# Press release September 22, 2025

New at EMO 2025: battery-powered electromechanical clamping devices

**An important step into an exciting future**

**At EMO 2025, SCHUNK is going to showcase the battery-powered electromechanical clamping devices with IO-Link Wireless for the first time – a technology with wireless data transmission between clamping device and machine control. This innovation represents an important step to further automation options of clamping process and the implementation of Industry 4.0 principles. Companies benefit from a media-independent clamping position, expanded options for data transmission, and increased productivity.**

With the new battery-powered clamping device, SCHUNK offers a pioneering solution for companies that want to capture process-relevant statuses in real time and transmit them efficiently to the machine control. This technology is particularly attractive for industries looking to move away from cost-intensive pneumatic and hydraulic solutions – whether to reduce operating costs or to avoid contamination, which is absolutely undesirable in cleanrooms or the food industry.

**Wireless data transmission and process monitoring in real time**

In this new development, SCHUNK relies on IO-Link Wireless for wireless communication between the clamping device and the machine control. For the first time at EMO 2025, battery-powered TANDEM clamping force blocks of the KSE3 series as well as VERO-S quick-change pallet modules will be presented that utilize this technology. The actuation and transmission of the permanently recorded statuses of the clamping devices are carried out via IO-Link Wireless and an IO-Link Master, which then transfer this information to the machine control.

A highlight in this area is the collaboration with Blum Novotest, a specialist in BRC wireless technology. If a BLUM measuring system with BRC wireless technology is already in use, the new clamping devices from SCHUNK can be quickly and cost-effectively integrated into existing production processes. This saves time, reduces installation effort, and increases production flexibility.

**Same performance with less peripheral equipment and reduced environmental impact**

Despite the switch to battery operation, users do not have to compromise on clamping force or pull-down force. On the contrary: the new clamping devices deliver the same performance as pneumatic or hydraulic systems. There are also no additional interfering contours, as the actuators and electronics are fully integrated into the clamping device. Signal processing takes place directly within the clamping module, so only the IO-Link interface needs to be connected. SCHUNK’s new battery-powered clamping devices are not only powerful but also highly efficient: up to 1,000 clamping cycles can be performed per battery charge. In this way, SCHUNK continues to pave the way toward a sustainable, resource-efficient, and highly productive future of manufacturing. **schunk.com**

**Caption:**

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|  | Electrically actuated quick-change pallet modules with fully integrated electronics and actuators: Thanks to a multitude of interrogation and transmission options, the VERO-S NSE3-PH 138 IOL offers greater transparence during the clamping process – without further interfering contours.  Image source: SCHUNK SE & Co. KG |
| *NSE3-PH\_138\_IOL\_Produktbild.jpg* | |

**Interview**

***Questions on this topic to Markus Michelberger, Head of Sales Clamping Technology at H.-D. Schunk GmbH & Co. Spanntechnik KG in Mengen:***

**Mr. Michelberger, how significant is the development of electromechanical clamping devices for the future of manufacturing?**

The further development of electromechanical systems forms the foundation for digitalization and automation in industrial manufacturing. The production of the future will be based on the intelligent integration of mechanics, software, and data – efficient, sustainable, and process-optimized. Capturing and analyzing data plays a crucial role in this context. Even in metal-cutting, it is becoming increasingly important to monitor process-relevant statuses and information in real time to optimize the machining process. The result: reduced wear, shorter setup times, and higher productivity – all economically critical factors. Another aspect is the growing trend to avoid pneumatic and hydraulic systems, even in clamping technology. Until now, the challenge was keeping the machine table free of electrical components. With our new battery-powered clamping devices and wireless communication via radio technology, we are taking manufacturing a decisive step further toward the future.

**What explains the trend toward moving away from pneumatic and hydraulic systems?**

Pneumatic and hydraulic systems are undoubtedly a major achievement and indispensable in many applications. However, they come with certain drawbacks: they require extensive peripheral equipment – such as compressors, lines, conditioning systems, and valves – which adds significant cost and complexity. In addition, they carry the risk of unwanted leaks, which can lead to media losses and contamination. These issues are particularly critical in sensitive environments such as cleanrooms or the food industry.

Electromechanical alternatives offer clear advantages in this regard. Without pneumatic or hydraulic systems, not only is the costly peripheral equipment eliminated, but so is the risk of contamination or environmental damage. This makes electromechanical clamping technology a forward-looking and more sustainable solution.

**For which applications and industries is the newly introduced clamping solution particularly suitable?**

Our battery-powered electromechanical clamping device is suitable wherever leakages or contaminations are absolutely undesirable – such as in cleanrooms or the food processing industry. They also offer enormous advantages in industrial automated applications and machine tools, where process-relevant statuses need to be monitored. With data transmission via IO-Link Wireless, we are setting new benchmarks in terms of flexibility and automation in clamping technology. The new solution is therefore a decisive step toward automated and connected clamping.

**How does wireless data transmission with IO-Link Wireless work in practice?**

IO-Link Wireless enables – unlike wired IO-Link – the wireless transmission of machine data between IO-Link devices, such as sensors or other measurement systems, and an IO-Link Wireless master. The master receives the data and forwards it to the machine control. The advantage: this communication is open to the market, fieldbus-independent, and can be flexibly combined with technologies from different providers. Another plus is the avoidance of system failures caused by cable breaks or peripheral malfunctions. If wireless measuring probes with BRC radio technology – such as those offered by Blum Novotest – are already installed on the machine, our new clamping devices can be seamlessly integrated. This saves time, reduces installation effort, and provides users with high flexibility.

**What market feedback do you expect, and how will you act after the trade show?**

I am confident that our new product launch will attract a lot of attention. The manufacturing industry is looking for practical solutions that provide transparency and enable process improvements – and that is exactly what we are offering here. We expect extensive feedback from the market. The demonstrated feasibility will convince many companies, and we will use the insights gained to further develop the technology. It promises to be truly exciting in every sense of the word!

**What role does this new product play in sustainable production?**

Eliminating pneumatics and hydraulics means less peripheral equipment and significantly higher cost efficiency. Costs from media losses or leaks are eliminated, resources are conserved, and contamination is prevented. This is an important contribution to supporting manufacturing facilities on their path toward a “Healthy Factory.”

Moreover, the networking of all process-relevant data in real time enables more efficient production with less waste and higher productivity. Our new clamping devices are a key component in implementing Industry 4.0 principles – and thus a step toward sustainable and future-proof manufacturing.

**Bildunterschriften:**

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| Ein Bild, das Menschliches Gesicht, Person, Kleidung, Mann enthält.  KI-generierte Inhalte können fehlerhaft sein. | Markus Michelberger  Head of Sales Clamping Technology  H.-D. SCHUNK GmbH & Co. Spanntechnik KG  Image source: SCHUNK SE & Co. KG |
| *Personenbild\_Michelberger\_Markus* | |

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