Time savings with the RiLineX busbar system exceed expectations

Assembly at record speed: Study confirms time savings of up to 75 per cent with RiLineX

Herborn, 2025-11-26.

**An independent study with Fraunhofer Institute for Material Flow and Logistics IML has examined the assembly time of the new Rittal RiLineX busbar system platform in use at switchgear manufacturer gefeba Elektro GmbH. The findings: RiLineX can speed up installation by as much as 75 per cent compared to conventional systems. This means the results clearly exceeded the manufacturer’s previous figures.**

The hardware, software and automation specialist Rittal commissioned an independent study with Fraunhofer Institute for Material Flow and Logistics IML to determine the time saved while assembling its new RiLineX busbar system platform. The result: RiLineX can be installed up to 75 per cent faster than the previous RiLine60 product. The manufacturer’s previous details, which had conservatively estimated a time advantage of around 50 per cent, have thus been greatly exceeded. In some cases, huge time savings have also been achieved in assembling devices. The study was carried out under real working conditions at the medium-sized switchgear manufacturer gefeba Elektro GmbH in Gladbeck, supervised by the renowned German institute.

Assembly rethought

The new RiLineX busbar system platform from Rittal, examined in the study, fundamentally rethinks the electromechanics of 60-mm busbars. An innovative “Click & Work” principle enables quick and tool-free assembly. Moreover, unlike conventional systems, there is no need to design and position holders or to cut parts such as the contact hazard protection.

RiLineX is available either as a pre-assembled complete board, including copper bars for direct installation in the enclosure, or as a bar-less modular system. With the modular process, users now assemble their own highly customised system from modular components. Standard flat rails made of copper, aluminium or Cuponal in a variety of cross-sections, which are available worldwide, only need to be cut to length or size and then easily inserted.

The highlights of the study

To independently validate the speed advantages of RiLineX during assembly, inherent in the system design, the assembly procedures for RiLineX complete boards and modular systems using the so-called REFA standard procedure were compared with those for the predecessor RiLine60 system, which is widely used in the industry. The study also differentiates between a manual assembly process and the use of CNC-supported drilling. Assembly work was carried out by experienced specialists from the Gladbeck-based gefeba switchgear manufacturer.

The greatest time benefit was achieved when using the prefabricated RiLineX complete boards: Compared to the RiLine60, assembly time was cut by 75 per cent with manual processing and 80 per cent with CNC support for drilling. However, the RiLineX modular system also showed a clear time saving of 60 per cent during manual assembly and 55 per cent during automated assembly. With the modular board, the time saved with CNC drilling is somewhat less than with manual drilling, because (unlike with the compact board) the machine needs to be used several times, and the board has to be processed with different drilling plans. The time savings when attaching device components depend on the type and can be as high as 85 per cent.

“The significantly faster assembly time with RiLineX really surprised me,” Marcel Birkenberger, Head of Manufacturing and Production at gefeba Elektro GmbH, points out. “The first impression of RiLineX was already positive when Rittal presented the product. The system seemed well-conceived and uncomplicated. But we couldn’t imagine how big the actual time advantage would be in practice.” In the future, gefeba intends to exploit this advantage. “Since its founding, a strong customer focus has driven our family business. If we want to keep things that way, we will need to keep an eye open for innovations to enable us to meet the ever-increasing demand for short delivery times, even for complex solutions.” Volker Schmidt, Head of Product Management RiLineX at Rittal, adds: “For the relevance of the study, it was important that we selected a company with fully qualified professionals and with extensive experience in the efficient use of the busbar systems currently available on the market, such as RiLine60. Everything worked out right at gefeba.”

|  |  |  |
| --- | --- | --- |
|  |  | Ein Bild, das Person, Bautechnik, Im Haus, rot enthält.  KI-generierte Inhalte können fehlerhaft sein. |
| Caption, image 1  Marcel Birkenberger, Head of Manufacturing and Production at gefeba Elektro GmbH: “I was amazed that RiLineX could be installed much faster.” Gefeba aims to benefit its customers through shorter delivery times. |  | Caption, image 2  The simplicity of baying several enclosures together reduces downtimes when expanding existing systems. |
| Caption, image 3  The rails sit securely in the board without any need to plan for a busbar support, and with contact hazard protection up to IP 2XB or IP 3X levels. |  |  |

May be reproduced free of charge. Please name Rittal GmbH & Co. KG as source.

Rittal

Rittal is a leading global supplier of enclosure systems, automation and infrastructure with its industrial, IT, energy and power, cooling and service units. Rittal products and solutions are used in over 90% of global industries – standardised, customised, and always of the very best quality.

Our approach and methodology: With their combined hardware and software expertise, Rittal, Rittal Software Systems (Eplan and Cideon) and Rittal Automation Systems (RAS, Ehrt, Alfra) optimize, digitize and automate processes along the entire customer value chain, including the IT infrastructure – from panel building and switchgear manufacturing to mechanical engineering, factory operators and the energy sector.

Our delivery promise: Rittal standard products are delivered in Germany within 24 hours, and within 48 hours throughout Europe.

Customer focus

Improving efficiency and increasing productivity through automation and digitalisation is one of the biggest challenges for our customers. This requires in-depth knowledge and expertise, the combination of hardware and software, and cross-sector networking. We are convinced that creating and connecting data rooms is crucial to the success of industrial transformation. And that is exactly our speciality and field of competence.

Eplan and Rittal are driving the development of the digital automation twin, making data accessible and useable in operations as well. Cideon is improving data consistency in the digital product twin context with its CAD/CAM, PDM/PLM and product configuration expertise.

Sustainability

Environmental and climate protection, social commitment and ethical corporate management are a given for Rittal. We take our responsibility for a sustainable future seriously. Our approach to resource management and conservation involves continuous improvement of our own production processes and ensuring that our products have the lowest possible Product Carbon Footprint. Our solutions support our customers in achieving their own climate targets. With a “Gold” rating in the independent EcoVadis assessment, Rittal ranks among the top 5 percent of companies evaluated.

Family business and global player

Founded in 1961, Rittal is the largest company in the owner-operated Friedhelm Loh Group. The group operates worldwide, with 13 production sites and 95 international subsidiaries. It has 12,600 employees and posted revenues of 3.1 billion euros in fiscal 2024. In 2023, the Friedhelm Loh Group was presented with the “Best Place to Learn” and “Employer of the Future” awards. In 2025, Rittal was awarded the Top 100 Seal as one of Germany’s most innovative medium-sized companies for the fourth time in a row. In 2025, the Haiger plant achieved overall victory in the prestigious European benchmark competition “Factory of the Year.”

For more information, visit [www.rittal.com](http://www.rittal.com/) and [www.friedhelm-loh-group.com](http://www.friedhelm-loh-group.com).

Corporate Communications

Dr. Carola Hilbrand Rittal GmbH & Co. KG

Corporate & Brand Communications Auf dem Stützelberg

Tel.: 02772/505-2527 35745 Herborn

hilbrand.c@rittal.de [www.rittal.com](http://www.rittal.com)