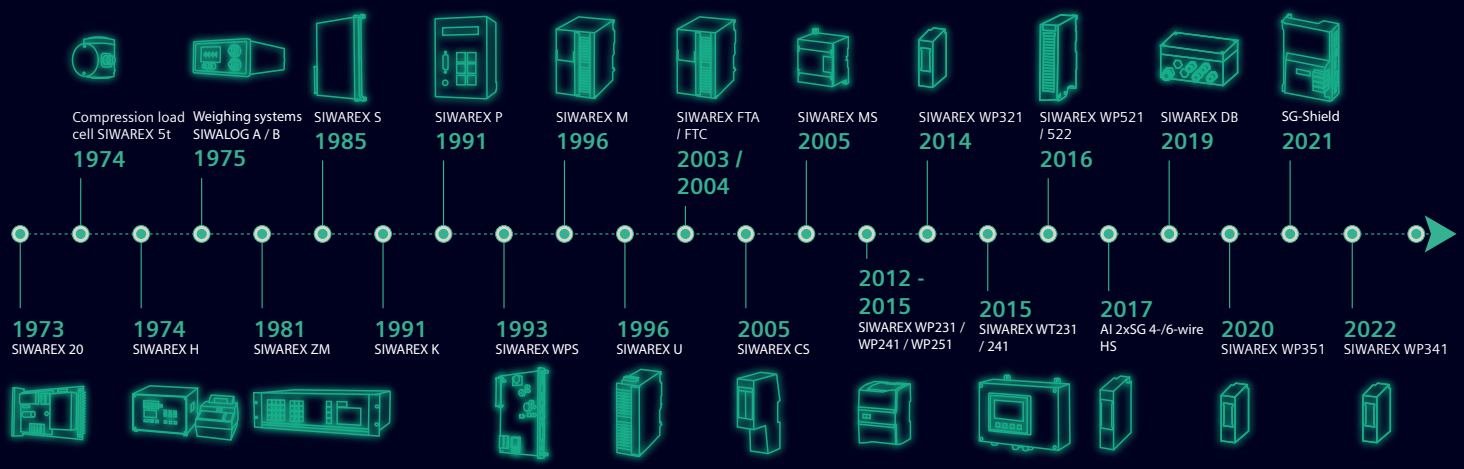


HALF A CENTURY OF PRECISE WEIGHING

50 years of SIWAREX Weighing Technologies from Siemens

In today's short-lived world, products sometimes disappear as quickly as they arrived. It is therefore something special when a product line is successfully running for 50 years. Such a period not only stands for consistency, but also for continuous innovation and adaptability to market and customer requirements. On the 50th anniversary of Siwarex weighing technologies from Siemens, it is worth pausing for a moment to consider the development and technical capabilities that have made such longevity possible in an ever-changing environment. For many years, Siwarex solutions have been proven in countless industries and are among the best-selling on the market.

Precise weighing applications are of vital importance in process industries such as chemicals, or food and beverage. For 50 years, Siwarex has been a leader in providing the measurement accuracy, flexibility and system openness required in these industries. The Siemens weighing portfolio offers a comprehensive range of solutions tailored to the needs of highly automated industries: The portfolio includes innovative weighing electronics with a scaled range of functions depending on the application, and the associated load cells with installation accessories for reliable measurements - either as a stand-alone system or seamlessly integrated into the automation system.

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SIWAREX 20 - production period 1973 - 1982, plug-in unit with 54-wire connectors, resolution +/- 20.000 units

Combined, these components form a consistent, coordinated system for a wide range of applications. Whether it is the exact proportioning of raw materials or consistent weighing in dosing, filling and batching applications, the measurement accuracy achieved ensures the efficiency and safety of production processes and is critical for consistent product quality and cost optimization. Its increasing use in all process industries underlines the importance of Siwarex weighing technologies as a guarantor of quality, safety and economic success.

A look back

The starting point for today's success was the need for weighing applications in the steel industry in 1973, where the main requirement was reliable weighing under extreme conditions with sufficient accuracy. Siemens and a small team in Karlsruhe, Germany, developed and marketed a stand-alone solution. But already in the first years, a development began that still characterizes Siwarex today: As the level of automation of the plants increased, many customers wanted to integrate weighing applications into the automation. A major customer in the food industry supplied the impetus to develop a weighing module that could be seamlessly integrated into the widely used Siemens Simatic S5 controller. “That was around 1985,” recalls Georg Angelov, who was responsible for Siwarex in various positions at Siemens for more than 35 years and is still a valued expert today in his well-deserved retirement. “The fact that this forward-looking development started with a specific customer request is indicative of the philosophy that we at Siemens have always lived in weighing technology: The customer is the focus.”

The flexibility of precise weighing applications and the easy integration into the Simatic automation world are still the success factors and unique selling points on the market. This is also true for the Siwarex M weighing electronics: In 1996, the module was the first integrated solution for legal-for-trade applications in the areas of mixing, filling, loading, monitoring and bagging. This was followed in 2003 by the Siwarex FTA, which, thanks to encrypted communication between the module and the operating and monitoring system used, still allows customers to retrofit or replace the HMI at any time - without having to recalibrate.

Recent development milestones include the Siwarex DB digital junction box and the Siwarex WP351 technology module for the Simatic ET 200SP distributed I/O system. The Siwarex DB digital junction box, introduced in 2020, supplies continuous digital communication between the field and control levels and enables predictive monitoring of connected load cells through channel-by-channel transmission of diagnostic information. The Siwarex WP 351 technology module is the optimal solution for all automatic and non-automatic weighing applications. With a width of only 20 mm and a resolution of 20 million at a sampling rate of 1 ms, it is one of the most compact and powerful weighing modules currently available on the market.

An open secret to success

An innovative spirit is just one of the pillars on which Siwarex's 50-year success rests, as Angelov confirms: "In all the new develop-

ments of the past decades, two key aspects have always played a decisive role: the wishes of the customers and our know-how in the team". One of Angelov's personal highlights was the establishment of the Siwarex hotline, which provides Siemens customers with free support. “I also managed this hotline for several years and can say that we not only made our customers smarter, but also ourselves. It was particularly important to look at the application and the requirements on site and work with the customer to find a solution that meets their expectations in terms of accuracy and process speed.” From this, Angelov derived an approach that still holds true today: “Only by listening to our customers and truly understanding their challenges can we continue to improve our products and solutions. It is through this interaction that Siemens offers its expertise in automation and weighing technologies.”

To understand the individual challenges of weighing applications, Siemens has continuously expanded its team of weighing specialists. They share their knowledge and experience not only with customers, but also internally: The experts help colleagues in sales and marketing to better understand weighing tasks. “Accurate weighing is not as easy as you might think. Considering the particular application and environmental influences, it is a combination of many components and therefore not a product that can simply be taken off the shelf, but instead a solution. Process understanding, electronic and mechanical knowledge, and experience are essential,” says Angelov.

Think ahead weighing

That's why Siemens also provides a dedicated space for the exchange of experience and knowledge: “In 2010, we opened the Weighing Technology Center in Karlsruhe, Germany, a training and competence center for weighing technology. Here we offer customer-specific training, demonstrations and tests on our systems under real conditions,” explains Martin Schöttinger, who has been responsible for Siwarex as product manager since 2013. When asked about the ideas that will keep Siemens Weighing Technology successful in the future, he refers to Angelov's statements: “In the future, we will continue to focus very clearly on customer communication at eye level and on integration. But we want to continue to think about these successful approaches.” For him, the focus is not only on integrating weighing technology into the Simatic world, but also with third-party suppliers: “We will further promote integration into third-party automation systems in the interest of our customers.”

Besides expanding integration efforts, Schöttinger sees further future prospects in the topic of sustainability and IIoT weighing applications. “The very resource-saving use of our products, ensured by modularity, has always been outstanding, but we want to improve even more here in the future.” Looking at edge and cloud applications, he adds, “Digitalization has the potential to fundamentally change weighing tasks as well. For example, we can already offer real-time monitoring for inventory tasks with Sitrans Store IQ and remotely retrieve measured values from load cells with IIoT weighing solutions. This allows our customers, for example, to access their inventory directly from the cloud without a large automation environment.”

What changes and therefore what innovations the future will bring remains an open question. What is certain is that Siemens Weighing Technology will continue to stand for high product quality, measurement quality and customer orientation, as it has for the past 50 years: "We will continue to position ourselves on the market as the specialist for weighing technology and automation," says Schöttinger, summarizing the mission for the coming years.

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