**SIKO turns to item**

**100 work benches for optimum efficiency and ergonomics**

**Based in Germany’s Black Forest region, SIKO GmbH expects the assembly and work benches it uses to be highly versatile, ergonomic and efficient. The sensor and positioning system manufacturer was looking for a partner to supply suitable work bench systems for its new production, sales and administrative centre in Bad Krozingen. The main aim was to ensure staff can easily lay their hands on all the parts needed to make the company’s measuring equipment. The entire workflow was also to be optimised based on an ergonomic design. item Industrietechnik GmbH in Solingen had the answer. The company took care of project planning, designing 100 work bench systems that can be flexibly extended and adjusted to suit individual employees. Installing the work benches in a compact U-shape results in shorter assembly lines, while the perfect arrangement of containers at the work bench and intelligent material supply systems create efficient workflows.** **Production took place at the item branch in nearby Freiburg, so it was easy for SIKO to carry out an on-site approval inspection prior to shipping.**

A global manufacturer of measurement and drive technology for mechanical engineering and industrial applications, SIKO GmbH has five subsidiaries and around 230 employees. Based in Buchenbach since 1963, the company decided in 2018 to construct a new building in Bad Krozingen, just under 30 kilometres away. The official ground-breaking ceremony took place there in March 2019. The future production area for SIKO’s electronic products will cover approximately 5,000 m². Mechanical production operations are to remain in Buchenbach. A state-of-the-art sales and administrative centre is also being built at the new site. SIKO was looking for a partner to supply ergonomically optimised assembly benches and special work benches for the new building’s production area. item Industrietechnik GmbH offered the perfect solution with its modular, individually adjustable work benches. “One of the decisive factors for SIKO was the proximity of the item sales centre in Freiburg. We were in close contact throughout the project phase – an absolute must with a project of this size,” explains Lorenzo Tosoni from the item systems engineering sales team. By the time the new building is complete, item will have supplied a total of at least 100 work bench systems and various SystemMobiles.

**Existing work benches anything but adaptable**

SIKO’s measuring equipment and systems are made up of numerous individual components that are joined together in several stages to create assemblies and, ultimately, finished products. The existing work benches in the production workshop at the Buchenbach site were from various manufacturers and couldn’t be flexibly adapted to different requirements. Storing all the different profiles was also tricky. “To optimise our warehousing, we were keen to settle on a single manufacturer. With item, we can create standard work benches quickly and efficiently, make all kinds of modifications, integrate accessories and even configure custom systems,” says SIKO’s Head of Lean Management.

**Superstructures and long assembly lines**

The joint project started in late 2016 with cardboard engineering. As SIKO’s lean expert explains: “We used a cardboard model to reproduce our assembly line. Adhering closely to the principles of lean production, we were looking to develop workflow and material flow systems with minimal waste. Working as a team, we used the model to put new ideas and proposed solutions to the test.” Following the concept development phase, a prototype was produced with direct support from item. To prepare an assembly, employees take individual parts from the various containers. The existing work benches used superstructures to bring the production material within reach of workers. “Originally, this material was behind assembly staff, which was neither ergonomic nor efficient,” reports the SIKO employee. The company was looking for a solution to separate logistics from value creation. The entire production process was also to be optimised. The problem was that arranging work benches 2 to 3 metres long in a row means staff have to cover quite a distance when carrying out the individual steps. Having put together their assembly at the end of the row of benches, they then have to return to their starting point.

**U-shape optimises workflows**

SIKO decided to switch over completely to item work benches at the new site. Having determined the number and size of containers, item designed the dimensions and structure of these benches, also configuring additional components such as roller conveyors. “Once item had completed the design, we checked whether it met all our requirements. The 3D visualisation was particularly helpful during this process,” says the SIKO manager. In addition to the item work benches based on standardised dimensions, SIKO also uses special, narrower benches. These are required for inspection and packaging processes, while the standard benches are used for preliminary and main assembly operations. The measuring equipment manufacturer is utilising various special components from item for the standard benches. Material is supplied on roller conveyors, for example. The U-shaped arrangement of the item work benches in the production areas will make for ergonomically optimised workflows, with staff only needing to cover a short distance for the entire operation – from assembly all the way through to product packaging. “The rational bench arrangement offers significant benefits for staff. Reducing stocks of materials and organising everything based on the material flow also saved us a lot of space,” reports the lean expert.

**Customised settings and optimum ergonomics**

Besides the production areas, SIKO is also using the item work bench systems in related areas such as the workshop and engineering offices. Their height-adjustable design means they can be adapted perfectly to the staff assigned to them. The ideal height is stored and can be called up again at any time. Thanks to integrated synchronous control, all benches in a given U-shaped group move to the programmed height simultaneously. When a different employee takes over, the ideal setting can be accessed in an instant to create optimum ergonomic working conditions at all times. item SystemMobiles L and U perfectly complement the work stations as a means of moving materials from A to B. Logistics staff can use them to transport components from incoming goods and the warehouse to the relevant work bench for assembly. Further SystemMobiles will supply small components that are required less often in a U-shaped line but are still necessary for special variants, so staff can convert their workstation themselves in no time at all. This will enable SIKO to benefit from ergonomic working practices and assemble special variants very quickly.

**Impressively flexible design**

SIKO’s products are made in several variants. A great many different components need to be available at the work bench. The flexible arrangement of benches with different dimensions is vital to produce the measuring equipment and systems efficiently, so the many possible combinations of item components are of great benefit to SIKO. What’s more, these are mutually compatible and also flexible in terms of attachment, which means standard benches can be modified quickly and with the minimum of effort, even for small batch sizes. SIKO has some profiles and accessories such as keyboard shelves, hooks and magnets in stock in the relevant workshops at the two sites. If additional components are required, item can supply these within 24 hours. “That means we can convert our production at short notice and adapt it to different requirements whenever we want. The catalogue item provides on its website with all its numerous products is another advantage,” explains the lean expert.

**Prime example of the lean philosophy in action**

From the start of the project to delivery of the first U-shaped work bench setups, SIKO repeatedly made adjustments and was in close contact with item to optimise ergonomics and efficiency. The biggest challenge was completing a project of this size in the specified time. “Although so many people were involved in the project, the process ran smoothly – a prime example of the lean philosophy in action,” underlines the Head of Lean Management.

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**Caption 1: The item work benches are being set up in a U-shaped arrangement in the production areas, which makes for ergonomically optimised workflows. Source: SIKO**

**Caption 2: In addition to the item work benches based on standardised dimensions, SIKO also uses special narrow benches for inspection and packaging operations. Source: SIKO**

**Caption 3: Having both vertical struts fixed to only one side of the chassis makes** **item SystemMobiles L ideal for direct parts picking at work benches. Source: item**

**Caption 4: item SystemMobiles U transport even heavy loads extremely securely. Source: item**

**About item**

item Industrietechnik GmbH is a global market leader in building kit systems for industrial applications and employs around 500 members of staff. It has been designing and marketing construction solutions for machinery, fixtures and plants since 1976. Today, the item product portfolio comprises more than 4,000 high-quality components designed for use in machine bases, work benches, automation solutions and lean production applications. Thanks to the inclusion of transport solutions and dynamic elements, the company’s products can cover virtually all working processes, from manual production to automated manufacturing. The highly skilled employees work day in, day out to develop innovative solutions for state-of-the-art mechanical engineering and also offer exceptional consulting services. item is headquartered in Solingen, Germany. Eleven branches and support centres ensure the company is always close to customers in Germany. The group has wholly owned subsidiaries in the USA, China, Mexico, Italy, Poland and Switzerland.

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