Maximum efficiency and minimum installation work

**Compact control system for precision in linear technology – the item stepper motor**

**A compact, high-performance solution that is ready for immediate use, the new** [**stepper motor**](https://www.item24.com/en-de/integrated-motor-st-nema24-310-48-t1-70345) **from item Industrietechnik GmbH features a directly integrated control system with logic components. Following minimal installation work, the motor enables precise and efficient movements in linear technology applications – ideal for state-of-the-art automation environments.**

As a plug-and-play component, the integrated ST NEMA24-310-48-T1 motor connects perfectly to item Linear Units – without any kind of separate control unit or complex wiring. A standardised NEMA24 flange and compatible Drive Sets make integration quick and uncomplicated. item MotionDesigner takes care of the technical configuration. This online software creates a bespoke combination of drive and Linear Unit based on specific requirements such as load, stroke length and motion profile. What’s more, the software gives users the option of downloading technical information, analyses and CAD data as project documentation – perfect for further processing in other programs.

**High torque and compact design**

“We wanted to develop a product that isn’t just technically impressive, but also makes our customers’ work much easier – from configuring through to commissioning,” says Oliver Lange, a product manager for automation at item. “Thanks to the integrated control system, only a minimal amount of assembly and parametrisation work is required. Together with intuitive operation, this makes the ST NEMA24-310-48-T1 a high-performance, compact and user-friendly solution for cutting-edge Linear Units,” he adds.

A further plus is the fact that, even at low speeds, the stepper motor generates a high torque of 3 Nm with a nominal power of 100 W. This eliminates the need for an additional gearbox and therefore reduces the level of complexity and the amount of maintenance work. Another advantage of the integrated control system is that no complex wiring is required. As a result, even less experienced technicians can commission the motor quickly and safely. The motor is easy to connect to sensors, proximity switches and pushbuttons via its digital inputs and outputs. It is particularly suited to tasks that call for a high level of precision and involve small loads of up to 15 kg – in applications ranging from the packaging industry and mechanical engineering through to high-tech sectors such as [semiconductor and medical technology](Cleanrooms%20for%20semiconductor%20production:%20item%20solutions%20–%20item).

[item MotionSoftStepper](https://www.item24.com/en-de/item-motionsoftstepper-71439) is available for parametrisation and commissioning work. This software can be used to program typical motion sequences in a matter of minutes. The programs run autonomously on the integrated control system, with preset operating modes making it easier to get started. The automated application can be implemented quickly and easily by entering just a few parameters.

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**Captions**

**Figure 1** The new stepper motor from item Industrietechnik GmbH features a directly integrated control system with logic components and is perfect for combining with item Linear Units.

**Figure 2** The motor can be commissioned quickly and generates a high torque, even at low speeds, with absolutely no need for an additional gearbox.

**About item**

item Industrietechnik GmbH is the pioneer in building kit systems for industrial applications and a partner of the manufacturing industry across the entire globe. Today, the item product portfolio comprises more than 4500 high-quality components designed for use in machine bases, work benches, automation solutions and lean production applications. The company has received a string of awards for products with ground-breaking industrial design and end-to-end ergonomics.

item is spearheading digital engineering by driving forward the digitalisation of processes with software tools developed in-house. The item Academy offers training at various levels, with on-demand training and online courses available in multiple languages.

Headquartered in Solingen, Germany, item has subsidiaries in various countries. Some 900 employees worldwide harness their know-how and passion to develop innovative solutions and services. Eleven sites make sure the company is always close to customers in Germany, with a global logistics chain ensuring swift delivery times for all components.

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