

FOUR OF THE MEDICAL DEVICE INDUSTRY'S MOST PRESSING CHALLENGES AND HOW TO SOLVE THEM



From geopolitical upheaval to the climate crisis, companies in all industries are facing unprecedented challenges. Pharmaceutical and medical device manufacturers are seeking to bring new products to market in a disrupted and ever-changing environment. Companies must have strategies in place to keep their assembly systems running as well as optimize new product development. Here, we examine the key hurdles affecting the industry and how one assembly line solutions provider is facing them down.

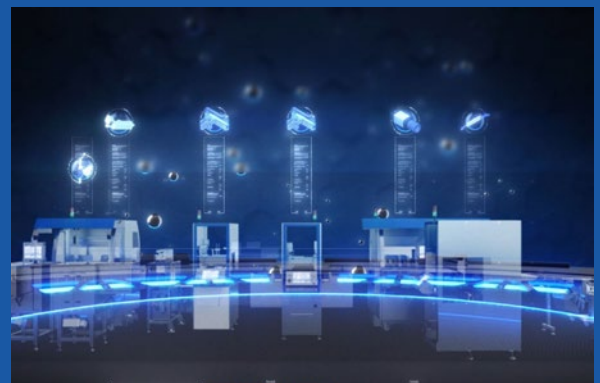
CHALLENGE 1: SUPPLY CHAIN DISRUPTION

The COVID-19 pandemic and war in Europe have significantly disrupted global supply chains. When it comes to building the assembly systems for medical devices, a widespread shortage in electronic components due to missing electronic chips has threatened productivity. Without servo drivers and their cables, for example, no assembly systems can be built.

Leading automation solution provider Mikron has developed strategies to ensure they can source required parts, explains Mikron COO Rolf Rihs: "We have to plan and forecast our material purchases from the market," he says. "Previously, we planned maybe half a year ahead, but we have now extended that substantially. Early anticipation has helped us to avoid major difficulties."

MEETING THE CHALLENGES

Innovation is fundamental to meeting new challenges, and as the world changes around us, advanced technologies are unlocking new possibilities for manufacturers in all industries. Digitization, for example, is creating efficiencies for Mikron customers. An assembly system generates millions of data points per hour, and Mikron is helping manufacturers to access and analyze that data to optimize their operations. "We want to continue our journey of investing in innovation and making sure that we are using the best available technologies in our assembly systems," says Rihs. "This is a key part of our past and future success."



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One of the knock-on effects of disrupted supply chains has been price hikes, with some components costing up to ten times more than before. For Mikron, it has taken great efforts and flexibility from across the workforce, from general managers to supply chain staff, to secure the right suppliers.

“We also have a sizeable in-house manufacturing capacity for metal parts, and that has helped us very much,” Rihs adds.

The good news is that global electronic chip production is beginning to recover, and shipping capacity is returning to normal. “I am an optimist,” says Rihs. “I believe that by mid next year, the situation will not be perfect, but it will be better.”

CHALLENGE 2: TALENT SHORTAGE

According to ManpowerGroup, 75% of global companies have recorded a talent shortage this year, and this problem continues to grow. For building pharmaceutical and medical device assembly lines, more engineers and technicians are required than the market can provide.

Companies can make use of education to develop their own pipelines for talent. “We are running a large apprenticeship programme in Switzerland and at our site in the US,” Rihs explains. “At our headquarters, we have 46 apprentices learning to be polymechanics. They will learn all the necessary skills a technician will need later.” Thanks to the dual education system in Switzerland, a good part of the polymechanics will continue their education with an engineering degree. And with employees demanding more comfort and flexibility from their workspaces, Mikron has invested more than 20 million Swiss franc into a new modern office setup to make its work environment more attractive.

CHALLENGE 3: THE RACE TO MARKET

In the medical device industry, time to market is crucial to gaining a competitive advantage, and the pace of development is ever-increasing. In order to keep up, manufacturers need new ways to make time savings.

“In the past, they developed a device, then tested it, then sourced an assembly system,” says Rihs. “To cut the time to market, we can parallelize the final development of the product and the building of the assembly system, and help our customers gain speed. “At the same time, the growing demand for more complex products means that manufacturers require larger assembly programmes than ever, often with two or more assembly lines in parallel. Mikron meets the needs of the largest programmes in the shortest time frame by leveraging the capacity of the entire company, across its sites.

Another way to save time downstream is to avoid mistakes and optimize designs from their conception. Mikron brings to the table 50 years of assembly experience to advise its customers on how to best design their products for manufacturing. “The assembly system is a vital piece of the product launch,” says Rihs. “Mikron has done a very good job over the years and proven to our customers that we are here for them when they need us.”

CHALLENGE 4: ESG STANDARDS

Environmental, social and governance (ESG) investment has been accelerating since 2014, according to Forbes. Stakeholders are demanding accountability from businesses, and pharmaceutical companies must be able to prove their commitment. “It’s high on our management agenda,” says Rihs.

Mikron is leading by example, taking steps to define and work towards 2025 and 2030 targets in areas including sustainability and diversity. For example, the new Switzerland factory includes solar panels which generate about 25% of the building’s electrical consumption, and gas heating has been replaced by a CO₂-neutral heat pump system. The apprenticeship programme has a target to champion women in engineering.

For manufacturers, a well-designed, high-precision assembly system enables energy-efficient product assembly which is planned with the highest standards in mind.



ABOUT MIKRON AUTOMATION

Mikron Automation, a division of the Mikron Group, is the leading partner for scalable and customized assembly systems – from the first idea to the highest performance solutions. Distinguished by a commitment to innovation, flexibility, unparalleled customer service, and an evolving platform portfolio, Mikron delivers state-of-the-industry solutions to the most complex assembly and testing demands.

To date, Mikron Automation has installed more than 3,900 assembly and testing systems worldwide. Its international customers operate in the following markets: pharmaceutical, medtech, automotive, electrical/industrial and consumer goods. Mikron Automation currently employs around 750 people and is headquartered in Boudry (Switzerland), a region that is regarded as the heart of the Swiss watchmaking industry. It also has sites in Denver (USA), Singapore, Shanghai (China) and Kaunas (Lithuania). It is a member of the Mikron Group, a publicly-traded company with more than 100 years' experience in precision machinery.

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